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- Актуальные вопросы политики и права;
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Редакционный совет:

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Тилакова М.А., доктор философии по педагогическим наукам (PhD),

ОСНОВНОЙ РАЗДЕЛ

Abdullayeva P. U.
Ma'mun universiteti, "Roman-german filologiyasi"
kafedrasi o'qituvchisi

TARJIMA JARAYONIDA YUZAGA KELADIGAN MADANIY MUAMMOLAR

Annotatsiya: Ushbu maqolada tarjima va uning madaniyatlararo jihatlari haqida ma'lumot keltirilgan. Shuningdek, tarjimaning madaniyat rivojidagi ahamiyati va tarjima jarayonida yuzaga keladigan muammolar batafsil yoritib berilgan.
Kalit so'zlar: tarjima, madaniyat, ekvivalentlik, lingvokulturologiya, tarjimon, transformatsiya.

Abdullayeva P.
teacher
of the department "Romano-Germanic Philology"
Ma'mun University

CULTURAL PROBLEMS THAT ARISE IN THE PROCESS OF TRANSLATION

Annotation: *This article provides information on translation and its intercultural aspects. The significance of translation in the development of culture and the problems that arise in the process of translation are explained in detail.*
Keywords: *translation, culture, equivalence, linguaculturology, translator, transformation.*

Tarjima ko'p asrlardan beri yozuvlar, tillar, lug'atlar, adabiyotlar, ilm-fan taraqqiyotiga, shuningdek jahon xalqlarining turli sohalarga oid bilimlarining rivojlanishiga hamda turli madaniyat vakillarini yanada mukammalroq tushunishga xizmat qilib kelayotgan sohadir. Ushbu faoliyatning ijtimoiy va xalqaro ahamiyati juda muhim bo'lib, u turli xalqlarning madaniy meroslaridan boshqa millat vakillari ham xabardor bo'lishi uchun xizmat qiladi. Tarjima o'z mohiyatiga ko'ra transformatsiya jarayoni hisoblanadi. Nazariy jihatdan tahlil qiladigan bo'lsak, mukammal tarjima qilingan asar yoki matn o'quvchiga asl nusxadan oladigan mazmunni ifodalay olishi kerak. Mashhur amerikalik tilshunos Yevgeniy Nida ta'kidlaganidek, "Yaxshi tarjimaning ta'rifi qabul qiluvchining tarjima qilingan xabarga bo'lgan munosabatiga bog'liq va bu ma'lumotni asl nusxada berilganda qabul qiluvchilarning xabarga qanday javob bergani bilan taqqoslash lozim”[1]. Rossiyalik olim Yakobsonning fikricha, tarjima shunchaki shakllarning boshqa tilga oʻzgarishi emas, balki axborot almashtirish boʻlib, tarjimonning vazifasi qabul qilingan maʼlumotni belgilangan tildagi shakllarga oʻzgartirishdir. “Shotlandiyalik tilshunos Ketford tarjima jarayonida maʼno ekvivalentligi boʻlmasligini taʼkidlab, faqat shakl jihatdan ekvivalentlik borligini tushuntiradi”[2]. Asl til va tarjima qilinayotgan til oʻrtasidagi farqlar tufayli tarjimada ekvivalentlik bilan bogʻliq cheklovlar mavjud. Bu cheklanish nafaqat soʻzlarning maʼnosida, grammatik xususiyatlarida, balki madaniy farqlarda ham namoyon boʻladi. Yuqoridagi taʼriflardan shuni aytish mumkinki, tarjima qilish jarayonida tarjimon koʻplab muammolarga duch kelishi mumkin, chunki tarjima qilinayotgan tillar bir-biridan turli jihatlari bilan farq qiladi. Shu sababli tarjimon ushbu jarayonda barcha qirralarni eʼtiborga olishi lozim.

Tarjima nazariyasining dastlabki bosqichlarida tarjima deganda bir tildagi matnni boshqa tildagi matnga almashtirish tushunilar edi, bu ikki matn taxminan bir xil maʼnoga ega boʻlgan. Asosiy eʼtibor tarjima qilish jarayonida tarjimaning ham lingvistik, ham semantik jihatlariga qaratildi. Tarjima faoliyatida maʼnoni aniq tarjima qilish har doim muammoli boʻlgan, kontekstda qanday maʼno nazarda tutilgan: semantikmi, pragmatikmi yoki ijtimoiymi kabi munozaralar paydo boʻlgan. Oxirida bu turdagi maʼnolarning barchasi oʻzaro aloqador deb topildi va tarjimaning madaniy jihatlariga kiritildi. Hozirgi kundagi asosiy muammolardan biri tarjima kamdan-kam hollarda manba tili madaniyati va tarjima qilingan tildagi madaniyatni hisobga olmagan holda koʻrib chiqiladi.

Tarjimaning maqsadi va xususiyatlari turli mamlakatlar, xalqlar oʻrtasida oʻzaro tushunishni rivojlantirishdan iborat boʻlib, u madaniyatlarni bogʻlovchi koʻprik vazifasini bajaradi. Mashhur amerikalik tarjima nazariyotchisi Yevgeniy Nida tarjimaga quyidagicha taʼrif bergan: “Tarjima, birinchidan, maʼno jihatdan, ikkinchidan, uslub jihatdan qabul qiluvchi tilni manba tilning sof ekvivalenti sifatida takrorlashdan iborat. Biroq, tarjima qilinayotgan tilda eng yaqin oʻxshash ekvivalentning paydo boʻlishiga madaniy farqlar turli darajada taʼsir qiladi”[3]. Tarixi, geografik joylashuvi, mahalliy urf-odatlari, diniy eʼtiqodlari va boshqalardagi farqlar tufayli tarjimada odamlar bir-birini toʻgʻri tushunishiga toʻsqinlik qiladigan ayrim muammolar mavjud. Shunday qilib, tarjima nafaqat tarjimonning lingvistik malakasini, balki tegishli madaniyatlardan ham xabardor boʻlishini nazarda tutadi. Shu maʼnoda tarjima faqat soʻzlarni, jumlalarni yoki maqolalarni manba tilidan maqsadli tilga tarjima qilishni emas, balki madaniyatlar oʻrtasidagi harakatlanishni ham anglatadi. Bilamizki, har bir xalqning oʻz madaniyati mavjud va u turli millatlarda har xil koʻrinishda namoyon boʻladi. Dastlab madaniyat soʻziga taʼrif beradigan boʻlsak, ushbu tushuncha maʼlum bir

[1] Eugene A. Nida. (2001). Language and Culture-Contexts in Translating. Shanghai: Shanghai Foreign Language Education Press

[2] Catford J. C. A Linguistic Theory of Translation / J. C. Catford. – London: Oxford University Press, 1965. – 103 p.

[3] Eugene A. Nida. (2001). Language and Culture-Contexts in Translating. Shanghai: Shanghai Foreign Language Education Press.

xalq yoki millatning urf-odatlari, an’analari, xatti-harakat normalari, e’tiqod tizimlari va qadriyatlarining aksi deb tasvirlash mumkin. Madaniyat muayyan jamoa yoki ma’lum bir odamlar guruhini belgilashda muhim ahamiyatga ega. Madaniy o‘ziga xoslik ma’lum bir kelib chiqishi bo‘lgan insonlarning hayotlarini qanday olib borishini ko‘rsatish uchun foydalaniladi.

Madaniyat insonilar o‘rtasidagi muloqotning ajralmas qismi bo‘lib, har bir shaxsning ma’lum bir guruh a’zosi sifatidagi xulq atvori va xatti-harakatlariga sezilarli ta’sir ko‘rsatib, til bilan chambarchas bog‘liqdir. U antropologiya, madaniyatshunoslik, sotsiologiya va gumanitar fanlarning asosiy tushunchalaridan biri ekanligi sababli uni o‘rganishga turli xil ta’riflar va yondashuvlar mavjud. Ularning barchasini umumlashtirsak, “Madaniyat tushunchasiga butun tarixiy taraqqiyot jarayonida insoniyat tomononidan yaratilgan va yaratilayotgan barcha moddiy va ma’naviy boyliklar yig‘indisi” deb ta’rif berish mumkin[4]. Madaniyat, shuningdek, odamlarning bir-birlari bilan qanday muloqot qilishiga ham ta’sir qiladi. Bu madaniyatlararo muloqotda ham muhim rol o‘ynaydi.

Til va madaniyat atamlari uzviy bog‘liqdir. XX asrning 90-yillarida tilshunoslikda ushbu tushunchalarning o‘zaro ta’siri, aloqadorligi, shakllanishi hamda yaxlit bir sistema sifatida til va tildan tashqarida aks etishi kabi hodisalarni o‘rganish bilan shug‘ullanuvchi yangi soha lingvokulturologiya ya’ni lingvomadaniyatshunoslik fani yuzaga keldi. Ushbu sohaning asosiy predmetlari til va madaniyat hisoblanadi. Agar madaniyatshunoslik insonning tarix, hayot, tabiat va ijtimoiy sohalardagi xususiyatlarini o‘rgansa, tilshunoslik tilda insonning dunyoqarashini o‘rganadi. Bir tomondan lingvokulturologiya insoniyatning madaniy til faktoridagi o‘rni, ikkinchi tomondan esa, til faktoridagi insonning o‘rnini o‘rganish bilan shug‘ullanadi. Til, madaniyat va tarjimani, ular o‘rtasidagi munosabatlarni o‘rganish dunyoda insonlar bilan muloqot qilish muhim ahamiyatga ega bo‘lganligi sababli ular juda dolzarb masalalar hisoblanadi. Turli madaniyatlar tillarining xilma-xilligi va inson hayotidagi muloqotga bo‘lgan ehtiyoj tarjimani muloqot qilish, madaniyat va bilim almashishda juda samarali omilga aylantirdi. Tarjimonlar tarjima qilish jarayonida ko‘plab qiyinchiliklarga duch kelishi mumkin. Buning asosiy omillaridan biri turli xalqlarning madaniy jihatdan farq qilishidir. Shunday qilib, til va madaniyat bir-biri bilan chambarchas bog‘liq va tarjima jarayonida ikkalasini ham hisobga olish zarur. Barcha tarjimonlar o‘z jamiyatining madaniy va diniy me’yorlariga asoslangan holda asl ma’noni yetkazishga harakat qilishadi. Hozirgi globallashuv davrida tarjimaning ahamiyati muhim bo‘lib, u bir tilda yozilgan asarlarni boshqa millat vakillari ham tushunishiga yordam beradi. Madaniyatlar, ayniqsa ommaviy madaniyat etnik odatlar va urf-odatlar yoki diniy qadriyatlarning kengayishiga olib kelmoqda, bu esa tarjimaga bo‘lgan zaruriyatni yanada oshirdi. Tillar va madaniyat bir-birini to‘ldirishi va har bir mintaqaning madaniy xususiyatlari har xil bo‘lganligi sababli, tarjimonlar nafaqat bir xil ma’noni qanday yetkazishga e’tibor qaratishlari zarur,

[4] Komilova Gulmira Temirovna. Lingvokulturologiya yangi soha sifatida.- "Экономика и социум" №12(91) 2021

balki ikki madaniyat oʻrtasidagi farqni koʻrsatishga harakat qilishlari kerak. Tarjimalar maʼlumot, bilim va gʻoyalarni tarqatish uchun xizmat qiladi.

Tarjima umumbashariy madaniyatni yaratishda muhim ahamiyat kasb etadi. U barcha tillarda, ayniqsa dunyoning barcha qismlarida til xususiyatlari va madaniy qadriyatlarni hisobga olgan holda bir-biriga oʻxshash boʻlgan tillarda muloqot qilish uchun koʻprik vazifasini bajaradi. Shunday qilib, u dunyoning barcha mamlakatlarini global tarmoqqa bogʻlash vazifasini oʻtaydi. Bundan tashqari, tarjima turli madaniyatlar oʻrtasida chegaralar mavjudligini nazarda tutadi va tarjimon bu chegaralarni anglashi va ularni kesib oʻtish muqarrarligini bilishi mumkin. Madaniy oʻxshashlik va universallik boʻlmasa, turli madaniyat vakillari bir-biri bilan muloqot qila olmaydi, tarjima ham boʻlmaydi. Teng ahamiyatli ikkita tilni tarjima qilayotganda, tarjimonlar asl matnning oʻz maʼnosi, pragmatik va oʻzaro bogʻliq maʼnolarni yetkazishlari zarur. Biroq, ikki madaniyat oʻrtasidagi farqlar tufayli, semantik ekvivalentlik cheklanishi mumkin.

Shunday qilib, tarjima til va madaniyatdan iborat murakkab jarayondir. U maʼlumot, bilim va gʻoyalarni tarqatish uchun zarurdir. Bu turli madaniyatlar oʻrtasidagi samarali va muloqot uchun mutlaqo ahamiyatli boʻlib, tarjima ijtimoiy totuvlik va tinchlikni taʼminlashga xizmat qiladi. Madaniyatning oʻziga xos xususiyatlarini ijobiy yoki salbiy jihatlarga ajratmagan maʼqul, chunki odat tusiga aylangan xatti-harakatlar barcha millatlarda uchraydi. Madaniyat va tarjima oʻrtasidagi munosabatlar oʻzaro bogʻliq va yonma-yon boradi. Bu turli tillarda yuzaga kelishi mumkin boʻlgan tafovutlarni bartaraf etishga yordam beradi.

Madaniyatni tarjima qilish mumkinmi yoki matnni uning madaniyatidan ajratgan holda tarjima qilish mumkinmi degan savollar paydo boʻladi. Har bir olim til va madaniyat chambarchas bogʻlanganligini, ularni bir-biridan ajratish qiyin, balki imkonsiz ekanligini tan oladi. Yuqorida keltirilgan maʼlumotlardan shuni xulosa qilish mumkinki, tarjimon – bu madaniy vositachi boʻlib, u tarjima jarayonida mukammalikka xizmat qilish uchun manba til madaniyatidan maqsadli til madaniyatga oʻzgara oladi. U manba matn mazmuni, uslubini tarjima qiladi va ularni tarjima qilingan til matniga kiritadi. Tarjimonlarning asosiy maqsadi insonlarga tarjimani xuddi asl tildagi mazmunni ifodalagan kabi yetkazib berishdir. Tarjima tilning madaniy omili bilan yaqinroq bogʻliq boʻlib, madaniyatni bilmay turib, asl nusxani maʼlum tilga toʻgʻri tarjima qilish qiyin kechadi. Shu tufayli tarjimon tarjima jarayonida muammolarga duch kelmasligi uchun madaniy farqlarni oʻrganishi zarur.

Foydalanilgan adabiyotlar:

1. Rajabov S. et al. Tasavvurli, umumiy-tasavvurli va raqamli-tasavvurli qoidalarni tahlil //Science and Education. – 2024. – T. 5. – №. 5. – С. 262-268.
2. Rajabov S. TASAVVURLI, UMUMIY-TASAVVURLI VA RAQAMLI-TASAVVURLI QOIDALARNI TAHLILI //Raqamli iqtisodiyot va axborot texnologiyalari. – 2024. – T. 4. – №. 1. – С. 113-119.

3. Абдуллаев М. ORGANIZATION OF WASTE PROCESSING IN SOLVING ENVIRONMENTAL PROBLEMS IN UZBEKISTAN //Nordic_Press. – 2024. – Т. 1. – №. 0001.
4. Qobilov A. et al. ASSOTSIATIV QOIDALAR VA BOZOR SAVATLARINING TAHLILI //Raqamli iqtisodiyot va axborot texnologiyalari. – 2023. – Т. 3. – №. 3. – С. 115-120.
5. Rajabov S. B. et al. Social mining and it is development stages //Science and Education. – 2023. – Т. 4. – №. 4. – С. 1342-1345.
6. Oybek o'g'li O. N., Urinovich K. A., Baxtiyorovich R. S. RAQAMLI IQTISODIYOT SHAROITIDA SOLIQLAR VA BOSHQA MAJBURIY TOLOVLARNI AMALGA OSHIRISHDA RAQAMLI TEXNOLOGIYALARDAN FOYDALANISH //Архив научных исследований. – 2022. – Т. 5. – №. 5.
7. Ziyadullayevich S. A., Mirzaliev S. M., Bakhtiyorovich R. S. IMPROVING THE PROGRESSES OF WASTE PRODUCTS PROCESSING THE AUTOMATED MANAGEMENT SYSTEM //Galaxy International Interdisciplinary Research Journal. – 2022. – Т. 10. – №. 5. – С. 372-381.
8. Mirzarakhimova A., Abdulakhatov M. Analysis of Healthcare Services in the Digital Economy //Proceedings of the 7th International Conference on Future Networks and Distributed Systems. – 2023. – С. 410-414.
9. Abdulakhatov M. M., Avlokulova S. S. TECHNOLOGY OF SEARCH ORGANIZATION IN VIRTUAL E-SHOPS WITH IMAGE RECOGNITION //Архив научных исследований. – 2022. – Т. 2. – №. 1.
10. Kobilov A., Abdulakhatov M., Jaloliddinova M. PECULIARITIES OF THE USE OF ARTIFICIAL INTELLIGENCE IN THE EDUCATIONAL PROCESS //Raqamli iqtisodiyot va axborot texnologiyalari. – 2021. – Т. 1. – №. 3. – С. 32-37.
11. Nigmanov A. U. XITOY SANOAT TARMOQLARIDA ENERGIYA SAMARADORLIGINI OSHIRISH TAHLILI //XXI Asr: Fan va ta'lim masalalari (XXI Век: Вопросы науки и образования). – 2024. – Т. 1. – С. 146-162.
12. Нигманов А. У. и др. ERKIN IQTISODIY ZONALARDA INVESTITSIYA FAOLIYATINI AMALGA OSHIRISHNING ASOSIY YONALISHLARI //ГЕОГРАФИЯ: ПРИРОДА И ОБЩЕСТВО. – 2020. – Т. 1. – №. 2.
13. Bobojonov J. B. O. XXR investitsion siyosatining istiqboldagi tendensiyasi //Science and Education. – 2024. – Т. 5. – №. 10. – С. 203-209.
14. Нигманов А. УЗБЕКСКО-КИТАЙСКОЕ ЭНЕРГЕТИЧЕСКОЕ СОТРУДНИЧЕСТВО //Sharq ma'shali/Восточный факел. – 2022. – Т. 14. – №. 1. – С. 127-135.
15. Sofoyeva F. Java dasturining asosiy tushunchalari //Nordic_Press. – 2024. – Т. 3. – №. 0003.

Abdullayeva K.T.
Associate Professor
of the Department of Preschool Education,
Faculty of Foreign Languages
University of Economics and Pedagogy

TECHNOLOGICAL EDUCATION IN THE PROCESSES OF DIRECTING STUDENTS TO THE PROFESSION AND BUSINESS ACTIVITIES

Abstract: *In this article, there are no political, social, national and other obstacles in the way of choosing the desired profession in our society, but it is necessary to be able to use this right and teach it. it is thought that it is determined not by attention, but by the structure of the national economy. Therefore, it is stated that objective scientific and technical progress introduces its own conditions and we must prepare young people to work in professions necessary for the national economy.*

Key words. *Technology, vocational training, labor and vocational training, vocational information, career guidance, political, social, national and other issues, law, structure of the national economy, objective scientific and technical development, youth, work in professions preparation*

The system of technology and professional training is one of the great works that directly implements labor and vocational training, education of young people, vocational information, career choice, career orientation, and has a very meaningful past development. It is impossible to imagine the formation of our people as a nation, a people, a nation without work, professions, and trades. Man has been involved in labor since the beginning of his life. He did household chores. At first, the work that was done only for subsistence was later carried out for a greater purpose, to gain wealth, and in the 10th century, it even developed to the level of production industries that could provide millions of nations with goods and equipment for large military armies.

In the 12th - 15th centuries, the development of craft knowledge and scale reached the highest level in Movaro unnakhr and Khorasan. Each nation inherited from its ancestors and has preserved its own characteristics, distinguished by its historical and cultural unity, passed from generation to generation. Uzbeks are among them. Archeological research conducted on the territory of our republic shows that crafts developed here two thousand years ago. During this period, a class society emerged, and crafts became an independent field based on the large division of labor.

In ancient times, the most common types of crafts were blacksmithing, jewelry, coppersmithing, and tinsmithing. One of the ancient professions that is still widespread is the craft of making wooden products. With the appearance of sewing machines at the beginning of the 20th century, a new craft profession - machinist - appeared. One of the most common professions of Uzbeks is hat making.

In addition, artisans made various leather goods, shoemakers sold their products to the population walking in cities and villages. Bakery, confectionery and butchery are among the professions, and their shops are found at every step. The custom of holding large weddings has created a special profession of cooking.

The great thinkers and scholars of the East in almost all eras emphasized and glorified the sanctity and necessity of honest work, the acquisition of a profession, in their works, poems and ghazals, and in their literary heritage.

We can also see the importance of acquiring a profession in the works of the encyclopedist Abu Ali Ibn Sina (980-1037). In his opinion, a child should be taught a profession from a young age. After the child has mastered the profession to a certain extent, it is necessary to teach him to use his profession in life, that is, to lead an independent life with honest work.

"Giving knowledge to young people and teaching them trades is an important and responsible job. Learning trades will help young people avoid any kind of bad behavior," he said.

Eastern and Central Asian thinkers and Uzbek enlightened poets also left valuable advice in their works about the importance of acquiring a profession.

In the historical development of mankind, both in the East and the West, as well as in America, special attention was paid to the occupation of young people. They regularly gave fatherly, mentoring advice and guidance to them to acquire a profession. Official career counseling offices began to appear at the beginning of our century.

The first career counseling office was established in Boston, USA in 1908, and this date is considered the beginning of career guidance. However, based on historical data, we can say that vocational guidance has been formed since ancient times.

In January 1908, in the city of Boston, as we mentioned above, youth orientation to the profession, which helps teenagers to choose their life path, began its work. This was accepted as the basis of the work of directing the activity of the bureau to the profession. Later, a similar bureau was established in New York. Among its tasks are the requirements for people to acquire various professions, and a deeper study of the abilities of schoolchildren. The work of the bureau was carried out in cooperation with teachers using tests and questionnaires.

During this period, with the permission of a special ministry in England, it was decided to open institutions that provide advice or more practical information to students under the age of 17 in choosing a profession. In 1911, a special newsletter coordinating the cooperative work of labor exchanges and educational institutions was published here.

In 1922, the Law on Vocational Guidance and Counseling was passed in Germany, and the Regulation was approved based on it, specifying the criteria for the implementation of this system.

Vocational training in Russia began in the early years of the 20th century. In the Pedagogical Museum of the teachers' house in Moscow, a series of research on the choice of profession of teachers of different types of schools is conducted. In this, the main attention was focused on researching which professions are most in demand, what reasons students base their choice on.

In 1927, the Vocational Counseling Bureau, established in Leningrad, carried out scientific research along with practical research.

Prominent Russian scientists such as P.P. Blonsky, A.S. Makarenko made a significant contribution to the development of the scientific and pedagogical foundations of career guidance. They created the conditions for its further development by creating the psychological-pedagogical foundations of the work of guiding students to the profession. Vocational guidance was carried out in close connection with polytechnic education, technological education and upbringing.

In the early 1930s, the Central Laboratory of Vocational Counseling and Vocational Guidance carried out active organizational work, and by 1932, the number of bureaus of this type had reached 54. However, the progress of vocational training during this period was negatively affected by the decreasing attention of students to technological education. Abolition of technological education led to a halt in vocational training.

In the early 1950s, attention to vocational guidance began to increase again, and a certain level of organizational-methodological approach was created.

After that, vocational training was organized on the basis of five-year plans based on the interests of students and the needs of the national economy.

Fundamental changes have been taking place in the education system since Uzbekistan gained independence. As a result of the adoption of the Law "On Education", a system of providing the national economy with qualified specialists is being created.

The information given above in a short chronological order shows the high importance of the career guidance of young people.

Guidance on choosing a profession is a general school task that is solved by the entire collective of pedagogues. At the same time, it should not be forgotten that technological education occupies a special place in this work. The reason for this is that the content of technological education includes an integral introduction to a number of professions, and this introduction is carried out not only theoretically, but also practically. It is known that it is possible to have a complete idea about the profession only when it is presented in this way.

Vocational guidance is carried out throughout technological education, but its tasks change at different stages.

In grades V-VII, information is mainly given about the profession. Pupils will get acquainted with what public working professions exist. Elements of these professions form the content of students' activities in the workshop. This situation fully corresponds to the task of general technical training of students in this period of education. In the VI grade, and especially in the VII grade, along with providing information about the profession, vocational training is also carried out. The reason for this is that on the eve of graduation of the VII class, students need to choose the profile (direction) of future labor training. Each profile contains many public worker occupations. These can be professions that have a consistent relationship with the content of the training in the workshop (for example, professions related to metalworking and woodworking) or professions that are not related to them at all (potter, plasterer, dyer, etc. construction professions) can be.

When choosing a profile of labor training, controversial situations often arise, and parents of students can participate in this discussion. Some profiles of labor training seem to be neglected, and no one wants to choose this profession. Other profiles, on the contrary, will attract more readers.

Unfortunately, such a scene can be observed in the work experience of schools; teachers try to solve this issue depending on the mastery of students, that is, excellent students are given the right to choose, and poor masters are forced to choose one of the remaining professions.

Solving the problem in this way is wrong in every way. No good can be expected from those who forcefully choose their way of life. Undoubtedly, excellent students deserve encouragement, but this should not deprive others of the freedom to choose a career.

It also happens that a student who correctly chooses the profile of labor training later chooses a profession within this profile.

Based on this, it is necessary to try to make the selection of the profile of labor training voluntary.

How to achieve this? In order to answer this question, it is first necessary to clarify how freedom of choice of profession should be understood.

In this regard, technological education is viewed with special hope. Research shows that a certain number of students do not want to work as workers. The reason for this is that students do not have a correct idea about the meaning of working professions, they do not know well how workers are respected in our society. It is necessary to work with students in this direction, because the interests of our country require the involvement of the majority of high school graduates in the fields of material production and public service.

In this case, the fact that the issue concerns mass labor professions of equal value makes it easier. Professions of equal value mean professions that are equal in terms of providing a person with all-round development, material well-being, and opportunities to gain a position in society. Therefore, if some of the public labor professions seem to be neglected, this is a simple confusion, and the labor teacher must eliminate the error. For this, it is necessary to note that there are many common aspects in public worker professions.

Of course, it is not possible to introduce students to all professions that can be found in practice. But many professions impose a number of general requirements on a person. It is possible to expand the imagination of teenagers by introducing them to these requirements. For example, it is observed that the spiritual level of physical labor is increasing. Demands for intellectual work are increasing. High demands are placed on behavior in the labor collective. Taking this into account, it is possible to organize the work of orientation to choosing a profession in such a way that the students realize that they are not only getting an idea about specific professions, but also about the general demand for labor activity. let it be

Teachers should not try to influence students too much when they are choosing a career. Instead, it is necessary to be very careful and determine whether the students are really interested in this profession or if this interest is a casual interest.

It is necessary to take into account the real working conditions of the school when carrying out the work of guidance for choosing a profession. The production base of different districts of our country is not the same. For example, if we are talking about a city located near the Black Sea, that is, a resort area, then the majority of students will have to consider that in the future they will work in the field of public service. The economy of the district determines the employment opportunities in many ways. However, the individual characteristics of a person usually meet the requirements of a number of professions, and students' interests can be formed. Thus, career guidance can be carried out taking into account the needs of the state for one or another profession and taking into account the interests and passions of students.

Grades VIII-IX occupy a special place in the process of choosing a profession. On the one hand, career guidance continues directly in technology classes, students get an idea of the professions that are part of the labor training profile they have chosen, that is, the pursuit of a profession "narrows down". On the other hand, in the process of studying the special subjects "Fundamentals of production", "Choosing a profession", the process of introducing students to the main professions and specialties of the national economy will begin to guide them to the choice of a systemized profession. In this subject, the knowledge of professions acquired by students in labor lessons, in lessons on the basics of science is summarized.

Thus, in grades VIII-IX, a somewhat opposite task is set. The student learns the elements of a number of similar professions (for example, metalworking, turning, milling) by studying extended technological education. As a result, he receives basic vocational training, and it seems necessary to continue it in the upper grades. At the same time, the world of professions is fully revealed to the reader for the first time in a systemized way, as if they were told to choose the one you want from them. The freedom to choose a profession manifests itself in a similar contradiction. In the 9th grade, a student can change his chosen profession and choose a completely different direction of technological education.

So, a student can make a final decision about choosing a profession only in the 9th grade. But it would be a mistake to say that this ends the orientation of career choice. On the contrary, this work should now be more impressive, but its purpose will change, now the first plan will be to instill love for the chosen profession. The entire content, forms and methods of career guidance are aimed at this goal.

From the above, it can be concluded that the path to choosing a profession in the process of technological education goes through several stages, and each of these stages has its own tasks. In this case, the way to choose a profession, like any other educational work, consists of a two-way process, in which both the teacher and the student are equally important. Therefore, the most important requirement for choosing a profession is that students should be active, and this activity is ensured by the formation of the foundations of vocational training. Students' activity will increase if their teachers have prepared for professional diagnostics and professional consultation and if they carry out this work on time.

In the process of technological education, there are favorable conditions for introducing students to a number of professions related to working with wood, metal and other materials, performing electrical assembly work, servicing machines, and so on. During workshops, it is important not only to give an idea of what this or that specialist does, but also to reveal all aspects of the profession and show working conditions. This is not easy to do, of course. For this, the teacher must work carefully and diligently.

The work experience of teachers determined the forms and methods of guiding students to choose a profession. Their main ones are as follows.

Guide to choosing a profession in classes. For example, a teacher introduces students to occupations related to the work they do in workshops. For example, while learning woodworking, students will learn about the professions of carpenter, joiner, veneerer, woodcutter, frame maker, turner, and driller. In addition, the teacher will also tell about the professions of woodworkers, which have taken the place of specialties related to manual woodworking in enterprises.

Guidance on choosing a profession on excursions. Usually, on excursions, there are favorable conditions for introducing students to the material from the educational program. This opportunity can be used to guide students to choose a profession. For example, when students visit metal and woodworking machine shops, they will see many groups and types of equipment. Therefore, it is recommended to tell the teacher about the professions of workers who work on this equipment. If the workers themselves talk about their work and the products they make, the students will have a better idea about these professions.

Guide to choosing a profession in circle training. There are more opportunities to introduce students to different professions in circle classes. If the teacher notices that the student has an inclination towards one of the working professions, for example, woodworking, metalworking, he should work with the student, deepen his knowledge and studies, and arouse interest in the profession he likes. Activities in circles help students to choose the direction of technological education in higher grades.

Meetings with production innovators and those who work in the field of material production after graduating from school. Usually, the performances of people who work in industrial enterprises after graduating from this school make a great impression on students.

Holding various cultural and public events. It is known from the work experience of schools that various cultural and public events that help to successfully conduct career guidance work. For example, holding contests on the topic "Who knows more about the profession", publishing oral journals "In the world of professions", organizing discussions on the topic "Personal and public opinion when choosing a profession", and reading relevant literature. organizing an exhibition, discussing books and films. All these activities are in workshops; can be done.

In-depth study of professions. In addition to working with all students in one way to give an idea about certain professions, the teacher works more seriously with students who want to get to know this or that profession better. Students are put into groups or clubs based on their interests. Various organizational forms of work are used in this. Pupils create a museum, write abstracts, conduct excursions. All this allows the teacher to explain in more detail what a certain profession requires of a person, and to help students understand the basics of choosing a profession. If the teacher notices that the student has a strong interest in a certain profession and that the student's health meets the requirements of this profession, he will start working accordingly and help the teenager's desire to come true.

Optional training. In some schools, a certain part of the hours allocated to optional training is used for career guidance. Below we present the approximate content of such training.

Pedagogical system of orientation to entrepreneurial activity. Our state pays great attention to private entrepreneurship and small business entities. At the current stage of the development of the national economy of our republic, the training of qualified specialists based on scientific ideas has become an urgent problem.

Because today, scientific and technical progress and market economy place great demands on the process of training qualified specialists. This places a great responsibility on educational institutions.

In our research work, we will focus on the pedagogical system of directing students to entrepreneurship and its organizers.

The effectiveness of education is ensured not only by the generalized opinions of leading pedagogues-experts, but also by a systematic approach to the teaching process.

Therefore, first of all, it is necessary to dwell on the meaning of the concepts "pedagogical system", "educational system", "didactic system", "model and modeling". "Pedagogical system" is a complex pedagogical structure that includes various sub-systems (sub-systems) and components.

From our point of view, "pedagogical system" consists of a set of interrelated tools, methods and processes necessary for the formation of a person based on a certain goal.

In general, the pedagogical system is considered as a broad concept that includes all events, processes, objects, systems, activities related to the formation and development of students' personality. There are many other definitions of the concept of "pedagogical system". We did not need to dwell on all of them.

Different approaches to the above-mentioned components of the pedagogical system can be compared and the most common components can be singled out. They are: purpose, motive, content, practical work, result.

If we take into account the interdependence, connection and coherence of teaching, upbringing and development, they will be integrated into all processes of education. It follows that we can consider the "pedagogical system" as an educational system and a didactic system within the framework of our research.

"Educational system" means a system whose elements and sub-systems have structural and functional characteristics. In other words, the structural-functional integrity of educational subjects and the educational environment is called an educational system.

Summarizing the definitions given above, we described the pedagogical system of vocational training by directing schoolchildren to small business and entrepreneurial activities as follows.

The pedagogic system of directing students to entrepreneurial activity is multi-level, and it is necessary for the subjects of technology education and educational environment, the formation of entrepreneurial skills, and preparation for professional activity.

The pedagogic system of directing students to entrepreneurial activity is multi-level, and it is necessary for the subjects of technology education and educational environment, the formation of entrepreneurial skills, and preparation for professional activity. It consists of the structural and functional integrity of teaching, training and development tools, methods and processes.

It is worth noting that this definition undoubtedly includes systematic education, systematic training, systematic education, and systematic development. In order to clearly imagine the essence, structure and content of the process of directing students to entrepreneurship, we will dwell on the problem of modeling within the framework of the "pedagogical system" under consideration.

The problem of modeling has been studied by many scientists. The scientific method of any research carried out with the help of a model is called modeling.

Complex of pedagogical conditions. By developing and applying a set of pedagogical conditions, it is possible to introduce the model and achieve the set goal. The issue of development and practical application of a set of pedagogical conditions that allow to ensure the effectiveness of training students by directing them to entrepreneurial activity is a topic that will be highlighted separately.

Determining the purpose and content of training students by directing them to entrepreneurship, developing the main methods and didactic tools, and planning the process of its organization form the basis of the activity of pedagogic scientists and practicing teachers. This process requires creativity, research, and relying on practical experiences.

A comprehensive and systematic approach to planning the training of qualified specialists is necessary. Because the planning of training of specialists, its goal-oriented organization, comprehensive improvement of the content of professional training, creates the basis for the rational organization of the educational process in the future.

Thus, we revealed the content of the concepts of "pedagogical and didactic system", "model and modeling", and discussed the founders of the model of the pedagogical system of training students by directing them to entrepreneurship.

Literature

1. Yuldashev S. et al. A Development of AI Connected System with Adaptive Assessments Method for Evaluation Methods in Education Field //2024 4th International Conference on Advance Computing and Innovative Technologies in Engineering (ICACITE). – IEEE, 2024. – C. 826-830.
doi: https://doi.org/10.1109/ICACITE60783.2024.10616960
2. Abdullayeva K. FACTORS OF ELIMINATING IDEOLOGICAL THREATS IN THE PROCESS OF GLOBALIZATION //Журнал академических исследований нового Узбекистана. – 2024. – Т. 1. – №. 7. – С. 97-100.
3. Abdullayeva K. MASS MEDIA AS A POWERFUL TOOL OF PROPAGANDA //Молодые ученые. – 2024. – Т. 2. – №. 18. – С. 88-89.
4. Tursunovna A. K., Kizi J. M. A., Hasanovna S. Z. USE OF INNOVATIVE EDUCATIONAL TECHNOLOGIES IN THE PROCESS OF LABOR EDUCATION AND REQUIREMENTS FOR THEIR DEVELOPMENT //European International Journal of Multidisciplinary Research and Management Studies. – 2022. – T. 2. – №. 03. – C. 101-107.
5. Tursunovna A. K., Qizi R. N. Q., Qizi Y. K. KASB TANLASHGA YO ‘LLASHNI O ‘QITISH METODLARI ORQALI SAMARADORLIGINI OSHIRISH //Ta’lim fidoyilari. – 2022. – T. 3. – C. 44-50.
6. Вардияшвили А. А. и др. Энергосбережение и энергоэффективность в системах пароснабжения //Материалы II Международной научной конференции" Технические науки: проблемы и перспективы". – 2014. – С. 53-55.
7. Вардияшвили А. А. и др. Возможности использования энергетических ресурсов возобновляемых видов энергии и их оценочные расчеты //Молодой ученый. – 2019. – №. 47. – С. 110-112.

8. Саматова Ш. Ю., Абдуллаева К. Т. Технико-экономические показатели по внедрению новой технологии ИОМС в водогрейных котлах //Молодой ученый. – 2015. – №. 4. – С. 248-249.
9. Саматова Ш. Ю., Абдуллаева К. Т. Технико-экономические расчеты по внедрению частотно-регулируемого электропривода в котельной АО" Каршимаслоэкстракция" //Молодой ученый. – 2015. – №. 4. – С. 244-248.
10. Вардияшвили А. А., Каримова С. Э., Абдуллаева К. Т. Вопросы опреснения минерализованных вод с использованием энергетических отходов и солнечной энергии //Молодой ученый. – 2019. – №. 20. – С. 86-88.
11. Рузиев А., Шодиев Б., Абдуллаева К. История педагогики, цель и задачи теории воспитания человека //Общество и инновации. – 2021. – Т. 2. – №. 4/S. – С. 666-672.
12. Баходирова Г. К., Абуллаева К. Т. ПРОБЛЕМЫ ФОРМИРОВАНИЯ КОМПОНЕНТОВ УЧЕБНОПОЗНАВАТЕЛЬНОЙ ДЕЯТЕЛЬНОСТИ УЧАЩИХСЯ ПРОФЕССИОНАЛЬНОЙ КОЛЛЕДЖА //Актуальные научные исследования в современном мире. – 2017. – №. 1-6. – С. 27-29.
13. Саматова Ш. Ю., Абдуллаева К. Т. Изменение гидродинамики парового котла бкз-75/39 и реконструкция хвостовых поверхностей нагрева //Молодой ученый. – 2017. – №. 3. – С. 156-158.
14. Саматова Ш. Ю. и др. Результаты режимно-наладочных испытаний при сжигании природного газа паровых котлов типа" Babcok-Wilcok"№ 1,№ 2 котельной Каршинского маслоэкстракционного АО //Молодой ученый. – 2014. – №. 4. – С. 250-253.

Abduvoxidova M.
1-bosqich talabasi
Xorijiy tillar fakulteti
Tarjima nazariyasi va amaliyoti (ingliz tili) yo'nalishi
Qarshi davlat universiteti

TARJIMA NAZARIYASI VA AMALIYOTI SOHASIDA ZAMONAVIY AKTDAN FOYDALANISH

Annotatsiya. *Ushbu maqolada tarjima nazariyasi va amaliyoti sohasida zamonaviy avtomatlashtirilgan tarjima dastaklari (AKT)dan foydalanishning ahamiyati va imkoniyatlari tahlil qilinadi. AKT vositalari tarjima jarayonini tezlashtirish, sifat va aniqlikni oshirish, shuningdek, tarjimonlarning samaradorligini yaxshilash uchun muhim resurs sifatida ko'rib chiqiladi. Maqolada mashinaviy tarjima, kompyuter yordamida tarjima va terminologik boshqaruv kabi AKT vositalarining tarjimada qo'llanilishi, ularning afzalliklari va mavjud cheklovlariga e'tibor qaratiladi. Shuningdek, AKT vositalarining tarjima nazariyasini amaliyotga tatbiq etishdagi o'rni hamda tarjimonlar uchun zarur bo'lgan raqamli ko'nikmalar muhokama qilinadi.*

Kalit so'zlar: *AKT, tarjima nazariyasi, ingiliz tili, talim, zamonaviy texnologiyalar, AT, suni'y intellekt, soha.*

Abduvokhidova M.
1st stage student
Faculty of Foreign Languages
Theory and practice of translation (English).
Karshi State University

USE OF MODERN ACTS IN THE FIELD OF TRANSLATION THEORY AND PRACTICE

Abstract. *This article analyzes the importance and possibilities of using modern automated translation tools (AKT) in the field of translation theory and practice. ICT tools are seen as an important resource for speeding up the translation process, improving quality and accuracy, and improving the efficiency of translators. The article focuses on the use of ICT tools in translation, their advantages and existing limitations, such as machine translation, computer-assisted translation and terminological management. Also, the role of ICT tools in the implementation of translation theory and digital skills necessary for translators will be discussed.*

Key words: *ICT, translation theory, English language, education, modern technologies, IT, artificial intelligence, industry.*

Zamonaviy axborot-kommunikatsiya texnologiyalari AKT tarjima nazariyasi va amaliyotida katta oʻzgarishlarni keltirib chiqarmoqda. Ushbu texnologiyalar nafaqat tarjimonlarning samaradorligini oshiradi, balki tarjima jarayonini sifatliroq va tezkorroq amalga oshirish imkoniyatini ham taqdim etadi. Ushbu maqolada zamonaviy AKTning tarjima nazariyasi va amaliyotiga taʼsiri, uning afzalliklari, kamchiliklari hamda ushbu sohadagi muhim innovatsiyalar haqida batafsil toʻxtalib oʻtiladi.

AKTning tarjima jarayonida tutgan ahamiyati.

Zamonaviy AKT texnologiyalari tarjima jarayonini avtomatlashtirish, matnlarni tez va sifatli tarjima qilish imkonini beradi.

1. AKTning tarjima jarayoniga taʼsiri.Tarjima nazariyasi va amaliyoti sohasida AKT texnologiyalarining joriy etilishi tarjima jarayonini avtomatlashtirishga katta hissa qoʻshdi. Masalan, mashinaviy tarjima (MT) tizimlari va kompyuter yordamida tarjima (CAT) dasturlari tarjimonlarga vaqt va kuchni tejash imkonini beradi. Ushbu texnologiyalar yordamida katta hajmdagi matnlar tez va aniq tarjima qilinadi, shuningdek, ular terminologiya bazalaridan foydalanishni osonlashtiradi. Shu bilan birga, CAT dasturlarida takrorlanadigan soʻzlar va iboralarni avtomatik tanib, tarjimonning yukini yengillashtiradigan xususiyatlar mavjud.

2. Onlayn tarjima va uning oʻzgarishlari.Soʻnggi yillarda sunʼiy intellekt va mashinaviy oʻqitish asosidagi MT tizimlari jadal rivojlandi. Google Translate, DeepL, Yandex.Tarjimon kabi dasturlar turli tildagi matnlarni yanada aniq tarjima qilish imkonini beradi. Neyron tarmoqlar asosidagi tarjima tizimlari matnning kontekstini chuqurroq tahlil qilishi tufayli maʼnoni ancha yaxshiroq uzata oladi. Shunday qilib, AKT nafaqat tarjimonlarning ish unumdorligini oshiradi, balki tarjimalarning sifatini ham sezilarli darajada yaxshilaydi.

3. Onlayn tarjima platformalari va kollektiv tarjima.Zamonaviy AKTlar orqali ishlab chiqilgan onlayn platformalar, masalan, Memsource va Smartling kabi vositalar masofadan ishlovchi tarjimonlar uchun jamoaviy hamkorlik imkoniyatini taqdim etmoqda. Bunda tarjimonlar, muharrirlar va mijozlar birgalikda ishlashlari mumkin, bu esa tarjimaning sifatini oshiradi va jarayonni yanada qulayroq qiladi. Platformalar yordamida tarjimonlar global miqyosda bir-birlari bilan oson aloqa oʻrnatib, muammolarni hal qilishadi va birgalikda ishlash imkoniyatiga ega boʻlishadi.

4. Tarjima va Sunʼiy Intellekt.Sunʼiy intellektning (AI) rivojlanishi tarjima sohasida yangi imkoniyatlar yaratmoqda. AI asosidagi tarjima tizimlari nafaqat matnni tarjima qiladi, balki uning kontekstini, tilning nozikliklarini ham inobatga oladi. Misol uchun, matndagi til uslubi, mantiqiy tuzilish va oʻxshashliklar AI tizimlari tomonidan tahlil qilinadi va tarjimaga tatbiq etiladi. Bu esa avtomatlashtirilgan tarjima sifatini oshirishga xizmat qiladi.

AKTning tarjima nazariyasida tutgan ahamiyati. Zamonaviy AKT tarjima nazariyasi va amaliyoti sohasida yangi bosqichni ochib berdi. AKTdan samarali foydalanish tarjima jarayonini tezlashtirish va sifatini oshirishga yordam beradi**.**

1. Tarjima nazariyasida avtomatlashtirishning yangi tamoyillari.AKT texnologiyalari tarjima jarayonini avtomatlashtirish orqali uning nazariy asoslarini qayta shakllantirmoqda. Avtomatlashtirish jarayoni takrorlanadigan tarjima jarayonlarini samaraliroq qilish, tarjimonlarning yukini kamaytirish va ularning diqqatini murakkab matnlarga qaratishga imkon yaratadi. Kompyuter yordamida tarjima (CAT) va mashinaviy tarjima (MT) dasturlari so‘nggi yillarda keng qo‘llanila boshlagan bo‘lib, bu dasturlar orqali matnni tez va sifatli tarjima qilish imkoniyati oshdi.

2. Korpus lingvistikasi va tahlil.AKT tarjima nazariyasiga korpus lingvistikasi orqali sezilarli hissa qo‘shmoqda. Bu yondashuv tarjima qilinayotgan til va manba til o‘rtasidagi munosabatlarni aniq va ilmiy o‘rganish imkonini beradi. AKT asosida yaratilgan korpus bazalari, ya’ni millionlab tarjimalarni o‘z ichiga olgan matnlar to‘plami, tarjima nazariyasini ilmiy tahlil qilish uchun qimmatli ma’lumotlarni taqdim etadi. Korpus lingvistikasi matndagi iboralar, grammatik va sintaktik tuzilmalarning qanday o‘zgarishini o‘rganib, nazariy asoslarni aniqroq shakllantirishga yordam beradi.

3. Terminologik bir xillik va lug‘at bazasidan foydalanish.AKT vositalari yordamida terminologiya bazalarining yaratilishi tarjimada bir xillik va aniqroq tarjimani ta’minlaydi. CAT dasturlarida integratsiyalangan lug‘at va terminologiya bazalari tarjimonlarga murakkab va soha ichidagi atamalarni to‘g‘ri ishlatishda yordam beradi. Bu tarjima nazariyasiga yangicha yondashuvlarni olib kirib, terminologik aniqlikni saqlash va tarjimonlarning bilim bazasini kengaytirishga yordam beradi.

Tarjima jarayonida AKTning samaradorligi. AKT tarjima nazariyasi va amaliyotiga bir qator afzalliklarni olib kirdi, bu o‘zgarishlar tarjima jarayonini sifatli, tezkor va samarali qilishda katta rol o‘ynamoqda.

1. Kontekstual Anglash.Sun'iy intellekt va AKT yutuqlari tarjima jarayonida kontekstual anglash darajasini oshirib, madaniy va mantiqiy nozikliklarni aks ettirish imkonini beradi. Ayniqsa, murakkab so‘z va iboralarga ega matnlarda bu xususiyatlar tarjimaning aniq va sifatli chiqishini ta'minlaydi, masalan, biznes yoki tibbiyot matnlarida terminologik xatolarning oldini olishga yordam beradi.

2. Real Vaqtda Tarjima.Nutqdan nutqqa va matndan nutqqa real vaqtda tarjima texnologiyalari xalqaro tadbirlar va sayohatlarda til to‘siqlarini bartaraf etishga yordam beradi. Bu biznes va diplomatiya sohalarida, shuningdek, chet ellik mehmonlarga xizmat ko‘rsatishda katta ahamiyatga ega.

3. Keng Til Qamrovi va Madaniy Inklusivlik.AKT keng tilda tarjima imkoniyatlarini kengaytirib, kam foydalaniladigan tillarni ham raqamli maydonga olib chiqmoqda. Bu nafaqat tillarning o‘qib-yurishini ta’minlaydi, balki madaniy merosni saqlash va rivojlantirishda ham muhim rol o‘ynaydi. Bunda til qamrovi kengaygani sababli, axborot global miqyosda oson va samarali tarqalmoqda.

Tarjima sohasida AKTning kamchilik tomonlari. Zamonaviy axborot va kommunikatsiya texnologiyalari tarjima sohasida bir qator zararlarga sabab bo'lishi mumkin. Ushbu zararlar quyidagi jihatlarni o'z ichiga oladi:

1. Madaniy nuanslar etishmasligi.Tarjimonlikda madaniyat va til o'rtasidagi bog'lanish juda muhimdir. AKT, ayniqsa sun'iy intellekt (AI) asosidagi tarjima tizimlari, madaniy jihatlarni to'g'ri aks ettira olmaydi, bu esa brendning global bozoridagi tasviriga salbiy ta'sir ko'rsatishi mumkin. Kichik bozorlar uchun to'g'ri madaniy moslashuvni ta'minlashda inson tarjimonlarining roli juda muhimdir.

2. Maxsus sohalarda cheklovlar.Sun'iy intellektli tarjima tizimlari, masalan, huquqiy yoki tibbiy sohalarda, aniqlikni saqlashda qiyinchiliklarga duch keladi. Bunday sohalarda har qanday xato jiddiy oqibatlarga olib kelishi mumkin, shuning uchun tajribali inson tarjimonlari talab etiladi.

3. Maxfiylik va ma'lumotlar xavfsizligi muammolari.AKT yordamida olingan tarjimalar ko'pincha shaxsiy yoki maxfiy ma'lumotlarni qayta ishlaydi. Bu, o'z navbatida, ma'lumotlar xavfsizligi va maxfiylik masalalarini keltirib chiqaradi, chunki ba'zi hollarda foydalanuvchilarning roziligi bo'lmasdan ma'lumotlar tarqatilishi mumkin.

Xulosa qilib aytganda, zamonaviy axborot-kommunikatsiya texnologiyalari tarjima nazariyasi va amaliyotiga chuqur ta’sir ko‘rsatdi. AKT, xususan, sun'iy intellekt va neyron mashina tarjimasi kabi texnologiyalar, tarjima jarayonlarini tezlashtirib, samaradorlikni oshirishga yordam beradi. Bu texnologiyalar katta hajmdagi matnlarni qisqa muddatda tarjima qilish imkonini berib, biznes va global muloqotda keng qo‘llanilmoqda. Inson va sun'iy intellekt birgalikda ishlaganda, madaniy va lingvistik nozikliklar yaxshiroq aks etadi.

Bundan tashqari, AKT kam ishlatiladigan tillar uchun ham tarjima imkoniyatini oshirib, madaniy xilma-xillikni saqlashga yordam beradi. Real vaqtda tarjima texnologiyalari esa xalqaro muloqotda til to‘siqlarini bartaraf etishda muhim o’rin tutadi.

Biroq, AKTning ba’zi kamchiliklari ham mavjud. Sun'iy intellekt asosidagi tarjimalar ko‘pincha madaniy jihatlarni hisobga olmagan holda amalga oshiriladi, bu esa ayrim kontekstlarda noaniq yoki noqulay tarjimalar paydo bo‘lishiga olib kelishi mumkin.

Qisqa qilib aytganda, zamonaviy AKT tarjima sohasida yuqori tezlik, keng qamrov va arzon xizmatlar kabi afzalliklarni taqdim etsa-da, uning madaniy va maxsus bilim talab qilinadigan sohalarda cheklovlari mavjud. Shu bilan birga, ma'lumotlar xavfsizligi masalasi ham dolzarb bo‘lib qolmoqda. Bu sohada inson va texnologiya hamkorligi samarali natijaga erishish uchun muhim rol o‘ynaydi.

Foydalangan adabiyotlar ro’yhati:

1. Bozorova I. J., Abdullayeva S. U. THE DEVELOPMENT AND ANALYSIS OF METHODS OF CREATING ELECTRONIC EDUCATIONAL RESOURCES FOR CHILDREN WITH DISABILITIES //Институты и механизмы инновационного развития: мировой опыт и российская практика. – 2017. – С. 11-13.
2. Бозорова И. Ж. и др. Технологии создания электронных библиотек и электронных музеев //European Scientific Conference. – 2019. – С. 95-97.

3. Jumanazarovna B. I. The Use of Digital Technologies in the Process of Improving Economic Systems for Accounting for Inventory Items //Miasto Przyszłości. – 2023. – Т. 36. – С. 62-65.
4. Bozorova I. Features of information systems of economic accounting of material and technical assets //Science and innovation. – 2023. – Т. 2. – №. A6. – С. 345-348.
5. Бозорова И. Ж. Принятие решений в сфере финансов в условиях цифровой трансформации //Экономика и социум. – 2023. – №. 1-2 (104). – С. 603-606.
6. Бозорова И. Ж. МЕСТО И РОЛЬ ИНФОРМАЦИОННО-КОММУНИКАЦИОННЫХ ТЕХНОЛОГИЙ В ЭКОНОМИЧЕСКИХ ПРОЦЕССАХ //Экономика и социум. – 2024. – №. 2-1 (117). – С. 910-915.
7. Nurfahasdi M. et al. Optimization of Efficiency Mercury (Hg) Removal with Electrocoagulation Using Zinc (Zn) Electrode by RSM Methods //E3S Web of Conferences. – EDP Sciences, 2024. – Т. 497. – С. 01002.
8. Бозорова И. Ж. и др. Принцип работы электрокардиографа и его роль в современной медицине //научные достижения студентов и учащихся. – 2020. – С. 25-27.
9. Бозорова И. Ж. Учёт методов оценки товарно-материальных запасов //INNOVATSION IQTISODIYOTNI SHAKLLANTIRISHDA AXBOROT KOMMUNIKATSIYA TEXNOLOGIYALARINING TUTGAN O ‘RNI. – 2023. – Т. 1. – №. 1.
10. Бозорова И. Ж. и др. СОЗДАНИЕ ПРОГРАММНОГО ОБЕСПЕЧЕНИЯ ЭЛЕКТРОННОЙ БИБЛИОТЕЧНОЙ СИСТЕМЫ НА ОСНОВЕ QR-КОДОВОЙ ТЕХНОЛОГИИ //ТЕОРИЯ И ПРАКТИКА СОВРЕМЕННОЙ НАУКИ. – 2020. – С. 26-28.
11. Bozorova I. J. METHODS OF PROCESSING AND ANALYSIS OF BIO SIGNALS IN ELECTROCARDIOGRAPHY //ПРОБЛЕМЫ СОВРЕМЕННЫХ ИНТЕГРАЦИОННЫХ ПРОЦЕССОВ И ПОИСК ИННОВАЦИОННЫХ РЕШЕНИЙ. – 2020. – С. 97-99.
12. Ergash o’g’li Q. F., Jumanazarovna B. I. METHODS OF DISPLAYING MAIN MEMORY ON CACHE //Ответственный редактор. – 2020. – С. 6.
13. Маматмурадова М. У., Бозорова И. Ж., Кодиров Ф. Э. Создание И Эффективное Использование Инновационных Технологий И Ресурсов Электронного Обучения В Непрерывном Образовании //Инновации в технологиях и образовании. – 2019. – С. 301-303.
14. Зохидов Ж. Б. и др. ОБЗОР ОПТИЧЕСКИХ ПЕРЕКЛЮЧАТЕЛЕЙ И ЕГО ВИДЫ //ИНТЕЛЛЕКТУАЛЬНЫЙ ПОТЕНЦИАЛ ОБЩЕСТВА КАК ДРАЙВЕР ИННОВАЦИОННОГО РАЗВИТИЯ НАУКИ. – 2019. – С. 24-26.
15. Bozorova I. J., Zoxidov J. B., Turdiyeva M. A. STORAGE OF BIOMEDICAL SIGNALS AND FORMATS OF BIOSIGNALS //СОВЕРШЕНСТВОВАНИЕ МЕТОДОЛОГИИ И ОРГАНИЗАЦИИ НАУЧНЫХ. – 2020. – Т. 116.

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Ahmedova D.M.
Associate Professor
candidate of Biological
Fergana State University

PROMISING VARIETIES OF MULBERRY PLANT

Annotation: *In this article, The Mulberry plant is studied the biological ecological characteristics of the varieties of Tajik seedless Mulberry, Sanish-41, Southern, Sanish-38, Sanish-33, Sanish-39. The quantitative and qualitative indicators of the varieties in the experiment were evaluated by determination. In our experiments in 2019-2020-2021, an observation was carried out on several Mulberry varieties at once, Tajikistan U/t was taken as control.The qualitative and quantitative indicators of the varieties in the experiment were influenced by environmental factors, and within the tested varieties, The Varieties Sanish-39 and Sanish-38 with all their indicators prevailed over the Tajik U/t variety. The Sanish-38 variety differed from other tested varieties in the abundance of Horn-Sheba and the dense arrangement of the leaf on its branches. The Sanish-39 variety averaged 132 s/, +6 more than control, and the Leaf yield reached 154 s/especially when the weather was favorable. This figure was +16 s/GA compared to the Tajik U/T variety.*

Keywords: *mulberry plant, quantity and quality indicators, varietal characteristics, environmental factors, productivity*

INTRODUCTION

As you know, one of the most important areas of our republic is the silk industry, the high level of its quality, salinity, biological and technological indicators of silk fiber depends on the satiety of silkworm food, the yield and quality of the Leaf.

The decision of the president of the Republic of Uzbekistan “on additional measures for the development of The Silkworm feed base in the cotton industry” aims to increase the base of the sawmills network in the Republic by expanding the plantations, applying water-saving irrigation technologies and promoting the effective implementation of agrotechnical measures, introducing innovative ideas, scientific developments and scientific achievements. [1]

LITERATURE ANALYSIS AND METHODOLOGY

Ch.I. Bekkamov, U.T. Daniyarov, N.K. Abdikayumova, N.O. Rajabov [2] notes that only about 5% of the total population of navdor Mulberry is the main source of silk in Uzbekistan [2]. 95% of mulberries are considered hybrids, which is explained by the fact that they are 2-3 times less fertile, lower leaf quality than varietal mulberries.

The quality of silkworm seed in bringing the cocoons grown in our republic to the world market, along with improving the agrotechnics of feeding, is required to establish the cultivation of a large number of varietal Mulberry seedlings in existing (nurseries) nurseries. Therefore, it was aimed at determining the impact of the environmental environment on the development of mulberry tree. For this, different varieties of Mulberry were evaluated by growing them in the same conditions.

For the experiment, varieties of Tajik seedless Mulberry, Surkh-Mulberry, Sanish-41, Southern, Sanish-38, Sanish-33, Sanish-39 mulberries were obtained. To do this, the quality indicators of the varieties in the experiment were determined:

bulging of the bud, the formation of 5 leaves, the tip Bud is closed, the time of yellowing of the leaves, the time of leaf shedding, the vegetative period (day).

Determination of the quantitative indicators of the varieties in the experiment: the number of trees in the account (pieces), the amount of the branch with a leaf (kg), the amount of leaf in the pure state (kg), the Leaf weight of one tree (kg), the yield s/ga.

The experimental land area is 3,300 m2 and the soil is light-toned loam soil, irrigated, with an average soil fertility of.The experimental land area was 64 m from North to South, and 50 m from East to West, the plant varieties were found in 2 Yarus, in 4 measures, the scientist of England R.A. Arranged in the rendering method recommended by Fisher. Experiments were carried out in 2019-2021 in the conditions of loose soil of a light hue of the Fergana District of the Fergana region.

DISCUSSION AND RESULTS

In 2019, bulging of the buds of Mulberry varieties was observed on 27.03-02.04. In combination with the dry warm arrival of April, temperatures are much lower in the 2-10 days of may, with much higher precipitation, and there was a sharp difference between evening and daytime temperatures. While the daytime was +15- + 250s hot, the night was 3-100s hot. Dry air dominated throughout the summer. Therefore, the number of irrigations of mulberries was 10. Fertilization was carried out 2 times, Feeding N-240 kg/ha, P-140 kg/ha, k-30 kg/ha.

In an experiment conducted in 2019, Tajikistan seedless Mulberry is a zoned variety in our republic and has been adopted as a standard. Other varieties are evaluated in terms of quality and quantity in relation to this variety. Leaf shedding for all varieties was observed on 1.11 day due to the fact that autumn frost-30c.

According to the results of the experiment, budding of the Tajik U/t variety was observed on 27.03, with a growing season of 218 days. The experimental count placed all mulberry bushes in 4 measures for a total of 131. Together with the leaf branches, it weighed 793 kg. For the 5 samples in each repeat

when separated from the branch by a leaf band of the resulting trees, the Leaf salivation was 0.42 (42 %). Including 5 specimens in repeat 1 with the leaf branch of the tree 33 kg, 14 kg when cleaned from the branch with the Leaf Band, 14:33= 0.42 i.e. 0.42 x 100 =42 %, leaf salve 42 %. The Leaf yield in one account is 2.54 kg, 127 s per hectare from the Tajik U/t variety. the harvest was obtained (Table 1].

The growing season of the Surkh Mulberry variety is 218 days, from 141 trees on the account, 854 kg was obtained with a leaf varietal, the Leaf Salm was 40% pure (with a leaf band), The unig amount was 341.6 kg, from one account tree 2.54 kg was harvested. From the Surkh Mulberry variety, 121 centners were harvested per hectare.

The growing season of the Surkh Mulberry variety is 218 days, from 141 trees on the account, 854 kg was obtained with a leaf branch, the Leaf Salm was 40% pure (with a leaf band), The unig amount was 341.6 kg, from one account tree 2.54 kg was harvested. From the Surkh Mulberry variety, 121 centners were harvested per hectare.

From 140 species of the Sanish-41 variety, 737 kg were obtained with a leaf stem. Leaf cuttings 38%, 2 kg of leaf harvest in pure form was obtained from one Bush. 100 ts/ha from each hectare account. Compared to the standard-27 centners low yield was obtained. Table data shows that among all varieties conducted in the experiment, The Varieties Sanish-38 and Sanish 39 dominated the standard Tajik U/T variety in terms of yield, Sanish-38 +3 s/, and Sanish-39 +6 s/.

In 2020, compared to 2019, the yield from tested varieties in the experiment was higher. Due to the wetness in the spring months, the quality of the leaves was high and the Mulberry became a good feed for silkworms. The quantitative indicator of the varieties tested in the experiment in 2020 was much higher than in 2019. The standard variety in the experiment was harvested from the Tajik U/t variety by 138 s/Ha. As of 2019, this number is +11 s., From the Surx Mulberry variety to 130 s/ha, compared to the previous year +9 s. a high score was obtained. In particular, in 2020, a harvest of 154 s/Ha was obtained from the highest-yielding variety Sanish-39. From the Sanish-38 variety, a yield of 142 s/ha, compared to 2019, +12 s was obtained. The Leaf salivation of the varieties tested in the experiment also turned out to be much higher. The Tajik u / t had 42% leaf salmag in 2019, compared to 43% in 2020 , 41% in 2019 in the Sanish-38 variety, 44% in 2020, and +3% higher in the Sanish-39 variety than in 2020. The amount of pure-holed leaf (without a branch with a leaf band) from a single tree was also higher in 2020 than in 2019. For example, in 2020 compared to 2019, a higher yield was obtained from the Tajik U/t variety +0.22 kg, from the Surkh tut variety +0.18 kg, from the Sanish 41 variety +0.16 kg, from the Sanish-33 variety +0.4 kg. As can be seen from the results of the experiment conducted in 2021, Tajikistan accounted for 115 s/Ha from the U/T variety, and 112 s/Ha from the Surkhtut variety . From the Sanish-39 Variety, a leaf yield of 154 s/Ha was obtained in 2020, while in 2021 this number was 129 s/Ha.

Also, the Leaf salinity (the percentage of leaf output) declined compared to that of 2020. Including the Leaf Salm of the standard Tajik U/t Variety has declined by 5% compared to 2020, the Leaf Salm of the Surkhtut variety by 6 %, The Leaf Salm of the Sanish-41 variety by 4 % , the Leaf Salm of the Sanish-39 variety by

Changes in the yield of mulberry tree by year

№	Varieties	The amount of a branch with a leaf (kg)			Leaf %			The amount of leaves in pure form (kg)			Leaf weight from a single tree			Productivity				
		2019	2020	2021	2019	2020	2021	2019	2020	2021	2019	2020	2021	2019	2020	2021	Medial	+st
1	Tojikiston u/t	793	842	792	42	43	38	333	362	301	2,54	2,76	2,30	127	138	115	127	st
2	Surx-tut	854	874	878	40	42	36	341	367	316	2,42	2,60	2,24	121	130	112	121	-6
3	Sanish-41	737	755	700	38	40	36	280	302	252	2,00	2,16	1,80	100	108	90	99	-28
4	Janubiy	855	886	854	41	42	37	350	372	316	2,49	2,64	2,24	124	110	112	122	-5
5	Sanish-38	881	898	900	41	44	38	361	395	342	2,31	2,84	2,46	130	142	123	132	+5
6	Sanish-33	697	636	730	41	41	37	286	286	210	2,31	2,31	2,18	116	116	109	111	-16
7	Sanish-39	816	881	813	40	43	39	326	379	317	2,66	3,08	2,58	113	154	129	139	+12

4 %, and the Leaf Salm of the Sanish-33 variety by 4%. It has had its effect on the yield of each tree at the expense of the decrease in leaf Salm. For example, in 2020, an average of 2.76 kg of pure-holed (without a branch with a leaf band) Leaf was obtained from One Tree of the Tajik U/t variety, in 2021, 2.30 kg of leaves were obtained, that is, the yield decreased by 0.46 kg. Just as well -0.36 from the Surkh Mulberry variety, 0.50 kg from each bush tree from the Sanish-39 Variety, the yield decreased.

When the results of the Mulberry varieties tested in the experiment were compared in terms of options, the indicators of other varieties compared to the Tajik U/t variety zoned in our Republic were as follows. An average leaf yield of 121 S/Ha was obtained from the surkhtut variety in 3 years, a leaf yield of -6 s/ha compared to the controlled one. The Sanish-41 variety received an average yield of -33 s/less in 3 years compared to the standard. The Leaf yield from the southern variety was 115 s/ha, compared to the standard -11 s/Ha. Among the tested varieties, The Varieties Sanish 39 and Sanish-38 with all their indicators dominated the Tajik U/t variety. The Sanish-39 variety differed from other varieties in its relatively large leaf size and length of branches, high leaf salinity and frost resistance. The Sanish-38 variety differs from other tested varieties in the abundance of Horn-shabbha and the dense arrangement of the leaf on its branches.

The Sanish-39 Variety has reached 132 C for 3 years +6 more than control, especially when the weather is favorable, the Leaf yield reached 154 C. This figure was +16 s/GA compared to the Tajik U/T variety. When we compared the Sanish - 38 variety with the controlled variety, we were sure that several indicators of this variety are high. From the Sanish-38 Variety, an average yield of 132 s/Ha was obtained in 3 years. This is more than +5 s/in relation to the controlled variety.

Conclusion

As can be seen from many years of data, the Sanish-39 Variety has shown that in terms of bioecological characteristics of all mulberry tree varieties tested in the experiment, the Sanish-39 variety is superior to all mulberry tree varieties tested in terms of biological characteristics and yield. On the basis of the results of the experiment, it is recommended to breed the Sanish-38 variety in the districts of the Rocky, Yozyovon, Sixariq, Kokand group, with a relatively dry climate in our region, and the Fergana, Quva, Sfokh, Rishton districts with a high humidity of climatic conditions.

LITERATURE USED:

1. O‘zbekiston Respublikasi Prezidentining "Pillachilik tarmog‘ida ipak qurti ozuqa bazasini rivojlantirish bo‘yicha qo‘shimcha chora-tadbirlar to‘g‘risida" PQ-4567-son 17.01.2020 yildagi qarori.
2. Ch.I. Bekkamov, U.T. Daniyarov, N.K. Abdikayumova, N.O. Rajabov " lpakchilik va tutchilik" Cho‘lpon nomidagi nashriyot-matbaa ijodiy uyi Toshkent — 2019
3. Методика испытания сортов шелковицы и гибридов тутового шелкопряда Москва. 1984
4. Mahammadovna, A. D. (2023). ATROF-MUHIT MUHOFAZASIDA CHIQINDILAR MUAMMOSI VA UNING YECHIMI. *Journal of new century innovations*, *37*(1), 194-198.
5. Ахмедова, Д. М. (2023). ВЗАИМОВЛИЯНИЕ ПИТАТЕЛЬНЫХ ВЕЩЕСТВ В ПОЧВЕННЫХ СРЕДАХ У ХЛОПЧАТНИКА. *World of Science*, *6*(5), 6-12.
6. Ahmedova, D. (2023). EKOLOGIK DEHQONCHILIK VA UNING ISTIQBOLI. *Science and innovation*, *2*(Special Issue 6), 133-136.
7. Ahmedova, D., & Turdimatova, H. S. (2022). PROBLEMS OF PRODUCTION OF ENVIRONMENTALLY FRIENDLY PRODUCTS. *Journal of Academic Research and Trends in Educational Sciences*, *1*(12), 12-16.
8. Ахмедова, Д. М. (2022). ГЕНОМНЫЙ АНАЛИЗ АЛЛОГЕКСАПЛОИДНЫХ ГИБРИДОВ ХЛОПЧАТНИКА. *International scientific journal of Biruni*, *1*(2), 8-15.
9. Akhmedova, D., & Nazarov, M. (2019). Influence of environmental factors on bio-ecological features and its productivity".
10. Ахмедова, Д. М. (2022). ГЕНОМНЫЙ АНАЛИЗ АЛЛОГЕКСАПЛОИДНЫХ ГИБРИДОВ ХЛОПЧАТНИКА. *International scientific journal of Biruni*, *1*(2), 8-15.

Akbarova M.Y.
Assistant Professor
Department of Biophysics and IT
Biomedical Engineering, FJSTI
Tursunaliyev A.A.
student of group 1722
FJSTI, Biomedical Engineering

BIOMECHANICS IN THE HUMAN BODY

ANNOTATION: *Humans are capable of performing a variety of movements, which give us the ability to move from one place to another. This is due to our musculoskeletal system, which supports body loads and the movement of body segments. This function is included in the principles of human biomechanics. Biomechanics is used to provide optimal care for injuries or conditions related to movement. All living things in the world, including humans, are constantly under the influence of gravity, and therefore are subject to forces from within and around the body. By studying the interaction of these forces and their effects, we can examine the shape, function, and movement of our bodies and apply the resulting knowledge to improve the quality of life. Human movement, under gravity and other loads and controlled by the nervous system, is achieved through complex and highly coordinated mechanical interactions between the bones, muscles, ligaments, and joints in the musculoskeletal system. On the other hand, the proper modification, manipulation, and control of the mechanical environment can help prevent injury, correct abnormalities, and accelerate healing and rehabilitation. Therefore, understanding the biomechanics and loading of each element during movement using motion analysis is useful for studying the etiology of disease, making treatment decisions, and evaluating the effects of treatment. This article is designed to study the biomechanics of human movement as well as human movement.*

KEYWORDS: *Biomechanics, 3D technologies, Biomechanical analysis, molecular biomechanics, invasive measurements, organism, organ kinematics.*

INTRODUCTION:

Biomechanics is a branch of biophysics that studies the mechanical properties of living organisms, organs and tissues and the mechanical phenomena that occur in them. Previously, the concept of biomechanics was also applied to the field of developmental mechanics of embryology, often called experimental embryology. Usually the term biomechanics is applied to the study of human and animal movement. Biomechanics studies include: respiratory biomechanics - the kinematics of the respiratory organs, elastic and inelastic resistance (i.e., the geometric characteristics of movements) and the dynamics of respiratory movements and other areas of the respiratory organs; blood circulation biomechanics - the tension properties of the vessels and the heart, the hydraulic resistance of the vessels to blood flow, the propagation of tension waves along the vessel walls, the movement of blood, the work of the heart. Biomechanics - based on the evidence of anatomy and theoretical mechanics, studies the structure of the organs of locomotion, the muscular forces that produce movement in the joints, the distribution of its weight along the body parts, the laws of movement of the body and its parts. The main task of biomechanics is to determine the characteristics of the impact force according to the kinematic classification of movement. This allows us to assess the efficiency of movement, the degree of use of external and muscular forces, and to draw conclusions about the mechanisms of coordination of movement and its control. The study of the position of the body (standing, sitting, etc.) is also a task of biomechanics.

LITERATURE REVIEW AND METHODOLOGY:

Biomechanics studies the human and animal bodies and even applies to the mechanical workings of plants and cells. However, most people think of biomechanics in terms of sports and athletic performance. Biomechanics helps design everything from optimal sports equipment to injury recovery techniques. Biomechanics is the science of the movement of the living body, including how muscles, bones, tendons, and ligaments work together to produce movement. Biomechanics is part of the larger field of kinesiology, which specifically focuses on the mechanics of movement. In short, it is the study and analysis of how all the individual parts of your body work together to create athletic and everyday movements. Biomechanics includes the structure of bones and muscles and the motion they produce, as well as the mechanics of blood circulation, kidney function, and other bodily functions.

Biomechanics is the science that studies the continuum mechanics of biological systems (i.e., the study of loads, motion, stresses, and deformations of solids and fluids) and the mechanical effects on the motion, size, shape, and structure of the body. Mechanical effects on biological systems can occur at many levels, from the molecular and cellular to the tissue, organ, and system levels. The study of biomechanics in humans ranges from the inner workings of the cell, to the mechanical properties of soft and hard tissues, to the development and movement of the body's neuromuscular system. Molecular biomechanics explores how mechanical forces and deformations affect the conformation, binding/reaction, function, and transport of biomolecules such as DNA, RNA, and proteins, and the mechanical biochemical couplings in the flow of biomolecular motors and ion channels, among others. It is concerned with the study of how cells sense mechanical forces or deformations and translate them into biological responses, with particular emphasis on the study of how mechanical forces affect cell growth, differentiation, movement, signal transduction, protein secretion and transport, and gene expression and regulation. The properties of living tissues are influenced by applied loads and deformations, and tissue biomechanics is primarily concerned with the growth and remodeling of tissues in response to applied mechanical stimuli. For example, the effects of elevated blood pressure on the mechanics of the arterial wall and the behavior of cardiomyocytes within the heart after a heart attack are well-known examples of living tissue regeneration as a direct consequence of applied loads. Biomechanics uses methods to record the displacements, velocities, and accelerations of the movements being studied in experiments. In this case, optical methods are used more often: accelerated cinematography, cyclography, chemocyclography, etc. In B., methods of electrical recording of mechanical quantities using mechanotrons, base dynamographs, and angular displacement devices are also used. The history of biomechanics research begins with the study of human movements by the Italian scientist Leonardo da Vinci from the point of view of anatomy and mechanics.

Biomechanics research is of great practical importance in labor and sports physiology, military and clinical medicine, including neurology, orthopedics, traumatology, and prosthetics. Because the study of physical exercise and sports movements helps to organize a training system on a scientific basis. The study of the elasticity of bones, tendons, and other tissues allows us to understand the mechanism of the influence of traumatic factors on the body and prevent it. A number of indicators of the state of blood circulation and respiration are important in the development of diagnostics of heart and lung diseases, as well as the consequences of operations.

Currently, combining non-invasive measurements of motion, such as segmental position and force measurement with computer graphics-based anatomical modeling, is a useful approach to assessing these loads. In this approach, the integration of motion analysis and medical imaging techniques is essential. These include measuring human motion and external loads, developing biomechanical models based on three-dimensional (3D) computer graphics based on medical images, calculating internal forces, and validating the results. The validated 3D computer biomechanical model can then be used to simulate various movements and surgical procedures. Electromyogram (EMG) recordings of active muscles can be used additionally to understand muscle activity during human movement. However, the development of an accurate and non-invasive method to measure internal forces within the human body for clinical and other purposes is still a challenge.

DISCUSSION:

All motion and changes in motion are caused by internal and external forces. A change in the force acting on an object is necessary to move the object from rest or to change its velocity. The amount of change in the velocity of an object depends on the magnitude and direction of the applied force. Newton's laws of motion provide a precise relationship between a changing force and the resulting change in motion, and this applies to all forms of motion, including human motion. Human motion analysis is the systematic study of human motion through extended, careful observation using instruments to measure body movements, body mechanics, and muscle activity. This helps to collect quantitative data about the mechanics of the musculoskeletal system in the performance of motor functions. A specialized branch of human motion analysis is gait analysis, which is the study of how people walk and is used to assess, plan, and treat conditions that affect their ability to walk. The following is a brief history of human movement analysis/gait analysis.

In their quest for mental and physical perfection, the ancient Greeks recognized that the harmony of mind and body required athletic activity to complement their pursuit of knowledge. Their interest in sports and human movement can be seen in the dominance of cinematic depictions of Greek athletics in artistic media. With the mechanical, mathematical, and anatomical paradigms developed during the ancient Greek period, the great philosopher Aristotle wrote his first book on human movement, which provides the first scientific analysis of human and animal movement in terms of observing and describing muscles.

RESULTS:

Mechanics is the branch of science that deals with forces and the effects of those forces. The application of this field to biological systems is called biomechanics. Human biomechanics focuses on how forces act on the musculoskeletal system and how body tissues respond to those forces. Using the forces involved in producing movement and posture, biomechanics can be considered in the context of external or internal biomechanics.

Sports biomechanics

Sports biomechanics is the study of human movement during exercise and sports. The laws of physics and mechanics are applied to athletic performance. For example, the biomechanics of the squat involves considering the position and movement of the feet, hips, knees, back, shoulders, and arms. Knowing the correct movement patterns for the squat can help you get the most out of your exercise, while also preventing potential injuries, correcting form errors, and increasing performance.

Biomechanics can be used in a variety of ways, including analyzing an individual's movements to develop and improve performance-enhancing sports equipment, treating injuries, and informing training protocols. Understanding how the body moves and why it moves helps professionals prevent and treat injuries, reduce pain, and improve performance.

Equipment

Biomechanics can be used to design sports equipment, clothing, footwear, sports fields, and structures. For example, a shoe might be designed for optimal performance for a middle-distance runner, or a padel racket for optimal grip. Another example: The grip of a basketball is key to strength, accuracy, and proper formation when passing and shooting. Playing surfaces are also studied for this purpose, such as how the hardness of an artificial turf surface affects an athlete's performance.

Individuals

Biomechanics can be applied to individuals, analyzing their movements and training them to perform more effectively during exercise and sports activities. For example, a person's running gait or golf swing can be filmed and recommendations can be made for modification and improvement.

Injuries

Biomechanics can be used to study the causes, treatment, and prevention of sports injuries. Research can analyze the forces at work that can cause ankle sprains and how shoe design or playing surfaces can reduce the risk of injury. For example, walking shoes for overpronators can help provide the necessary stability and motion control to help correct your gait.

Training

Biomechanics can study sports techniques and training systems and develop ways to make them more effective. This could include basic research into how arm position affects movement in swimming. It can propose and analyze new training methods aimed at improving performance based on the mechanical demands of the sport. For example, muscle activation measured using electromyography and kinematics in cycling can help researchers see how factors such as posture, components, or exercise intensity affect muscle activation.

CONCLUSION:

Gravity affects all life forms on Earth. Our bodies are constantly subjected to forces from within and around us. By studying the interaction of forces and their effects on the body, we can study the shape, function, and movement of our biological bodies and apply the knowledge gained to improve the quality of life. GRF and muscle activity measured using stereophotogrammetry-based human movement analysis methods can be used to identify deviations from normal kinematic, kinetic, or EMG patterns and then used to assess the state of the neuromusculoskeletal system, help plan further treatment, and evaluate the effectiveness of treatment. In various patient groups. It can also be used to improve athletic performance and help identify posture or movement problems in people with injuries or diseases. In a nutshell, biomechanics refers to the body's movements in an anatomical position, standing upright, with your gaze looking forward, your arms at your sides, palms facing forward, and your toes pointing forward and slightly apart from your heels.

REFERENCES:

1. Clinical Gait Analysis, University of Vienna, Austria. History of the study of locomotion. **http://www.univie.ac.at/cga/history/**.
2. B.M. Nigg, W. Herzog. *Biomechanics of the musculo-skeletal system*. 3rd ed. Hoboken NJ: John Wiley & Sons. 2007.
3. Watkins. *Structure and function of the musculoskeletal system*. Champaign: Human Kinetics. 1999.
4. Bergmann, G. Deuretzbacher, M. Heller, F. Graichen, A. Rohlmann, J. Strauss, et al. Hip contact forces and gait patterns from routine activities. *J Biomech*. 2001; **34**: 859–871.
5. https://uz.wikipedia.org/wiki/Biomexanika

Akramjonov Sh.D.
stajyor-o‘qituvchi
Andijon qishloq xo‘jaligi va agrotexnalogiyalar institute

EKONOMETRIK TAHLIL ORQALI ANDIJON VILOYATIDAGI NAVIGUL KORXONASINING QAYTA ISHLASH FAOLIYATLARI

Annotatsiya. *Uzumchilik qishloq xo‘jaligining muhim tarmoqlaridan biri hisoblanadi. O‘zbekistonda uzum yetishtirish ko‘plab viloyatlarda keng rivojlangan bo‘lib, ushbu soha mamlakat iqtisodiyoti va aholining daromad manbalari uchun katta ahamiyatga ega. Shu nuqtai nazardan, uzum yetishtirish hajmi va uzumning bozorlaridagi narxlar o‘rtasidagi o‘zaro bog‘liqlikni tahlil qilish uzumchilik sohasida iqtisodiy barqarorlikni ta’minlash va ishlab chiqarish jarayonlarini samarali boshqarish uchun zarurdir.*
Kalit so‘zlar: *ekonometrik tahlil, uzumchilik, narx, qishloq xo‘jaligi, Andijon viloyati, uzum, ishlab chiqarish, korrelatsiya koeffitsenti, regressiya tenglamasi.*

Akramjonov Sh. D.
intern-teacher
Andijan Institute of Agriculture and Agrotechnologies

RECYCLING ACTIVITIES OF NAVIGUL ENTERPRISE IN ANDIJAN REGION THROUGH ECONOMETRIC ANALYSIS

Abstract. *Viticulture is one of the important branches of agriculture. In Uzbekistan, grape growing is widely developed in many regions, and this sector is of great importance for the country's economy and sources of income for the population. From this point of view, the analysis of the relationship between the volume of grape production and the prices of grapes in the market is necessary to ensure economic stability in the field of viticulture and to effectively manage production processes.*
Key words: *econometric analysis, viticulture, price, agriculture, Andijan region, grapes, production, correlation coefficient, regression equation.*

Qishloq xo‘jaligi O‘zbekiston iqtisodiyotining asosiy tarmoqlaridan biri bo‘lib, uzum yetishtirish ushbu sohada muhim o‘rin egallaydi. Uzum mahsuloti nafaqat ichki bozorda, balki tashqi bozorlarda ham katta talabga ega bo‘lgan mahsulotlardan biridir. Uzumchilikning rivojlanishi mamlakatda agrar sohaning barqarorligini ta’minlashda, qishloq hududlarida aholi bandligini oshirishda hamda eksport hajmini kengaytirishda muhim ahamiyatga ega.

Mazkur izlanishda respublikada va Andijon viloyatida uzum yetishtirish hajmi hamda Andijon viloyatidagi bozor narxlari o‘rtasidagi bog‘liqlikni o‘rganish maqsadida ekonometrik tahlil amalga oshiriladi. Ushbu tahlil yordamida regressiya va korrelatsiya koeffitsiyentlari hisoblanib, o‘zgaruvchilar o‘rtasidagi statistik munosabatlar aniqlanadi. Shu asosda bir nechta asosiy maqsad vazifalar belgilab olinadi:

- Qishloq xo‘jaligida uzum yetishtirishning o‘sish dinamikasi va bozor narxlari o‘rtasidagi bog‘liqlikni o‘rganish.
- Andijon viloyatida uzum ishlab chiqarishning respublika miqyosidagi uzum ishlab chiqarish hajmiga ta’sirini baholash.
- Ekonometrik tahlil qishloq xo‘jaligida, xususan, uzumchilikda iqtisodiy omillar va ularning o‘zaro ta’sirini tushunishga yordam beradi.

Ekonometrik tahlil usullari yordamida uzum yetishtirish va narxlar o‘rtasidagi bog‘liqlikni o‘rganish orqali sohaning hozirgi holati va kelgusidagi rivojlanish istiqbollarini prognoz qilish mumkin. Ushbu maqolada O‘zbekiston Respublikasi bo‘yicha umumiy uzum yetishtirish hajmi (Y), Andijon viloyatida yetishtirilgan uzum hajmi (X_1) hamda Andijon viloyati bozorlaridagi uzumning o‘rtacha narxlari (X_2) o‘rtasidagi bog‘liqlikni o‘rganish va ularning iqtisodiy tahlili amalga oshiriladi. Shu bilan birga, ushbu o‘zgaruvchilar o‘rtasidagi korrelatsiya va regressiya tahlili yordamida statistik bog‘lanish darajasi aniqlanadi (1-jadval)[5].

1-jadval

Yillar	Respublikada yetishtirilgan uzum, *ming tonna* Y	Andijon viloyatida yetishtirilgan uzum, *ming tonna* (X_1)	Andijon viloyati bo`yicha dehqon bozorlardagi uzumning o`rtacha narxlari, *1 kg. ming so‘mda* (X_2)
2019	1603,3	77,6	9,524
2020	1606,9	76,8	10,823
2021	1695,3	81,6	12,776
2022	1760,6	81,7	13,772
2023	1731,7	80,9	21,786

Ushbu jadvalda Respublikamizda 2019-2023 yillar davomida yillar bo‘yicha yetishtirilgan uzum *(ming. tonna)* da Y natijaviy omil sifatida berilgan. X_1 va X_2 ta’sir etuvchi omillar sifatida esa Andijon viloyatidagi yetishtirilgan uzum mahsulotlari va ularning bozordagi narxlari sifatida tanlangan.

Ekonometrik tahlil natijalariga ko‘ra quydagi natijalarga erishildi (2-jadval)[6].

2-jadval

	Y	X_1	X_2
Y	1		
X_1	0,931162	1	
X_2	0,682801	0,561993	1

[5] O‘zbekiston Respublikasi Andijon viloyatida yetishtirilgan uzum mahsuloti va ularning bzozrdagi narxlari www.stat.uz

[6] MS Exell dasturi bilan korrelatsiya koeffitsenti natijalari

Respublikada uzum yetishtirish hajmi (Y) va Andijon viloyatida uzum yetishtirish hajmi (X_1) o‘rtasidagi korrelatsiya koeffitsiyenti r_{yx}=0.93. Bu shuni bildiradiki, Andijonda uzum yetishtirish hajmi va respublikada umumiy uzum yetishtirish hajmi o‘rtasida juda kuchli bog‘liqlik mavjud. Bu shuni ko‘rsatadiki Andijon viloyatida yetishtirilgan uzum hajmi oshganda, respublika bo‘yicha uzum ishlab chiqarish ham oshadi. Y va Andijon bozorlaridagi uzum narxi (X_2) o‘rtasidagi korrelatsiya koeffitsiyenti r_{yx}=0.68. Bu o‘rta darajadagi bog‘liqlikni bildiradi. Ya’ni, narxlar oshganida umumiy uzum ishlab chiqarish hajmi ham ko‘payadi, ammo bu bog‘liqlik o‘rtacha darajada kuchli. X_1 va X_2 omil o‘rtasidagi korrelatsiya koeffitsiyenti r_{yx}=0.56. Bu esa ikki ta’sir etuvchi omillar bir biriga o‘rtacha bog‘liqlikda ekanligini ko‘rsatadi.

Regressiya tenglamasi esa quydagi ko‘rinishga ega bo‘ladi. Respublikada uzum yetishtirish hajmi (Y) va Andijon viloyatida uzum yetishtirish hajmi (X_1) ga nisbatan regressiya $Y = -600.39+28.60\ X_1$ (3-jadval)[7].

3-jadval

Y-пересечение	-600,393
Переменная X 1	28,59951

Ushbu tenglama shuni anglatadiki, Andijonda qo‘shimcha ishlab chiqarilgan har bir ming tonna uzum respublikada umumiy uzum ishlab chiqarish hajmini taxminan 28.6 ming tonnaga oshiradi. Bunda a_1 model 28.60 regressiya koeffitsiyenti bo‘lib, o‘zgaruvchilar orasidagi ta’sirni ko‘rsatadi. a_0 model esa -600.39 bo‘lib, X_1 nolga teng bo‘lgandagi (Andijon viloyatida uzum yetishtirilmasa) respublikadagi uzum ishlab chiqarish hajmini bildiradi (bu holat real bo‘lmasada, matematik natija sifatida qabul qilinadi).

Respublikada uzum yetishtirish hajmi (Y) va Andijon bozorlaridagi uzum narxi (X_2) ga nisbatan regressiya tenglamasi esa $Y = 1539.08+10.23\ X_2$ ko‘rinishga ega. (4-jadval)[8].

4-jadval

Y-пересечение	1539,078752
Переменная X 1	10,22708231

Bu tenglamaga ko‘ra, uzum narxi 1 ming so‘mga oshganda respublikadagi umumiy uzum ishlab chiqarish hajmi o‘rtacha 10.23 ming tonnaga oshadi. a_1 model 10.23 koeffitsiyenti narx va ishlab chiqarish o‘rtasidagi ta’sirni ko‘rsatadi. a_0 model esa 1539.08 bo‘lib, bu X_2 (narx) nolga teng bo‘lgandagi (narx bo‘lmagandagi) uzum ishlab chiqarish hajmini ko‘rsatadi.

Xulosa. Andijonda uzum ishlab chiqarish respublikadagi umumiy uzum yetishtirishga sezilarli darajada ijobiy ta’sir ko‘rsatadi. Bu bog‘liqlik korrelatsiya koeffitsiyenti orqali ham, regressiya natijasi orqali ham kuchli ekanligi ko‘rsatilgan. Andijondagi uzum narxlari ham umumiy ishlab chiqarishga ijobiy

[7] MS Exell dasturi bilan regressiya tenglamasi natijalari
[8] MS Exell dasturi bilan regressiya tenglamasi natijalari

ta'sir ko'rsatadi, lekin bu ta'sir Andijondagi uzum ishlab chiqarish hajmi bilan solishtirganda bir oz kamroq. Ushbu iqtisodiy tahlil Y, X_1 va X_2 o'rtasidagi bog'liqlikni tushuntiradi hamda ular o'rtasidagi munosabatni raqamli ifodalab beradi.

Bibliografik ro'yxat

1. ST Iskandarov, DS Toshpolatov. Assessment of Economic Efficiency of Vegetable Production in Greenhouses. //International Journal of Progressive Sciences and Technologies, 20 (2), 2020, 251-257.
2. D.Toshpo'latov, B.Egamberdiyeva Ekonometrikadan amaliy mashg'ulotlar. O'quv qo'llanma. T., MALIK PRINT CO, 2022, 202 b.
3. Guajaarti, D.N "Basic Ecoconometrics" McGraw-Hill 5th edition 2009
4. Xodiyev B.Yu., Shodiyev T.Sh., Berkinov B.B. Ekonometrika. O'quv qo'llanma. T., IQTISODIYOT, 2018, 178 b.

Akramov B.O.
o'qituvchi, xalqaro oziq-ovqat texnologiyalari
va muhandislik instituti
Farg'ona, O'zbekiston Respublikasi

MIKROMODUL SOVUTGICHLARINI SODDALASHTIRISHDA O‘RTACHA PARAMETRLAR USULIDAN FOYDALANISH

Annotatsiya. *O‘rtacha parametr usuli - bu mikromodulli sovutgichlarning dizaynini soddalashtirish uchun ishlatiladigan texnika. Bu sovutgichni bir qator kichik segmentlarga bo‘lish va har bir segment ichidagi termoelektrik parametrlar uchun o‘rtacha qiymatlardan foydalanishni o‘z ichiga oladi. Ushbu yondashuv dizayn jarayonining murakkabligini pasaytiradi, chunki u sovutgich ichidagi har bir nuqtada termoelektrik parametrlarni aniq hisoblashni talab qilmaydi.*

Kalit so‘zlar: *o‘rtacha parameter, mikromodul, termoelektrik, Zeebek koeffitsienti, sovutgich, Pel’te effekti, yarimo‘tkazgich, o‘rtacha parametr.*

Akramov B.O.
Lecturer
International Institute of Food Technologies and Engineering
Fergana, Republic of Uzbekistan.

Abstract. *The average parameter method is a technique used to simplify the design of micromodule coolers. This involves dividing the refrigerant into a number of small segments and using average values for the thermoelectric parameters within each segment. This approach reduces the complexity of the design process, as it does not require the exact calculation of thermoelectric parameters at each point inside the cooler.*

Key words: *average parameter, micromodule, thermoelectric, Seebeck coefficient, refrigerator, Peltier effect, semiconductor, average parameter.*

O‘rtacha parametr usuli mikromodul sovutgichini bir qator termoelektrik modullardan iborat deb hisoblaydi, har bir modul yuqori qarshilik elementi va past qarshilik elementidan iborat. Har bir modul uchun Zeebek koeffitsienti, issiqlik o‘tkazuvchanligi va elektr o‘tkazuvchanligini o‘z ichiga olgan termoelektrik parametrlar o‘rtacha hisoblanadi va sovutgichni loyihalash uchun ishlatiladi. Ushbu usul mikromodul sovutgichi uchun ma’lum bir konfiguratsiyani, masalan, termoelektrik modullar soni va ularning o‘lchamlarini qabul qilishdan boshlanadi. Keyin har bir modul uchun o‘rtacha termoelektrik parametrlar ishlatiladigan termoelektrik materiallarning moddiy xususiyatlaridan kelib chiqqan holda hisoblab chiqiladi.

O‘rtacha parametr qiymatlari bilan sovutgichning ishlashini matematik modellashtirish orqali taxmin qilish va optimallashtirish mumkin. Ushbu yondashuv loyihalash jarayonini soddalashtiradi va vaqt hamda resurslarni tejab, talab qilinadigan eksperimental sinovlar miqdorini kamaytiradi. O‘rtacha parametr usuli turli xil ilovalar uchun mikromodulli sovutgichlarni loyihalash va optimallashtirishda, jumladan, kosmik kemalarda elektronikani sovutish, sovutish va issiqlikni boshqarishda qo‘llanilgan. Uning soddaligi va aniqligi uni mikromodulli sovutgichlarni loyihalash va optimallashtirishda qimmatli vositaga aylantiradi. Mikromodulli sovutgichlarni temir yo‘l transportida qo‘llash bo‘yicha tadqiqotlar bir necha yillardan beri davom etmoqda. Ular muvaffaqiyatli qo‘llanilgan sohalardan biri poezdlar va tramvaylardagi elektron komponentlarni sovutishdir.

Temir yo‘l tizimida elektron komponentlar ularning optimal ishlashini ta'minlash uchun ma’lum bir harorat oralig‘ida ishlashi kerak. Yuqori harorat komponentlarning haddan tashqari qizib ketishiga va ishlamay qolishiga olib kelishi mumkin, bu esa poezd yoki tramvayda nosozliklarga olib keladi. Mikromodulli sovutgichlardan foydalangan holda, bu komponentlar doimiy va past haroratda saqlanishi mumkin, bu esa haddan tashqari issiqlik xavfini kamaytiradi.

Temir yo‘l transportida mikromodulli sovutgichlardan foydalanishning yana bir afzalligi - ularning ixcham o‘lchamlari. Ular minimal modifikatsiya bilan mavjud tizimlarga birlashtirilishi mumkin, bu esa o‘rnatish vaqtini va narxini kamaytiradi. Bu, shuningdek, ulanishlar sonining kamligi tufayli tizimlarning ishonchliligini oshirishga yordam beradi. Mikromodulli sovutgichlarni temir yo‘l transportida qo‘llash bo‘yicha tadqiqotlar davom etmoqda va yangi ilovalar o‘rganilmoqda. Tekshirilayotgan qismlarning ba’zilari quyidagilardan iborat:

1. Batareyalarni sovutish: Elektr poyezdlari va tramvaylarda ishlatiladigan batareyalarni sovutish uchun mikromodulli sovutgichlardan foydalanish ularning ishlash muddatini yaxshilashga yordam beradi. Batareyalarning haroratini pasaytirish orqali buzilish tezligini sekinlashtirish mumkin, bu esa poezdning ishlash samaradorligini oshiradi.

2. Konditsioner tizimlari: Mikromodulli sovutgichlar yanada samarali sovutish yechimini ta’minlash uchun poezdlar va tramvaylarning konditsioner tizimlarida ishlatilishi mumkin. Sovutgichlarning ixcham o‘lchamlari ularni cheklangan joylarda ishlatish uchun ideal qiladi.

3. Haroratga sezgir yuk: Ba’zi hollarda sezgir yuklarni muayyan haroratlarda tashish kerak bo‘lishi mumkin. Mikromodulli sovutgichlar yukni belgilangan joyga yaxshi holatda yetib borishini ta’minlab, tashish vaqtida kerakli harorat oralig‘ini saqlash uchun ishlatilishi mumkin.

Umuman olganda, temir yo‘l transportida mikromodulli sovutgichlardan foydalanish ushbu tizimlarning ishonchliligi va samaradorligini oshirish uchun katta va’da beradi. Ushbu sohada davom etayotgan tadqiqotlar yangi ilovalar va texnologiyadagi keyingi yutuqlarni berishi kutilmoqda.

Mikromodulli sovutgichlar kichik o‘lchamlari va issiqlikni yuqori tezlikda tarqatish qobiliyati tufayli elektron qurilmalar va komponentlarni sovutishning samarali usuli hisoblanadi. Ular Pel’tye effekti yordamida ishlaydi –

yarimo‘tkazgichli birikma orqali o‘tadigan oqim yo‘nalishiga qarab issiqlikni yutishi yoki chiqarishiga olib keladigan hodisa.

O‘rtacha parametrlar usuli - sovutgichda ishlatiladigan termoelektrik (TE) elementlar uchun material parametrlarining eng yaxshi kombinatsiyasini tanlash orqali mikromodulli sovutgichlarning ishlashini optimallashtirish usulidir. TE ishlashiga ta’sir qiluvchi moddiy parametrlarga Zeebek koeffitsienti, elektr o‘tkazuvchanligi, issiqlik o‘tkazuvchanligi va tashuvchining kontsentratsiyasi kiradi.

O‘rtacha parametrlar usulida mikromodul sovutgichining TE ishlashini tavsiflovchi o‘rtacha parametrlarning yagona to‘plamini olish uchun turli materiallarning TE parametrlari o‘rtacha hisoblanadi. Ushbu yondashuv turli materiallarning TE ko‘rsatkichlarini osonroq taqqoslash imkonini beradi va mikromodulli sovutgichlarni loyihalash jarayonini soddalashtiradi.

Mikromodulli sovutgich uchun o‘rtacha parametrlarning optimal to‘plami sovutishning o‘ziga xos talablariga bog‘liq, masalan, istalgan harorat farqi va tarqatilishi kerak bo‘lgan issiqlik oqimidir. Ushbu talablarni simulyatsiya va tajribalar orqali aniqlash mumkin.

Umuman olganda, o‘rtacha parametrlar usuli mikromodulli sovutgichlarni loyihalash va optimallashtirish uchun kuchli vositadir. Bu ma’lum bir dastur uchun eng yaxshi TE materiallarini tanlashda ko‘proq moslashuvchanlik va samaradorlikni ta’minlaydi hamda elektron qurilmalar va komponentlarning sovutish ish faoliyatini yaxshilashga yordam beradi.

Mikromodulli sovutgichlarda o‘rtacha parametrlar usuli termoelektrik (TE) material parametrlarining o‘rtacha qiymatlarini hisoblashni o‘z ichiga oladi. Buni matematik formulalar yordamida amalga oshirish mumkin.

Keling, n xil TE materiallaridan tashkil topgan mikromodulli sovutgichni ko‘rib chiqaylik. Moddiy parametrlarning o‘rtacha qiymatlari $\sigma_{o\prime r}, n_{o\prime r}, \varkappa_{o\prime r}$ sifatida belgilanadi, ular mos ravishda o‘rtacha Zeebek koeffitsientini, elektr o'tkazuvchanligini, issiqlik o‘tkazuvchanligini va tashuvchining kontsentratsiyasini ifodalaydi.

Moddiy parametrlarning o‘rtacha qiymatlari olingandan so‘ng, ular mikromodul sovutgichining qadr-qimmatini yoki zT ni hisoblash uchun ishlatilishi mumkin. TE samaradorligining ishlash ko‘rsatkichini o‘lchovini quyidagi formula bilan aniqlanadi:

$$zT = \frac{\sigma S^2 T}{\chi}$$

bu yerda T - mikromodul sovutgichi ishlaydigan harorat.

Moddiy parametrlarning o‘rtacha qiymatlarini optimallashtirish orqali xizmat ko‘rsatkichini oshirish mumkin, natijada mikromodul sovutgich yanada samarali bo‘ladi. O‘rtacha parametrlarning optimal to‘plami, avval aytib o‘tilganidek, dasturning maxsus sovutish talablariga bog‘liq va simulyatsiya va tajriba orqali aniqlanishi mumkin.

FOYDALANILINGAN ADABIYOTLAR

1. Акрамов Б. О. ВАЖНОСТЬ ИСПОЛЬЗОВАНИЯ ТЕРМОЭЛЕКТРИЧЕСКИХ ПРЕОБРАЗОВАТЕЛЕЙ ЭНЕРГИИ И УСТРОЙСТВ // Экономика и социум. 2024. №5-1 (120). URL: https://cyberleninka.ru/article/n/vazhnost-ispolzovaniya-termoelektricheskih-preobrazovateley-energii-i-ustroystv (дата обращения: 30.10.2024).
2. Сулаймонов Х. М., Умаров М. Г., Юлдашев Н. Х. ТЕНЗОЧУВСТВИТЕЛЬНОСТЬ ПОЛИКРИСТАЛЛИЧЕСКИХ ПОРИСТЫХ ПЛЕНОК //Актуальные проблемы современной науки. – 2015. – №. 4. – С. 149-150.
3. Sulaymonov, Kh.M., & Yuldashev, N.Kh. (2017). Tensometric properties of polycrystalline films n-PbS dependent on doping level. Uzbekiston Fizika Zhurnali, 19(2), 84-87.
4. Oxunjon o‘g‘li A. B., Shuhratjon o‘g‘li A. S. MIKROMODULLI SOVUTGICHLARNING ZAMONAVIY DUNYODA INQILOB QILUVCHI SOVUTISH YECHIMLARI //Science Promotion. – 2023. – Т. 1. – №. 1. – С. 101-103.
5. Oxunjon o‘g‘li A. B. MIKROMODULLI MUZLATGICHLARNING TERMOELEKTRIK SOVUTISHIDA PEL’TYE EFFEKTIDAN FOYDALANISHNI O ‘RGANISH //IQRO INDEXING. – 2024. – Т. 8. – №.
6. Baxtiyor o‘g‘li K. M. TIPI BUZILADIGAN GIPERBOLA-PARABOLIK TENGLAMA UCHUN TO ‘G ‘RI VA TESKARI MASALANING KORREKLIGI HAQIDA: VI Romanovskiy nomidagi Matematika instituti Fizika-matematika fanlari doktori SZ Djamalov taqrizi ostida //IQRO INDEXING. – 2024. – Т. 8. – №. 2 (2). – С. 216-224
7. Камолдинов М. О КОРРЕКТНОСТИ ДВУХТОЧЕЧНОЙ ОБРАТНОЙ ЗАДАЧИ ДЛЯ УРАВНЕНИЯ РАСПРЕДЕЛЕНИЯ ТЕПЛА В ТРЕХМЕРНОМ ПРОСТРАНСТВЕ //ИКРО журнал. – 2024. – Т. 8. – №. 1.
8. Otto M. et al. FIZIKA FANINI O‘QITISHDA ZAMONAVIY TEXNIKALARDAN FOYDALANISH VA ZAMONAVIY TEXNIK QURILMALARNI AMALIY O‘RGANISH //QO ‘QON UNIVERSITETI XABARNOMASI. – 2023. – Т. 9. – С. 250-253.
9. Авазбек Ўғли, Н. Х. (2023). Мультисервисли Тармоқни Тезкор Бошқариш Усуллари. Ўзбекистонда Фанлараро Инновациялар Ва Илмий Тадқиқотлар Журнали, 2(17), 611-615.
10. Boymirzayev F. R. PARALLEL TIP O ‘ZGARISH CHIZIG ‘IGA EGA PARABOLIK-GIPERBOLIK TIPDAGI TENGLAMA UCHUN INTEGRAL ULASH SHARTLI CHEGARAVIY MASALA //O'ZBEKISTONDA FANLARARO INNOVATSIYALAR VA ILMIY TADQIQOTLAR JURNALI. – 2023. – Т. 2. – №. 19. – С. 715-727.
11. Raxmatjon o‘g‘li B. F. ARALASH TENGLAMA UCHUN INTEGRAL ULASH SHARTLI CHEGARAVIY MASALA //ISSN 2181-4120 VOLUME 1, ISSUE 32 NOVEMBER 2023. – 2023. – С. 123.

12. Oxunjon o‘g‘li A. B. YARIMO ‘TKAZGICH MATERIALLAR: ZAMONAVIY ISHLAB CHIQARISHLAR VA TEXNOLOGIK YUTUQLAR: Farg ‘ona Politexnika Instituti “Fizika” kafedrasi, PhD, Sulaymonov Xusanboy Mannopovich taqrizi ostida //IQRO INDEXING. – 2024. – T. 9. – №. 1. – C. 205-209.

Alimova M., PhD
Karshi Engineering-Economics Institute
Uzbekistan
Kurbanova F.
Student
Karshi Engineering-Economics Institute
Uzbekistan

ECONOMIC MECHANISMS OF STATE SUPPORT OF PRIVATE ENTREPRENEURSHIP

Abstract: *This article aims to explore the economic mechanisms of government support for private entrepreneurship and suggests considering their potential for developing a thriving entrepreneurial ecosystem. It also provides suggestions and recommendations on how these mechanisms, similar to economic conditions, can solve the various problems faced by entrepreneurs and ultimately lead to economic growth and prosperity.*

Key words: *entrepreneur, private entrepreneurship, economic mechanism, ecosystem, potential, efficiency, employment, economic growth, demand, supply.*

Introduction. Private entrepreneurship, first, we will delve into the rationale behind state support, examining why governments choose to invest in fostering private enterprise. The discussion will touch upon the crucial role of entrepreneurs in driving innovation, creating jobs, and contributing to tax revenue. Next, we will outline the types of economic mechanisms governments employ, categorizing them into broad themes like financial assistance, business development services, regulatory reforms, and infrastructure development. Each category will be introduced, briefly highlighting its intended purpose and potential impact. Furthermore, we will touch upon the challenges and considerations associated with implementing these mechanisms. Concerns like resource allocation, targeting effectiveness, and potential market distortions will be discussed, emphasizing the importance of careful design and evaluation of intervention strategies. Finally, we will briefly introduce the structure of the article, providing a roadmap for a deeper exploration of specific mechanisms, their intricacies, and real-world case studies. This roadmap will entice readers to delve further into the fascinating world of state support for private entrepreneurship.

Literature Analysis: The burgeoning field of entrepreneurial ecosystem development has garnered significant attention in recent years, fueled by the recognition of private entrepreneurship as a potent engine of economic growth, innovation, and job creation. This literature analysis delves into the scholarly discourse surrounding various economic mechanisms employed by governments to support private entrepreneurship, examining their strengths, weaknesses, and potential impacts.

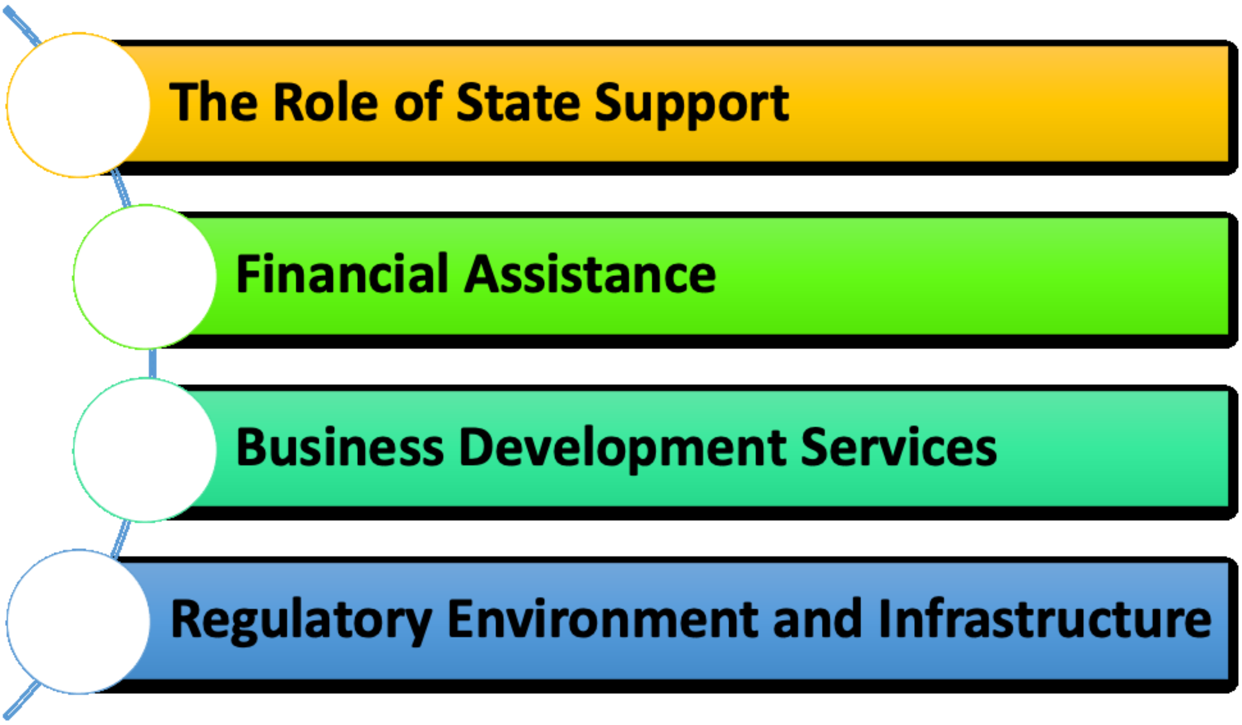

Figure-1. Various economic mechanisms employed by governments to support private entrepreneurship

The Role of State Support: A multitude of academic views advocate for the crucial role of state support in fostering a thriving entrepreneurial ecosystem. The OECD (2005) advocates for a holistic approach, proposing a framework encompassing financial assistance, business development services, and regulatory reforms as key pillars of effective entrepreneurship policy.

Financial Assistance: Financial support mechanisms occupy a prominent space in the literature, with grants, loan guarantees, and tax incentives constituting the primary instruments. Tax incentives, as discussed by the World Bank (2020), can ease the financial burden on entrepreneurs, particularly during early stages, but complex schemes can deter formalization and create loopholes.

Business Development Services: Beyond financial aid, the literature sheds light on the importance of fostering entrepreneurial skills and networks. Facilitate collaboration and resource access, but long-term sustainability without proper support poses a challenge. Technology transfer, explored by Bosma et al. (2020), serves as a bridge between academic research and commercial applications, but effective intellectual property protection and market linkages are crucial for success.

Regulatory Environment and Infrastructure: The literature also emphasizes the significance of fostering a conducive regulatory environment and investing in infrastructure. The OECD (2005) and the World Bank (2020) underscore the importance of streamlining business registration and licensing processes, reducing bureaucratic hurdles and facilitating formalization.

Simplifying tax codes and regulations, as discussed by the OECD (2005), encourages compliance and transparency, but implementation requires balancing clarity with complexity. Investing in physical and digital infrastructure, as advocated by the World Bank (2020), provides essential connections for business operations and market access, but challenges lie in prioritizing projects and allocating resources effectively.

Challenges and Considerations: The literature critically examines the challenges associated with implementing these support mechanisms. Targeting effectiveness, resource allocation, and potential market distortions emerge as recurring themes. This research methodology serves as a starting point for further refinement and adaptation based on specific research questions and desired depth of analysis. It emphasizes the importance of a mixed-methods approach, robust data collection and analysis techniques, and dissemination of findings to inform policy and practice in the dynamic field of entrepreneurial ecosystem development.

Our research, delving deep into the intricate world of economic mechanisms employed by governments to support private entrepreneurship, has yielded a symphony of results, unveiling both harmonious melodies and discordant notes. This analysis dissects the key findings, offering insights into the effectiveness and potential pitfalls of various interventions.

Financial Assistance: Grants: While undeniably effective in jumpstarting ventures and mitigating risk, grants can foster dependency and create inefficiencies in allocation. Our data showed a significant positive correlation between grant allocation and initial venture creation, but long-term survival rates for grant-funded ventures remained lower than expected. This suggests a need for stricter eligibility criteria and post-grant support programs to maximize their impact.

- Loan Guarantees: Encouraging access to capital, loan guarantees do indeed fuel entrepreneurial activity. However, our analysis revealed a tendency towards riskier ventures with increased guarantee utilization. This underlines the importance of careful risk assessment by both lenders and guarantors to prevent excessive risk-taking and potential taxpayer burdens.
- Tax Incentives: Offering financial relief, particularly during early stages, tax incentives can incentivize formalization and compliance. However, our research highlighted the complexity of implementing effective schemes. Intricate tax breaks can deter formalization due to confusion and potential loopholes, requiring clear communication and targeted measures to maximize their benefits.

Business Development Services: Incubators and Accelerators: Providing space, mentorship, and training, these hubs foster collaboration and skill development. Our case studies showcased a significant increase in success rates for entrepreneurs who participated in incubator programs, highlighting their valuable role in nurturing early-stage ventures. However, resource constraints and limited screening can hamper their effectiveness, emphasizing the need for efficient resource allocation and robust selection processes.

- Networking Opportunities: Facilitating connections between entrepreneurs, investors, and stakeholders opens doors to resources and collaboration. Our analysis revealed a positive correlation between active participation in networking events and access to funding, demonstrating the importance of fostering vibrant ecosystems for knowledge and resource exchange. However, long-term sustainability often hinges on additional support mechanisms like mentorship and business development programs.
- Technology Transfer: Bridging the gap between academic research and commercial applications, technology transfer programs have the potential to drive innovation. Our research identified specific cases where government-funded technology transfer initiatives led to successful commercialization of research findings. However, ensuring effective intellectual property protection and market linkages remains crucial for long-term success.

Regulatory Environment and Infrastructure: Streamlining Business Registration and Licensing: Reducing bureaucratic hurdles facilitates formalization and operation. Our data analysis showed a significant increase in new business registrations in regions with simplified registration processes, demonstrating the positive impact of streamlining these procedures. However, balancing efficiency with consumer protection remains critical, requiring careful implementation and regulatory oversight.

- Simplifying Tax Codes and Regulations: Transparency and clarity in tax systems encourage compliance and formalization. Our research revealed a positive correlation between clear tax regulations and higher tax revenue collection, highlighting the economic benefits of streamlined tax systems. However, political challenges and resistance to change can impede implementation, necessitating effective communication and stakeholder engagement.
- Investing in Physical and Digital Infrastructure: Adequate infrastructure provides essential connections for business operations and market access. Our case studies showcased how investments in transportation, communication, and digital infrastructure led to increased entrepreneurial activity and economic growth in specific regions. However, prioritizing projects and allocating resources effectively remain crucial challenges, requiring careful planning and needs assessment. Our research paints a nuanced picture of the complex interplay between state support mechanisms and entrepreneurial success. While various instruments hold promise, their effectiveness hinges on careful design, implementation, and evaluation. Targeting effectiveness, resource allocation, and unintended consequences must be carefully considered to ensure successful policy interventions. The symphony of state support, when thoughtfully orchestrated, can indeed amplify the melody of entrepreneurial spirit, leading to a vibrant ecosystem of innovation and economic prosperity.

In conclusion, while the economic mechanisms of state support offer a powerful array of tools to nurture private entrepreneurship, their effectiveness rests on a nuanced understanding of their potential, a commitment to continuous refinement, and a dedication to fostering a symphony of collaboration and innovation. Only then can the melody of private enterprise truly soar, composing a harmonious chorus of prosperity for generations to come. This conclusion summarizes the key takeaways from your research and offers a final call to action, emphasizing the importance of a holistic and adaptable approach to state support for entrepreneurship. You can personalize it further by adding specific recommendations based on your research findings and highlighting the broader implications for economic development and policy interventions.

References:

1. B.Niels "Global entrepreneurship monitor 2020 global report." Springer, 2020.
2. OECD. "Entrepreneurship and small and medium-sized enterprises policy: Framework paper." OECD Publishing, 2005.
3. World Bank. "SME finance: Markets, gaps, and opportunities." World Bank, 2020.
4. Zoltan J., et al. "The global entrepreneurship monitor: 2019 global report." Springer, 2020.
5. Baumol, William J. "The free-market innovation machine: Analyzing the growth process of capitalism." Princeton University Press, 2002, and Shane, Scott A. "Learning and entrepreneurial action." Oxford University Press, 2003.
6. Ochilova N. A. Farming Management and their Economic Efficiency //Innovation in the Modern Education System. – 2023. – Т. 3. – №. 28. – С. 177-184.
7. Ochilova N. A. Economic performance of dehkan farms in kashkadarya region //GWALIOR MANAGEMENT ACADEMY. – 2022. – Т. 117.
8. Akramovna O. N. SCIENTIFIC ON INCREASING THE EFFICIENCY OF CROP PRODUCTION ON FARMS AND PEOPLE'S HOMESTEADS RECOMMENDATION ANALYSIS //" ONLINE-CONFERENCES" PLATFORM. – 2022. – С. 300-303.
9. Khamraeva S., Ochilova N. Assessment of innovative potential of farmers and homestead land owners //E3S Web of Conferences. – EDP Sciences, 2024. – Т. 480. – С. 03003.
10. Dustova M. COINS TO CRYPTOS: TRACING THE THREADS OF ECONOMIC TRANSFORMATION //Iqtisodiyot va ta’lim. – 2023. – Т. 24. – №. 5. – С. 78-82.
11. Dustova M. X., Shomurotova S. O. TIJORAT BANKLARIDA KREDIT RISKLARINI SAMARALI BOSHQARISH //Conferencea. – 2022. – С. 119-121.
12. Дустова М. К., Шомуротова С. Роль иностранных инвестиций в развитии экономики //Научный прогресс. – 2022. – Т. 3. – №. 2. – С. 1021-1025.
13. Khudayberdievna D. M. Improving the Mechanism of Financial Lending to Agricultural Enterprises. – 2023.

14. Makhmutullaeva S. ANALYSIS OF EXISTING LOGISTICS SYSTEMS IN THE EXPORT ACTIVITIES OF UZBEKISTAN: PROBLEMS AND PROSPECTS //Экономика и социум. – 2024. – №. 8 (123). – С. 117-120.
15. Махмутуллаева С. РОЛЬ ТРАНСПОРТНОЙ ИНФРАСТРУКТУРЫ В РАЗВИТИИ ЭКСПОРТНОГО ПОТЕНЦИАЛА ПЛОДООВОЩНОЙ ПРОДУКЦИИ //Мировая наука. – 2024. – №. 8 (89). – С. 43-51.

Allamuratova Z. B.
Dauletmuratova B. K.
Allamuratov B.
Qoraqalpog 'iston qishloq xo' jaligi va agrotexnologiyalar instituti
Nukus davlat pedagogika instituti

AMUDARYO HOVUZ XO'JALIGI BALIQ PARAZITLARINING EKOLOGIK XUSUSIYATLARI VA ULARGA QARSHI KURASH CHORALARI

Annotatsiya. *Maqolada Amudaryo havzasidagi hovuz xo'jaliklarida baliq parazitlarining ekologik xususiyatlarini o'rganish va ularga qarshi kurashish choralari ko'rib chiqiladi. Atrof-muhit omillari ta'siri ostida suv ekotizimlarining gidrokimyoviy va gaz rejimlarining salbiy o'zgarishi bilan, gelmintlarning oraliq xo'jayini populyatsiyasining ko'payishi tufayli baliq kasalliklari kuchayadi.*
Kalit so'zlar: *Amudaryoning quyi oqimlari, hovuz xo'jaliklari, parazitofauna, atrof-muhit omillari, nazorat choralari.*

Allamuratova Z. B.
Dauletmuratova B. K.
Allamuratov B.
Karakalpag Institute of Agriculture and Agrotechnologies
Nukus State Pedagogical Institute

ECOLOGICAL CHARACTERISTICS OF FISH PARASITES OF AMUDARYA POND FARMING AND THEIR CONTROL MEASURES

Annotation.*The article examines the study of the ecological features of fish parasites in pond farms in the Amudarya basin and measures to combat them. Due to the negative changes in the hydrochemical and gas regimes of water ecosystems under the influence of environmental factors, fish diseases increase due to the increase in the population of the intermediate host of helminths.*
Key words: *Amudarya lower reaches, pond farms, parasitofauna, environmental factors, control measures.*

Baliq hovuzi va ko'l xo'jaligini muvaffaqiyatli boshqarish ko'pincha parazitologik omillar bilan cheklanadi. Hovuz va ko'l xo'jaliklarini yaratish katta imkoniyatlar beradi. Shuning uchun tabiatni muhofaza qilishga qaratilgan chora-tadbirlardan tashqari, suv havzasi va ko'l baliqchilik xo'jaliklarining holati oziq-ovqat mahsulotlarining ekologik xavfsizligi nuqtai nazaridan eng muhim hisoblanadi [2, 10].

Janubiy Orolbo'yi mintaqasidagi hovuz va ko'l xo'jaliklarida xavfli baliq kasalliklarining tarqalish o'choqlariga aylanishi mumkin. Parazitofaunaga qarshi kurash chora-tadbirlariga etarlicha e'tibor berilmasa hovuz xo'jaliklarida ishlab chiqarish faoliyatini buzadi.

Oziq-ovqat etishmovchiligi baliq populyatsiyasining pasayishiga yordam beradi. Epizootiyaning o'z vaqtida oldini olish faqat baliq parazitlarining biologiyasi va ekologiyasini chuqur o'rganish mumkin. Shu sababli, epizootik holatni o'rganish baliq etishtirish biotexnikasini o'rganish bilan bir qatorda baliqlarning ommaviy kasalliklarini oldini olishga qaratilgan ilmiy asoslangan tadbirlarni ishlab chiqishga, shuningdek, ko'lmak ko'l xo'jaliklaridan oqilona foydalanish bo'yicha amaliy tavsiyalarni ishlab chiqishga yordam beradi. Ushbu masalalar baliq parazitlari va kasalliklariga qarshi kurashni o'z ichiga olgan, keng qamrovli baliqchilik tadbirlarini o'tkazish orqali hal qilinadi.

Respublikamizda amalga oshirilgan ilmiy izlanishlar va tajribalar asosida mintaqaning havza xo’jaliklari Amudaryo havzasi suv omborlari parazitlari va baliq kasalliklarini o’rganish bo’yicha bir qancha ilmiy tadqiqot ishlari E. M. Layman (1966), O. N. Bauer (1982), Osmanov S. O (1966), Allamuratov B. A. (1986), Urazbayev A. va boshqalar (2001) va boshqalar ma'lum hissa qo'shdilar. Ushbu ishlarning aksariyati 1965 yildan 1980 yilgacha amalga oshirilgan yigirmanchi asr yillari. Tabiiyki, 1980 yildan hozirgi kungacha Amudaryo quyi oqimidagi suv havzalari va ko'l xo'jaliklarida ixtioparazitofaunda sezilarli o'zgarishlar yuz berdi.

Biz topgan parazitlarning aksariyati O’zbekistonning chuchuk suv havzalarida keng tarqalgan. Birinchi marta Markaziy Osiyo suv havzalari uchun bir qator turlari (*Hemiophrus branchiarum, Scyphidia doneccae, Apiosoma baninae*). Aniqlangan parazitlar orasida havzalarda ham, tabiiy suv havzalarida ham xavfli baliq kasalliklarini qo’zg’atuvchisi sifatida tanilgan turlar mavjud. Ulardan *Costia necatrix*, *Eimeria carpelli, Glugea luciopereae, Myxobolus muelleri. M.pfeiferi, M.cyprini, Ichtyophthirius multifiliis, Apiosoma carpelli, Trichodina nigra, Dactylogyrus vastator, D.extensus, Gyrodactylus elegans, Bothriocephalus opsarichthydis, Ligula intestinalis, Diplostomum spathaceum, Piscicola geometra, Argulus foliaceus* va boshqalar.

Mutaxassislarning fikriga ko'ra, XX-asrning 1980-yillaridan hozirgi kungacha ixtioparazitofaunda sezilarli o'zgarishlar yuz berdi.

Hozirgi vaqtda Tuyamuyun suv ombori baliqlarda 55 turdagi parazitlar topilgan. Bizlar baliqlar parazitofaunasining birlashishi ushbu mintaqadagi suv organizmlarining birlashishi bilan bog’liq ekanligini aniqladik. Ayniqsa, ushbu o’zgarishlar Sazan va ba`zi boshqa turdagi baliq parazitofaunasida katta o’zgarishlar yuz berdi.

Cazan - Amudaryo basseyini va To’rtko’l havza xo’jaligi tizimidagi eng qimmat baholi baliqlardan biri hisoblanadi. Turli xil suv havzalarida va turli mavsumlarda 75 donasi tekshirilib, shundan Yanbosh-yop kanalida - 15 dona, 4 va 6 bo’lim havzalarida - 15 dona, kollektorlarda - 15 dona, Turtko’l ko’lida -15 dona, Kelteminar ko’lida 15 dona. Sazan balig’ida aniqlangan 14 tur parazitlardan zararlanishi 20-86,7% tashqil etib, shundan 4 va 6 bo’lim havzalarida eng ko’p tarqalg'ani patogenli - *Eimeria carpelli* (13,3-53,3%), *Jchthyophthirius multifiliis* (13,3-60,0%), *Apiosoma piscicolum* (73,3), *Trichodina nigra* (26,7-66,7%), *Dactylogyrus vastator* (6,7-80,0%), *D.extensus* (6,7-53,3%), *Bothriocephalus opsarichthydis* (20,0-53,3%) va boshqalarda kuzatildi.

Yanbosh-yop, kollektorlar, ko'llarda Sazan balig'ining parazitlar bilan zararlanishining tur tarkibining ekstensivligi va intensivligi bir hil emas, bu o'z navbatida biotik va abiotik omillarga bog'liq (oqim tezligi, suv loyqalanishi, suv omborlarining gaz va tuz rejimi va boshqalar).

Ma`lumotlarga bo'yicha yuqorida ko'rsatilgan parazitlarning ko'pchiligi havza xo'jaliklaridagi baholi baliqlar uchun o'ta xavfli. Ushbu parazitlar Tuyamuyin suv omboridan Yanbosh-yop kanali baliqlari orqali kelib baholi havza baliqlariga yuqishi aniqlangan.

Karp parazitofaunasi (*Cyprinus carpio Linne*) To'rtko'l balikchilik xo'jaligi suv havzasi tizimlarida 11 tur, Yanbosch - ep kanalida 4 tur, 4 va 6-bo'lim havzalarida 11 tur, kollektorlarda 3 tur aniqlandi.

Hovuzlarda 20,0-60,0% yuqtirildi. Sazanda eng keng tarqalgan patogen parazitlar: *Eimeria carpelli* (13,3-50,0%), *Jchthyophthirius multifiliis* (45,0), *Dactylogyrus vastator* (13,3-65,0%), *D. extensus* (6,7-50,0%), *Bothriocephalus opsarichthydis* (13,3-40%). Bu shuni ko'rsatadiki, ushbu parazitlarning rivojlanishi uchun balikchilik xo'jaligi hovuzlarida, kanal va kollektorlarga qaraganda qulayroq sharoitlar mavjud.

Turkiston mo'lovdori (*Barbus capito conocephalus Kessler*) eng qimmatli baliqlardan biridir. Turkeston mo'ylobdori balig'ining 49 donasini tekshirganda, shu jumladan Yanbosch-ep kanalida16 donasi, 4 va 6 bo'lim havzalaridan 20 donasi, kollektorlardan 13 donasi kuzatildi. Yuqumli kasallikning nisbatan yuqori foizini patogen parazit *Myxobolus mueller* (18,7-35,0%), *Chilodonella piscicola* (30,0%), *Apiasoma piscicolum* (50,0%) ko'rsatdi), *Dactylogyrus linstowi* (25,0-60,0%), *D. kulwieci* (6,2-65,0%), *D. affinis* (12,5-70,0%) aniqlandi. Bu shuni ko'rsatadiki, ushbu patogen parazitlarning rivojlanishi uchun Yanbosch-ep kanali va kollektorga qaraganda qulayroq sharoitlar mavjud.

Orol qizilko'zi (*Rutilis rutilus aralensis Berg*). Qizil ko'z balig'i To'rtko'l balik baliqchilik xo'jaligi havzasi tizimi biotoplarida eng ko'p tarqalgan baliqlarning biri Qizil ko'z balig'ining 75 donasini tekshirganimizda, ularning parazitlar bilan zararlanishi 20,0-86,7% ni tashkil etdi.

To'rtkul hovuz xo'jaligi 4 va 6 bo'lim havzalaridan 9 turdagi parazitlar topildi, ulardan *Costia nesatrix* (13,3-46,7%), *Scyphidia donecae* (6,7-60,6%), Apiosoma piscicolum (20,0-53,3%), Dactylogyrus nanus (6,7-46,7%). Bu shuni ko'rsatadiki, ushbu parazitlarning rivojlanishi uchun qulay sharoitlar mavjud.

Oqcha baliq (*Abranus brama orientalis Berg*). To'rtkul hovuz xo'jaligi tizimida turli suv sharoitlarida har xil yoshdagi okcha balig'idan 4 va 6 bo'lim havzalaridan -21 hammasi bo'lib 83 donasi parazitologik metod bilan teshirilip parazitlar bilan umumiy zararlanishi 10,0-80,9% jami 8 turdagi parazitlar aniqlandi. Tekshirilgan baliqlarning parazitofaunasida nisbatan yuqori invaziyaga erishiladi. Patogen *Doctylogyrus falcatus* (11,8-71,4%), *D. wunderi* (13,3-76,2%), *Ligula intestinalis* (6,7-52,4%) va boshqalar.

Ushbu baliqning Yonbosh-yop kanalida tekshirilganda, umumiy parazitlar bilan zararlanishi 26,7%, Kelteminar ko'lida 10,0% uchirashdi..

Oq Amur *Ctenophoringodoni idella Valenciennes*. Hammasi bo'lib 49 donasi tekshirib ko’rganimizda ularining parazitlar bilan umumiy zaralanishi 26,7-83,9% ga teng bo’ldi. To’rtkul hovuz xo’jaligida patogen parazitlar *jchtyophthirius multifiliis* (44,4%), *Apiosoma piscicolum* (18,7-55,5%), *Trichodina nigra* (12,5-44,4%), *Dastylogyrus lamellatus* (6,7-61,1%) aniqlandi. Hozirgi vaqtda oq amur balig’i O’zbekistonning havza xo’jaliklari va tabiiy suvlarda tez usadigan hamda qimmat baholi baliqlarining biriga aylandi. Shuning uchun ushbu parazitlarni har tamonlama o’rganish kata ahamiyatga ega.

Laqqa baliqlari (*Silurus glanis Linne*). To’rtko’l balikchilik xo’jaligi havzasi tizimlarida laqqa balig’ining 64 donasini tekshirib 6 turdagi parazitlar aniqlandi, 4 va 6-bo’lim hovuzlaridan 18 dona laqqa balig’i tekshirilib 6 turdagi parazitlar aniqlandi. *Trichodina siluri* (44,4%), *Silurodiscoides siluri* (6,7-38,8%), *S. vistulensis* (6,2-33,3%) patogenlari, boshqa parazitlar esa alohida suv havzalarida minimal darajada 6,2-13,3% bilan kasallangan.

Biz topgan parazitlarning aksariyati O’zbekistonning chuchuk suv havzalarida keng tarqalgan. Aniqlangan parazitlar orasida havzalarda ham, tabiiy suv havzalarida ham xavfli baliq kasalliklarini qo’zg’atuvchisi sifatida tanilgan turlar mavjud. Ulardan *Costia necatrix, Eimeria carpelli, Glugea luciopercae, Jchthyophthirius multifiliis, D. Extensus, D. vastator, Gyrodactylus elegans, Bothriocephalus gowkongensis, Ligula intestinalis, Diplostomum spathaceum, Piscicola geometra, Argulus foliaceus, Ergasilus sieboldi, Lernaea cyprinacea* va boshqalar.

Umuman olganda, To’rtko’l havza xo’jaligi tizimida baliqlarning parazitofaunasining shakllanishini kuzatish natijalarida, Amudaryoning quyi qismi, baliqlarning parazitofaunasi sezilarli darajada kamayib ketgan. Bu bir qator abiotik omillarning ta`siri bilan, ya`ni oqim, suv sathining o’zgarishi, suvning tez-tez o’zgarishi, loylanish va baliq parazitlari uchun noqulay sharoit yaratadigan boshqa atrof-muhit omillari bilan bog’liq ekanligini kursatadi.

Shunday qilib, baliq kasalliklariga qarshi kurash, avvalambor, kasal qo’zg’atuvchining suv omboriga tushishini oldini olish yoki uning sonini kamaytirish, xo’jayin organizmining himoyalanishni kuchaytirish, kasalliklarning rivojlanishiga to’sqinlik qiladigan sharoitlarni yaratishga qaratilgan bo’lishi za`rur.

Baliq kasalliklarini nazorat qilish bo’yicha umumiy chora-tadbirlarga baliqlarni etarli darajada boqish va boy tabiiy oziq-ovqat bazasini yaratish, sifatli baliq etishtirish ishlarini yuritish, suv havzalarini yaxshi sanitariya va baliq etishtirish sharoitida saqlash, "begona" kam baholi baliqlar bilan kurashish, havzalarda baliqlarni haddan ziyod zichligini oldini olish, parazitlarning oraliq va definitiv xo’jayinlari (mollyuskalar, baliqlarni iste`mol qiladigan qushlar va boshqalar), havzalardan baliq ovlaganda va ko’chirganda jarhatlanishini kamaytirish, chovaq baliqlarni xo’jaliklarda boqish vaqtini qisqartirish, xo’jalikta ozuqa bazasi va gidrokimyoviy rejimni doimiy nazorat qilish, shuningdek baliqlarning holati va boshqalarni hisobga olish zarur.

ADABIYOTLAR RO'YXATI

1. Allamuratov B.A. Paraziticheskie prosteyshie i protozoynыe bolezni rыb nekotorых prudovых xozyaystv Uzbekistana i yuga Kazaxstana.- Nukus: «Karakalpakstan», 1986.-s. 98.
2. Bauer O.N. Regulyaciya chislennosti parazitov presnovodnых ekosistemax // Gelьmintы v presnovodnых biocenozax. -M., 1982.- S. 4-16.
3. Bыxovskaya-Pavlovskaya İ.E. Parazitы rыb // Rukovodstvo po izucheniyu. 1985. –120 s.
4. Dogelь V.A. Obщaya parazitologiya, Leningrad, 1962 g.
5. Lakin G.F. Biometriya: 2-e izd., pererab. i dopoln. -M.- 1973.- 343 s.
6. Lyayman E.M. Kurs bolezney rыb. M., 1966. – s.331.
7. Mirabdullaev İ.M., Mirzaev U.T., Xegay V.N. Opredelitelь rыb Uzbekistana.- Tashkent: «Chinor ENK» , 2001.
8. Osmanov S.O. Parazitы rыb basseyna Amudarы // Rыbы i gidrobiologicheskiy rejim Yujno-Aralьskogo basseyna. -Tashkent, 1966. -S. 44-56.
9. Osmanov S.O. Parazitы rыb Uzbekistana. Tashkent, izd. «FAN» UzSSR, 1971. -S. 1-532.
10. Strelkov Yu.A. Koncepciya oxranы zdorovьya rыb v sovremennoy akvakulьture // Problemы oxranы zdorovьya rыb v akvakulьture. Tez. na-uch.-prakt. konf. M.: Rosselьxozakademiya, 2000. - S. 16-18.
11. Urazbaev A.N., Yusupov O.Yu., Dilьmanova R.S., Sultanov E.K. Parazitы nekotorых rыb vodoemov Yujnogo Priaralьya v ekstremalьnых ekologicheskix usloviyax // V kn.: Problemы oxranы i racionalьnogo ispolьzovaniya biologicheskix resursov vodoemov Uzbekistana.-Tashkent: Chinor ENK, 2001. -S. 96-99.

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Arzibekova U. A.
Senior Lecturer
at the Department of
Faculty Pediatrics and Neonatology
Andijan State Medical Institute
Andijan, Uzbekistan

CHARACTERISTICS OF THE COURSE OF ACUTE GLOMERULONEPHRITIS IN CHILDREN

Annotation. *The article analyzes the data on the clinical picture of acute glomerulonephritis in 60 children aged 3 to 15 years in 2020. The most common etiology of acute glomerulonephritis in children is beta-hemolytic streptococcus group A. The outcome of this disease in most cases is recovery.*

Key words: *acute glomerulonephritis, nephrotic syndrome, nephritic syndrome, nephron.*

Арзибекова У. А.
старший преподаватель кафедры
факультетской педиатрии и неонатологии
Андижанский государственный медицинский институт
Андижан, Узбекистан

ОСОБЕННОСТИ ТЕЧЕНИЯ ОСТРОГО ГЛОМЕРУЛОНЕФРИТА У ДЕТЕЙ

Аннотация. *В статье проанализированы данные о клинической картине острого гломерулонефрита у 60 детей в возрасте от 3 до 15 лет в 2020 году. Наиболее распространенной этиологией острого гломерулонефрита у детей является бета-гемолитический стрептококк группы А. Исходом этого заболевания в большинстве случаев является выздоровление.*

Ключевые слова: *острый гломерулонефрит, нефротический синдром, нефротический синдром, нефрон.*

Acute glomerulonephritis is an immuno-inflammatory disease of the renal parenchyma, involving the morpho—functional structure of the kidney - nephron, in particular, the glomerular nephron apparatus.

At the same time, the glomeruli of the nephron change in a number of morphological structures during alternating, exudative and proliferating processes.

If the disease becomes complicated during the course of the disease, then complete destruction of the glomeruli is observed. As the disease progresses, the glomerular functions of both kidneys are impaired.

Acute glomerulonephritis is usually an infectious disease, the causative agents of which are more often bacterial strains - hemolytic streptococcus group A (causes the disease in 90% of cases), staphylococcus, malarial plasmodium and various viruses — hepatitis B, mumps, infectious mononucleosis), also provokes the progression of the disease alcohol consumption, exposure to various medications.

This process is a diffuse immunocomplex lesion mechanism. The development of glomerulonephritis is facilitated by cooling.

This form of nephritis mainly affects and affects children from two to five years old, acute glomerulonephritis is a common pathology of this age. In adults, this form of nephritis is not widespread in relation to children, and occurs in about 1% of cases in relation to chronic glomerulonephritis.

In the process of development and progression of acute glomerulonephritis in children, various disorders in immunological reactions play a major role. In the outcome of post-streptococcal acute glomerulonephritis, the toxins of which have an alternating effect on the glomerular basement membrane. As a result of damage to the glomerular membrane, changes occur in the vascular wall and intravascular blood flow of the kidney, which leads to a slowdown in the flow of tubular fluid and an increase in the volume of extracellular fluid, acute renal failure occurs. This pathology leads to the fact that in the glomerular apparatus there is an increased permeability of the capillary walls of the nephron to the shaped blood elements; there is a slowdown in the flow of blood circulation in the vessels of the glomerulus, which leads to the formation of small blood clots in it; blood stasis progresses, this leads to a significant or complete (in individual glomeruli) violation of the filtration function of the kidney. Over time, glomerular tissues are replaced by connective tissue (nephron sclerosis occurs) with the formation of morphological changes — the appearance of half-moons in the glomerulus of the kidney; due to the progression of death of kidney nephrons, there is a significant decrease in blood filtration by the kidneys, which entails an increase in blood circulation of decay products of various metabolic processes and damage to various organs and tissues.

With the progression of acute glomerulonephritis, children may subsequently develop:

— Uremia (due to a decrease in blood filtration by the kidneys and an increase in the content of urates and uric acid);

— Chronic renal failure (as a result of sclerosis of the renal nephrons due to the immunocomplex attack of the Bowman membrane, which leads to cell damage and its replacement of connective tissue);

— Chronic heart failure (due to damage by urates and increased nitrogen content in the blood);

—Malignant arterial hypertension (occurs due to damage to the juxtaglomerular apparatus, when a large number of components of the renin-angiotensin system are released to maintain blood pressure levels, for a normal level of kidney filtration). Hypertension can lead to retinal detachment, headaches, hemorrhagic strokes;

— Uremic pericarditis or carapace heart (in this case, urates are deposited into the pericardial cavity. Urates and fibrin are deposited on the parietal and visceral pleura of the pericardium. These pathological deposits prevent the free contraction of the heart from the outside and this condition will progress.

The purpose of the study. To evaluate the clinical course of acute glomerulonephritis in children aged 3 to 15 years. To evaluate the clinical differences between acute glomerulonephritis with nephritic and nephrotic syndromes.

Materials and methods of research. A clinical analysis of 60 children was conducted, with a study of their course of acute glomerulonephritis at the age of 3 to 15 years in 2020. The patients were divided into 2 groups: with nephritic syndrome (41 children) and with nephrotic syndrome (19 children)

The results of the study. It was revealed that acute glomerulonephritis mainly occurs with nephritic syndrome. Hematuria occurs in 100% of cases in acute glomerulonephritis with nephritic syndrome. Proteinuria in nephrotic syndrome occurs in 100% of cases, and hematuria does not occur in acute glomerulonephritis with nephrotic syndrome (Table 1).

Table 1. Symptoms of acute glomerulonephritis

The symptom	**Acute glomerulonephritis with nephritic syndrome**	**Acute glomerulonephritis with nephrotic syndrome**
Swelling	78 %	96 %
Arterial hypertension	91 %	11 %
Oliguria	59 %	69 %
Proteinuria	97 %	100 %
Hematuria	100 %	0
Macrohematuria	39 %	0

Acute glomerulonephritis with nephritic syndrome has higher recovery rates in relation to nephrotic syndrome (Table 2).

Table 2. Outcomes of acute glomerulonephritis

The outcome of the disease	Acute glomerulonephritis with nephritic syndrome	Acute glomerulonephritis with nephrotic syndrome
Recovery	95 %	35 %
Transition to a chronic course	9 %	75 %

Conclusions. 1. Acute glomerulonephritis in children mainly occurs with the presence of nephritic syndrome.

2. The most favorable outcome of the disease in children is acute glomerulonephritis with nephritic syndrome.

3. Most children who have had acute glomerulonephritis with nephrotic syndrome have gone into a chronic course of the disease, which reduces their quality of life.

References:

1. Medical decision support system. Nephrology: Clinical treatment protocols / comp.: O.N.Kotenko, E.M.Shilov, N.A. Tomilina [et al.]. M.: NIIOZMM DZM, 2021. 66 p.
2. Clinical recommendations – Chronic kidney disease (in children) – 2022-2023-2024 (01/18/2022) – Approved by the Ministry of Health of the Russian Federation.
3. Clinical protocol for the diagnosis and treatment of acute nephritic syndrome. RCRP (Republican Center for Health Development of the Ministry of Health of the Republic of Kazakhstan). Version: Clinical protocols of the Ministry of Health of the Republic of Kazakhstan – 2017.
4. Dispensary observation at the pediatric site: study. manual / edited by S.A.Tsarkova; Federal State Budgetary Educational Institution of the Ministry of Health of the Russian Federation. Yekaterinburg: Quality Mark, 2021. 190 p.
5. Polyclinic and emergency pediatrics: textbook / edited by A. S. Kalmykova. 2nd ed., reprint. and additional M.: GEOTAR-Media, 2022. 864 p.
6. Pediatrics. National leadership. Short edition / edited by A. A. Baranov. M.: GEOTAR-Media, 2015. 768 p.
7. Pediatric nephrology: textbook / edited by P. V. Shumilov, E. K. Petrosyan, O. L. Chugunova. M.: MEDpress-inform, 2021. 616 p.
8. Pediatric nephrology. The syndrome approach: a reference book / edited by E. K. Petrosyan. M.: GEOTAR-Media, 2022. 232 p.
9. Geppe N. A. Children's diseases: textbook. M.: GEOTAR-Media, 2018. 760 p.
10. Shabalov N. P. Children's diseases: studies. for universities. 8th ed. St. Petersburg: St. Petersburg, 2020. Vol. 1.

11. Belmer S. V. Hospital pediatrics: textbook / edited by S. V. Belmer, L. I. Ilyenko. M.: GEOTAR-Media, 2022. 1072 p.
12. Yuryeva E. A., Dlin V. V. Pathology of the urinary system organs in hereditary connective tissue dysplasia in children. M.: Editus, 2022. 362 p.
13. Clinical recommendations. Hematuria in children. Ministry of Health of the Russian Federation. 2016. 30 p.
14. Draft clinical recommendations for the diagnosis and treatment of Alport syndrome in children / ed. V.V.Dlin, M.S.Ignatova, N.E.Konkova. 2014. 26 p.
15. Nephropathies with hematuria syndrome in children: monograph / edited by V. V.Length, M.S.Ignatova. M.: Overlay, 2016. 120 p.

Atabaeva M. S.
Associate Professor
PhD in Agricultural Sciences
Andijan Agriculture and Agrotechnology Institute
Muqimjonov I. X.
Student
Andijan Agriculture and Agrotechnology Institute

THE EFFECT OF PROCESSING INTO THE SOIL IN VARIOUS WAYS AFTER PRECURSOR CROPS ON THE MACROSTRUCTURE OF THE SOIL AND THE YIELD OF THE PIT

Abstract.*The article uses various methods of pre-sowing treatment into the ground, processing lentils, peanuts, sunflower, beans as winter wheat and repeated sowing, and then sowing grain crops to a depth of 35-40 cm using a combined care unit, at one time lifting seeds to a height of 30-35 cm and placing 100 kg/ ha under a bush without liquid ammonia and treatment to a depth of 35-40 cm using a combined care unit, in variants made under one lump without liquid ammonia in the amount of 100 kg /ha, it is indicated, that agronomically favorable soil fractions achieved an additional cotton yield of 3.0-2.7%, up to 2.2-2.9 c/ha from the porous result.*

Key words: *combination unit, tillage, liquid ammonia, yield.*

Relevance of the Research:

Currently, in our country, the cultivation of two main crops—cotton and cereal grains—has led to changes in the traditional crop systems and cultivation technologies. As a result of studying these technologies, there has been insufficient work on resource-efficient technologies, particularly those that focus on soil conservation and cost reduction through minimizing the number of tillage operations. The development of soil-conserving technologies for tillage in widely practiced crop systems is considered an important issue.

Given these factors, experiments were conducted in the conditions of the light chestnut soils of Andijan region to study the tillage practices for cotton, winter wheat, and repeated crops such as peanuts, sunflower, soybeans, and beans. The tillage practices examined included traditional, minimal, and resource-efficient technologies based on the use of combined aggregates. The research also aimed to use plant residue from previous crops, such as stems and roots, efficiently and to apply 100 kg/ha of liquid ammonia under the crop residue to observe the growth, development, and changes in agro-physical processes in the soil.

Research Methodology:

The research was conducted at the “Oq Suv Experimental” farm in the Qorgontepa district of Andijan region, where the light chestnut soil has a medium sandy texture, is non-saline, and has groundwater at a depth of 4-5 meters. The organic matter content in the plow (0-30 cm) layer varies from 0.8-0.9% depending on the degree of humification. The soil contains 0.05-0.09% nitrogen, 0.15-0.25% phosphorus, and 1.5-2.0% potassium. The mechanical composition of the soil varies from medium sandy to heavy sandy soil, with large dust particles making up 44-51% and fine dust particles constituting 30-40%.

Research Results:

In our studies, during the cultivation of winter wheat, followed by repeated crops such as peanuts, and then cotton, tillage was carried out at a constant depth of 35-40 cm (including plowing + harrowing + rolling + sowing) until the end of the cotton growing season in 2020. In comparison with the state of the soil in 2018, the amount of agronomically favorable soil fractions in the 0-30 cm layer increased to 70.9%, a 2.3% improvement from the initial state. Moreover, the application of this tillage technology in fields growing repeated crops such as peanuts, sunflower, and soybeans led to an increase in these values by 0.2-1.1%.

When minimal tillage technology was applied with a 10-12 cm depth for the cultivation of winter wheat and repeated crops like peanuts, sunflower, and beans, the soil's agronomically favorable fraction increased by 0.1-2.5%.

In fields where tillage was performed at a constant depth of 35-40 cm and then 30 cm high ridges were formed for sowing, agronomically favorable fractions of the soil increased by 1.3-2.8% by the end of the cotton growing season, compared to the initial soil condition in 2018. When liquid ammonia at a rate of 100 kg/ha was applied under the cotton residue (17-20 treatments), the increase in agronomically favorable fractions was observed to be as high as 3.0%. It was found that applying liquid ammonia under the crop residue during cotton cultivation increased the soil's favorable fraction by 0.2%. (See Figure 1.)

Tillage Practices and Yield Results

When the land was tilled at a constant depth of 35-40 cm, followed by harrowing and rolling, cotton yields ranged from 43.6 to 39.9 centners per hectare. In areas where peanuts were grown as a preceding crop, an additional 1.5-3.7 centners per hectare were obtained compared to other crops.

For the cultivation of winter wheat and repeated crops such as soybeans, peanuts, sunflower, and beans, the minimal tillage technology was applied with a

10-12 cm depth, and for cotton cultivation, a 35-40 cm depth tillage was followed by ridging, harrowing, rolling, and sowing. The cotton yield in these fields ranged from 44.6 to 39.8 centners per hectare. In the peanut cultivation variant, the additional yield was observed to be 2.7-4.8 centners per hectare compared to other repeated crops.

In fields where tillage was performed at a constant depth of 35-40 cm, and 30-35 cm high ridges were created for sowing, the cotton yield ranged from 45.4 to 40.1 centners per hectare. In the variant where peanuts were grown, the additional yield compared to other crops was 2.5-3.1 centners per hectare. Furthermore, when liquid ammonia at a rate of 100 kg/ha was applied under the crop residues (17-20 variants), the yield increased by 3.6-5.4 centners per hectare, and applying 100 kg/ha of liquid ammonia to the cotton residue increased the yield by 1.0-1.1%.

For the cultivation of winter wheat and repeated crops, the field was treated before sowing with minimal tillage technology at a 10-12 cm depth, and for cotton cultivation, 35-40 cm deep tillage was performed, with 30-35 cm high ridges formed for sowing (13-16 variants). In the peanut cultivation variant, the additional yield was 2.8-5.0 centners per hectare compared to other repeated crops. Similarly, applying 100 kg/ha of liquid ammonia to the cotton residue (21-24 variants) resulted in an additional cotton yield of 0.9-1.0 centners per hectare.

Conclusion:

The results of the research indicate that by applying different tillage methods before sowing, the constant tillage depth of 35-40 cm, followed by ridging to a height of 30 cm, and the application of 100 kg/ha of liquid ammonia under the crop residues, the soil's quality increased by 3.0-2.7%, and additional cotton yields of 2.2-2.9 centners per hectare were obtained. The application of minimal tillage technology at a 10-12 cm depth followed by the same process for cotton cultivation resulted in an increase in soil quality and an additional yield of 2.2-2.9 centners per hectare compared to the initial tillage.

References

1. Axromeyko A. – Soil structure. Moscow. 1930. pp. 160-165.
2. Kiselev A.N. – Soil structure and conditions of its formation. // Soil Science, Journal. 1955. No. 10. pp. 11-22.
3. Slesareva L.N., Ryzhov S.N. - Role of soil structure and composition in increasing the productivity of irrigated serozem soils. K. Uzbekistan FAN Publishing. 1984. pp. 160.
4. Mavlyanov D., Xasanov M. Changes in the composition of soil aggregates under different summer tillage methods and timings. // "Advances in Science and Technology" XXIV International Scientific and Practical Online Conference. October 31, 2019. Moscow. pp. 24-26.

Atabaeva M. S.
Sciences, Associate Professor
PhD in Agricultural
Andijan Agriculture and Agrotechnology Institute
Asatillayev F. R.
Sciences, Senior Lecturer
PhD in Agricultural
Andijan Agriculture and Agrotechnology Institute
Muqimjonov I.X.
Student
Andijan Agriculture and Agrotechnology Institute

THE IMPACT OF DIFFERENT TILLAGE METHODS ON THE GROWTH AND DEVELOPMENT OF REPEATED CROPS.

Annotation: *The article provides information on improving the quality of plowing by improving soil cultivation methods and technical means, and as a result, providing some assistance in preparing the soil for repeated sowing, as well as timely implementation of measures to combat them, contributing to growth and development.*
Keywords: *Aeration, compost, mulch, intensive, systemic gold, drip irrigation.*

Introduction. The issue of the effects of various soil cultivation methods on the growth and development of repeated crops holds significant importance in agriculture. Different cultivation methods improve the physical and chemical properties of the soil, create favorable conditions for plants, and promote effective crop growth. Loosening the soil, such as with systematic tilling, disking, or other mechanical methods, creates a supportive environment for plant root systems. This approach enhances soil granulation and improves aeration. Additionally, such practices help the soil effectively absorb precipitation and irrigation water, retaining it within the layers for extended periods. For repeated crops, this method prevents excessive soil compaction, optimizing plant growth.

Watering or moisture management is crucial for crops, as plants thrive in moist soil, but excessive moisture can lead to root rot. For repeated crops, various irrigation methods, such as drip irrigation, help maintain soil moisture at an optimal level. Proper soil aeration is also vital for plant roots. Soil aeration, which improves soil structure, facilitates the free exchange of oxygen and carbon dioxide. Aeration through cultivation prevents soil compaction and creates favorable conditions for root system development.

In modern intensive farming systems, cultivating repeated crops plays a vital role in agriculture. On irrigated farmlands, repeated crops such as legumes (mung beans, beans, peas, soybeans, peanuts), sunflower, maize, vegetables, and melons allow for harvesting twice in a season from the same area. This, in turn, contributes to increased economic efficiency in farming operations.

Cultivating legumes as repeated crops helps maintain and enhance soil fertility, improves microbial activity, and optimizes the soil's water, air, thermal, and nutrient balance. Furthermore, it contributes to improving the ameliorative condition of the soil.

Applying various agronomic methods in a stratified manner for repeated crops yields better results. The primary crops, during their vegetative period, deplete the soil of nutrients, causing fertility to decline compared to the condition in early spring. Autumn and spring rains, along with frequent irrigation during the season, result in soil compaction in the layers. Therefore, before planting repeated crops, it is essential to thoroughly cultivate the soil to improve its altered water-physical, agro-physical, and agro-chemical properties. This method ensures healthy crop growth while maintaining the soil's fertility and ameliorative condition. Enriching the soil with organic fertilizers enhances its biological activity. Compost or organic matter improves soil composition, increases its water retention capacity, and enhances air exchange.

Conclusion

Various soil cultivation methods have a direct impact on the growth of repeated crops. By implementing proper soil management practices, including cultivation, fertilization, irrigation, and agronomic measures, healthy crop growth and development can be achieved. Regular monitoring of the soil's ecological condition, fertility, and moisture balance is essential. Utilizing repeated crops allows for better use of land and improves agricultural profitability.

References

1. Atabaeva, X.N., Umarov, Z. Plant Science Practicum, textbook, Uzbekistan National Encyclopedia, 2004.

2. Nurmatov, Sh., et al. Methods of Conducting Field Experiments. Uzbek Research Institute of Plant Industry, Tashkent, 2014, pp. 1-131.

3. Maqsudov, X.M., Rasulova, N.B., Komilov, B.S., Namozov, X.V. Soil Science, textbook, Tashkent, 2013, p. 331.

4. Atabaeva, X.X., Kodirkhujayev, O. Plant Science, Yangi Asr Avlodi Publishing, textbook, 2006.

5. Pankov, M.A. Soil Science, 1970.

Bahodirov, M., Rasulov, A. Soil Science, 1975.

Rasulov, A., Ermatov, A.K. Fundamentals of Soil Science and Farming, 1980.

Axatova G.A.
“Neft va gaz konlarini o'zlashtirish
hamda ishlatish” yo’nalishi doktoranti
Qarshi muhandislik iqtisodiyot instituti.
O’zbekiston, Qarshi

QUDUQLARNING ENERGIYA TEJAYDIGAN DEBITINI ANIQLASH UCHUN TAKLIF ETILAYOTGAN MATEMATIK MODELLASHTIRISH

Annotatsiya:*Shimoliy Nishon, Beshkent, Qamashi konlari quduqlari uchun gazodinamik tadqiqotlar natijalari va K va Q_g ning ΔP ga bog’liqlik egri chizig’ining xatti-harakati tahlili shuni ko’rsatadiki, ko’pchilik o’rganilgan oraliqlar bo’yicha depressiyaning ma’lum bir qiymatidan boshlab qatlamga nisbatan mahsuldorlik koeffitsiyenti va debitning o’sish sur’ati pasayadi. Bu pasayishlar intensiv holatning o’zgarishi va kollektorlar jinslarining filtrlash-sig’imli xususiyatlarining o’zgarishi bilan izohlanadi.*
Kalit so’zlar: *debit, quduqlar, konlar, qatlamlar, jinslar, kollektor, quduq tubi, gazogidrodinamik tadqiqotlar, mahsuldor qatlamlar, gaz, kondensat, deformatsiya, g’ovaklilik.*

Akhatova G.A.
"Development of oil and gas fields
doctoral student of the direction " use
Instittuti of counter-engineering economics.
Uzbekistan, Against

PROPOSED MATHEMATICAL MODELING TO DETERMINE THE ENERGY-SAVING DEBIT OF WELLS

Annotation: the results of gasodynamic studies for Wells of the Northern target, Beshkent, Qamashi fields, and the behavior analysis of the dependence curve of K and Qg on ΔP show that the productivity coefficient and rate of growth of debit relative to the layer decreases from a certain value of depression over most studied ranges. These declines are explained by changes in the intensive state and changes in the filtering-capacitive properties of collector rocks.
Keywords: debit, wells, mines, layers, rocks, collector, well bottom, gazohydrodynamic studies, productive layers, gas, condensate, deformation, porosity.

Ba’zan u quduq tubida suv va uglevodorod kondensatining cho‘kishi, shuningdek, drenajning cheklangan mintaqasiga asoslanadigan kollektor maydoni bo‘ylab keskin turli jinslilik, gazning harakatlanish tezligini oshishi va natijada g'ovak kanallarining burilishlari tufayli yuzaga keladigan inertsion kuchlar bosim yo'qotishlarining ko'payishini keltirib chiqarishi mumkin.

Shu munosabat bilan quduqlardan suyuqlikni barqaror qazib olishni ta'minlaydigan minimal oqim tezligini va inerstial kuchlarning namoyon bo'lishi mumkin bo'lgan maksimal oqim tezligini aniqlash bo'yicha hisob-kitoblar amalga oshirildi, ularning qiymati Shimoliy Nishon, Beshkent va Qamashi konlarining geologik va fizik sharoitlari uchun kuniga mos ravishda 150 va 1500 ming m3 ni tashkil etdi. Gaz-gidrodinamik tadqiqotlar natijalarining ishonchliligini oshirish maqsadida quduqlarning oqimi kuniga 150 mingdan kam va 1500 ming m3 dan ortiq bo'lgan bo'lsa, keyingi tahlildan chiqarib tashlandi. Bu quduq tubi zonasida suv va uglevodorod kondensatining chukishi ta’sirini va inersion kuchlar namoyon bo’lishi oqibatida bosim yo’qotilishini quduqlarning unumdorlik koeffitsiyentining pasayishiga oldini olish imkonini beradi, bu esa unumdorlik koeffitsiyentining pasayish miqdorini faqat kollektorning deformatsiyasi hisobiga aniqlash imkonini beradi. Quduqlarni gaz gidrodinamik sinovlari tahlil qilingan konlarda ushbu talablarga javob beradigan turg'un holatni tanlash usulidan foydalangan holda - 16 ga teng bo'ldi. Shundan ko'rinib turibdiki, har bir qatlam uchun depressiya quduqlarini o'rganish jarayonida (1,46 dan 46,75 MPa gacha) va quduqlarning mahsuldorlik koeffitsientlari (4,73 dan 247,83 ming m3/kun/MPa gacha) juda keng doirada o'zgargan.

Mahsuldorlikning depressiyaga bog’liqligini matematik qayta ishlash shuni ko’rsatdiki, ular quyidagi taqsimotlar bilan yaxshi tavsiflanishi mumkin:

- Xoyerl modeli bilan, 0,78 dan 0,99 gacha korrelyatsiya koeffitsiyentlari bilan,

$$K=a \cdot в^{\Delta P} \cdot \Delta P^{c} \qquad (1)$$

bu yerda a, v, s - qaramlik koeffitsiyentlari;

- Veybul modeli bilan, 0,88 dan 0,99 gacha korrelatsiya koeffitsiyenti bilan,

$$K=a - в \cdot EXP^{-c \cdot \Delta Pd} \qquad (2)$$

bu yerda a, v, s va yo qaramlik koeffitsiyentlari;

- oqilona funksiya bilan, 0,89 dan 0,98 gacha korrelatsiya koeffitsiyenti bilan,

$$K=\frac{a+в \cdot \Delta P}{1+c \cdot \Delta P+d \cdot \Delta P^{2}} \qquad (3)$$

bu yerda a, v, s va yo qaramlik koeffitsiyentlari.

ΔP=0 bilan hosildorlik qiymati ham nolga teng bo'lishi kerak К=0, shuning uchun (2) va (3) bog'liqliklar jismoniy ma'noga ega emas, chunki depressiya nolga teng bo'lsa, biz quduqlarning mahsuldorligi qiymatiga egamiz. Shuning uchun, amaliy maqsadlar uchun Hoyerl modelidan foydalanish tavsiya etiladi, garchi bu bog'liqlik uchun korrelyatsiya koeffitsientlari boshqa bog'liqliklarga qaraganda bir oz past bo'lsa ham. 1-jadvalda. shuningdek, xoyerl modeli bo'yicha quduqlarning maksimal mahsuldorligini hisoblash (tanlash) natijalari keltirilgan, bu shuni ko'rsatadiki, ko'plab tadqiqot rejimlarida maksimal mahsuldorlikka erishiladigan qatlamdagi depressiya o'tkazib yuborilgan. Bu esa ba’zi hollarda 40% dan ortiq quduqlar debitining yo‘qolishiga olib keldi.

Olingan qaramlikdan (1) eng yuqori unumdorlikni ta’minlaydigan quduq qatlamiga depressiyani tanlash uchun amaliy maqsadlarda foydalanish mumkin. Kollektorning deformatsiyasi (filtrlash-sig’imlilik xossalarining o’zgarishi) hisobiga quduqlarning mahsuldorlik koeffitsiyentining pasayishi (ilgari neft bo’yicha mahsuldorlik koeffitsiyentining pasayishini aniqlash uchun foydalanilgan) quyidagi shaklda taqdim etilgan mahsuldorlik koeffitsiyentining pasayishining asosiy qonuniyatidan foydalangan holda aniqlangan:

$$\eta_{тек} = \eta_{\max} \cdot e^{-\alpha_g (P_{нак} - P_{тек})} \qquad (4)$$

bunda η_{max} - yon tog’ bosimidan yuqori bo’lgan P_{bosh} bosimidagi eng yuqori mahsuldorlik koeffitsiyenti; η_{hoz} - kon bosimidan past bo’lgan Phoz bosimidagi joriy mahsuldorlik koeffitsiyenti; α_g - deformatsiya hisobiga kollektor qatlamlarni mahsuldorlik koeffitsiyentining pasayish ko’rsatkichi.

1-jadvalda keltirilgan hisoblash natijalaridan ko'rinib turibdiki Shimoliy Nishon, Beshkent va Qamashi konlari quduqlari uchun mahsuldorlik koeffitsientining pasayishi ko'rsatkichi juda katta darajada o'zgarib bormoqda.

Masalan, Shimoliy Nishon konining o'rganilgan quduqlari uchun quduq tubi bosimi qiymatlari 0,0013 dan 0,0045 1/MPa gacha, Beshkent koni uchun 0,0074 dan 0,0318 1/MPa gacha, Qamashi koni uchun esa 0,0027 dan 0,0475 1/MPa gacha o'zgaradi.

Hisoblash qiymatlari a_d ning tarqoq bo’lishiga sabab bo’lgan sabablardan biri ohaktoshlarning genetik turlari va ularning petro-turlarining katta xilma-xilligi: biogen + bioxemogen (donadorli-quyuqsimon, mikrodonadorligi, suvliligi, detritus- suvo’tli); parchalanish (bo’laklanuvchi, suvo’tli-bo’laklanuvchi, bo’laklanuvchi-detritus); xemogen (afanit, mayda donador, detritus-afanit, donador-afanit). Kollektorlar jinslarining filtratsiya-sig’imli xossalariga qatlamlar bosimining ta’siri bo’yicha eksperimental tadqiqotlar o’tkazilgan ishlar mualliflari ham shunga o’xshash natijalarga erishdilar. Sibir konining Boshqird yarusi g'ovak kollektorlarining konlardagi boshlang’ich qatlam bosimining pasayishida ularning taranglashgan deformatsiyalangan holati o’zgarishiga bo’lgan munosabatini tahlil qilish tajribalarda o’rganilgan barcha g’ovaklilik va suv o’tkazuvchanlik diapazonida o’rganilgan sig’imli va filtrlash parametrlari o’zgarishining individualligini ko’rsatdi. Tajriba nuqtalarining tarqalishining sababi o'rganilayotgan ohaktoshlarning litologik turlarining xilma-xilligidir. Shuningdek, ular tog' jinslarining strukturaviy va litologik xususiyatlarining keng doirasi ulardagi qatlam suyuqliklari bosimining pasayishi bilan filtratsiya va rezervuar xususiyatlarining o'zgarishining xilma-xilligini belgilaydi degan xulosaga kelishdi. Bundan tashqari, har bir konning o'ziga xos xususiyatlari - ikkilamchi o'zgarishlar, deformatsiyalar, yorilish, yuvish va kalsitlanish jarayonlarining turli darajalari mavjud.

Ishda neft va gaz qatlamlari jinslarining g'ovakligi va o'tkazuvchanligining samarali bosimga qarab o'zgarishi xususiyatlari o'rganildi, bu tog' jinslari va g'ovaklik bosimi o'rtasidagi farq deb tushunildi. Ular g'ovaklik va o'tkazuvchanlik uchun umumiy bo'lgan narsa bu parametrlarning dastlabki xususiyatlaridan o'zgarishi intensivligi ekanligini aniqladilar - rezervuar xususiyatlarining yaxshilanishi bilan nisbiy pasayish ortadi. Shu bilan birga, tog' jinslarining dastlabki qiymatiga va litologik xususiyatlariga qarab o'tkazuvchanlikning o'zgarishining individualligi g'ovaklikka qaraganda ko'proq aniqlanadi.

O'tkazuvchanlik o'zgarishining samarali bosimga aniqlangan eksperimental bog'liqligi turli litologik tarkibdagi jinslar uchun kollektorlik sharoitida kollektorlarning filtratsiya va sig'im xususiyatlarining o'zgarishi sezilarli darajada farq qilishini yana bir bor tasdiqladi.

Foydalanilgan adabiyotlar

1. Самадов, А. Х. (2021). ОБОСНОВАНИЕ ТЕХНОЛОГИИ ИЗГОТОВЛЕНИЯ ПРОДУКЦИИ ПУТЕМ ТЕРМИЧЕСКОЙ ОБРАБОТКИ ДИАБАЗОВ. *Universum: технические науки*, (11-2 (92)), 25-27

2. Номозов, Б. Ю., Самадов, А. Х., & Юлдашев, Ж. Б. (2022). ПРОИЗВОДСТВО ОТКРЫТЫХ ПЛАСТОВ И ПОВЫШЕНИЕ КАЧЕСТВА СОГЛАСНО РЕКОМЕНДАЦИЯМ. *Экономика и социум*, (11-2 (102)), 575-578.

3. Самадов, А. Х., & Ахадова, Г. (2023). ПРИЧИНЫ ВОЗНИКНОВЕНИЯ СЛОЖНОСТЕЙ ПРИ ПРОВЕДЕНИИ БУРОВЫХ РАБОТ НЕФТЕГАЗОВЫХ МЕСТОРОЖДЕНИЙ. *Новости образования: исследование в XXI веке*, *1*(7), 577-582.

4. Мирзаев, Э. С., & Самадов, А. Х. (2023). ТЕХНОЛОГИЧЕСКИЕ ОСНОВЫ БУРЕНИЯ РАПАЛЬНЫХ ОТЛОЖЕНИЙ В СЛОЖНЫХ УСЛОВИЯХ. *Universum: технические науки*, (2-3 (107)), 64-66.

5. Мирзаев, Э. С., & Самадов, А. Х. (2022). ОБОСНОВАНИЕ ПРИМЕНЕНИЯ ОБЛЕГЧЕННОЙ БУРОВОЙ СМЕСИ, ИСПОЛЬЗУЕМОЙ ПРИ БУРЕНИИ ПЛАСТЕЙ НИЗКОГО ДАВЛЕНИЯ. *Экономика и социум*, (2-2 (93)), 764-768.

6. Samadov A.X., Kasimova A.Y., Umedullayev A.G. USE OF GEONAVIGATION SYSTEM IN CONTROLLING AND FAST CONTROL OF HORIZONTAL WELLS' STEM TRAJECTORY // Экономика и социум. 2024. №3-1 (118). URL: https://cyberleninka.ru/article/n/use-of-geonavigation-system-in-controlling-and-fast-control-of-horizontal-wells-stem-trajectory (дата обращения: 11.11.2024).

7. Самадов А. Х., Бойқобилова М. М., Мажидова Ю. С. ТЕХНОЛОГИЯ ВОЗДЕЙСТВИЯ ПАРОВОГО ТЕПЛА И ГОРЯЧЕЙ ВОДЫ НА ПЛАСТ ЧЕРЕЗ НАГНЕТАТЕЛЬНУЮ СКВАЖИНУ // Экономика и социум. 2023.

№10 (113)-1. URL: https://cyberleninka.ru/article/n/tehnologiya-vozdeystviya-parovogo-tepla-i-goryachey-vody-na-plast-cherez-nagnetatelnuyu-skvazhinu (дата обращения: 11.11.2024).
8. Самадов, А. Х., & Ахадова, Г. (2022). ОЧИСТКА, ОПРЕДЕЛЕНИЕ И УТИЛИЗАЦИЯ ОТХОДОВ БУРЕНИЯ. *Экономика и социум*, (6-1 (97)), 855-858.
9. Nomozov B.Yu., Samadov A.X., Yuldashev J.B., Boyqobilova M.M. ISM TURDAGI QATTIQ QOTISHMALI BURG`ILAR // Экономика и социум. 2023. №9 (112). URL: https://cyberleninka.ru/article/n/ism-turdagi-qattiq-qotishmali-burg-ilar (дата обращения: 11.11.2024).
10. Samadov A.X., Ashurov Sh.M., Bekmuratov J.A. BURG`ILASH MINORASINI MONTAJ VA DEMONTAJ QILISH TEXNOLOGIYASINI ASOSLASH // Экономика и социум. 2024. №5-1 (120). URL: https://cyberleninka.ru/article/n/burg-ilash-minorasini-montaj-va-demontaj-qilish-texnologiyasini-asoslash (дата обращения: 11.11.2024).
11. Samadov, A. X., Ahadova, G., & Shukrullayev, D. D. (2023). PDC TURDAGI INNOVATSION BURGILARNING QOLLASHNI ASOSLASH. Экономика и социум, (5-2 (108)), 340-346.

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Baratova R.Sh.
Samarqand Davlat Tibbiyot Universiteti.
Samarqand shahri, O'zbekiston.

BOLALARDA SIYDIK YO'LLARI INFEKSIYASINING MIKROBIOLOGIK MONITORINGI

Annotatsiya. *Tadqiqot davomida siydik yo'llari infeksiyasini keltirib chiqaruvchi 438 ta bakteriya shtammlari ajratib olindi. Dominant qo'zg'atuvchilar sifatida Enterobacteriaceae oilasi vakillari, xususan, Escherichia coli (E. coli) va Klebsiella pneumoniae (K. pneumoniae) bo'lib chiqdi. Shu bilan birga, so'nggi yillarda K. pneumoniae ulushining ortib borishi kuzatilmoqda. Antibiotiklarga chidamlilikni tahlil qilish ko'pgina E. coli shtammlari ampitsillin, kanamitsin, karbenitsillin va sefuroksimga ko'p tomonlama doriga chidamli ekanligini ko'rsatdi. Ammo gentamitsin, sefotaksim va sefoperazon kabi ayrim antibiotiklarga sezgirlik saqlanib qoldi. K. pneumoniae shtammlari ham, ayniqsa, aminoglikozidlar va sefalosporinlarga nisbatan yuqori darajadagi chidamlilikni namoyon etdi. Enterococcus turi mikroorganizmlari vankomitsindan tashqari barcha antibiotiklarga chidamlilikni namoyon etdi.*

Kalit so'zlar: *siydik yo'llari infeksiyasi, qo'zg'atuvchilar, antibiotiklarga chanqovlilik, Escherichia coli, Klebsiella pneumoniae, Enterococcus.*

Baratova R.Sh.
Samarkand State Medical University
Samarkand, Uzbekistan

MICROBIOLOGICAL MONITORING OF URINARY TRACT INFECTIONS IN CHILDREN

Abstract. *The study isolated 438 bacterial strains causing urinary tract infections (UTIs). The predominant pathogens were members of the Enterobacteriaceae family, particularly Escherichia coli (E. coli) and Klebsiella pneumoniae (K. pneumoniae). There is a tendency toward an increasing proportion of K. pneumoniae in recent years.*

Antibiotic susceptibility testing showed that most E. coli strains exhibited multidrug resistance, including resistance to ampicillin, kanamycin, carbenicillin, and cefuroxime. However, susceptibility to certain antibiotics such as gentamicin, cefotaxime, and cefoperazone was preserved. K. pneumoniae strains also demonstrated high resistance to many antibiotics, especially aminoglycosides and cephalosporins. Enterococcus species exhibited resistance to all antibiotics except vancomycin.

Keywords: *urinary tract infections, pathogens, antibiotic resistance, Escherichia coli, Klebsiella pneumoniae, Enterococcus.*

Kirish. Siydik yo‘llarining infeksion kasalliklari bolalarda keng tarqalgan va muhim klinik muammo hisoblanadi. Rossiyada 2018 yilda 0-14 yoshli bolalarda siydik-jinsiy a’zolari tizimi kasalliklari bo‘yicha umumiy kasallanish 100 000 aholiga nisbatan 5093,3 kishini tashkil etmoqda.

Siydik yo‘llari infeksion kasalliklarining tez-tez uchrashi bolaning yoshi, jinsi, millati va geografik o‘ziga xos xududlarda yashashiga qarab o‘zgarib turibdi. Kichkina va erta yoshdagi bolalarda siydik yo‘llarining infeksion kasalliklari eng ko‘p uchraydigan sababchisi bakteriyali infeksiya bo‘lib, bu yoshdagi isitma sababli gospitalizatsiya qilingan bemorlarning 10-15%ida kuzatilmoqda. 1 yoshgacha bo‘lgan bolalarda, ayniqsa, o‘g‘il bolalarda (2,7-3,7%) qizlarga nisbatan (0,7-2%) siydik yo‘llarining infeksion kasalliklari tez-tez uchramoqda. Biroq, bu tendensiya 1 yoshdan 7 yoshgacha bo‘lgan bolalarda o‘zgaradi, bu yoshda qizlarda (0,9-8%) o‘g‘il bolalarga nisbatan (0,2-2%) siydik yo‘llarining infeksion kasalliklari tez-tez uchraydi [3,5]. Tadqiqotlar tahlilida, siyishda buzilish belgilari va/yoki isitma bo‘lgan 2 yoshdan 16 yoshgacha bo‘lgan bolalarda bu kasallikning tarqalishi 7,8%ni tashkil etgan (95% ishonch intervali 6,6-8,9) [4].

Hayotining birinchi yilidagi bolalarda bu kasalliklarning simptomsiz kechishi 10-30% hollarda buyrak to‘qimasining chandiqli o‘zgarishlari, qaytalanadigan pielonefrit, gipertoniya va oxirgi bosqichdagi buyrak yetishmovchiligiga olib keladi [2, 9].

Ishning maqsadi: Shifoxona ichi infeksiyasi bo‘lmagan siydik yo‘llari infeksiyasining etiologik tuzilishini tahlil qilish va uning asosiy qo‘zg‘atuvchilarining antibakterial preparatlarga sezuvchanligini aniqlash.

Materiallar va uslublar: 2017-2023 yillar davrida bolalar ko‘p tarmoqli shifoxonasida siydik yo‘llari infeksiyasining asoratlanmagan va asoratlangan shakllari bo‘lgan bemorlarning siydik namunalarining bakteriologik tahlili o‘tkazildi. Qo‘zg‘atuvchilarni ajratib olish va aniqlash bakteriologiyada qo‘llaniladigan rutin usullar bilan amalga oshirildi. Antibiotiklarga sezuvchanlikni aniqlash disk-diffuziya usuli bilan o‘tkazildi.

Olingan natijalar va muhokama: Siydik yo‘llari infeksiyalari qo‘zg‘atuvchilarining 438 ta shtammi ajratib olindi. Qo‘zg‘atuvchilarning eng katta qismi (65%)ni Enterobacteriaceae oilasi vakillari tashkil etdi, jumladan, E. coli — 45,9% (turli yillarda 32% dan 54,7% gacha), K. pneumoniae — 10% (turli yillarda 3,5% dan 18,9% gacha), K. oxytoca - 1,8% (turli yillarda 3,5% dan 3,9% gacha) va E. cloacae — 7,3% (turli yillarda 1,9% dan 24% gacha). Kamroq qismini Enterococcus turi mikroorganizmlari (9,1%) tashkil etdi, jumladan, E. faecium — 5% (2% dan 15,9% gacha) va E. faecalis — 4,1% (2,9% dan 7,5% gacha). Qo‘zg‘atuvchilar tuzilishini yillar bo‘yicha tahlil qilish E. coli MIning dominant qo‘zg‘atuvchisi bo‘lib qolishini ko‘rsatdi, lekin so‘nggi yillarda K.pneumoniae infeksiyasi 3-6% dan 15-16% gacha oshgani kuzatildi. E. coli antibiotiklarga sezgirligini tahlil qilish uning ko‘pgina shtammlari polirezistent bo‘lganini (60-75%) ko‘rsatdi. E. colining Ampitsillin (73%), Kanamitsin (90%), Karbenitsillin (95%), sefuroksim (60%) ga rezistentligi qayd etildi.

Lekin Gentamitsin (33%), sefotaksim (17%) va sefoperazon (18%) ga nisbatan sezgirlik saqlanib qoldi. 2017 yildan 2023 yilgacha bo‘lgan davrda Gentamitsinga chidamli shtammlar soni sezilarli darajada oshdi. Klebsiella turkumi mikroorganizmlari aminoglikozid va 2 va 3-avlod sefalosporinlarga (76% dan 100% gacha) chidamli edi, lekin Polimiksinga (37%) nisbatan sezgirligini saqlab qoldi. Enterococcus spp. shtammlari Vankomitsindan tashqari barcha antibiotiklarga chidamli ekanligi aniqlandi.

Xulosalar: So‘nggi 6 yil ichida siydik yo‘llari infeksiyasi qo‘zg‘atuvchilarining etiologik tuzilmasi o‘zgarmasdan saqlanib qoldi. Yetakchi qo‘zg‘atuvchilar E. coli, K. pneumoniae, Enterococcus spp. mikroorganizmlari hisoblanadi. Ularning aksariyati siydik yo‘llari infeksiyalarini davolash uchun eng ko‘p qo‘llaniladigan antibiotiklarga ko‘p tomonlama chidamliligi kuzatiladi. Shu tariqa, siydik yo‘llari infeksiyasining boshlang‘ich antibakterial terapiyasini qo‘zg‘atuvchilarning antibiotiklarga sezgirligini hisobga olgan holda olib borish kerak.

Adabiyotlar.

1. Akbarovich, A. A., Murodullayevich, T. O., & Shodievich, S. H. (2023). OG ‘IZ BO ‘SHLIG ‘I SHILLIQ QAVATLARINING ZAMBURUG ‘LI KASALLIKLARIDA EOZINOFIL KO ‘RSATKICH. *INTERNATIONAL JOURNAL OF RECENTLY SCIENTIFIC RESEARCHER'S THEORY*, *1*(6), 116-119.

2. Giyosovna, S. D., Maqsudovna, O. G., Isrofilovna, M. N., & Shodiyevich, S. H. (2023). BACILLUS AVLODIGA MANSUB BAKTERIYALARNING BIOTEXNOLOGIK POTENSIALI. *Innovations in Technology and Science Education*, *2*(7), 1154-1162.

3. Mardanovna, I. M., & Shodievich, S. H. (2023). GEMOLITIK ESHERIXIYALARNING ADGEZIVLIK XOSSALARI. *INTERNATIONAL JOURNAL OF RECENTLY SCIENTIFIC RESEARCHER'S THEORY*, *1*(6), 198-202.

4. Sh, S. X., & Sa’dinov, P. O. (2014). Rol gemoliticheskix esherixiy v strukture ostrых kishechnых infeksiy u detey i effektivnost primeneniya probiotikov v ix lechenii.

5. Shayqulov H. S. et al. DIAREYA BILAN KASALLANGAN BOLALARDA AJRALUVCHI ICHAK MIKROFLORALARI //GOLDEN BRAIN. – 2023. – T. 1. – №. 6. – С. 20-24.

6. Shayqulov, H. S., & Mamarasulova, N. I. O'TKIR DIAREYALARDA ESHERIXIYALARNING AJRALISHI.«. *МИКРОБИОЛОГИЯНИНГ ДОЛЗАРБ МУАММОЛАРИ» МАВЗУСИДАГИ РЕСПУБЛИКА ИЛМИЙ-АМАЛИЙ АНЖУМАНИ*, *103*.

7. Shodievich, S. H., & Ubaydullaevich, N. D. (2023). BAKTERIAL ICHBURUG ‘BILAN OG ‘RIGAN BEMORLARNING IMMUN KO ‘RSATKICHLARIDAGI AYRIM O ‘ZGARISHLAR. GOLDEN BRAIN, 1 (5), 163–167.
8. Маматова, М. Н., & Шайкулов, Х. Ш. (2024). Применение реакции непрямой гемагглютинации для определения антител к стафилококковому токсину. *Журнал «Экономика и социум*, (7), 122.
9. Маллаходжаев, А. А., Шамсиддинова, М. Ш., Жамалова, Ф. А., & Шайкулов, Х. Ш. (2021). ГЕМОЛИТИЧЕСКИЕ ЭШЕРИХИИ В ЭТИОЛОГИИ КИШЕЧНЫХ РАССТРОЙСТВ У ДЕТЕЙ И ГЕНЕТИЧЕСКОМ МЕХАНИЗМЕ ИХ ФОРМИРОВАНИЯ. In *VOLGAMEDSCIENCE* (pp. 588-589).
10. Нарзиев Д.У., & Шайкулов Х.Ш. (2024). ТЕЧЕНИЕ ОСТРОЙ ПНЕВМОНИИ У ДЕТЕЙ РАННЕГО ВОЗРАСТА В ЗАВИСИМОСТИ ОТ ВЫДЕЛЕННОЙ МИКРОФЛОРЫ. Экономика и социум, (2-1 (117)), 1636-1642.
11. Шайкулов, Х. Ш. (2023). Antibiotikorezistent laktobakteriyalardan foydalanishning samaradorligi. *Молодой ученый.—2023*, *10*(457), 268-271.
12. Шайкулов, Х. Ш. (2024). Изменению микробиоценоза кишечника при поносах у детей. *Молодой ученый.–2024*, *8*(507), 24-26.

Begmatov D. I.
Toshkent davlat iqtisodiyot universitetining mustaqil izlanuvchisi

OLIY TA'LIM BOSHQARMASIDA SHAXS KASBIY KOMPETENSIYASINI RIVOJLANTIRISHNING ASOSIY XUSUSIYATLARI VA BOSHQARUV MODELI.

Annotatsiya: *Bugungi kunda, har qachon, ayniqsa, ta'limni boshqarish va mahalliy o'zini o'zi boshqarish tizimida yangi avlod boshqaruv kadrlari kerak. Buning sababi shundaki, menejmentdagi tizimli inqiroz, menejment tizimi xodimlarining intellektual salohiyatida jiddiy kamchiliklarni aniqlaydi, ularning ko'plab vakillari yangi sharoitlarda, ya'ni turli xil mulk shakllarining tengligi, jamiyat hayotini demokratlashtirish, siyosiy va mafkuraviy pluralizm, bozor munosabatlari shakllanishi sharoitida ishlay olmadilar. Shuning uchun menejerlar o'zlarining kasbiy faoliyatlarida tobora ko'proq vakolat inqiroziga duch kelmoqdalar, bu zamonaviy jamiyatdagi o'zgarishlar, jamiyatning rivojlanish sur'ati va jamoatchilik bilan aloqalar tizimi ularning kasbiy kompetentsiyasiga qo'yadigan talablardan orqada qolish bilan bog'liq.*

Kalit so'zlar: *oliy ma'lumot, mehnat bozori, raqamli iqtisodiyot.*

Begmatov D.I.
Independent student
of Tashkent State University of Economics

IN HIGHER EDUCATION MANAGEMENT, THE MAIN CHARACTERISTICS OF DEVELOPING AN INDIVIDUAL'S PROFESSIONAL COMPETENCE AND THE MANAGEMENT MODEL

Abstract: *Today, more than ever, Uzbekistan needs a new generation of management personnel, especially in education management and local self-government. The reason for this is that the systemic crisis in management revealed serious deficiencies in the intellectual capacity of management system employees, many of whose representatives could not work in new conditions, i.e. equality of different forms of property, democratization of public life, political and ideological pluralism, formation of market relations. Therefore, managers are increasingly facing a crisis of authority in their professional activities, which is connected with changes in modern society, the pace of development of society, and the lag behind the demands of the public relations system on their professional competence.*

Key words: *Higher education, labor market, digital economy.*

Entrance

In relation to the approval of the concept for the revitalization of the higher education system of the Republic of Uzbekistan until 2030 by the President of the

Republic of Uzbekistan on October 8, 2019, under the decree PF-5847, as well as the decrees PF-5847 dated April 20, 2017, and the decree PQ-3151 dated July 27, 2017, regarding further measures to revitalize the higher education system and expand the participation of economic sectors and networks in enhancing the quality of training highly qualified specialists, and the resolution No. 797 of the Cabinet of Ministers of the Republic of Uzbekistan on September 23, 2019, concerning additional measures for the continuous improvement of the system to enhance the skills of leaders and pedagogical staff of higher education institutions, this dissertation contributes to the implementation of the specified tasks outlined in other relevant legal documents in this matter. In Uzbekistan, the modernization of society imposes new requirements on the professional competence of leaders in higher education institutions, with one of their key indicators being the acquisition of specialized knowledge and skills necessary to successfully fulfill professional duties related to their roles. This encompasses a set of specific knowledge and tools, known as professional competence, which is tailored to meet the essential requirements for carrying out professional responsibilities.

Analysis of Literature on the Topic

In the field of higher education management, scientific research conducted globally by leading scientific centers and higher education institutions, including the Centre of Increasing Pedagogical Qualification at Manchester University (United Kingdom), the Association for Educational Communications and Technology – AECT (USA), Belfield Pedagogical University (Germany), Miyagi Pedagogical University (Japan), Russia Education Academy (Russia), Moscow State University (Russia), and the Russia Oil and Gas University (Russia), reveals a series of significant findings.

Research outcomes in the global higher education system management domain include the successful implementation of mechanisms for enhancing the management of the education system (Centre of Increasing Pedagogical Qualification at Manchester University, United Kingdom);

- additionally, mechanisms facilitating the collaboration between higher education institutions and business corporations have been developed (Association for Educational Communications and Technology – AECT, USA);
- models have been created to ensure the transition towards further democratic relations between administrative bodies and educational institutions (Belfield Pedagogical University, Germany);
- the overall internationalization trend of education is based on a high level of educational standards (Miyagi University of Education, Japan).

Establishing a centralized management of education involves mechanisms for allocating competencies, responsibilities, and accountability, as outlined in the developed framework (Moscow State University).

Furthering education management through centralization involves the implementation of mechanisms to distribute competence, responsibility, and accountability among various levels, as evidenced by research from Moscow State University.

In the intersection of management, biotechnology, economics, and cognitive psychology, new master's programs have been introduced, as seen in the developments at the Russia State Oil and Gas University.

Leading higher education institutions worldwide are actively engaged in scientific research to enhance mechanisms for integrating management in the higher education system:

improving the management of higher education institutions through the theoretical-methodological foundations of social partnership;

integrating contemporary mechanisms of state-private partnership in advancing the educational system;

adapting standards and methods in the system through corporate governance;

advocating for diverse social institutions in leading educational institutions;

enhancing the autonomy of educational institutions;

effectively utilizing integration mechanisms in raising the professional qualification of leaders and pedagogical staff.

In our Republic, educational leaders such as R. Juraev, G. Qosimov, U. Begimkulov, M. Vakhabov, U. Inoyatov, N. Isakulova, R.G. Isyanov, Sh. Kurbanov, E. Seythaliyev, S. Turgunov have been actively involved in developing contemporary concepts, content, and management of educational institutions, as well as in preparing and retraining educational management personnel. Additionally, collaborative research on leadership issues has been conducted by Y. Ismadiyarov, Z. Ismailova, R. Juraev, Sh. Sharipov, Sh. Shodmonova, Sh. Shakurov, M. Yuldashev, N. Egamberdieva, and others.

Research Methodology

The methodology of the research focuses on adapting personal, social, and professional development methods to address the ongoing changes in society. It aims to expand the requirements placed on individuals' professional qualifications within the framework of higher education management, emphasizing the necessity to enhance selfunderstanding and the leader's personal and professional development tools.

The main objectives include establishing scientific and methodological support for improving the leader's personal and professional competence in higher education management. The research aims to update the purpose of scientific and methodological support in this direction and address identified challenges, such as the general resistance to change. In other words, it explores optimal pedagogical principles for making decisions to enhance the leader's professional competence in higher education management.

The practical significance of the research includes:

-establishing pedagogical conditions that positively influence the improvement of the leader's professional competence in collaboration with professor-instructors.

-utilizing pedagogical principles from developed management models to enhance the professional competence of leaders in higher education and other educational institutions.

-employing psychological-pedagogical methods for diagnosing the improvement of the leader's professional competence.

-developing schemes for enhancing personal skills through materials and methodological recommendations for engaging university students and individuals in higher education management in personalized skill development activities.

Analysis and Results

In the process of developing a management model to enhance the professional competence of individuals in higher education management, the following tasks were successfully accomplished:

-identification of sources from which psychological-pedagogical information is obtained.

-clarification of the amount of information and methods for its adjustment for students with varying levels of preparedness for learning and knowledge activity.

-creation of an information gathering technology to constantly improve the leader's professional competence through the application of pedagogical conditions.

The primary means of implementing the developed model are pedagogical technology and pedagogical conditions. In our research, we employ the concept of "pedagogical technology" as defined by A. Ya. Nayna in practical terms. This concept is specifically used for practical purposes because models can be introduced into pedagogical reality through various methods. Moreover, our approach to educational technology is based on the principles of teaching technology through problem-solving.

In our educational research, the fundamental definition of pedagogical technology is utilized as follows: pedagogical technology is the systematic organization of the interconnected components, stages, situations, and participants of a pedagogical process to comprehensively implement their actions.

Pedagogical technology consists of four integral components:

-diagnosing the integration of fundamental principles.

-methodology based on the results of diagnostics.

-intensive training tools.

-evaluation of outcomes.

To enhance the professional competence of a person in a leadership position in a higher education institution, we must understand the conditions that cannot be ignored for effective management. The necessity of specified conditions is elucidated through the analysis of psychological and pedagogical literature, collaboration with higher education leaders, and the findings of clarification experiments.

When it comes to developing professional competence, we recognize the necessary conditions for successful development in the additional education system. The effectiveness of formative experimental work emerges from the results of the shaping phase. Acquired information demonstrates the effectiveness of leaders' professional competencies in managing the development of the educational process, providing the conditions recommended for achieving adequacy.

According to pedagogical conditions, we understand the complete context of objective possibilities, content, forms, methods, pedagogical techniques, and the material-phase environment required to achieve the specified tasks. We have identified the pedagogical conditions of the observed phenomenon as follows.

The first condition is to develop pedagogical projects for the self-realization of individuals in educational management, focusing on the revitalization of study programs. In formulating these projects, it is essential to cultivate the motivation, selectivity, and activity of students as subjects in their own development. The planning of professional situations (programs) requires the educational institution's leader to play specific roles in execution [28].

Research indicates that designing self-learning programs is crucial, as the motivational field plays a significant role in enhancing knowledge capacities and shaping the learning and mentoring activities of educators. Practical experiences demonstrate that self-development activities manifest positively in emotional experiences, initially derived from achieved successes, and subsequently strengthen the process of knowledge acquisition. Successfully accomplishing the tasks of self-development and contributing to the satisfaction of the educator's authority and leadership positively raises intellectual skills.

The repetitive experiences of intellectual activity contribute to stimulating self-motivation and internal development. This need, as evidenced by our experience, becomes a unique force in enhancing the professional competencies of educational institution leaders.

The second condition is to shape the motivational and value attitude towards the leader's management activity in higher education.

It is essential to understand that values and value attitudes are crucial for individuals to reach their goals and contribute to their personal development. The term "value" indicates the societal and cultural significance of the surrounding environment. The research emphasizes that developing managerial competence in the educational environment relies on fostering values[19].

The management environment plays a significant role in shaping various disciplines, and the terms "value" and "motivational-value attitude" distinguish their specific characteristics. The research defines these terms, outlines general rules for them, and provides the following definitions: value: This is the adaptation of a subject, group, or society's activity to a specific type and regulation of its behavior, taking into account its nature and qualities. attitude: It is the readiness of the subject to react to specific conditions based on personal and social experiences.

Value Attitude (to something): the subjective acceptance of values related to the objective significance of certain conditions, preparedness to participate in subjective social relations that correspond to values, and a willingness to share attitudes compatible with values in relation to significant values.

The third condition is to ensure the provision of individual experiences based on an individual's life experience.

Life experience is defined as information related to a person's property, expressed in adapted conditions and created in an adequate state to update needs continuously. If a person has not managed to process their experiences properly, their long-term memories may retain insignificant or even unnecessary information. In such cases, the relevance and significance of life experience may only be revealed when discussing certain events[6].

The research emphasizes the importance of managing experiences, considering them as stored in adapted conditions, and highlights the relevance of actively shaping individual experiences in shaping managerial and personal competencies[23].

In conclusion, a model for developing the managerial and personal competencies of a higher education leader is created based on the second and third conditions. This model incorporates motivational and value attitudes and emphasizes the role of individual experiences in shaping competencies.

Summary and Recommendations:

We have developed programs for enhancing the professional competence of individuals in higher education management:

1. "Effective Communication: Managing Dialogue"

- Objective: Enhance the communication skills of leaders with educators, students, and parents; refine techniques and methods for constructive dialogue; and mitigate stress through effective communication strategies.

2. "Effective Leadership: Managing Teams"

- Objective: Systematically shape teamwork in educational leadership, refining all stages of leadership cycles (planning, organization, motivation, supervision) to enhance the fundamental aspects of managing people.

3. "Effective Community: Managing Relationships"

- objective: Strengthen relationships within teams, reduce conflicts, foster a community of innovative individuals with general attributes, and encourage mutual understanding. Empower individuals and their colleagues to influence each other positively within the community.

Conditions for Successful Education at Guliston State University:

-ensure human resources are in line with the optimal level of competence for effective training, including attracting and retaining young specialists.

-establish conditions that support the development of a variety of additional educational programs based on diverse material and technical resources.

For individuals in higher education, the model for managing and enhancing professional competence aims to improve effectiveness. We recommend actively utilizing contemporary methods from professional development workshops to achieve this goal.

Used Literature:

1. Akhmedova N.Q. Improving the effectiveness of management activities of higher education students of general secondary schools.: Autoref. dis. … ped. science. div. doc. - Tashkent, 2017. - 35 p.
2. Asilova G.A. Development of professional communication competence of students of customs and tax departments in the state language. Ped. science. doc. (DSc) … diss. auto. - T., 2017. - 66 p.
3. Akhmedov M.U. Improving the monitoring of the quality of education in the training of general education school principals: Dissertation. ped. science. name - Tashkent: "XTTRMXQTMOI", 2019. - 155 p. 15-B.
4. Akhlidinov R.Sh. Sotsialno-pedagogicheskie osnovy upravleniya kachestvom obshchego srednego obrazovaniya: Autoref. dis. … doctor. pedagogic. science - Tashkent: Tashkent State Pedagogical University. Nizami, 2000. - 44 p.
5. Ansoff Igor. Strategic management. Electronic resource: Strategic management (lgaki.info). Data processing: 18.01.2022.
6. Azizkhodjaeva N.N. Innovatsii v reformirovanii neprerivnogo obrazovaniya Republic of Uzbekistan. Electronic resource: http://cyberleninka.ru/viyewer_imaGES/14956523/p/1.png. Data processing: 2009
7. Ansoff I. Strategic management. - M.: Ekonomika, 1989.
8. Abannikov V.N. Innovative management: Uchebnoe posobie / 2-e izd. ispr. i dop. - SPb.: RGGMU, 2010. - 254 p
9. Abdalina JI.B. Razvitie professionalizma pedagoga: ot teorii k praktike. - Moscow: Izdatelstvo RGSU, 2008. - 327 p.
10. Barnard C. The Functions of the Executive. Cambridge, Mass.: Harvard University Press, 1938. R . 60.
11. Beknazarova L.S. Psychological characteristics of teacher-student cooperation in the educational process. In the case of pedagogical colleges: Aftoref. dis. … psycho. science. Name. - Tashkent: "UzMU", 2007. - 22 p.
12. Babkina E.V., Pazushkin P.B. Innovative management: uchebnoe posobie. – Ulyanovsk: UlGTU, 2016. – 223 p.
13. Baglaev G.P. Pedagogical basis of upravleniya innovatsionnim uchebnim zavedeniem nachalnogo professionalnogo obrazovaniya.: Avtoref. dis. ... candy. ped. science - Ulan-Ude, 2000. - 27 p.
14. Balabanov I.T. Innovative management. - St. Petersburg: Peter, 2000. - 208 p.
15. Burkov V.N., Novikov D.A. Theory of the active system: cost and perspective. M.: SINTEG, 1999. — 128 p

Berdikulova M.T.
Teacher
of the Geography Department
of Karshi State University

DEMOGRAPHIC ASPECTS OF FORMATION OF LABOR RESOURCES IN KASHKADARYA REGION

Abstract: *In this article, the regional aspects of the formation of labor resources of Kashkadarya region are studied, and the geodemographic situation of the region is explained in relation to it. The growth of the region's labor resources and the problems of their use are highlighted. The permanent population, the main indicators of the labor market, labor resources of rural districts of the region were analyzed.*

Key words: *population, demographic situation, labor resources, labor market, economy, population structure, birth rate, population employment.*

In the Development Strategy of New Uzbekistan for 2022-2026, set forth by the President of the Republic of Uzbekistan, Goal 85 titled “Creating new jobs in the country, increasing incomes of the population, and thereby reducing poverty by at least 50% by the end of 2026” outlines the most prioritized tasks based on the demographic situation in different regions. The quantitative and qualitative development of labor resources is explained in terms of the demographic status of these regions. The geodemographic situation of the regions directly affects all stages of labor resource formation.

Several factors have a direct and indirect impact on the formation of labor resources in regions. Among these, demographic, economic, and social factors are of significant importance. Without labor resources, neither any sector of the economy nor the material and non-material fields can develop. Population size and structure are crucial in the quantitative and qualitative indicators of labor resources. Changes in population size and age-gender composition influence the working-age population and, consequently, the formation of labor resources in the region. This, in turn, serves as a unique “instrument” impacting the economic development of the country and its regional subdivisions.

In the formation of labor resources, the most important demographic factor is the population size of a region. Population size refers to the total number of people living in a given area, representing one of the most common quantitative demographic characteristics. Population size changes continuously due to births and deaths and, for specific regions, varies due to migration.

When studying labor resources, several processes reflecting the demographic situation of a region are examined, including birth rate, death rate, natural growth, migration movements, and population structure. The number of labor resources is composed of the working-age population who are able to work, and the number of workers below and above working age. The working-age population is determined by subtracting the number of non-working individuals in the first and second disability groups, as well as those who receive early retirement benefits based on age, from the total number of labor resources (males aged 16-59 and females aged 16-54). Officially registered unemployed individuals are those aged 16 or older, up to retirement age, who do not have a job, income, or wages, and who are registered with labor offices as job seekers ready to work, train, or improve their skills.

According to data from the State Statistics Agency of the Republic of Uzbekistan, the number of labor resources in the country as of January-December 2023 was 19,739.6 thousand people, an increase of 222.1 thousand compared to the same period in 2022 (when it was 19,517.5 thousand).

In the country's geodemographic context, the Kashkadarya region holds a unique position. The main indicators of the region's demographic situation are revealed through the natural population increase. According to data from the Kashkadarya Regional Statistics Department, as of April 1, 2024, the permanent population of the region was 3,577.0 thousand people, an increase of 16.4 thousand or 0.5% compared to the beginning of the year (Table 1). Specifically, the urban population was 1,530.5 thousand (representing 42.8% of the total population), while the rural population was 2,046.5 thousand (57.2%). Of the permanent population, 34.6% are below working age, 55.5% are of working age, and 9.9% are above working age.

Table 1.

Distribution of permanent population in Kashkadarya region by districts (01.04.2024)

No.	Districts and Cities	2023 (thousand)	2024 (thousand)	Growth Rate (%)
1	Guzar	218,4	223,3	102,2
2	Dehkhanabad	157,0	160,3	102,1
3	Kamashi	288,2	294,5	102,2
4	Karshi	267,1	273,7	102,5
5	Koson	306,4	313,6	102,3
6	Kitob	277,3	283,0	102,0
7	Mirishkor	127,3	130,0	102,1
8	Mubarak	92,2	93,8	101,7
9	Nishon	163,5	167,5	102,4
10	Kasbi	209,3	213,9	102,2
11	Kokdala	184,6	189,9	102,9
12	Chirakchi	262,2	269,3	102,7
13	Shahrisabz	231,8	235,8	101,7
14	Yakkabog	278,0	283,6	102,0
15	Karshi city	290,3	297,0	102,3
16	Shahrisabz city	145,3	147,8	101,8
17	Region total	3498,9	3577,0	102,2

Source: Compiled by the author based on data from qashstat.uz.

An analysis by district shows that the highest population in the region is in Koson district with 313.6 thousand people (8.7% of the region's population), followed by Qamashi district with 294.5 thousand people (8.2%). The lowest population is in Muborak district with 93.8 thousand people (2.6%) and Mirishkor district with 130.0 thousand people (3.6%). Qarshi city has a population of 297.0 thousand, accounting for 8.3% of the total regional population and 19.4% of the total urban population.

In demographic studies, birth rate is examined as the basis for population regeneration. According to data from the Uzbekistan Statistics Agency, from January to December 2023, 962.0 thousand people were born across the country. Analyzing by region, Surkhandarya has the highest birth rate at 30.9 per 1,000 people, followed by Kashkadarya at 28.9, and Namangan at 27.9. The lowest rates were observed in the Republic of Karakalpakstan (22.1), Bukhara (23.0), and Tashkent region (24.2).

Unique features of the demographic situation in Kashkadarya region include a higher birth and natural growth rate compared to national figures, a negative migration balance, a large proportion of young people in the population, sufficient labor resources (with 51.3% of the total population), and uneven distribution of the population across the region. Population growth also leads to changes in its geographic distribution and density. By 2024, the population density in the region reached 133 people per square kilometer. Population distribution varies according to the natural geographic environment; it is denser in districts with irrigated farming such as Qarshi, Kasbi, Shahrisabz, Yakkabog', and Kitob, while it is sparser in mountainous and desert areas.

The region's population is growing primarily due to natural increase, placing Kashkadarya in the group of regions with high natural growth. According to the Kashkadarya Regional Statistics Department, 101,852 births were recorded in the region from January to December 2023, with boys making up 51.9% and girls 48.1%. Compared to the same period in 2022 (with 98,279 births), births increased by 3,573. The birth rate reached 28.9 per 1,000, an increase of 0.4 from the same period in 2022 (28.5 per 1,000). The highest birth growth rates were seen in Nishon (108.9%), Muborak (108.7%), Qarshi (108.4%), and Mirishkor (106.7%) districts, while slight declines were observed in Yakkabog' (99.7%) and Qarshi city (99.8%).

As of January 1, 2024, Kashkadarya region had 1,826.7 thousand people within its labor resources, an increase of 13.3 thousand from the same period last year (1,813.4 thousand as of January 1, 2023). The region's labor resources account for 9.2% of the country's total labor resources, while its population represents 9.7% of the national total.

The regional labor market in Kashkadarya is shaped by a relatively "young" demographic due to increasing birth rates. When analyzing labor resources by district, Koson, Kamashi, Yakkabog, Kitab districts, and Karshi city show higher figures, whereas Muborak and Myrishkor districts have lower levels.

Given the distinctive population density, demographic characteristics, and adequate labor resources in Kashkadaryo, it is essential to focus on the efficient and effective use of these resources to reduce the outflow of labor migrants. The shortage of permanent, well-paying jobs in rural areas has led many working-age residents to seek employment abroad as labor migrants, a trend observed in the region's population dynamics.

Employment of the labor force remains a critical issue in every area. The current demographic situation, marked by rapid population growth, increases the need to create new jobs. One of the main strategies to address employment challenges is to strengthen the development of local industries at the district level. This includes fostering an effective investment environment in production and service sectors to stimulate growth.

References:

1. Солиев А.С. Ўзбекистон географияси. Дарслик. –Тошкент, 2014.
2. Бердикулова М. Т. ТЕРРИТОРИАЛЬНЫЕ АСПЕКТЫ ДЕМОГРАФИЧЕСКОЙ СИТУАЦИИ В КАШКАДАРЬИНСКОЙ ОБЛАСТИ //Экономика и социум. – 2021. – №. 4-1 (83). – С. 729-732.
3. Berdikulova M. T. GEODEMOGRAPHIC SITUATION IN KASHKADARYA REGION IN THE REPUBLIC OF UZBEKISTAN //Экономика и социум. – 2023. – №. 5-1 (108). – С. 54-56.
4. Berdiqulova M. T. O'ZBEKISTONNING HOZIRGI GEODEMOGRAFIK VAZIYATI //Экономика и социум. – 2023. – №. 11 (114)-1. – С. 57-61.
5. Berdiqulova M. T. AHOLINI RO'YXATGA OLISHDA GEOGRAFIK VA DEMOGRAFIK MA'LUMOTLARNING O'RNI //Экономика и социум. – 2022. – №. 3-1 (94). – С. 29-32.
6. Бердиқулова М. Т. ЕР ШАРИ АҲОЛИСИНИНГ ГЕОДЕМОГРАФИК ВАЗИЯТИ //Экономика и социум. – 2022. – №. 10-1 (101). – С. 286-289.
7. Toshtemirovna B. M. Geographical aspects of the demographic situation in Kashkadarya region //ACADEMICIA: AN INTERNATIONAL MULTIDISCIPLINARY RESEARCH JOURNAL. – 2021. – Т. 11. – №. 1. – С. 188-190. 6. Data from the State Statistics Committee of the Republic of Uzbekistan.

Botirov Y.Z.
Qarshi davlat universiteti magistranti

QASHQADARYO VILOYAT SHAHARLARI RIVOJLANISHINING TABIIY GEOGRAFIK VA GEOEKOLOGIK MUAMMOLARI

Annotatsiya: *Ushbu maqolada Qashqadaryo viloyati shaharlari rivojlanishining tabiiy geografik va geoekologik muammolari o'rganilgan va tahlil qilingan. Qashqadaryo viloyati shaharlari rivojlanishini geoekologik muammolarini bartaraf qilish bo'yicha taklif va tavsiyalar ishlab chiqilgan.*
Kalit so'zlar: *shahar, tabiiy geografik, geoekologik, urbanizatsiya, hududiy, ekologik muammo.*

Baturov Y.Z.
Graduate of Qarshi State University

NATURAL GEOGRAPHICAL AND GEOECOLOGICAL PROBLEMS OF THE DEVELOPMENT OF RURAL PROVINCIAL CITIES

Annotation: *this article explores and analyzes the natural geographical and geoecological problems of the development of cities of the Kashkadarya region. Proposals and recommendations have been developed to eliminate geoecological problems of the development of the cities of the kashkadarya region.*
Keywords: *urban, natural geographical, geoecological, urbanization, territorial, environmental problem.*

Urbanizatsiya-ijtimoiy, hududiy mehnat taqsimoti o'rnatilgan hamda dialektik va tarixiy chegaralangan va o'tish xarakteriga ega bo'lgan ko'pqirrali ijtimoiy-iqtisodiy va geografik jarayondir[2].

Fan-texnika taraqqiyoti, ijtimoiy-iqtisodiy rivojlanish kabi jarayonlar ham urbanizatsiyaga ma'lum ma'noda ta'sir qiladi. Ayni vaqtda urbanizatsiya ekologik muhitga o'zining ta'sirini ko'rsatadi. Jumladan, bu jarayon rivojlangan mintaqalarda ekologik muhitning buzilishida kuzatiladi. Chunki, urbanizatsiya darajasi yuqori bo'lgan mintaqalarda sanoat korxonalari, zavod va fabrikalarning keng ko'lamda tashkil etilishi, ularning yuqori ko'rsatkichlarda hududiy mujassamlashuvi atrof-muhitga sezilarli ziyon keltiradi. O'zbekiston Respublikasi mustaqillik davrining dastlabki yillarda shaharlarning ijtimoiy-iqtisodiy rivojlanishida ayrim muammolar yuzaga keldi. Ayniqsa, bu muammolar yirik, asosan og'ir sanoat tarmoqlariga ixtisoslashgan shaharlarda biroz jiddiy tus oldi ularning iqtisodiy rivojlanish ko'rsatkichlari pasaydi, ijtimoiy va ekologik masalalarni hal etish ham muhim bo'lib qoldi.

Respublikada tabiiy geografik va geoekologik muammolar ko'zga yaqqol tashlanadi. Bu muammolarni bartaraf etish uchun bir qancha keng ko'lamli ishlarni amalga oshirilmoqda. Qoraqalpog'iston Respublikasi, Xorazm, Buxoro, Navoiy, Qashqadaryo, Surxondaryo, Samarqand, Sirdaryo, Jizzax, Toshkent, Namangan, Andijon, Farg'ona viloyatlarida tabiiy geografik va geoekologik muammolar ularning sanoat shaharlarida uchrab turibdi. Qashqadaryo viloyatining shaharlarida toza ichimlik suvining yetishmasligi, Surxondaryo viloyatida esa, shamollarning ta'siri, Sirdaryo va Jizzax viloyatlarida ob-havoning noqulayliklari, Toshkent shahrida aholining zichligi atmosferaning ifloslanishi, shovqin-suron kunlarning ko'p bo'lishi, Toshkent viloyatida esa, sanoat korxonalaridan chiqayotgan chiqindilar, shahar infratuzilmasiga va aholiga juda ham yomon ta'sir ko'rsatmoqda. Birlashgan Millatlar Tashkiloti qoshidagi sog'liqni saqlash Umumjahon tashkiloti dunyoda tinchlikni saqlash muammosidan keyin ikkinchi muammo –shahar muammosi deb xulosa qiladi. AQSHda 1960—1970 yillar ichida shahar aholisi taxminan 20 % ga ko'paydi. 1970-yili har to'rt amerikalikdan uchtasi shaharlik edi. Angliya, GFR, Yaponiya, Daniya, Shvetsiya, Niderlandiya va boshqa bir necha taraqqiy etgan kapitalistik mamlakatlarda shahar aholsining salmog'i 80 % dan oshib ketdi. Har yili ko'plab dehqon xo'jaliklari barbod bo'lmoqda va yuz minglab qishloq aholisi shaharlarga ko'chib kelmoqda.

Bugungi kunda dunyoda juda ko'p mummolar uchramoqda. Shaharlarimizning bugungi kundagi muammolarini bartaraf etishda bir qancha qonun-qoidalarni ishlab chiqish va amalda tatbiq qilish bilan ifodalanadi. Shaharlarimizda dunyoda bo'layotgan tabiiy geografik va geoekologik muammolarning borligi bizning oldimizga bu muammolarni yechish masalasini qo'yadi. Hozirgi kunda shaharlarda atmosfera havosining ifloslanishi, shovqin-suronli kunlarning ortib borayotganligi, aholi o'rtasida irqiy mojarolarning kelib chiqayotganliklari, shaharlardagi sanoat korxonalaridan chiqayotgan zaharli birikmalarning haddan tashqari ortayotganligi, shaharda ahloqiy buzuqlik, jinoyatchilikning sonining kundan-kunga ortib, aholiga zarar keltirayotganligi, bugungi shaharlarning oldiga ulkan muammolarni yechish va ularga qarshi chora-tadbirlarni amalga oshirish vazifalarini qo'yadi.

Shahar va uning xo'jaligidagi zavod-fabrikalar, transport vositalari va boshqalarning atrof muhitga ta'siri juda kuchli bo'lishi tabiiy, bu hol shaharlarda shart-sharoitlarni ham tubdan o'zgartirib yuborishi mumkin. Aksincha, atrof-muhitning musaffo bo'lishi ijtimoiy mehnat samaradorligini ko'tarish va aholi farovonligini yaxshilashda muhim rol o'ynaydi. Atrof muhit musaffoligining, qisman bo'lsada, buzilishi, tabiiy boyliklarning chegaralanganligi shahar rivojiga salbiy ta'sir ko'rsatadi. Masalan, shahar uchun zarur bo'lgan hududning kamligi shaharning kengayishiga to'sqinlik qiladi, natijada turarjoy binolari zichlashib ketadi, bu esa shaharda geoekologik muommolarni ko'payishiga sabab bo'ladi. Shaharlarning rivojlanishiga antropogen omillarni ham ta'siri kuchayib bormoqda.

Qashqadaryo viloyati shaharlarida ekologik va tabiiy geografik muammolar talaygina. Bu muammolarni viloyatdagi barcha shaharlarda uchratish mumkin.

Ularning yechimini topishda bir qancha amaliy ishlar amalga oshirilmoqda. Bunday muammolar Kasbi, Koson, Mirishkor, Nishon, Muborak kabi shaharlarda yaqqol ko'zga tashlanadi.

Kasbi, Koson, Mirishkor kabi shaharlarda yangi o'zlashtirilgan yerlarni ishdan chiqishi bu tabiiy geografik muammolardan biri bo'lgan sho'rlanish, tuproqlarning eroziya uchrashi, botqoqlanish kabi muammolarni keltirib chiqarmoqda. Yangi o'zlashtirilgan yerlar tezda ishdan chiqmoqda. Bu esa shaharlarda o'z ta'sirini o'tkazmasdan qolmaydi. Buning oldini olish uchun shahar atrofida ko'kalamzorlashtirish ishlarini olib borish shahar atrofida daraxtzorlar va o'simliklarni ko'paytirish ishlarini amalga oshirish kerak bo'ladi. Bu shaharlardan ko'tarilgan tuzlar va changlar shahar atrof muhitiga juda katta salbiy ta'sir ko'rsatmoqda. Ekologik muammolarni bartaraf etish va ularga qarshi chora-tadbirlarni amalga oshirish maqsadga muvofiqdir. Undan tashqari Muborak gazni qayta ishlash zavodi shaharning keng taraqqiy etishi shaharning turmush tarzini bir tarafdan yaxshilagan bo'lsa, ikkinchi bir tarafdan shahar atrofi va undagi aholiga zarar ham keltirmoqda. Muborak gazni qayta ishlash zavodidan chiqayotgan zaharli gazlar inson salomatligi uchun o'ta xavflidir.

Cho'l bag'rida qad rostlagan bu shahar bugungi kunda eng yirik gazni qayta ishlash zavodi bo'lishiga qaramay, ekologiya juda katta miqdorda zaharli birikmalarning chiqib ketishiga sabab bo'lmoqda. Bu yerda aholining sog'ligi bilan bo'lgan muammolar juda qiynab kelmoqda. G'uzor shahridagi Sho'rtan neftni va gazni qayta ishlash zavodi shahar rivojlanishida juda katta turtki bo'ldi. Sanoatning rivojlanishi shaharning yanada barg urib rivojlanishiga va shakllanishiga turtki bo'lgan bo'lsa, uning shaharga beradigan salbiy oqibatlarini ham ko'zdan yiroqda qoldirmaslik kerak bo'ladi. G'uzor shahrida eng katta geokologik muammolardan biri suv muamosi, havoning ifloslanishi, sho'rlanishning yuqoriligi bilan alohida ajralib turadi. Sho'rtangaz zavodining qurilishi bir qancha qulayliklarning ketidan anchagina muammolarni ham keltirib chiqarmoqda. Eng katta muammolardan biri bu shahar havosining keraksiz zaharli gazlar bilan ifloslanishidir. Shaharlarda, birinchi navbatda, sanoat taraqqiy etgan yirik shaharlarda bosh ekolog lavozimini joriy etish kerak bo'ladi. Har bir shahar, har bir korxona atrof muhitni muhofaza qilishga qaratilgan aniq chora-tadbirlar belgilashi va ularning so'zsiz bajarilishi ustidan nazorat o'rnatish kerakligi. Atrof muhitni buzganligi uchun katta miqdorda jarimalar olish qator xorijiy mamlakatlarda qo'llanib kelmoqda. Bugun yuksalib borayotgan davlatlarda shahar atrof muhitini muhofaza qilish bo'yicha bir qancha ishlar amalga oshirilayotgani so'zimizning isbotidir.

Qashqadaryo viloyatidagi ko'pchilik shaharlarda ekologik muammo bu toza ichimlik suvi bilan bog'liqdir. Bu muammoni hal qilish uchun suvni chuchuklashtirish qurilmalarini amalga joriy qilish va ularni qo'llab shaharni toza ichimlik suvi bilan ta'minlash muammosini hal qilish birinchi vazifalardan biridir. Shahar havosining buzilishi yirik shaharlardagi haroratni birmuncha isitib yuborishi ham mumkin. Ko'p qavatli binolar va transport vositalaridan keladigan issiqlikning tez tarqalib ketishining qiyinligi tufayli shunday hodisa yuz beradi. Shaharlarda atmosfera havosi va suv manbalarining ifloslanishi shaharda istiqomat qilish uchun zarur bo’lgan muayyan shart-sharoitlarni yomonlashtiradi, uning iqtisodiy taraqqiyot darajasini pasaytiradi, ijtimoiy soha tarmoqlari darajasini zaiflashtiradi. Shaharlarda tabiiy muhitning, qisman bo’lsa-da, ifloslanishi kishilar sog’ligiga, yashash sharoitiga, aholining farovonligiga katta ta’sir ko’rsatadi.

Jahon olimlari fikricha, katta shaharlardagi shovqin-suron inson umrini o’rta hisobda 8—12 yilga qisqartirar ekan. Yana shu narsa aniqlanganki, shovqin-suron kuchli bo’lgan ko’chalardagi maktablarda o’qiydigan bolalarning o’zlashtirishi shovqinsiz, tinch joylardagi maktab bolalarnikiga qaraganda ancha past bo’ladi. Shaharlarning rivojlanishida quyosh radiatsiyalarining, shamollarning, atmosfera havosining, havo massalarining ta’sir juda yuqori. Shaharlarni barpo qilishda har bir detalga diqqat qaratishimiz kerak bo’ladi. Mashhur nemis olimi Robert Kox “Bir zamonlar kelib inson vabo va o’latga qarshi qanchalik shavqatsizlik bilan kurashgan bo’lsa, shovqin-suronga qarshi ham ana shunday qatiyat bilan kurashadi’, degan edi[1].

Mintaqa urbanistik va hududiy urbanistik tarkibini takomillashtirish, turli miqyosidagi hududlarning shaharlar bilan ta’minlashini yaxshilash, qishloq joylar urbanizatsiyasini rivojlantirish; shaharlar funksional tuzilishini mustahkamlash va shu maqsadda ularni bozor sharoitiga moslashuvini jadallashtirish (investitsiya muhitini yaxshilsh, qo’shma korxonalar qurish, eksport salohiyatini ko’tarish), yangi shaharchalar, yangi agroshaharchalarning ijtimoiy-iqtisodiy rivojlanishini ta’minlash; shaharlarning murakkab hududiy tizimini, jumladan shahar aglomeratsiyalarini shakllantirish, viloyatlar va mintaqa ijtimoiy-iqtisodiy rivojlanishi faollashtirish maqsadida o’sish qutb va markazlarini aniqlashtirish; shahar hosil qiluvchi tarmoqlarni deversifikatsiyalash, ishlab chiqarish jarayoniga zamonaviy texnologiyalarni joriy qilish; urboekologik muammolarni hal etish, shaharlar va yo’llar tizimini mintaqaning ijtimoiy-iqtisodiy negizi sifatida rivojlantirilishi va hokazo. Yuqoridagi shahar va urbanizatsiyaga tegishli iqtisodiy geografik muammolarni ilmiy asoslangan yechimi eng avvalo mintaqa ijtimoiy-iqtisodiy rivojlanish strategiyasi va konsepsiyasini ishlab hamda ularni amalga oshirish bilan bevosita bog’liq.

Ayni vaqtda Surxondaryo va Qashqadaryo viloyatlarning cho’l zonasi, ya’ni Qarshi va Surxon-Sherobod cho’llari namgarchilik va suv resurslarining yetishmasligi sababli aholi joylashuvi va shaharsozlik nuqtai nazardan qulay emas. Xususan, global iqlim o’zgarishi natijasida tobora isib borayotgan hududning jazirama issiq va quruq havosi shaharlar qurilishi va aholi yashashi uchun katta qiyinchiliklarni vujudga keltirmoqda. Shaharlarni tabiiy iqlim sharoiti keskin o’zgarib binolarni qurishda va ularni barpo etishda biroz qiyinchiliklarga duch kelmoqdamiz. Mamlakatimizning barcha shaharlarida yashil zonani tashkil qilish har bir shaharlarimizga ko’kalamzorlashtirish ishlarini amalga oshirish bo’yicha bir qancha ishlarni qilish maqsadga muvofiq. Shaharlarimizda yashil maskanlarimiz va daraxtzorlar maydonining qisqarib borishi, keng ko'lamli qurilish ishlari, avtomobillar va sanoat korxonalari tomonidan atmosferaga chiqarilayotgan karbonat angidrid gazining miqdori ortib borishi Termiz, Qarshi, Muborak, Koson, Yangi-Nishon va boshqa shaharlarda yoz oylarida harorat rekordlari har yili yangilanib bormoqda.

Bu tekislik hududlarida barpo bo'lgan shaharlarning investitsion jozibadorligiga, ichki qishloq-shahar migratsiyasi jarayonlariga, aholi salomatligiga, iqtisodiy rivojlanishga salbiy ta'sir ko'rsatmoqda. Shaharlarda toza atmosfera muhitini yaratish maqsadida shaharlarimizda toza transport vositalarini ko'paytirish, shu jumladan keng jamoatchilik uchun qulay bo'lgan veloyo'lakchalar tashkil etish ishlarini yanada rag'batlantirish; Qashqadaryo viloyatidagi Qarshi, Muborak, Koson, Talimarjon, Beshkent, Yangi Nishon shaharlari va Mug'lon, Yangi Mirishkor, Po'loti, Jeynov kabi o'nlab shaharlarning qulay mikroiqlimini yaratish, tabiiy drenaj hisoblangan ko'p yillik daraxtlarni mutlaq kesilishini ta'qiqlash; keyingi yana bir masala barcha aholi maskanlarida suv resurslaridan oqilona foydalanish, jumladan, Qarshi, Koson, kabi yirik shaharlarda kanalizatsiya va sug'orish tizimlarida suvni qayta ishlab foydalnishni yo'lga qo'yish maqsadga muvofiqdir, Mamlakatimzdagi aksariyat shaharlarimizning muammolari tabiiy omillar bilan bog'liq. Shaharlarni ekologik toza muhitda rivojlantirmoqchi bo'lsak, birinchi navbatda shaharlarni toza transport vositalarini ko'paytirish kerak, undan keyin esa, shaharlarda insonlar uchun qulay bo'lgan veloyo'laklarini barpo etib, tabiatga bo'lgan ta'sirimizni biroz bo'lsada kamaytirish kerak. Bugungi dunyo yuzida rivojlanib borayotgan shaharlarning oldiga eng katta muammolardan biri dunyo yer yuzasining isib borishi eng yirik muammolardan biri sifatida shakllanishidir.

Bugungi kunda Koson, Muborak, Yangi Nishon, Mirishkordagi muammolar bir holatda emas, har bir shaharda har xil muammolar uchraydi. G'uzor, Kitob, Shahrisabz kabi shaharlarida esa muammolar umuman yangi yerlarni o'zlashtirilgan shaharlardan farq qiladi. Mamlakatimizda esa, bu geoekologik muammolar 12 viloyat va uning shaharlarida ta'sir doirasiga bog'liq holatda rivojlanmoqda. Yana shuni ta'kidlab o'tish joizki global iqlim o'zgarishi bilan bog'liq muammolar bu tabiiy iqlim sharoitining o'zgarishi, issiqxona samarasi, kabi muammolar bugungi dunyoning asosiy muammolaridan biri hisoblanmoqda.

Dunyoning shaharlarni kichik va o'rta shaharlarini taraqqiyoti oldida turgan muammolarni hal etishda, ayniqsa, ularda mavjud bo'lgan ishchi kuchlarini harakatga keltirish bunday shaharlarda yirik shaharlarda mavjud bo'lgan sanoat korxonalari va birlashmalarning ayrim filiallari hamda sexlarni tashkil etish va ishga solish maqsadga muvofiq bo'ladi. Shunday qilib mamlakatimizdagi barcha viloyatlaridagi shaharlarda bu kabi ishlarni olib borish va ularni amaliyotga tadbiq etish kerak bo'ladi. Viloyatda shaharlarni rivojlantirish ularni shakllantirish shaharning moddiy iqtisodiy bazasiga ham bog'liq.

Adabiyotlar

1. Ahmedov E. O’zbekiston shaharlari mustaqillik yillarida. T.: Abu Ali ibn Sino nomidagi tibbiyot nashr., 2002. -224 b.
2. Qurbonov P. R. Iqlim o’zgarishi sharoitida tekislık mintaqasi shaharlarining rivojlanish xususiyatları (janubiy o’zbekiston misolida) //Экономика и социум. – 2023. – №. 10 (113)-1. – С. 210-214.
3. Qurbonov P. O‘zbekıstonda urbanızatsıya jarayonları rıvojlanıshınıng asosıy bosqıchları //Farg'ona davlat universiteti. – 2023. – №. 3. – С. 165-165.
4. Qurbonov P. R. Botirov Y.Z. Qashqadaryo viloyati shaharlari rivojlanishida iqlimning o’rni// Экономика и социум. – 2024. – №. 10(125)
5. Сафаров И. Б., Расулов Ф. Социально-экономические проблемы и перспективы развития городов Кашкадарьинской области //Экономика и социум. – 2024. – №. 1 (116). – С. 1304-1311.
6. Safarov I. B., Rasulov F. I. Development of social spheres in the cities of Kashkadarya region //Educational Research in Universal Sciences. – 2024. – Т. 3. – №. 4. – С. 85-90.

Боймирзаев Ф.Р.
Oziq-ovqat texnologiyasi va
muhandisligi xalqaro instituti o'qituvchisi

OLIY TA'LIM MUASSASALARIDA MATEMATIKANI KASBIY YO'NALTIRILGANLIK ASOSIDA O'QITISH METODIKASI

Annotatsiya: *Maqola oliy ta'lim muassasalarida matematikani kasbiy yo'naltirilganlik asosida o'qitish metodikasini tahlil qilishga bag'ishlangan. Ushbu maqola kasbiy yo'naltirilgan yondashuvning ta'limda qo'llanishiga bag'ishlangan tadqiqot va metodikalarni yanada chuqur o'rganish imkonini beradi.*
Kalit so'zlar: *kasbiy yo'naltirilgan yondashuv, matematika ta'limi, oliy ta'lim, amaliy qo'llash, real hayotiy muammolar, kasbiy tayyorgarlik, analitik fikrlash.*

Boymirzayev.F.R.
Lecturer
International Institute of Food Technologies and Engineering.

METHODOLOGY OF TEACHING MATHEMATICS IN UNIVERSITIES BASED ON PROFESSIONAL ORIENTATION.

Abstract: *The article is devoted to the analysis of the methodology of teaching mathematics in higher educational institutions based on professional orientation. This article presents a more in-depth study of research and methods of using a professionally oriented approach in education.*
Key words: *professional approach, mathematical education, higher education, practical application, life tasks, professional training, analytical thinking.*

Zamonaviy ta'lim jarayonlarida matematika fani nafaqat nazariy bilimlarni berish, balki talabalarning kasbiy ko'nikmalarini shakllantirishda ham muhim ahamiyat kasb etmoqda. Oliy ta'lim muassasalarida matematikani kasbiy yo'naltirilganlik asosida o'qitish metodikasi ta'limning amaliyotga yaqinlashishini ta'minlash va talabalarning tanlagan kasb sohalarida kerakli bilimlarni egallashlariga yordam beradi. Bugungi kunda texnika, iqtisodiyot, axborot texnologiyalari va boshqa ko'plab sohalarda matematik bilimlarga bo'lgan ehtiyoj kuchayib bormoqda. 2023-yilgi ma'lumotlarga ko'ra, O'zbekiston oliy ta'lim muassasalarida texnika va iqtisodiyot yo'nalishlarida o'qiyotgan talabalar soni jami talabalarning 30% ni tashkil qiladi, bu esa ushbu yo'nalishlar uchun matematik tayyorgarlikning dolzarbligini ko'rsatadi.

Matematika fani kasbiy yo‘naltirilgan holda o‘rgatilganda, talabalar tanlagan sohalarida matematikani real vaziyatlarda qo‘llash imkoniyatiga ega bo‘ladilar. Shuningdek, ta’lim jarayonida kasbiy vazifalar orqali o‘rgatiladigan matematik metod va usullar talabalarni kelgusidagi professional faoliyatlariga yanada yaqinlashtiradi. O‘z navbatida, ushbu metodika matematikani nazariy fan bo‘lishdan chiqarib, uni amaliy fan sifatida o‘rganishga keng yo‘l ochadi. Shu sababli, matematikani kasbiy yo‘naltirilganlik asosida o‘qitish metodikasini ishlab chiqish va tatbiq etish dolzarb pedagogik muammolardan biri hisoblanadi.

Oliy ta’lim muassasalarida matematikani kasbiy yo‘naltirilganlik asosida o‘qitish masalasi hozirgi zamonaviy ta’lim tizimining markaziy muammolaridan biri hisoblanadi. Ushbu yo‘nalishda olib borilgan ilmiy izlanishlar matematikani kasbga yo‘naltirilgan asosda o‘qitishning talabalarni tanlagan sohalarida muvaffaqiyatli professional faoliyatga tayyorlashda muhim omil ekanligini ta’kidlamoqda. Xususan, Freudenthal (1973) va Tall (1991)[1] tomonidan taklif etilgan "matematik modellashtirish" yondashuvi matematikani amaliy hayot bilan bog‘lashda muhim ahamiyat kasb etadi. Ular matematikani faqat nazariy bilim sifatida emas, balki kundalik kasbiy faoliyatda yechiladigan muammolarni hal qilish vositasi sifatida o‘rgatishni taklif qiladilar.

Shuningdek, Niss (2007) va Artigue (2009) tomonidan taqdim etilgan tadqiqotlar matematikani kasbiy yo‘naltirilganlikda o‘qitishda interfaol ta’lim metodlarining samaradorligini tasdiqlaydi. Ular matematik tayyorgarlikning kasbiy faoliyat bilan integratsiyasini ta’minlash orqali talabalarni professional hayotga yaxshiroq tayyorlashni ta’minlash mumkinligini ta’kidlaydilar. Bu tadqiqotchilarning asarlarida kasbiy kontekstda matematikani o‘rgatish talabalarning nazariy bilimlarni chuqurroq tushunishlariga va ularni real muammolarga tatbiq etish qobiliyatini rivojlantirishiga katta e’tibor qaratilgan[2].

1- Jadval:Kasbiy yo‘naltirilgan yondashuv mazmuni

Jihat	**Tavsif**
Amaliy qo‘llashga e’tibor	Matematika tushunchalari o‘quvchilar kelajakda duch keladigan kasbiy vaziyatlarga mos ravishda o‘rgatiladi. Har bir mavzu kasbiy amaliyot bilan bog‘lanadi.
Kasbiy sohalar bilan integratsiya	Matematik bilimlar muhandislik, iqtisodiyot, axborot texnologiyalari kabi kasbiy yo‘nalishlarga integratsiyalangan holda beriladi.
Haqiqiy hayotdagi muammolarni hal qilish	O‘quvchilarga haqiqiy hayotda duch keladigan muammolarni hal qilish uchun matematik modellarni yaratish va qo‘llash o‘rgatiladi.
Ishlab chiqarish va sanoat misollari	O‘qitish jarayonida sanoat sohasidagi real misollar va tajribalar kiritilib, nazariyani amaliyotga tatbiq etish imkoniyatlari ko‘rsatiladi.

Jihat	Tavsif
Kasbiy ekspertlar bilan hamkorlik	Dars jarayoniga soha mutaxassislari jalb qilinadi. Ular o‘z sohalarida matematikani qanday qo‘llashlari haqida talabalarga real misollar bilan tushuntiradi.

Bundan tashqari, Trowler (2012)[3] tomonidan olib borilgan izlanishlar yuqori ta’lim muassasalarida "kasbiy tayyorgarlik" kontseptsiyasini shakllantirishda integratsiyalashgan yondashuvlar zarurligini ko‘rsatadi. Uning fikricha, talabalar matematikani kasbiy muammolarni hal qilish vositasi sifatida qabul qilsalar, o‘zlarining kelajakdagi professional faoliyatlarida matematik bilimlardan ko‘proq foydalanadilar. Bu yondashuv talabalarni nafaqat matematik nazariy bilimlarga ega bo‘lishga, balki ularni amaliy muammolarni hal qilishda qo‘llash qobiliyatini rivojlantirishga yo‘naltiradi.

Zamonaviy tadqiqotlar, masalan, English va Kirschner (2016) va Borromeo Ferri (2018), matematikani kasbiy yo‘naltirilganlik asosida o‘qitishda "muammoga asoslangan ta’lim" (Problem-Based Learning, PBL) yondashuvining afzalliklarini yoritib beradi. Ularning tadqiqotlari shuni ko‘rsatadiki, bu metod talabalarga real kasbiy vazifalar asosida matematik bilimlarni o‘rganish imkonini beradi, bu esa ularning kelajakdagi professional faoliyatlariga yaqinlashtiradi. Ayniqsa, PBL orqali matematikani o‘rganish talabalarning ijodkorlik va muammolarni yechish ko‘nikmalarini rivojlantiradi.

Shu bilan birga, Xie va Reiser (2019) [5]tomonidan olib borilgan izlanishlar zamonaviy texnologiyalar, xususan, axborot-kommunikatsiya texnologiyalari yordamida matematikani kasbiy yo‘naltirilganlik asosida o‘qitishning samaradorligini oshirish usullarini tahlil qiladi. Ularning fikriga ko‘ra, raqamli texnologiyalar matematik modellashtirish va ma’lumotlar tahlili bo‘yicha talabalarni kasbiy muammolarga tayyorlashda muhim vosita bo‘lib xizmat qiladi. Bu esa zamonaviy texnologiyalarni matematik ta’lim jarayoniga integratsiya qilish zaruratini ko‘rsatadi.

Yuqoridagi adabiyotlar tahlili shuni ko‘rsatadiki, matematikani kasbiy yo‘naltirilganlik asosida o‘qitish pedagogik metodlarni takomillashtirish, talabalarning kasbiy faoliyatlarida qo‘llaniladigan ko‘nikmalarni rivojlantirish uchun keng imkoniyatlar yaratadi. Ayniqsa, interfaol va texnologiyalarga asoslangan metodlar talabalar bilimini chuqurlashtirish va ularni professional faoliyatga tayyorlashda dolzarb yondashuvlardir.

Oliy ta’lim muassasalarida matematikani kasbiy yo‘naltirilganlik asosida o‘qitish metodikasining samaradorligini aniqlash uchun bir necha mezonlar bo‘yicha empirik tahlil o‘tkazildi. Tahlil doirasida talabalarning bilim darajalari, ularning matematikani kasbiy faoliyatda qo‘llash qobiliyatlari hamda ushbu metodika orqali o‘quv jarayoniga bo‘lgan munosabatlari baholandi.

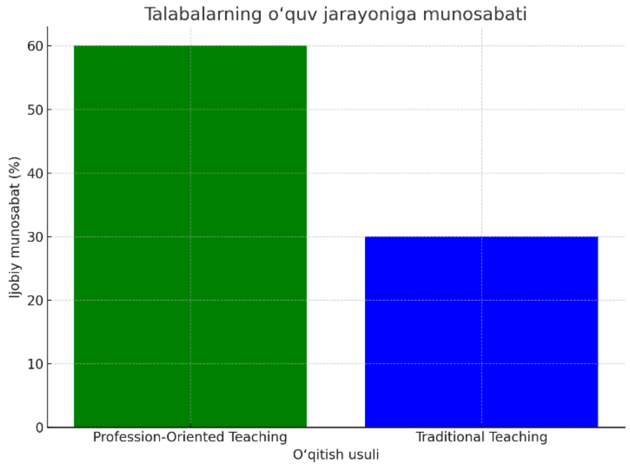
Jadval 1. O‘quv metodikasi bo‘yicha o‘quvchilar bilim darajalarining taqqoslash

Metodika turi	**Yuqori daraja (%)**	**O‘rta daraja (%)**	**Past daraja (%)**
An’anaviy o‘qitish usuli	25	50	25
Kasbiy yo‘naltirilgan o‘qitish	45	40	15

Mazkur jadvalda talabalarning bilim darajalarida kasbiy yo‘naltirilgan o‘qitish usuli yordamida sezilarli yaxshilanish kuzatilgan. Yuqori bilim darajasiga ega talabalar soni 45% ga yetgani, an’anaviy usulda esa bu ko‘rsatkich atigi 25% ekanligi ko‘rsatilgan.

Diagramma 1. O‘quv jarayoniga bo‘lgan munosabatlar tahlili

Talabalarning o‘quv jarayoniga bo‘lgan munosabati so‘rovnomalar orqali o‘rganildi. Quyida ushbu so‘rov natijalarining diagrammasi keltirilgan.



Diagrammadan ko‘rinib turibdiki, kasbiy yo‘naltirilgan o‘qitish metodikasiga talabalar ijobiy baho berishgan bo‘lib, ularning 60% dan ortig‘i ushbu usulni amaliyotga yaqin va samarali deb topishgan. An’anaviy usulda esa talabalar faqat 30% ijobiy fikr bildirishgan.

***Jadval 2.** Kasbiy faoliyatga tayyorgarlik ko‘nikmalarining shakllanishi*

Ko‘nikma turi	**An’anaviy usul (%)**	**Kasbiy yo‘naltirilgan usul (%)**
Muammolarni tahlil qilish	40	65
Qaror qabul qilish qobiliyati	35	60
Matematik modellashtirish	25	55

Jadvalga ko‘ra, kasbiy yo‘naltirilgan o‘qitish talabalarning kasbiy ko‘nikmalarini sezilarli darajada yaxshilaganini ko‘rsatmoqda,ayniqsa, matematik modellashtirish va qaror qabul qilish qobiliyatlarida an’anaviy usul bilan solishtirganda o’sish kuzatilmoqda.

Diagramma 2. O‘quv jarayonida kasbiy yo‘naltirilgan yondashuvning samaradorligi

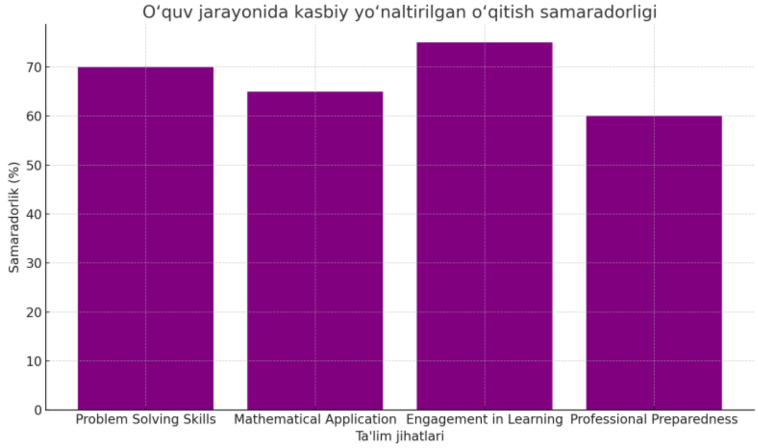


Diagramma kasbiy yo‘naltirilgan yondashuvning samaradorligini aniq ko‘rsatib beradi. Talabalar kasbiy yo‘naltirilgan matematikani o‘rganishda qobiliyat va bilimlarini yaxshiroq namoyon qilishgan.

Oliy ta’lim muassasalarida matematikani kasbiy yo‘naltirilganlik asosida o‘qitish bugungi zamonaviy ta’lim jarayonida o‘z dolzarbligini saqlab kelmoqda. Ushbu metodika o‘quvchilarning matematik bilimlarini nafaqat nazariy jihatdan rivojlantirish, balki ularni kelajakdagi kasbiy faoliyatlarida amaliy qo‘llash uchun zarur ko‘nikmalar bilan boyitishda katta ahamiyat kasb etadi. Tadqiqotlar shuni ko‘rsatadiki, kasbiy yo‘naltirilgan o‘qitish yondashuvi orqali talabalarning analitik fikrlash, muammolarni hal qilish va qaror qabul qilish qobiliyatlari sezilarli darajada oshadi.

Mazkur yondashuvning afzalliklari shundan iboratki, o‘quvchilarga matematikani amaliy qo‘llash uchun zaruriy ko‘nikmalar, real hayotdagi muammolarni hal qilish imkoniyatlari beriladi va ularning kasbiy sohada matematikadan foydalanish qobiliyatlari rivojlanadi. Shu bilan birga, dars jarayoniga kasbiy ekspertlar va sanoat sohasidagi real misollarni jalb qilish o‘quv jarayonini yanada boyitadi va kasbiy faoliyatga tayyorgarlikni oshiradi.

Shuning uchun oliy ta’lim muassasalarida matematikani kasbiy yo‘naltirilganlik asosida o‘qitish metodikasini yanada rivojlantirish, uning nazariy va amaliy jihatlarini mustahkamlash dolzarb vazifalardan biri hisoblanadi. Bu yondashuv talabalarning kelajakdagi muvaffaqiyatli kasbiy faoliyatlariga tayyorgarlik ko‘rishda ularga muhim poydevor yaratib beradi.

Foydalanilgan adabiyotlar

1. Freudenthal, H. (1973). *Mathematics as an Educational Task*. Dordrecht: Reidel.
2. Tall, D. (1991). *Advanced Mathematical Thinking*. Dordrecht: Springer.
3. Niss, M. (2007). *Mathematical Competencies and the Learning of Mathematics: The Danish KOM Project*. Educational Studies in Mathematics, 55(1), 21–43.
4. Artigue, M. (2009). *Didactical Design in Mathematics Education*. Nordic Studies in Mathematics Education, 14(1), 7–17.

5. Trowler, P. (2012). *Higher Education Policies and Institutional Change: Intentions and Outcomes in Turbulent Environments*. Society for Research into Higher Education.
6. English, L. D., & Kirschner, P. (2016). *Perspectives on Problem Solving in Mathematics Education*. Educational Research Review, 19, 85–99.
7. Borromeo Ferri, R. (2018). *Learning How to Model in Mathematics and Science Education: The Role of Competencies and Skills*. Springer.
8. Xie, Q., & Reiser, B. J. (2019). *Using Technology to Support Students' Modeling Competencies in Mathematics*. Journal of Educational Technology Research and Development, 67(3), 511–529.
9. Ross, S. M. (2014). *Introduction to Probability Models*. Academic Press.
10. Grimmett, G., & Stirzaker, D. (2020). *Probability and Random Processes*. Oxford University Press.
11. Tursunova E. G., Boymirzayev F. R. PARALLEL TIP O ‘ZGARISH CHIZIG ‘IGA EGA ARALASH TENGLAMA UCHUN INTEGRAL ULASH SHARTLI CHEGARAVIY MASALA //O'ZBEKISTONDA FANLARARO INNOVATSIYALAR VA ILMIY TADQIQOTLAR JURNALI. – 2023. – Т. 2. – №. 15. – С. 237-243.
12. Boymirzayev F. R. PARALLEL TIP O ‘ZGARISH CHIZIG ‘IGA EGA PARABOLIK-GIPERBOLIK TIPDAGI TENGLAMA UCHUN INTEGRAL ULASH SHARTLI CHEGARAVIY MASALA //O'ZBEKISTONDA FANLARARO INNOVATSIYALAR VA ILMIY TADQIQOTLAR JURNALI. – 2023. – Т. 2. – №. 19. – С. 715-727.
13. Raxmatjon o‘g‘li B. F. ARALASH TENGLAMA UCHUN INTEGRAL ULASH SHARTLI CHEGARAVIY MASALA //ISSN 2181-4120 VOLUME 1, ISSUE 32 NOVEMBER 2023. – 2023. – С. 123.
14. Raxmatjon o‘g‘li B. F. O ‘ZGARISH CHIZIG ‘IGA EGA PARABOLIK-GIPERBOLIK TIPDAGI TENGLAMA UCHUN INTEGRAL ULASH SHARTLI CHEGARAVIY MASALA //IQRO INDEXING. – 2024.–Т. 8.–№. 1.
15. Raxmatjon o‘g‘li B. F. KASR TARTIBLI OPERATORLAR BOSHLANG ‘ICH TUSHUNCHALAR VA ABEL INTEGRAL TENGLAMASI YECHIMLARI: Farg ‘ona Davlat Universiteti “Matematika” kafedrasi, PhD, dotsent, Xonqulov Ulug ‘bek Xursanalievich taqrizi ostida //IQRO INDEXING. – 2024. – Т. 9. – №. 1. – С. 289-295.
16. Боймирзаев Ф. Р. РЕШЕНИЕ ИНТЕГРАЛЬНЫХ УРАВНЕНИЙ АБЕЛЯ С ПОМОЩЬЮ ДРОБНЫХ ОПЕРАТОРОВ //Экономика и социум. – 2024. – №. 5-1 (120). – С. 1145-1150.

Bozorov M.I.
Qarshi davlat universiteti magistranti
Ko‘chimov J.I.
Termiz iqtisodiyot va servis universiteti talabasi

TOPONIMLARNING STRATIGRAFIK (TARIXIY) QATLAMLARI

Annotatsiya: *Mazkur maqolada toponimlarning stratigrafik qatlamlari haqida so‘z boradi. Xususan, O‘zbekiston hududida keng tarqalgan lug‘aviy geografik qatlamlar haqida ma’lumotlar keltirilgan.*
Kalit so‘zlar: *Sug‘diy, forsiy, «uch rabot», turkiy, Qizilarab, Yomchi, Quyi Kaltatoy, chay*

Bozorov M.I.
Master's degree
from Karshi State University
Ko‘chimov J. I.
Student
of Termez University of Economics and service

STRATIGRAPHIC (HISTORICAL) LAYERS OF TOPONYMS

Abstract: *This article will focus on the stratigraphic layers of toponyms. In particular, data on the dictionary geographical strata common in the territory of Uzbekistan are provided.*
Keywords: *Sugdean, Persian, "three workers", Turkic, Kyzylarab, Yomchi, Nizhny kaltatoi, tea*

Kirish. Ma’lumki, kishilik jamiyatining ilk bosqichidan boshlab odamlar uchun joy haqida tasavvurlar juda zarur bo‘lgan. Tabiat bilan doimiy bog‘liqlikda yashagan qadimiy odamlar uchun o‘zlari istiqomat qilayotgan joy va uning tevarak atrofini nomlash ehtiyoji paydo bo‘lgan. Bu zaruriyat, ya’ni geografik ehtiyoj kishilarga mo‘ljal olish yoki bir manzilni ikkinchisidan farqlash uchun kerak edi. Demak, insoniyat tarixi qanchalik qadimiy bo‘lsa, geografik nomlar ham shunchalik qadimiydir. Geografik nomlar turli tarixiy sharoitlar va tillar takomilining mahsuli, ular tarixning ma’lum bir davrida paydo bo‘lgan. Har qanday toponim muayyan bir tarixiy davrda paydo bo‘lgan, xalq tarixining kichik bir zarrachasi unda mujassam. Shuning uchun, nomning paydo bo‘lishida turtki bo‘lgan omil o‘sha davrning tarixi, voqeligi, ijtimoiy-iqtisodiy muhiti bilan birga izohlanishi, tadqiq qilinishi yaxshi samara beradi. Har qanday geografik nomlarning majmuasi ma’lum vaqt davomida shakllangan. Ularning «umri, yashash davri» ham har xil bo‘ladi. Chunonchi, O‘rta yer dengizi sohillari, Hindiston, Xitoyda yoshi bir necha ming yilni tashkil etadigan toponimlar mavjud.

Xorazm, Buxoro, Samarqand kabi nomlar ham salkam uch ming yildan buyon yozma manbalarda uchraydi. Antraktidadagi nomlarning asosiy qismi esa oxirgi 50-75 yilda paydo boʻlgan. [4]

Asosiy qism. Oʻrta Osiyo va Oʻzbekiston toponimiyasining tarixiy qatlamlarini oʻrganishda V.V.Bartold, E.M.Murzaev, H.Hasanov, A.Muhammadjonov, S.Qoraev, A.Nabiev, T.Nafasov, Z.Doʻsimov, A.Nizomov kabi olimlarning asarlari muhim ahamiyatga ega. Masalan, E.M.Murzaevning Oʻrta Osiyoni koʻpgina turkiy, eroniy, arab, mugʻul tillari asosida paydo boʻlgan toponimlarga bergan sharhi oʻzining tarixiy manbalarga asoslanganligi, yorqin, sodda, ravon va ishonarligi bilan alohida ajralib turadi. Geografik nomlarning tarixiy tasnifida toponimning qaysi lugʻaviy geografik qatlamga mansubligi tahlil qilinadi. Joy nomlari aniq bir tarixiy sharoitda paydo boʻlib, kelib chiqishi jamiyat hayoti, hududda yashayotgan yoki qachonlardir yashagan xalqlar tili bilan chambarchas bogʻliq. Aniqroq aytganda, har bir tarixiy davr oʻziga xos xususiyatlarga ega ekanligini uning geografik nomlarida ham koʻrish mumkin. [8]

Geografik nomlar tarkibidagi mavjud lugʻaviy geografik qatlam boʻyicha Oʻzbekiston hududida keng tarqalgan quyidagi 7 ta qatlamlarni ajratish mumkin:

1. *Sug'diy* (Andagin, Andugon, Asaka, Jizzax, Mug'on, Porasht, Novqa, Nushkent, Pishag'ar);

2. Forsiy (Duoba, CHortogʻ, Peshku, Tagob, Tangi, Sangzor, Garasha, CHorbogʻ, Navroʻz); Hozirgi Oʻzbekiston hududidagi turkiy va forsiy xalqlar qadimdan uzviy iqtisodiy, madaniy, siyosiy aloqada boʻlishgan. Bu munosabat va aloqalar har ikki xalqning toponimiyasiga oʻz taʻsirini oʻtkazgan. Tarixchi olim A.Muhammadjonov eroniy qatlamga xos boʻlgan Savot nomini izohlab shunday yozadi: Ustrushonaning Sebat rustoqida Buyuk Ipak yoʻli uch tarmoqqa (SHosh, Fargʻona, Ustrushona) boʻlinib ketgan. Ushbu yoʻnalishlarning har birida bittadan rabotkarvonsaroy mavjud boʻlgan va Sebat (se -uch, bat - rabotlarning qisqargan shakli) - «uch rabot» maʻnosini beradi. Sebat mahalliy xalq talaffuzida Sabot, Savot boʻlib oʻzgargan. Oʻrta asrlarning arabiynavis geograflari Ibn Havqal va Istaxriy asarlarida ham qishloq toʻgʻrisida maʻlumotlar mavjud va uning katta karvon yoʻli ustida joylashganligi ta'kidlangan. Qulay geografik oʻringa ega boʻlgan Sebatda oʻrta asrlarda Ustrushonadagi yagona mashhur yopiq bozor, tim boʻlgan. Demak, Savot - aslida Seravot boʻlib uch rabot, uch karvonsaroy degan ma'noni bildiradi. Har bir mintaqa toponimiyasi yordamida oʻsha hududdagi tarixiy qatlamlarning oʻziga xos xususiyatlarini aniqlash mumkin. Ba'zan, nomlar oʻtmish mahsuli sifatida, asrlar davomida tildan tilga oʻtib shaklan oʻzgaradi, mazmunan mavhumlashib boradi. Jizzax viloyati hududidagi Nurota togʻlari etagida joylashgan Garasha qishlogʻining nomi bunga yaqqol misol boʻladi. Mahalliy xalqning aytishicha, qishloq nomiga fors-tojik tilidagi «girehkusho» soʻzi asos boʻlgan. Girehkusho soʻzi fors-tojik tilida, gireh - «tugun», «band» va kusho - «echmoq», «tugunlarni yechuvchi», «tilsimlarni ochuvchi», «hojatbaror» kabi ma'nolarni ifodalaydi. Girehkusho nisbati XII asr oxiri va XIII asrning boshlarida yashagan, yassaviya tariqatining izdoshlaridan boʻlgan, hamda ilk bor shu qishloq hududida qo‘nim topgan shayx Muhammadsharif ibn Aliasqarga tegishli. Bu nisba bilan mashhur bo‘lishiga shayxning ko‘pgina karomatlari, muammolar yechimini to‘g‘ri topganligi sabab bo‘lgan deyishadi. [1]

3. Turkiy (Qorasoy Qorabo‘yin, Qorakaltak, Qo‘g‘ay, Puchug‘oy, O‘rtaqishloq, Yoyilma, Tuyoqli, Tuyachi, Tumor, Qirq, Bolg‘ali, Kaltatoy, Ming); Ta'kidlash joizki, mintaqada eroniy tilli toponimlar bilan birga, turkiy nomlar ham juda qadimiy davrlarda shakllangan. O‘rta Osiyoning qadimiy turkiy toponimiyasini maxsus o‘rgangan tarixchi olim SH.S.Kamoliddinning yozishicha, kelib chiqishi turkiy bo‘lgan nomlar juda qadim davrlardan buyon, ushbu hududda keng tarqalgan va ular ilk o‘rta asrlarda son jihatdan sharqiy eroniy tillarga xos bo‘lgan toponimlardan keyin ikkinchi o‘rinni egallagan. Turkiy toponimlar o‘rta asrlardan boshlab to hozirga qadar mintaqa toponimiyasining eng baquvvat hamda barcha hududlarda keng tarqalgan geografik nomlar qatlamini tashkil etadi. E’tiborli tomoni shuki, O‘rta Osiyoning boshqa hududlariga nisbatan Yettisuv va Tyan-SHanning ichki qismlari hamda Qazog‘istonning dasht mintaqasida azaldan turkiy nomlar ko‘p bo‘lgan. Nomshunos olimlarning fikricha, turkiy toponimlarning farqlovchi xususiyatlardan biri shuki, ular ko‘pincha geografik terminlar yordamida paydo bo‘lgan. Olimlar bu holatni turkiy xalqlarning yashash tarzi bevosita ularni o‘rab turgan tabiat bilan chambarchas bog‘liqligi bilan izohlashgan. Turkiy nomlarning asosiy farqlovchi xususiyatlaridan biri - qatlamdagi nomlarning katta qismini etnonimlar tashkil etadi. Tarixiy ma‘lumotlarga qaraganda, o‘tmishda ularning soni bundan ham ko‘p bo‘lgan. Masalan, XIX asrning oxirlarida Zarafshon vodiysini o‘rgangan rus olimlari tomonidan yozib olingan 1300 aholi punkti nomi orasida 900 dan ortiq etnonim borligi qayd qilingan. O‘rta Osiyo toponimiyasi tarkibidagi nomlarning asosiy qismini hozirgi o‘zbek, qozoq, qirg‘iz, turkman, qoraqalpoq va tojik tillari yordamida osongina tushunish mumkin. Mutaxassislar ta’kidlaganidek, toponimlar hozirgi ma’muriy hududiy chegaralarni tan olmaydi. CHunki ularning ko‘pchiligi hozirgi milliy chegaralanishdan oldin paydo bo‘lgan. SHuning uchun, mahalliy xalqlar (o‘zbek, qozoq, qirg‘iz, turkman, tojik) tomonidan yaratilgan joy nomlarni O‘rta Osiyoning barcha davlatlari hududida uchratish mumkin. E.Murzaevning yozishicha, turkiy qatlamdagi nomlar aholining xo‘jalik yuritish faoliyati bilan chambarchas bog‘liq bo‘lganligi bois, boy va rang-barang. Ayrim geografik tushunchalar chorva mollarning yaylovlari va landshaftlar unumdorligi bilan bog‘liq. Turkiy tillarda chorva ozuqalarning turli xususiyatlarini ifodalash uchun bir qator ixtisoslashgan geografik terminlardan foydalaniladi. O‘rta Osiyo mintaqasida ayrim geografik terminlar qaysi mamlakat hududida qo‘llanilishiga qarab fonetik jihatdan o‘zgargan. Masalan, O‘zbekiston, Qirg‘izistonda - soy, Qozog‘istonda - say, Turkmanistonda - choy (chay).

4. Arab (Aravon, Arabmozor, Arabqishloq, Arabto’pi, Toshloqarab, Tojikarab, CHo’jaarab, Qizilarab, Mirarab, Kattaarab, Kichikarab , Talli, So’fimozor, Juma, Mavtan, Avliyo, Ravot, Hulkar); arablarning ko‘p asrlik istilosi bilan bog‘liq, ular islom dinini olib kelish bilan birga, kelib chiqishi arab tiliga mansub so‘zlardan paydo bo‘lgan toponimlarning shakllanishida faol ishtirok etganlar. O‘rta Osiyo, jumladan O‘zbekiston hududida arab tili elementlari asosida paydo bo‘lgan nomlar orasida antroponimlar ko‘p. Arab tilining mintaqada paydo bo‘lishi tarixan ayon, ammo ularni geografik ob’yektlarga nom sifatida shakllanishiga sabab bo‘lgan omillar kam o‘rganilgan. Bu qatlamga tegishli geografik nomlarning asosini tashkil qiluvchi so‘zlar, ancha qadimgi davrlarda arab tilidan, turkiy tillarga o‘zlashgan. Hozirda O‘zbekiston hududidagi arabcha toponimlarning aksariyati o‘zbek tili grammatikasi asosida yaratilgan. Sof arab tilidan o‘zlashgan so‘zlarning ayrimlari hozirgi vaqtda ham geografik termin sifatida qo‘llaniladi va ma‘nosi tushuniladi. Bunday geografik terminlar qatoriga anhor, mozor, mahalla, masjid, rabot, aqba, supa, qal‘a kabi terminlarni kiritish mumkin. Bunda arab tilining adabiy til bo‘lib xizmat qilishi muhim ahamiyat kasb etgan. Mutaxassislar arab tilidan o‘zlashgan so‘zlar asosida paydo bo‘lgan toponimlar orasida diniy terminlarning ko‘pligini alohida qayd qilishgan. Mintaqadagi bir qator yirik geografik ob’yektlar nomini arablar o‘zgartirgan bo‘lsalar ham, ammo mahalliy xalq orasida ular keng qo‘llanilmagan. Bular Sayhun, Jayhun, Movarounnahr va boshqalar. Ko‘p asrlik lisoniy aloqalar turkiy - arabcha - Toshsaqo, Narpay, Alamli, Talli kabi gibrid nomlarni paydo bo‘lishiga sabab bo‘lgan. [3].

5. Mo‘g‘ul (Arg‘in, Axtachi, Do‘rmon, Darxon,To‘qay, Yomchi,Ungut, Sayxan,Sulduz, Ko‘tal, Jaloyir, Saroy, Nayman,Qo‘nji, Qo‘riq); O‘zbekiston hududida mo‘g‘ul tilidan o‘zlashgan so‘zlar asosida paydo bo‘lgan toponimlarning kelib chiqishi XIII asrdagi mo‘g‘ullar istilosi bilan bog‘liq. Mug‘ulcha toponimlar mintaqa joy nomlari tarkibidagi kichik bir guruh sifatida to‘rtinichi tarixiy qatlamni tashkil etadi. Mo‘g‘ul tili hozirgi O‘zbekiston hududida xalq tiliga aylanmadi. SHu sababdan, mug‘ul tili bilan bog‘liq toponimlari nisbatan kam va ularni aniqlash qiyin emas. Ayrim mutaxassislar O‘zbekiston toponimiyasi tarkibida, mo‘g‘ulcha nomlarning kamligi, ularni mahalliy xalq bilan aralashib tili va dinini qabul qilganligi sabab bo‘lgan deyishadi. S.Nominxanov, E.Begmatov, T.Nafasov kabi o‘zbek olimlari, turkiy tillar onomastikasida mo‘g‘ulcha va mo‘g‘ulcha - turkiy so‘zlar asosida yasalgan kishi ismlarni, etnonimlarni, toponimlarni tadqiq qilishgan. Masalan, T.Nafasov mo‘g‘ul va turkiy xalqlarning o‘zaro yaqinligiga ishora qilib, mo‘g‘ul va turkiy tillarda mushtarak so‘zlarning etnolingvistik tabiatini aniqlamasdan turib, ularni biror tilga mansubligini belgilash qiyin deb, hisoblaydi. O‘zbekiston toponimiyasi tarkibida ayrim mo‘g‘ulcha so‘zlar negizida shakllangan toponimlar hozirgacha saqlanib qolgan. Bunga, respublika hududidagi Bulung‘ur, Darxon, Norin, Yom, Sayxan kabi joy nomlari misol bo‘ladi. Masalan, Jizzax shahri tarkibidagi mahallalardan birining nomi Sayxan. Yetuk toponimik tadqiqotlar muallifi E.M.Murzaevning yozishicha, Sayxan oykonimiga, mo‘g‘ul tilida «chiroyli», «go‘zal» degan ma’nolarni anglatuvchi saykan so‘zi asos bo‘lgan. Keyinchalik geografik termin sifatida bu so‘z o‘zbek tiliga o‘zlashgan va hozirda «katta», «tekis ochiq joy», «maydon» ma’nosini ifodalaydi. Geografik nom sifatida tanilgan yom (dialektda jom) so‘zi ham mo‘g‘ul tilidan o‘zlashgan. Mutaxassislar Yomchi, Jom, Jomboy, Jombo‘z, Jombuloq kabi toponimlarni paydo bo‘lishini yom so‘zi bilan bog‘liq deyishadi. Yo‘l ma‘nosidagi yom so‘zi mo‘g‘ullardan turkiy tillarga o‘tib, mo‘g‘ullar hukmronligi davrida O‘rta Osiyoda keng tarqalgan. Yomlar chingiziylar davrida qurila boshlagan. Keyinchalik yom so‘zi «choparlar, yo‘lovchilar qo‘nadigan va ot almashtiradigan joy», «bekat» ma’nosini ifodalagan. Yomda doim otlar shay turib, bir qancha kishi xizmat qilgan. Yom so‘zi nafaqat turkiy tillarga balki slavyan, xususan, rus tiliga ham o‘tgan. [1].

6. Slavyan (Ittifoq, Ulyanovo, Oktyabr, Parts’ezd, Kommunizm, Rassvet); O‘zbekiston toponimiyasi tarkibidagi mazkur qatlamni slavyan (asosan rus) tillari asosida shakllangan toponimlar tashkil qiladi. Ruscha nomlarning mintaqada paydo bo‘lishi XIX asrning oxiri va XX asrning boshida Rossiya tomonidan O‘rta Osiyoni bosib olishi bilan bog‘liq. Hozirgi O‘zbekiston hududida ruscha nomlar turli sabablarga ko‘ra paydo bo‘lgan. Masalan, XIX asrning oxirida chor Rossiyasi tomonidan mintaqada temir yo‘l o‘tkazildi. SHunda, chor hukumatining maxsus qarori bilan O‘zbekiston hududidagi temir yo‘l stantsiyalariga Skoblevo, Obruchevo, Lomakino, Milyutinskaya, Ursatevskoe, Xilkovo kabi rasmiy nomlar qo‘yildi. E.M.Murzaevning yozishicha, mahalliy xalq bu nomlarni yaxshi kutib olmagan. Ko‘pincha, yangi nom bilan birga, shu joyning avvalgi an’anaviy nomi ham qo‘llanib kelingan. Sobiq sho‘rolar davrida rus tili bilan bog‘liq toponimlar soni keskin ko‘paydi va ularning asosiy qismini antropotoponimlar tashkil qilgan. Lenin, Ulyanov, Karl Marks, Engels, Kalinin, Frunze, Kuybishev kabi antropotoponimlar keng tarqaldi. Xususan, o‘zlashtirilgan cho‘l hududlarda paydo bo‘lgan yangi geografik ob’yektlarga, hukmron mafkura va siyosat ta’sirida kommunistik partiya va sho‘ro hokimiyatini tarannum etuvchi nomlar berildi. Masalan, 1975 yili tashkil etilgan Arnasoy tumani tarkibidagi barcha aholi punktlariga sho‘ro davlatining harbiy sarkardalari nomlari (Jukov, Timoshenko, Grechko, Rokossovskiy, Konev, Vasilevskiy va boshqalar) qo‘yildi. O‘zbekiston istiqlol sharofati bilan, mustaqil toponimik siyosat yurgizdi va joy nomlari bilan bog‘liq bo‘lgan barcha chalkashliklarga barham berildi. 2011 yili Geografik ob’yektlarning nomlari to‘g‘risidagi O‘zbekiston Respublikasi Qonuni qabul qilingandan so‘ng, respublika hududidagi barcha geografik nomlar inventarizatsiya qilindi. Qonun talablariga javob bermaydigan barcha geografik ob’yektlar nomlari davr talabini aks etadigan, xalqona, oddiy, sodda, tushunarli bo‘lgan nomlar bilan almashtirildi yoki tarixiy nomlari qayta tiklandi. [1]

7. Yangi qatlam (Istiqlol, Nurafshon, Istiqbol, Baxtli, Mustaqillik, Bunyodkor, Yangiturmush). Mazkur qatlamga mansub har qanday toponim mamlakat ijtimoiy hayotida ro‘y berayotgan siyosatni o‘zida aks ettiradi. Respublikamizda mustaqillik e’lon qilingandan keyin joy nomlarining juda ko‘p o‘zgarishi ham shu bilan izohlanadi. Istiqlol, Nurafshon, Istiqbol, Nurli yo‘l, Mustaqillik, Bunyodkor, Yangiturmush kabi hozirgi zamon ruhiga moslab qo‘yilgan nomlar viloyatning har bir tumanida uchraydi, ayniqsa mahallalar nomlarida o‘z ifodasini topgan. Mustaqillikdan keyin respublikaning turli joylarida bo‘lganidek, Surxondaryo toponimlari borasida ham asl nomlarni tiklash masalasi qo‘yildi. Kommunizm, Sotsializm, Lenin, Marks, Engels kabi qator nomlar asl toponimlar bilan almashtirildi. Joy nomlarini tiklashda asl toponimni aniqlash tamoyiliga amal qilindi: Marks – Madaniyatga, Kaganovich – Yangiqishloqga, Ittifoq– Ilono‘tdiga, N.Soatov– Mirzo Ulug‘bekka almashtirildi. Joy nomlarini yangilashda aniqlik kiritildi: Qora–Qoraqishloqqa, O‘rta–O‘rtaqishloqqa, Qo‘rg‘on–Qo‘rg‘onchaga, Quduq– Quduqliga o‘zgartirildi. Bir qator toponimlarga aniqlagichlar tirkaldi: Machay– Quyi Machay O‘rta Machay, Yuqori Machay, Kaltatoy – Quyi Kaltatoy va h k. Qayta nom berishda xalq qarashida salbiy baholangan nomlar qabila-urug‘ nomiga almashtirildi: Ba’zida bir toponimning shu hududni boshqa jihatdan sifatlovchi nomga o‘zgartirilganini ko‘rish mumkin, masalan, Tengali– Maydabuloq. [8]

Xulosa. Xulosa qilib aytganda toponimik tadqiqotlardan ma’lumki, O‘rta Osiyo toponimiyasi shakllanishi va taraqqiyoti jarayonida bir necha tarixiy davrlarni bosib o‘tgan. Ular turli tillar mahsuli, turkiy toponimlar ular orasida eng baquvvat va keng tarqalganligi bilan mintaqada alohida ajralib turadi. Har bir tarixiy davrning o‘ziga xos toponimlari mavjud, ammo geografik nomlarning tarixiy qatlamlari orasidagi chegaralar shartli hisoblanadi. Mavjud stratigrafik (tarixiy) qatlamlar bir-biri bilan uzviy bog‘liqligi bois, ularni aniq belgilab bo‘lmaydi, yangi qatlam avvalgisini to‘ldirsa, eskisi yangi qatlamga o‘z ta’sirini o‘tkazgan.

FOYDALANILGAN ADABIYOTLAR

1. A.Nizomov, G.Rahimova, N.Rasulova Toponimika TOSHKENT-2012 39-54 b.
2. H.Hasanov Geografik nomlar siri “O‘ZBEKISTON”-1985 41-43 b.
3. S.Qorayev Toponimika Toshkent -2006 27-28 b.
4. K.M.Xakimov Toponimika Jizzax-2024 67-69 b.
5. M.T.Mirakmalov Xalq tabiiy geografik terminlari TOSHKENT-2009 37-39 b.
6. S.Qorayev Geografik nomlar ma’nosi TOSHKENT “O‘ZBEKISTON”-1978
7. S.Qorayev O‘zbekiston viloyatlari toponimlari. –T.: 2005
8. Q.Hakimov Toponimika ‘’MUMTOZ SO‘Z”-2016 108-110 b.

Chorshanbaev U.Q.
Guliston davlat universiteti o'qituvchisi,
Muratjonova L.
Mallaxanov J.
Guliston davlat universiteti talabalari

XO'JALIK YURUTUVCHI SUBEKTLARDA QO'SHILGAN QIYMAT VA UNGA SOLINADIGAN SOLIQ

Annotatsiya: *Mazkur maqolada qo'shilgan qiymat tushunchasi va unga solinadigan soliq (QQS) mohiyati, maqsadi va uni qo'llash tartibi haqida ma'lumotlar beriladi. QQS ning soliq to'lovchilari, hisob-kitob qilish qoidalari, va uning iqtisodga ta'siri hamda rivojlanayotgan mamlakatlardagi rolini ochib berish maqsad qilingan. Ushbu mavzu iqtisodiy va moliyaviy sohalardagi mutaxassislar, tadbirkorlar va soliq siyosatchilari uchun muhim ahamiyatga ega.*

Kalit so'zlar: *Qo'shilgan qiymat, QQS, soliq tizimi, iqtisodiy rivojlanish, soliq to'lovchi, hisob-kitob, soliq siyosati, tadbirkorlar, soliq nazorati.*

Chorshanbaev U. K.
Teacher
Gulistan State University
Muratjonova L.
Mallakhanov J.
Gulistan State University students

VALUE ADDED IN ECONOMIC ENTITIES AND THE TAX IMPOSED ON IT

Abstract: *This article provides information about the concept of added value and the essence, purpose and procedure of its application. It aims to reveal the taxpayers, calculation rules, and its impact on the economy and its role in developing countries. This topic is important for experts in the economic and financial spheres, entrepreneurs and tax politicians.*

Key words: *Value added, VAT, tax system, economic development, taxpayer, calculation, tax policy, entrepreneurs, tax control.*

Kirish. Qo'shilgan qiymat solig'i birinchi bo'lib 1954 yilda Frantsiyada joriy qilingan. Hozirgi vaqtda ushbu soliq dunyoning ko'pgina mamlakatlarida asosiy soliqlardan biridir. O'zbekistonda ham ushbu soliqning ahamiyati katta: u davlat byudjetining tahminan uchdan bir qismidan ko'prog'ini tashkil etadi [1].

Nima uchun ushbu soliq "qo'shilgan qiymat solig'i" deb ataladi? Chunki u ishlab chiqarish yoki xizmat ko'rsatish jarayonida inson mehnati bilan qo'shilgan qiymatdan olinadi.

Tikuv korxonasida matoning qiymatiga korxona xodimlari mehnati (dizaynerlar, tikuvchilar, marketologlar, boshqaruv xodimlari va h.k.) natijasida yangi qiymat qo’shiladi va tikuv mahsulotlari hosil bo’ladi. U tikuv korxonsi tomonidan xom ashyo va material sifatida olingan mato, ip, tugmalar sotib olingan qiymatdan ancha qimmatroqqa sotiladi. Sotilgan mahsulot qiymati bilan mol yetkazib bervuchilardan sotib olingan xom ashyo va materiallar (ularni yaratishda korxona o’z hissasini qo’shmagan) qiymati orasidagi farq qo’shilgan qiymatdir.

Agar korxona hech narsa ishlab chiqarmasa, aytaylik, savdo bilan shug’ullansa,unda qo’shilgan qiymat yuzaga keladimi? Ha, yuzaga keladi, u tovarni ma’lum bir narxda masalan, xorijdan sotib olib, uni respublikaga olib keladi, bojxonadan o’tkazadi, o’zining savdo nuqtalariga tarqatib chiqadi va qimmatroq narxda sotadi. Ushbu farq (savdo ustamasi) savdo korxonasi tomonidan qo’shilgan qiymat bo’lib hisoblanadi.

Shunday qilib, qo’shilgan qiymat – bu tovar qiymatning korxona tomonidan yaratilgan qismidir.Agar biz mamlakatdagi barcha tashkilot va korxonalar tomonidan yaratilgan qo’shimcha qiymatlarni yig’ib chiqsak, unda iqtisodiyotning rivojlanganlik darajasini ko’rsatuvchi – yalpi ichki mahsulot (YaIM) ko’rsatkichiga ega bo’lamiz.

Turli tovarlarning qiymatini ikkiga ajratish mumkin - mavjud qiymatga(boshqa tashkilotlardan sotib olib ishlatilgan xom ashyo, yoki sotib olingan tovar qiymati) va ishlab chiqarish va sotish jarayonida yangi qo'shilgan qiymatga.

Xazinasi ko’proq qo’shilgan qiymat solig’i hisobiga to’ldiriladigan har qanday davlat ushbu qo’shilgan qiymatning yuqori bo’lishidan manfaatdordir. Tadbirkor dastlabki materialni olib, unga o’zining bilimini, malakasi va resurslarini qo’llagan holda o’ta sifatli, foydali va buning natijasida qimmat bo’lgan mahsulotni yaratishi davlatga ham jamiyatga ham foydalidir.

Qo’shilgan qiymat – bu bozor munosabatlari sub’ekti bo’lgan har bir korxona dastlabki tovar bilan ayrim amallarni bajarib, uni keyinchalik sotish maqsadida unga qo’shgan foydasidir. Bu konveyerga o’xshaydi. Dastlab xom ashyo va materiallarni ishlab chiqaruvchilar qo’shilgan qiymatni yaratadilar. Ular xom ashyo va materiallarni qayta ishlovchilarga sotadilar. Ishlab chiqaruvchilar biror-bir tovarni ishlab chiqib – ulgurji savdo bilan shug’ullanuvchi sub’ektlarga sotilar. Ulgurji savdogarlar chakana savdo bilan shug’ullanuvchilarga, ular esa iste’molchi bo’lgan siz va bizga sotadilar. Har bir tijorat tuzilmasi olgan mahsulotini xom ashyo sifatida qabul qilib, ishlab chiqarish (xizmatlar ko’rsatish, yoki savdo) jarayonida uning qiymatiga o’zining yangi qiyimatini qo’shadi.

Qo’shilgan qiymatni hisoblash usullari

Qo’shilgan qiymatni quyidagi tarzda hisoblab chiqarish mumkin.

Sotilgan tovarlar (ish, xizmatlar) qiymatidan mol yetkazib beruvchilardan sotib olib, foydalanilgan xom-ashyo va materiallar qiymatini ayirish yo'li bilan. Quyidagi formulaga ega bo'lamiz:

$$\boxed{\textbf{ҚҚ=СҚ-ИҚ}}$$

Bu yerda:
ҚҚ - qo'shilgan qiymat;
СҚ - sotilgan tovar(ish,xizmatlar)lar qiymati;
ИҚ - iste'mol qilingan moddiy resurslar va tashki ish (xizmat)lar qiymati.

Qo'shilgan qiymat solig'ining ta'rifi

Qo'shilgan qiymat solig'i (QQS) bu – tovar(ish, xizmat)larni ishlab chiqarish va sotishning barcha bosqichlaridan olinadigan ko'p pog'onali bilvosita soliqdir.

Nima uchun u bilvosita? Chunki u bevosita soliqlar kabi korxona daromadidan to'lanmaydi.

QQS boshqa bilvosita soliqlar kabi tovar, ish va xizmatlar iste'molchilari tomonidan to'lanadi:

• sotuvchi realizatsiya qilishda tovar (ish, xizmat)larining narxini hujjatlarda (hisobvaraq-fakturada) alohida ko'rsatilgan soliq summasiga oshiradi;

• xaridor tovar (ish, xizmat)lar qiymatiga qo'shilgan soliqni to'laydi;

• sotuvchi QQSni hisoblaydi va xaridordan olingan mablag'lar hisobidan uni byudjetga o'tkazib beradi.

Quyida shartli misolni keltiramiz. Faraz qilamizki, korxona kiyim-kechak tikish bilan shug'ullanadi va u buning uchun mato sotib oladi.

Mol etkazib beruvchidan sotib olinayotgan matoning narxi 100 mln. So'mdeylik, lekin uni xaridor korxona 112 mln. so'mga sotib oladi, chunki u mato siymatiga 12% miqdorida QQS hisoblashga majbur (100 mln. x 12%).

Shunday qilib, xaridor korxona 100 mln. so'm mato qiymatini hamda 12 mln. so'm QQS to'laydi. Mol etkazib beruvchi xaridor korxonadan olgan pul mablag'ini quydagicha taqsimlaydi: 100 mln. so'mni o'ziga olib, 12 mln. so'mnidavlatga topshiradi. U aynan xaridordan olgan soliq summasini byudjetga o'tkazadi. Demak QQSni xaridor korxoha to'laydi. Bunday turdagi soliqlar bilvosita soliqlar deb ataladi.

Qo'shilgan qiymat solig'ini hisoblab chiqarish uchun soliq stavkasini qo'llaymiz va soliq summasini olamiz. Uni quyidagi formula shaklida ifodalash mumkin:

QQS = QQ x St

Bu erda:

QQS – qo'shilgan qiymat solig'I;

QQ – qo'shilgan qiymat;

St – soliq stavkasi.

Qo'shilgan qiymatni aniqlash usulidan foydalangan holda soliq hisoblashning quyidagi formulasini olamiz:

QQS = (SQ – IQ) x ST

Bu erda:

QQS – qo'shilgan qiymat solig'I;

SQ – sotilgan tovar (ish, xizmat) lar qiymat;

IQ – iste'mol qilingan moddiy resurslar va tashqi ish (xizmat) lar qiymati;

St – soliq stavkasi.

Qavslarni ochib quyidagi formulani keltirib chiqaramiz:

QQS = SQ x St – IQ x St

Ayiriladigan "IQ x St» nima ma'noni anglatadi? Xaqiqatda bu xaridor tomonidan iste'mol qilingan moddiy resurslar, ish va xizmatlarni sotib olishda to'langan QQS summasidir. Ya'ni bizning QQS hisoblash formulamiz quyidagicha bo'ladi:

To'lanadigan QQS = SQ x St – QQS to'langan.

Bu erda:

QQS to'lanadigan – byudjetga to'lanishi lozim bo'lgan qo'shilgan qiymat solig'I;

SQ – sotilgan tovar (ish, xizmat) lar qiymat;

St – soliq stavkasi;

QQS to'langan – soliq to'lochi tomonidan iste'mol qilingan moddiy resurslar, ish va xizmatlarni sotib olishda to'langan QQS summasi.

O'zbekistonda aynan shu formula orqali QQS hisoblanadi. Har bir korxonada qo'shilgan qiymatning o'zini hisoblab chiqarishning zarurati yo'q. Sotish hajmi va iste'mol qilingan resurs (ish, xizmat)lar bo'yicha to'langan QQSni bilishning o'zi yetarlidir.

Fikr-mulohazalar:

Xo'jalik yurutuvchi subyektlarning iqtisodiy samaradorligi:

Qo'shilgan qiymatga solinadigan soliq tizimi, iqtisodiyotning samarali ishlashini ta'minlashda, xo'jalik subyektlariga iqtisodiy samaradorlikni oshirishga undaydi. Chunki har bir bosqichda soliq to'lovchilarga qo'shilgan qiymatni qamrab olish orqali ular raqobatni kuchaytiradi va narxlarni optimallashtiradi.

Davlat byudjetini tushadigan mablag' miqdorini oshirish:

QQS davlat budjetiga mablag' kiritishning muhim manbai bo'lib, davlatning ijtimoiy va infratuzilma loyihalarini moliyalashtirishga yordam beradi. Shu bilan birga, bu soliqqa solinadigan mahsulotlar va xizmatlarning narxining oshishi, iste'molchilarga to'lanadigan narxni oshirishi mumkin, bu esa iste'mol talabini kamaytirishi mumkin.

Xalqaro iqtisodiy aloqalar:

QQS tizimi iqtisodiy integratsiya va xalqaro savdo munosabatlarini rivojlantirishda yordam beradi. Bu tizim orqali davlatlar o‘z iqtisodiy tizimlarini modernizatsiya qilish va global bozorga chiqish imkoniyatlarini kengaytiradi.

Xulosa

Xo‘jalik yurutuvchi subyektlar tomonidan yaratilgan qo‘shilgan qiymat va unga solinadigan soliq (QQS) iqtisodiyotning samarali ishlashida muhim o‘rin tutadi. QQS tizimi davlatning moliyaviy bazasini shakllantirishga yordam beradi, iqtisodiy o‘sishni rag‘batlantiradi va raqobatbardosh mahsulotlarning ishlab chiqarilishini ta’minlaydi. Shuningdek, QQS tizimi iqtisodiyotdagi shaffoflikni oshiradi va soliq yig‘ish jarayonlarini osonlashtiradi. Shu bilan birga, mamlakatlar o‘rtasida iqtisodiy aloqalarni kengaytirish va global bozorlar bilan integratsiya qilish uchun QQS tizimi muhim vosita bo‘lib xizmat qiladi.

Foydalanilgan Adabiyotlar

1. O’zbekiston Respublikasi “Soliq kodeksi” 30.12.2019 y.
2. Soliq solish asoslari. I.Axmadxonov. «Kafolat print company» nashriyoti. 2024 y. 238 b.
3. Aliyev, A. (2020). "O'zbekiston iqtisodiyotida qo‘shilgan qiymat va uning soliq tizimidagi o‘rni." *Iqtisodiy Tahlil*, 5(2), 45-60.
4. G‘ulomov, D. (2019). "Soliq tizimi va iqtisodiy o‘sish: qo‘shilgan qiymatga solinadigan soliq." *Xalqaro Soliq Jurnali*, 12(3), 72-80.
5. Zaripov, R. (2018). "Soliq siyosatining iqtisodiy rivojlanishga ta'siri: qo‘shilgan qiymat solig‘i misolida." *O‘zbekiston iqtisodiyotini rivojlantirish masalalari*, Toshkent, 104-112.
6. Yusupov, F. (2021). "Markaziy Osiyo mamlakatlarida soliq siyosati va qo‘shilgan qiymat solig‘ining iqtisodiy o‘sishga ta'siri." *Jahon iqtisodiyoti va xalqaro munosabatlar*, 6(1), 98-106.

Davronbekov B.
Assistant
Tashkent University of architecture and civil engineering

THE LEVEL OF PHYSICAL PREPARATION OF THE EFFECTIVENESS OF TECHNICAL-TACTICAL MOVEMENTS OF VOLLEYBALL PLAYERS

Abstract.:*In this article, the scientific and practical experiences of local and foreign scientists in the field of sports on the technical-tactical and physical development of young volleyball players, and scientific-theoretical information presented in the sources of scientific literature are studied. By analyzing the training process of young volleyball players, modern methods of developing their technical-tactical and physical fitness were used in the research process. Scientific-theoretical opinions on the control of the level of preparation were put forward and scientific research works were carried out, the results obtained from the research were comparatively analyzed and appropriate conclusions were drawn.*
Keywords: *Explosive force, operational force, technical-tactical training, annual training, research group, control group, training exercises.*

Modern volleyball belongs to the type of sports games that require extreme speed and great effort. First of all, the physical qualities of volleyball players should be perfectly developed in order to be worthy of high technical and tactical skills.

The modern volleyball game requires a lot of physical and technical training from the player, to act with accuracy throughout the game, because a lack of physical training leads to ineffective completion of all actions on the field, and unsuccessful team performance.

However, during the annual competitions, the problem of optimizing training sessions was left aside. The fact that volleyball competitions consist of many "tours" requires us to have an optimal program to ensure that the players are at a high level of physical and psychological preparation for each "tour".

Due to the density of "tours" during the competition, players are required to develop a high level of physical fitness and technical-tactical skills to prepare for each "tour".

Relevance of the study

Several experts have recommended their method to increase the quickness of volleyball players. But currently, in the training of volleyball players, little attention is paid to the aspects of quick-strength qualities related to technical-tactical actions. First of all, it is necessary to pay great attention to the correct distribution of training loads and the development of quick-strength qualities from the initial stage of specialization. For volleyball players to perform at a high level, it is necessary to develop well the various systems of the body.

The purpose of the study: is to improve the efficiency of technical-tactical training of young volleyball players during the annual training period and to study its connection with physical training.

The purpose of scientific research is to improve the effectiveness of the technical and tactical training of young volleyball players during the annual training period and to study its connection with physical training.

In order to determine the dynamics of the effectiveness of technical and tactical actions of young volleyball players during the annual training period, observations were made during training sessions and friendly matches.

Before the study, control tests on the physical training of the experimental and control groups were taken and the following results were obtained.

The experimental group was 30 m before the study. 4.8 seconds, 69.2 seconds in 400 meters, 186 centimeters in long jump, 30 meters. 5.3 in the run with the ball, 77 in the footy, 29.7 meters in the long kick with the right foot and 24.4 meters in the kick with the left foot. They also showed a result of 14.2 meters when throwing the ball from the outside (Table 6).

The control group exercised 30 m before the study. to run 4.9 seconds on average according to the standard of control, 68.6 seconds for running 400 meters, and standing long jump 187 centimetres, 30m. 5.3 in the run with the ball, 72.7 in the footy, 29.3 meters in the long kick with the right foot and 24.3 meters in the kick with the left foot. They also showed a result of 14.2 meters in throwing the ball from the outside. (Table 1)

Tests for the assessment of physical and technical-tactical training of the experimental group before the study (Table 1)

No	Full name	30 m. run to	400 m run	Standing long jump	Running with a ball for 30m	Playing the ball by hand	Throwing the ball far		AUT
1.	Abdukodirov J.	5.0	70	190	5.3	51	30	20	14
2.	Abdufaizov M.	4.8	70	180	5.4	62	28	22	13
3.	Abdumajidov N.	4.7	72	185	5.5	95	31	23	15.5
4.	Akramjonov A.	4.9	70	190	5.2	80	26	31	14
5.	Algadumorov G.	5.0	69	180	5.1	60	31	21	13
6.	Abduvaliev S.	5.1	70	190	5.4	63	32	28	14
7.	Boriev V.	4.9	68	200	5.3	92	27	30	14
8.	Ganiev A.	4.9	69	180	5.3	60	26	23	13
9.	Zakirov B.	4.7	70	185	5.6	63	30	20	15
10.	Makhamatov Kh.	4.8	70	180	5.4	97	38	19	15.5
11.	Mirzaev M.	4.9	69	180	5.1	53	29	25	13.5
12.	Madusmanov J.	4.9	68	180	5.0	85	26	31	15
13.	Nasirkhanov N.	4.8	67	185	5.3	112	29	26	13
14.	Omonov A.	4.7	69	200	5.1	101	30	20	15.5
15.	Rakhimov T.	4.8	70	180	5.5	58	31	18	15
16.	Rakhimov S.	4.7	71	190	5.6	90	32	27	14.5
17.	Rustamov S.	5.1	68	195	5.3	101	30	25	14
18.	Sadritdinov Sh.	4.9	67	180	5.1	89	30	22	14.5
19.	Tojiboev B.	4.8	69	180	5.5	102	29	26	15.5
20.	Yergashev O.	5.0	68	190	5.4	78	30	31	13
X		**4.8**	**69.2**	**186**	**5.3**	**77**	**29.7**	**24.4**	**14.2**

After that, in order to improve the effectiveness of technical and tactical training in the study group during the annual training period, the proportion of technical-tactical training was increased in the planning of training hours, physical training exercises were added to match episodes, and in the experimental group, training through this distribution trainings were conducted. After six months of training, we again received control norms from the volleyball players of the experimental group.

Tests for the assessment of physical and technical-tactical training of the control group before the study (Table 2)

No	Full name	30 m. run to	400 m run	Standing long jump	Running with a ball for 30m	Playing the ball on foot	Kick the ball far		AUT
1.	Abdukodirov J.	5.1	69	185	5.6	68	28	18	13
2.	Abdufaizov M.	4.9	71	190	5.4	70	27	22	14
3.	Abdumajidov N.	4.8	67	180	5.2	59	25	24	13.5
4.	Akramjonov A.	4.9	68	190	5.5	48	22	26	15
5.	Algadumorov G.	5.0	68	200	5.3	51	29	32	14
6.	Abduvaliev S.	4.9	69	185	5.1	62	31	28	13.5
7.	Boriev V.	5.0	67	195	5.6	87	33	20	14
8.	Ganiev A.	4.9	70	190	5.3	99	31	26	15.5
9.	Zakirov B.	5.0	70	180	5.5	133	29	21	14
10.	Makhamatov Kh.	5.1	69	180	5.5	48	27	25	13
11.	Mirzaev M.	4.9	68	195	5.4	59	32	24	14.5
12.	Madusmanov J.	4.9	68	190	5.3	75	31	22	14
13.	Nasirkhanov N.	4.8	67	185	5.2	81	29	24	15
14.	Omonov A.	4.9	69	200	5.0	72	28	22	16
15.	Rakhimov T.	4.8	69	190	5.2	42	29	31	14
16.	Rakhimov S.	4.9	68	180	5.1	44	33	24	15
17.	Rustamov S.	4.8	70	185	5.3	87	31	28	15
18.	Sadritdinov Sh.	5.0	71	180	5.4	129	32	19	14.5
19.	Tojiboev B.	4.9	68	185	5.6	66	30	24	14
20.	Yergashev O.	4.7	67	190	5.5	74	29	26	13.5
X		**4.9**	**68.6**	**187**	**5.3**	**72.7**	**29.3**	**24.3**	**14.2**

the experimental group 30m before the study. 4.8 seconds in the control standard, after the study this figure was 4.6 seconds, in the 400 meters run it was

69.2 seconds before the study, 66.8 seconds after the study, standing long jump 186 centimetres before the study, 197 centimetres after the study, 30m. 5.3 in running with the ball, 5.0 seconds after the study, 77 before the study in footwork, 108 after the study, 29.7 meters in the long kick with the right foot and 29.7 meters with the left foot 24.4 meters in the kick, 32.9 meters in the right foot after the study and 27.4 in the left foot meter. And in throwing the ball from the outside, they showed the result of 14.2 meters before the study, and after the study, this indicator was 16.1 meters (Table 3).

Tests for the assessment of physical and technical-tactical training of the experimental group after the study (Table 3)

No	Full name	30 m. run to	400 m run	Standing long jump	Running with a ball for 30m	Playing the ball on foot	Kick the ball far		AUT
1.	Abdukodirov J.	4.8	66	200	5.0	89	35	24	16
2.	Abdufaizov M.	4.6	67	190	5.2	97	33	26	14.5
3.	Abdumajidov N.	4.6	68	200	5.3	130	32	28	16.5
4.	Akramjonov A.	4.7	68	200	5.0	180	30	35	16.5
5.	Algadumorov G.	4.8	66	190	5.0	160	36	27	15.5
6.	Abduvaliev S.	4.7	66	210	5.2	76	38	33	16.5
7.	Boriev V.	4.8	67	215	5.0	130	31	33	18
8.	Ganiev A.	4.8	65	190	5.1	86	29	25	16.5
9.	Zakirov B.	4.5	67	200	5.0	78	32	24	16.5
10.	Makhamatov Kh.	4.7	68	190	5.2	105	36	22	17
11.	Mirzaev M.	4.6	68	190	5.0	139	30	27	15
12.	Madusmanov J.	4.8	67	205	4.8	78	28	34	16
13.	Nasirkhanov N.	4.6	66	190	5.0	167	31	28	15.5
14.	Omonov A.	4.5	66	185	4.9	91	33	21	17
15.	Rakhimov T.	4.6	67	200	5.2	90	34	19	16
16.	Rakhimov S.	4.6	68	200	5.3	73	36	29	16
17.	Rustamov S.	4.7	69	200	5.2	363	32	33	17

18.	Sadritdinov Sh.	4.8	65	205	5.1	97	36	28	17
19.	Tojiboev B.	4.6	66	190	4.9	107	34	24	15.5
20.	Yergashev O.	4.6	67	205	4.8	126	32	28	16
X		**4.6**	**66.8**	**197**	**5.0**	**108**	**32.9**	**27.4**	**16.1**

Training in the control group was carried out unchanged and after 6 training sessions, we rechecked them through control standards. **The control group** exercised 30 minutes before the study. The average running time of 4.9 seconds was 4.8 seconds after the study. 68.6 seconds before the study in the 400 meters, 67.8 seconds after the study, 187 centimetres in the standing long jump, 191 centimetres after the study, 30m. in running with the ball was 5.3 seconds before the study and 5.2 seconds after the study. 72.7 in kicking the ball, 90.2 after the study, 29.3 meters in the right-footed long kick before the study and 24.3 meters in the left-footed kick, from the study then this indicator showed 30.8 meters in the right leg and 26.7 meters in the left leg. Before the study, the result of the throw was 14.2 meters, and after the study, this indicator reached 14.7 meters (Table 4).

According to the results of the study, the indicators of physical fitness increased in both groups compared to the initial results, but in the participants of the control group, these indicators increased at a low level, while in the research group, the results showed a significant increase. we can reach

Tests for the assessment of physical and technical-tactical training of the control group after the study (Table 4)

No	Full name	30 m. run to	400 m run	Standing long jump	Running with a ball for 30m	Playing the ball on foot	Kick the ball far		AUT
1.	Abdukodirov J.	5.0	68	190	5.4	80	30	21	14
2.	Abdufaizov M.	4.9	69	190	5.2	105	29	22	14
3.	Abdumajidov N.	4.7	67	185	5.1	145	29	27	14.5
4.	Akramjonov A.	4.9	67	190	5.4	135	26	30	15.5
5.	Algadumorov G.	5.0	68	200	5.3	170	32	35	14
6.	Abduvaliev S.	4.8	67	190	5.1	65	32	30	14
7.	Boriev V.	4.9	66	200	5.4	89	33	25	15.5

8.	Ganiev A.	4.9	69	195	5.2	138	31	28	15.5
9.	Zakirov B.	4.9	68	185	5.4	100	31	24	14
10.	Makhamatov Kh.	5.0	68	185	5.3	70	28	26	14
11.	Mirzaev M.	4.8	68	195	5.2	105	33	28	15
12.	Madusmanov J.	4.8	67	200	5.1	89	32	24	14.5
13.	Nasirkhanov N.	4.7	66	190	5.2	90	30	25	15
14.	Omonov A.	4.8	68	190	5.0	88	28	26	16.5
15.	Rakhimov T.	4.7	69	195	5.1	50	31	32	15
16.	Rakhimov S.	4.8	67	185	5.0	70	34	26	16
17.	Rustamov S.	4.8	68	190	5.1	40	33	29	15
18.	Sadritdinov Sh.	4.9	69	185	5.2	51	34	24	15
19.	Tojiboev B.	4.8	68	195	5.2	45	31	24	14
20.	Yergashev O.	4.8	70	190	5.3	80	30	28	14.5
X		**4.8**	**67.8**	**191**	**5.2**	**90.2**	**30.8**	**26.7**	**14.7**

Summary : Scientific Evidence shows that the control of volleyball players' competitive activity plays an important role in the process of training volleyball players. Along with the assessment of individual technical-tactical movements, volleyball players determine the qualities of speed, strength, special agility, endurance and technical movement abilities. Based on the results of the analysis, it is possible to have a targeted effect on various aspects of the volleyball player's training.

Technique training and its improvement depends on several factors, for example, the level of preparation of the players, the training period, the number of balls, the condition of the field and the meteorological conditions. Regular control of movement training serves to consciously organize the coach's work and is of great help to young volleyball players. Control and self-control instill a sense of freshness and self-confidence in a volleyball player.

List of used literature

1. Nurimov R.I. Sovershenstvovanie takticheskikh deistviy voleybolistov vysokoy qualificatsii. Ucheb posobie, T., 2000. -254 p.
2. Melziddinov R.A. Motor activity of volleyball players as an indicator of the first level of special physical fitness. FAN-SPORTGA scientific theoretical magazine. Issue 6 of 2020. B. [13.00.00 #16]
3. Melziddinov R.A. Pedagogical testing of the level of special physical fitness of volleyball players. "PEDAGOGIKMAHORAT" Scientific-theoretical and methodical journal, issue 4 (August 2020) . 231-233 pages . [13.00.00 #23]

4. Rajabov S. et al. Analysis of imaginary, general-imaginary and digital-imaginary rules //Science and Education. - 2024. - T. 5. – no. 5. - S. 262-268.
5. Rajabov S. ANALYSIS OF IMAGINARY, GENERAL-IMAGINARY AND DIGITAL-IMAGINARY RULES //Digital economy and information technologies. - 2024. - T. 4. – no. 1. – S. 113-119.
6. Abdullaev M. ORGANIZATION OF WASTE PROCESSING IN SOLVING ENVIRONMENTAL PROBLEMS IN UZBEKISTAN //Nordic_Press. - 2024. - T. 1. – no. 0001.
7. Kabilov A. et al. ANALYSIS OF ASSOCIATIVE RULES AND MARKET BASKETS //Digital economy and information technologies. - 2023. - T. 3. – no. 3. - S. 115-120.
8. Rajabov SB et al. Social mining and its development stages //Science and Education. - 2023. - T. 4. – no. 4. – S. 1342-1345.
9. Oybek o' oglu ON, Urinovich KA, Bakhtiyorovich RS USE OF DIGITAL TECHNOLOGIES IN IMPLEMENTATION OF TAXES AND OTHER MANDATORY CHARGES IN DIGITAL ECONOMY //Archive nauchnyx issledovaniy. - 2022. - T. 5. – no. 5.
10. Ziyadullayevich SA, Mirzaliev SM, Bakhtiyorovich RS IMPROVING THE PROGRESSES OF WASTE PRODUCTS PROCESSING THE AUTOMATED MANAGEMENT SYSTEM //Galaxy International Interdisciplinary Research Journal. - 2022. - T. 10. – no. 5. - S. 372-381.
11. Mirzarakhimova A., Abdulakhatov M. Analysis of Healthcare Services in the Digital Economy //Proceedings of the 7th International Conference on Future Networks and Distributed Systems. - 2023. - S. 410-414.
12. Abdulakhatov MM, Avlokulova SS TECHNOLOGY OF SEARCH ORGANIZATION IN VIRTUAL E-SHOPS WITH IMAGE RECOGNITION //Archiv nauchnyx issledovaniy. - 2022. - T. 2. – no. 1.
13. Kobilov A., Abdulakhatov M., Jaloliddinova M. PECULIARITIES OF THE USE OF ARTIFICIAL INTELLIGENCE IN THE EDUCATIONAL PROCESS //Digital economy and information technologies. - 2021. - T. 1. – no. 3. - S. 32-37.
14. Nigmanov AU ANALYSIS OF INCREASING ENERGY EFFICIENCY IN CHINESE INDUSTRIAL NETWORKS // XXI Century: Science and Education Issues (XXI Century: Voprosy nauki i obrazovaniya). - 2024. - T. 1. – S. 146-162.
15. Nigmanov A. U. i dr. MAIN DIRECTIONS OF IMPLEMENTATION OF INVESTMENT ACTIVITY IN FREE ECONOMIC ZONES // GEOGRAPHY: NATURE I OBSHCHEESTVO. - 2020. - T. 1. – no. 2.
16. Bobojonov JBO Prospective trend of investment policy of the PRC //Science and Education. - 2024. - T. 5. – no. 10. – S. 203-209.

Egamnazarova S.X.
Qo'qon davlat pedagogika instituti
informatika kafedrasi o'qituvchisi

XORIJIY MAMLAKATLARDA RAQAMLI TA'LIM PLATFORMALARINING O'RGANILISHI VA ULARDAN FOYDALANISH TAJRIBALARI

Annotatsiya. *Ushbu maqolada ta'lim jarayonida raqamli texnologiyalardan foydalanishning xorijiy tajribalari tahlil qilinadi. Raqamli texnologiyalar o'quv jarayonini yanada samarali va interaktiv qilish imkoniyatini beradi. Maqolada AQSh, Finlyandiya, Singapur va boshqa mamlakatlardagi innovatsion yondashuvlar, masofaviy ta'lim, interaktiv darslar, onlayn platformalar va raqamli resurslardan foydalanish kabi usullar ko'rib chiqiladi.*

Kalit so'zlar: *Raqamli texnologiyalar, ta'lim, xorijiy tajribalar, masofaviy ta'lim, interaktiv darslar, onlayn platformalar, innovatsion yondashuvlar.*

Egamnazarova S.X.
Kokand State Pedagogical Institute
teacher of the Department of Informatics

USING DIGITAL TECHNOLOGIES IN EDUCATION: FOREIGN EXPERIENCES

Annotation*: This article analyzes foreign experiences of using digital technologies in the educational process. Digital technologies enhance the effectiveness and interactivity of the learning process. The article examines innovative approaches in countries like the USA, Finland, Singapore, and others, including methods such as distance learning, interactive lessons, online platforms, and digital resources.*

Keywords: *Digital technologies, education, foreign experiences, distance learning, interactive lessons, online platforms, innovative approaches.*

Kirish. Zamonaviy ta'lim tizimlari o'zgarayotgan sharoitlarga moslashish, o'quvchilarni zamonaviy bilimlar bilan ta'minlash va ularni tayyorlash uchun raqamli texnologiyalardan foydalanishni talab qiladi. Ushbu maqolada xorijiy mamlakatlardagi raqamli texnologiyalardan foydalanish tajribalari tahlil qilinadi va ularning ta'lim jarayonidagi ahamiyati ko'rsatib beriladi.

Asosiy qism. ***AQShda raqamli texnologiyalardan foydalanish.*** AQSh ta'lim tizimida raqamli texnologiyalarni joriy etish juda keng tarqalgan. Masalan, *Khan Academy* platformasi ta'limda interaktiv va mustaqil o'rganishni rag'batlantirishga qaratilgan. Ushbu platforma o'quvchilarga o'z tempida darslarni o'rganish imkonini beradi va o'quvchilarning individual ehtiyojlarini qondirishga yordam beradi. O‘qituvchilar o‘z darslarini mazkur platforma orqali tashkil etishlari, o‘quvchilarga qo‘shimcha resurslar taqdim etishlari mumkin.

Finlyandiyada raqamli ta'lim. Finlyandiya ta'lim tizimi raqamli texnologiyalarni o‘qitishda muvaffaqiyatli qo‘llash bilan tanilgan. Bu mamlakatda **“Digitaalinen oppiminen”** (raqamli o‘rganish) konsepsiyasi mavjud bo‘lib, u o‘quvchilarning raqamli ko‘nikmalarini rivojlantirishga qaratilgan. Finlyandiyada o‘qituvchilar raqamli texnologiyalardan foydalanib, interaktiv darslar o‘tkazishadi. Shuningdek, o‘quvchilarga raqamli resurslardan foydalanish imkoniyatlari yaratilgan. Bu yondashuv orqali o‘quvchilarning ta'lim jarayonidagi faol ishtiroki oshiriladi va ularning mustaqil fikrlash qobiliyati rivojlanadi.

Singapurda raqamli ta'lim. Singapur ta'lim tizimi raqamli texnologiyalardan foydalanishda ilg‘or tajribalarni o‘z ichiga oladi. Mamlakatda “Smart Nation” dasturi doirasida raqamli ta'limni rivojlantirishga qaratilgan ko‘plab tashabbuslar amalga oshirilmoqda. Ta'lim muassasalari o‘quvchilarga raqamli vositalar va platformalardan foydalanish imkoniyatlarini taqdim etadi.

Yevropadagi tajribalar. Yevropa mamlakatlarida, masalan, Germaniya va Niderlandiya kabi davlatlarda ham raqamli ta'lim tizimlari kengaymoqda. Ushbu mamlakatlarda raqamli ta'limda innovatsion yondashuvlar qo‘llaniladi. O‘quvchilarga onlayn platformalarda darslar o‘tish, virtual laboratoriyalar va interaktiv simulyatorlar orqali amaliy ko‘nikmalarni rivojlantirish imkoniyatlari yaratiladi. Germaniyada “DigitalPakt Schule” dasturi doirasida maktablarni raqamlashtirishga qaratilgan katta sarmoya kiritilgan.

Raqamli Ta'lim Resurslari

Raqamli texnologiyalarni ta'limda qo‘llashda raqamli ta'lim resurslarining mavjudligi muhim ahamiyatga ega. Xorijiy tajribalar ko‘rsatmoqda:

Onlayn platformalar: Coursera, edX, Udacity kabi platformalar orqali ta'lim olish imkoniyatlari. Bu platformalarda o‘quvchilar turli fanlardan yuqori sifatli kurslar va sertifikatlar olishlari mumkin. Misol uchun, edX platformasi MIT va Harvard universitetlari tomonidan taklif etiladigan kurslar bilan tanilgan.

Simulyatsiyalar va o‘yinlar: Raqamli simulyatsiya vositalari va o‘yinlar ta'limda o‘rganilayotgan materialni qiziqarli qilishda samarali. Masalan, *PhET Interactive Simulations* platformasi o‘quvchilarga fizikani va boshqa fanlarni virtual tajribalar orqali o‘rganishga yordam beradi.

Raqamli Ta'limning Psixologik Ta'siri. Raqamli texnologiyalarning ta'limda qo‘llanilishi o‘quvchilarning psixologik holatiga ta'sir qiladi. Ilmiy tadqiqotlar shuni ko‘rsatmoqda:

Motivatsiya va Qiziqish: Raqamli texnologiyalar yordamida o‘quv jarayonini qiziqarli qilish, o‘quvchilarni ta'limga jalb etishda yordam beradi. Masalan, AR va VR orqali amalga oshiriladigan tajribalar o‘quvchilarning qiziqishini oshiradi.

Qiyinchiliklar: Raqamli texnologiyalarning o‘quvchilarga salbiy ta'siri ham bo‘lishi mumkin, masalan, ortiqcha ma'lumotlar oqimi, e'tiborni jamlashda qiyinchiliklar.

3. Ta’limda Raqamli Innovatsiyalar

Xorijiy mamlakatlar ta’limda raqamli innovatsiyalarni qo‘llashga katta e’tibor qaratmoqda. Misollar:

Blended Learning (Aralash Ta’lim): An’anaviy va onlayn ta’limning kombinatsiyasi, o‘quvchilarga o‘z bilimi va qobiliyatlariga mos ravishda ta’lim olish imkonini beradi. Ko‘plab ta’lim muassasalari bu usuldan foydalanmoqda, masalan, Yevropada va AQShda.

O‘yinlashtirish (Gamification): Ta’lim jarayonida o‘yin elementlarini qo‘shish o‘quvchilarni qiziqtiradi. Misol uchun, Kahoot! va Quizlet kabi platformalar sinfda interaktiv testlar o‘tkazish imkoniyatini beradi.

4. O‘qituvchilarning Raqamli Malakalari

Raqamli texnologiyalarni muvaffaqiyatli qo‘llash uchun o‘qituvchilarni tayyorlash muhimdir:

Malaka Oshirish Kurslari: O‘qituvchilar uchun raqamli texnologiyalar bo‘yicha malaka oshirish kurslari tashkil etilishi kerak. Masalan, **TACIT** (Training for the Adoption of ICT in Teaching) dasturi o‘qituvchilarga raqamli texnologiyalarni o‘z darslarida qanday qo‘llashni o‘rgatadi.

O‘qituvchilarni Raqamli Resurslar Bilan Ta’minlash: O‘qituvchilarga raqamli resurslar va taqdimot vositalari haqida ma’lumot berish, ularni foydalanishga o‘rgatish kerak.

Raqamli texnologiyalarning afzalliklari va kamchiliklari. Raqamli texnologiyalar ta’lim jarayonini tezkor, qulay va moslashuvchan qiladi. Ulardan foydalanish orqali katta hajmdagi ma’lumotlarga bir zumda kirish mumkin, bu esa o’quv jarayonini osonlashtiradi va samaradorligini oshiradi. Masalan, interaktiv materiallar, video va animatsiyalar yordamida murakkab tushunchalar yanada tushunarli bo'ladi. Raqamli ta’limning yana bir afzalligi – istalgan vaqtda va joyda o’qish imkoniyati, bu ayniqsa masofaviy ta’lim va onlayn kurslar uchun juda foydali.

Biroq, raqamli texnologiyalar ba’zi muammolarni ham keltirib chiqaradi. Birinchidan, an’anaviy o’quv muhitidagi insonlararo munosabatlar yo’qolishi mumkin, bu esa o’quvchilarda ijtimoiy ko'nikmalarning shakllanishiga salbiy ta’sir ko’rsatishi mumkin. Texnik muammolar ham paydo bo'lishi mumkin, masalan, internet aloqasining uzilishi yoki dasturiy ta’minotdagi nosozliklar o’quv jarayoniga xalal berishi mumkin. Shuningdek, talabalar va o'qituvchilar raqamli vositalardan to'g'ri foydalanishni bilishlari zarur, aks holda qo’shimcha o’qitish vaqti va xarajati talab qilinadi. Raqamli texnologiyalar sog’liq uchun ham xavf tug’dirishi mumkin. Ekran qarshisida uzoq vaqt o'tirish ko'zlar va umurtqa uchun zararli. Bundan tashqari, raqamli dunyodagi chalg'ituvchilar, masalan, ijtimoiy media, o’qishga to’sqinlik qilishi mumkin. Shu sababli raqamli texnologiyalardan foydalanishda me’yorni saqlash va ulardan oqilona foydalanish muhimdir.

Xulosa. Raqamli texnologiyalarni ta’limda qo‘llash xorijiy tajribalar ko‘rsatganidek, o‘quv jarayonini yanada samarali va interaktiv qilish imkoniyatini beradi. AQSh, Finlyandiya, Singapur va Yevropaning boshqa mamlakatlaridagi tajribalar raqamli ta’limni rivojlantirishda muhim ahamiyatga ega. Ushbu tajribalar orqali ta’lim tizimini modernizatsiya qilish, o‘quvchilarni zamonaviy bilimlar bilan ta’minlash va ularni tayyorlashda raqamli texnologiyalarning roli yanada kengayadi. Ta’lim jarayonida raqamli texnologiyalardan foydalanishning to‘g‘ri yondashuvlari orqali o‘quvchilarning bilim va ko‘nikmalarini rivojlantirish mumkin.

Foydalanilgan adabiyotlar

1. Anderson, T., & Elloumi, F. (2004). Theory and Practice of Online Learning. Athabasca University Press

2. Dede, C. (2011). Comparing Frameworks for 21st Century Learning. International Society for Technology in Education

3. Johnson, L., Adams Becker, S., Estrada, V., & Freeman, A. (2014). NMC Horizon Report: 2014 Higher Education Edition. Austin, Texas: The New Media Consortium

UO‘K: 614

Ergashev S.A.
dotsent
Fuqaro muhofazasi instituti o‘qituvchisi

GLOBAL IQLIM O‘ZGARISHINING TA‘SIRINI OLDINI OLISH BO‘YICHA O‘ZBEKISTONDA AMALGA OSHIRILAYOTGAN HARAKATLAR

Annotatsiya: *So‘ngi yillarda Markaziy Osiyo mintaqasining ko‘p qismlarida anomal qish va jazirama yoz tendentsiyasi kuzatilmoqda, bu esa Pamir va Tyan-Shan tog‘larida muzliklar va abadiy muzlarning erishini keltirib chiqaradi. Kuchli yomg‘ir, qurg‘oqchilik, suv toshqini va sel oqimlari xavfi oshadi. Bu o‘z navbatida, iqlim o‘zgarishi suv resurslari, qishloq xo‘jaligi va inson salomatligiga ta‘sir ko‘rsatishi, ma’lum bir xududlarni cho‘llanishi, ekotizimlar va tabiiy resurslarning buzilishi kabi mavjud muammolarni kuchaytirishi mumkin. Ushbu maqolada iqlim o‘zgarishining ta‘sirini oldini olish va uning oqibatlarini yumshatish hamda iqlim o‘zgarishiga moslashish bo‘yicha O‘zbekistonda amalga oshirilayotgan dasturlar va harakatlar to‘g‘risida ma’lumotlar keltirilgan.*

Kalit so‘zlar: *O‘zbekiston, iqlim o‘zgarishi, Markaziy Osiyo, global, harakat, inson salomatligi, mintaqa, suv resurslari, issiq havo, anomal sovuq, qurg‘oqchilik, tabiiy ofat, “Yashil” iqtisodiyot.*

Ergashev S.A.
associate professor
Lecturer at the Institute of Civil Protection

ACTIONS TAKEN IN UZBEKISTAN TO PREVENT THE CONSEQUENCES OF GLOBAL CLIMATE CHANGE

Annotation: *In recent years, many parts of the Central Asian region have experienced a trend of anomalous winters and hot summers, causing melting of glaciers and permafrost in the Pamir and Tien Shan mountains. The risk of heavy rains, droughts, floods and flash floods will increase. This, in turn, can exacerbate existing problems such as climate change affecting water resources, agriculture and human health, desertification of certain areas, destruction of ecosystems and natural resources. This article provides information on the programs and actions implemented in Uzbekistan to prevent the impact of climate change and mitigate its consequences, as well as adapt to climate change.*

Key words: *Uzbekistan, climate change, Central Asia, global, movement, human health, the region, water resources, hot weather, an anomalous drought, poppy farming, natural disasters, “The green” economy.*

Kirish. Birlashgan Millatlar Tashkiloti ma’lumotlariga ko‘ra, so‘nggi besh yil ichida dunyo bo‘yicha o‘rtacha harorat har qachongidan ham yuqori bo‘lgan. Prognozlarga ko‘ra, harorat ko‘tarilishi shu tarzda davom etsa, 2050-yilga kelib, dunyoning oltita mintaqasida 216 million kishi, shu jumladan Markaziy Osiyoda 5 million kishi iqlim qochqinlariga aylanadi. Bugungi kunda ro‘yxatga olingan tabiiy ofatlar soni 1970-yilga nisbatan 5 barobar ko‘pni tashkil etmoqda. So‘nggi 20 yil ichida tabiiy ofatlar 1,2 milliondan ziyod odamni bevaqt xayotdan ko‘z yumishiga sababchi bo‘ldi, iqtisodiy zarar esa 3 trillion dollardan ortiq miqdorni tashkil etdi. Kelgusi 30 yil ichida iqlim o‘zgarishi va uning oqibatlari jahon iqtisodiyotiga 8 trillion dollar zarar keltirishi taxmin qilinmoqda. 2050-yilga kelib esa iqlim o‘zgarishi oqibatida dunyoda yalpi ichki mahsulotning o‘sishi 3 %ga kamayishi kutilmoqda.

Xozirgi kunda zamonaviy ilmiy hamjamiyat “global isish” atamasidan asta sekin yuz o‘girmoqda, chunki sayyoramizda sodir bo‘layotgan iqlim o‘zgarishlari jadalligi yildan-yilga ortmoqda. Shuning uchun “global isish” atamasidan ko‘ra “global iqlim o‘zgarishi” degan atama ko‘proq mos keladi. Yerning turli mintaqalaridagi meteorologik kuzatuvlar shuni ko‘rsatadiki, iqlim o‘zgaruvchanligi va issiqxona effekti sayyoramiz atmosferasi shakllanganidan so‘ng paydo bo‘lgan.

Natijalar. Markaziy Osiyo mamlakatlari iqlim o‘zgarishiga eng ko‘p uchraydigan va zaif hisoblanadi. Bu yerdagi havo harorati sayyoramizdagi o‘rtacha haroratdan 1,7 baravar tezroq o‘smoqda, bu esa muzliklar maydoni qisqarishiga olib kelmoqda, ularning hajmi so‘nggi 50 yil ichida deyarli 32% ga kamaydi. Bu esa daryolar oqimini kamaytiradi, mintaqaning oziq-ovqat va energiya xavfsizligi uchun xavf tug‘diradi.

Global iqlim o‘zgarishi natijasida so‘nggi 50-60 yil ichida mintaqaning muzliklar maydoni taxminan 30% ga kamaydi. 2050-yilgacha Sirdaryo havzasida suv resurslari 5% gacha, Amudaryo havzasida esa 15% gacha kamayishi kutilmoqda. 2050-yilga kelib Markaziy Osiyoda toza suv yetishmovchiligi yalpi ichki mahsulotning 11% ga pasayishiga olib kelishi mumkin.[1]

O‘zbekistonda ham iqlim o‘zgarishi sodir bo‘layotganini ko‘rish uchun maxsus asbob-uskunalar talab qilinmaydi. Misol uchun, 2007-2008-yillar qish oylarida butun mamlakat bo‘ylab termometr ustunlari - 20^0C gradusgacha tushib ketdi. 2009- yilda esa buning aksi bo‘ldi: yanvar oyining o‘rtalarida havo harorati juda yuqori bo‘ldi, taxminan $+10^0$C issiq.

Tahlillar shuni ko‘rsatadiki, iqlim o‘zgarishi O‘zbekistonda suv tanqisligini kuchaytirishi, qurg‘oqchilikning davomiyligini uzaytirishi, shuningdek, iqtisodiyotning suv resurslariga bo‘lgan ehtiyojini qondirishda jiddiy muammolarga olib kelishi mumkin. Agar 2015-yilgacha bo‘lgan davrda O‘zbekistonda umumiy suv tanqisligi 3 milliard kub metrdan ziyod bo‘lgan bo‘lsa, 2030-yilga kelib u 7 milliard kub metr, 2050-yilga kelib 15 milliard kub metrni tashkil qilishi mumkin. So‘nggi 15 yil ichida aholi jon boshiga suv bilan ta‘minlanganlik 3048 kub metrdan 1589 kub metrga kamaydi.

Bundan tashqari, hududda suvdan oqilona foydalanish bilan bog‘liq muammolar mavjud. So‘ngi ma‘lumotlarga ko‘ra, mintaqaning ba’zi mamlakatlarida suvdan foydalanish tanqidiy darajaga (100% dan ortiq) yetdi. Xususan, O‘zbekistonda bu ko‘rsatkich 169%, Turkmanistonda esa 144% ni tashkil etadi. Tojikistonda suv tashvishlari o‘rtacha 62% deb baholanadi. Qirg‘iziston va Qozog‘istonda ham shirin suvdan foydalanish ko‘rsatkichlari jahon darajasidan yuqori bo‘lib, mos ravishda 50% va 33% ni tashkil etadi.

O‘zbekistonda iqlim o‘zgarishiga moslashish va uning oqibatlarini yumshatish bo‘yicha izchil choralar ko‘rilmoqda. Atrof-muhitni muhofaza qilish davlat siyosatining ustuvor yo‘nalishlaridan biri sifatida belgilangan. Bu borada institutsional baza mustahkamlandi. Ekologiya va atrof-muhitni muhofaza qilish davlat qo‘mitasi, Gidrometeorologiya xizmati markazi to‘liq isloh qilindi, O‘rmon xo‘jaligi davlat qo‘mitasi tashkil etildi.[1]

Ekologik xavfsizlikni ta‘minlashga, tabiiy resurslardan oqilona foydalanishga, iqtisodiyotning turli tarmoqlariga yangi, ekologik toza texnologiyalarni joriy etishga qaratilgan uzoq muddatli strategiyalar qabul qilingan. Ular orasida 2030-yilgacha atrof-muhitni muhofaza qilish konsepsiyasi, 2020-2030-yillarda suv xo‘jaligini rivojlantirish, 2019-2030-yillarda respublikani “Yashil” iqtisodiyotga o‘tkazish strategiyasi, 2019-2028-yillarda qattiq maishiy chiqindilar bilan bog‘liq ishlarni amalga oshirish va boshqalar. Tabiatni muhofaza qilish tadbirlarining samaradorligini oshirishda aholining ekologik madaniyatini rivojlantirish muhim ahamiyat kasb etadi.

2008-yilda fuqarolik jamiyati sa‘y-harakatlarini birlashtirishga qaratilgan O‘zbekiston Ekologik Harakati tashkil etilishi bu borada muhim qadam bo‘ldi. 2019-yilda Ekologik harakat Ekologik partiyaga aylandi, bu esa tabiatni muhofaza qilish kun tartibini siyosiy munozaralar darajasiga ko‘tarishga imkon berdi. Aholining ekologik madaniyatini shakllantirishning muhim omili yosh avlodni tarbiyalashdir. O‘zbekistonda uzluksiz ekologik ta‘lim tizimi barpo etilmoqda.

2019-yilda yosh avlodda ekologik bilimlar, ong va madaniyatni shakllantirishni, innovatsion texnologiyalarni jalb etgan holda ekologiya sohasidagi fanni takomillashtirishni va ta‘lim va atrof-muhitni muhofaza qilish sohasida kadrlar salohiyatini oshirishni nazarda tutuvchi ekologik ta‘limni rivojlantirish konsepsiyasi qabul qilindi.

O‘zbekistonning iqlim kun tartibining eng muhim jihatlaridan biri “Yashil” iqtisodiyotga bosqichma-bosqich o‘tishdir. Iqtisodiyotning energiya samaradorligini oshirish, uglevodorodlardan foydalanishni kamaytirish, qayta tiklanuvchi energiya manbalari ulushini oshirish bo‘yicha choralar ko‘rilmoqda. Masalan, 2030-yilga kelib energiya samaradorligini ikki baravar oshirish va yalpi ichki mahsulotning uglerod sig‘imini kamaytirish kutilmoqda. Aholining o‘sib borayotgan talabini ta‘minlash uchun qayta tiklanadigan energiya manbalarining elektr energiyasi ishlab chiqarishdagi ulushini 25% gacha oshirish rejalashtirilgan.[4]

Bunda asosiy e‘tibor quyosh energiyasiga qaratilmoqda. Mutaxassislarning hisob-kitoblariga ko‘ra, quyosh elektr stansiyalarini qurish orqali O‘zbekiston 600 milliard kVt.soat elektr energiyasi ishlab chiqarish imkoniyatiga ega. Bu esa respublikada mavjud ehtiyojdan 8 baravar ko‘pdir. 2025-yilga kelib xalqaro kompaniyalar bilan birgalikda umumiy quvvati 2900 MVt bo‘lgan quyosh va shamol elektr stansiyalarini ishga tushirish rejalashtirilgan. Avgust oyida Navoiy viloyatida 100 MVt quvvatga ega birinchi quyosh fotoelektr stansiyasi ishga tushirildi.

Suv resurslaridan oqilona foydalanish maqsadida qishloq xo‘jaligiga eng yangi texnologiyalar joriy etilmoqda. 2020-yilda mamlakatimizda 133,6 ming gektar maydonda suvni tejaydigan texnologiyalar joriy etildi . Shunday qilib, so‘nggi yillarda suvni tejaydigan sug‘orish texnologiyalarini joriy etish maydoni 291,2 ming gektarga yetdi, bu sug‘oriladigan yerlarning umumiy maydonining qariyb 7% ini tashkil etadi. Sug‘orishning tejamkor texnologiyalarini qo‘llash natijasida vegetatsiya davrida 280 mln kub metr suv tejadi, 300 ming gektardan ortiq sug‘oriladigan yerlarning suv ta‘minoti yaxshilandi, shuningdek, 16 ming gektardan ortiq maydonda takroriy ekinlarni qo‘shimcha sug‘orish imkoniyati yaratildi.

Mamlakat shaharlari va aholi punktlarini ko‘kalamzorlashtirishga alohida e‘tibor qaratilmoqda. Nukus, Urganch va Xiva shaharlarida mahalliy daraxt va buta o‘simliklaridan “Yashil mintaqani” yaratish rejalashtirilgan. Bundan tashqari, yaqin kelajakda yashil zonalar yaratiladi, 125 million daraxt o‘tkaziladi. Toshkent shahrining umumiy maydonini ko‘kalamzorlashtirish darajasi hozirgi 26,4% dan 2023-yilga kelib 30% ga yetkaziladi . 2019-yil 1-noyabrdan boshlab davlat o‘rmon fondiga kirmaydigan daraxt va butalarning qimmatbaho turlarini kesishga moratoriy joriy etildi. Ekologiya sohasidagi buzilishlarning, shu jumladan noqonuniy kesish, brakonerlik, chiqindilarni noqonuniy tashlashning oldini olish uchun mas‘ul bo‘lgan Ekopolisiya tashkil etish rejalashtirilgan.[5]

Orol dengizining qurib ketishi oqibatlarini kamaytirish va Orolbo‘yi mintaqasini ijtimoiy-iqtisodiy rivojlantirish O‘zbekistonning iqlim siyosatidagi ustuvor vazifalardan biridir. Orol dengizining qurigan tubida himoya daraxtzorlarini barpo etish hisobiga (1,5 mln ga) O‘zbekiston o‘rmonlar va butalar bilan qoplangan hududlarni ko‘paytirmoqda. So‘nggi 4 yil ichida respublikada o‘rmonlar o‘sishi 10-15 barobar ko‘paydi. Agar 2018-yilgacha o‘rmonlarni tashkil etishning yillik hajmi 47-52 ming gektar doirasida bo‘lgan bo‘lsa, 2019-yilda bu ko‘rsatkich 501 ming gektarga, 2020-yilda 728 ming gektarga oshdi.

Xulosa. Hech bir mamlakat iqlim o‘zgarishi oqibatlarini o‘z kuchi bilan bartaraf eta olmaydi. O‘zbekiston bu sohada xalqaro tashkilotlar, AQSh, Yevropa Ittifoqi va boshqa mamlakatlar bilan hamkorlikni yo‘lga qo‘ygan. BMT iqlim o‘zgarishiga qarshi kurashish va quruqlikdagi ekotizimlarni saqlashni o‘z ichiga olgan barqaror taraqqiyot maqsadlariga (BTT) erishishga ko‘maklashadi. 2020-yilda Germaniya Markaziy Osiyo va Afg‘onistonda iqlim va xavfsizlik bo‘yicha “Yashil Markaziy Osiyo” mintaqaviy tashabbusini boshladi. Tashabbusning maqsadi kelgusi to‘rt yil ichida oltita ishtirokchi mamlakatlar o‘rtasida ma‘lumotlarga kengroq kirishni yaratish va akademik hamkorlikni qo‘llab-quvvatlashdan iboratdir.

Foydalanilgan adabiyotlar:

1. 2030-yilgacha bo‘lgan davrda O‘zbekiston Respublikasining Atrof-muhitni muhofaza qilish Konsepsiyasi//Qonun hujjatlari ma’lumotlari milliy bazasi, 31.10 .2019-y., 06/19/5863/3979-son.

2. Mamlakatdagi sahrolanish va yerlarning yemirilishi (SEYE). Bundan qanday qutilish mumkin?// www.sgp.uz

3. Iqlim o‘zgarishiga qarshi kurash samaradorligini oshirish. 24.07.2013//www.parliament.gov.uz.

4. Узбекистан: Обзоры результативности экологической деятельности. Третий обзор. ООН, Женева, 2020.

5. Tolipov H. Cho‘llanish va qurg‘oqchilikning salbiy ta’sirlariga qarshi qanday kurashilmoqda? 16.12.2020//www.uza.uz.

Eshboyev B.T., g.f.f.d.dotsent
Qarshi davlat universiteti
Bozorov M.I.
magistrant
Qarshi davlat universiteti

ETNOTOPONIMLAR VA ULARNING TOPONIMIK TAHLILI

Annotatsiya: *Maqolada etnotoponimlar va ularning toponimik tahlili haqida ma'lumotlar keltirilgan. Shuningdek, etonotoponimlarning o'ziga xos xususiyatlari, etnonimlarning shakllanishi va rivojlanishida muhim ahamiyat kasb etgan omillar haqida so'z boradi.*

Katit so'zlar: *etnos, etnotoponim, "vis", takroriylik, Qurama, "-iya", "-iston".*

Eshboyev B.T., PhD associate professor
Karshi State University
Bozorov M.I.
master's student
Karshi State University

ETHNOPONYMS AND THEIR TOPONYMIC ANALYSIS

Abstract: *The article provides information about ethnotoponyms and their toponymic analysis. It also talks about the specific features of ethnotoponyms, the factors that are important in the formation and development of ethnonyms.*

Key words: *ethnos, ethnotoponym, "vis", repetition, Kurama, "-iya", "-istan".*

Kirish. Toponimlarning turli guruhlari orasida etnonimik geografik nomlar, ya'ni etnotoponimlar alohida o'rin tutadi. Ular qadimgi qabila, elat va boshqa etnik birliklarning nomlarini bugungi kungacha saqlab kelgan tirik guvohlardir. Ko'pincha unutilgan va yo'q bo'lib ketgan xalqlarning mavjudligi haqidagi faktlarni toponimikadagi dalillar bilan topish mumkin. Ushbu geografik nomlarni o'rganar ekan, tadqiqotchi muqarrar ravishda etnografiya va etnik tarix sohalariga kirib boradi. Qadimiy xaritalarga e'tibor berib qaralsa, asosiy toponimik yukni qabila va xalqlar nomlari, ya'ni etnonimlar tashkil etadi. Buni sababi shundaki, kishilik jamiyatining dastlabki bosqichlaridan buyon aholining etnik tarkibi hududni belgilash uchun asos bo'lib xizmat qilgan. Etnik belgi bilan nomlashda ijtimoiy voqelik bosh me'yor, mezon vazifasini o'tagan. Masalan, Sug'diyona, Baktriya, Iberiya, Parfiya kabi nomlarni eslash kifoya, chunki ularning barchasida etnik nom mujassam. CHunki, xalqning eng ibtidoiy etnomadaniy belgisi va eng muhim qadriyatlaridan biri uning nomi bo'lgan.

Boshqacha aytganda, har qanday etnik birlik qadimda hududiy, iqtisodiy, lisoniy va kelib chiqishi jihatidan nasl nasabidan tashqari, maxsus nomga ega bo‘lishi shart bo‘lgan. SHuning uchun, muayyan sharoitda tabiiy-tarixiy taraqqiyot jarayonda vujudga kelgan etnik birlikning nomi ular yashaydigan hududga ham nom bo‘lib o‘tgan. Har qanday etnik birlikni nomi etnonim (yunoncha, etnos - “xalq”, onim - “nom”) deb ataladi. Juda ko‘p joy nomlari etnonimlar bilan bog‘liq holda paydo bo‘lgan. Etnonimlardan nom olgan har qanday geografik obyekt etnotoponim deyiladi. Etnotoponimlarning aksariyat qismi oykonimlar, ular har qanday mintaqa aholisining tarixiy shakllanishi, taraqqiyoti, xalqlarning qadimiy munosabati, integratsiyasi va migratsiyasini ko‘rsatuvchi muhim manba hisoblanadi. Suv bo‘ylari, dehqonchilik va chorvachilik uchun qulay joylarda, yirik aholi punktlarida, turli etnik guruh vakillari aralash yoki yonma-yon yashagan joylarda etnotoponimlar zichroq tarqalgan. Ba’zan, yo‘qolib ketgan xalqlar va tillarni tarqalish hududlarini aniqlashda etnotoponimik ma’lumotlar qo‘l keladi.

Asosiy qism. Etnonimlar juda qadimiy so‘zlar, ular yordamida xalqlar etnogenezini o‘rganish mumkin. Masalan, Xorazm etnografiyasini o‘rgangan S.P.Tolstov bu haqda shunday ma’lumot yozib qoldirgan: “Avestoda yozishicha, jamiyat asosini urug‘ tashkil qilgan. Urug‘lar “vis” deb atalgan. U ma’lum bir qishloq aholisidan tashkil topgan bo‘lib, qishloqning o‘zi ham “vis” deb yuritilgan. Bu so‘zning keyingi davrlardagi shakli “diz” dir. Bir necha urug‘ birlashib zantuni tashkil qilgan. Nihoyat qabilalar ittifoqi yoki viloyat daxu yoki daxyu deb yuritilgan”. Joy nomlarida aks etgan etnonimlarning tahlili shuni ko‘rsatadiki, ko‘pincha qabila yoki urug‘ nomi, ba’zan ularning atrofdagi aholidan etnografik jihatlari bilan farqi etnonimning toponimga aylanishiga sabab bo‘lgan. Nomlashni o‘ziga xos qoidalaridan biri shuki, aksariyat hollarda aholi maskanlariga nom o‘zgalar tomonidan berilgan. Aholi maskanini yaratuvchi bilan nomlovchi jamoa munosabati bu jarayonda muhim omil sanalgan. V.A.Nikonovning yozishicha, etnotoponimlar etnik guruh yaxlit yashaydigan hududda emas, balki uning chekka qismida, ya’ni boshqa bir etnik birlik bilan chegaradosh hududlarda paydo bo‘lgan. Masalan, qo‘ng‘irot yoki qang‘lilar yaxlit yashagan hududlarda qo‘ng‘irot, qang‘li kabi toponimlar uchramaydi. SHu narsa muhimki, boshqa etnik birliklar miqdoriy ko‘pchilikni tashkil qilgan hududlarda emas, ozchilikni tashkil qilgan hududlarda etnik belgi nomlanish uchun mezon, asos, belgi vazifasini o‘tagan. Etnonim va toponim orasida uzviy bog‘liqlik mavjudligini S.S.Gubaeva o‘z ilmiy ishlarida Farg‘ona vodiysi misolida ko‘rsatib bergan. Olimaning yozishicha, o‘tmishda aholisi ko‘chmanchi yoki yarim o‘troq hayot kechirgan hududlardagi joy nomlarida etnonimlar soni ko‘p, aksincha aholisi qadimdan o‘troq bo‘lgan hududlardagi joy nomlarida etnotoponimlar kam. Bu qonuniyatni, ko‘chmanchi yoki yarim o‘troq tarzda hayot kechirgan aholini hududiy tarqalishida etnik mansublik muhim rol o‘ynaganligi bilan izohlash mumkin. Etnotoponimlar - tarixan faol kategoriya sanaladi. Bu turdagi geografik nomlarga hududiylik, takroriylik xos va u tarixiy - geografik sabablar, ya’ni etnosni tarqalishi, etnik aloqalar hamda xo‘jalik faoliyatini xususiyatlari bilan bog‘liq. Nomning takroriyligi nom asosidagi so‘zning boshqa ijtimoiy, etnik, ruhiy, falsafiy xususiyati borligini ko‘rsatadi. Nomshunoslikning asosiy qonuniyatlaridan biri takroriylik. Uning turi ham xilma-xil. Asosiy sababi xalq tafakkuridagi umumiylik, tabiat hodisalarini bir xil idrok qilinishidir. Inson tafakkuridagi, ma’naviyatidagi bu holat joy nomlariga ko‘chgan. Etnotoponimlarning ma’lum hududda qayta takrorlanishiga etnik guruh vakillarini ijtimoiy hayot tarzi ham ta’sir ko‘rsatgan. Boshqacha aytganda, bir joyda yoki bir-biriga yaqin masofalarda aynan bir etnotoponimning takrorlanishi tasodifiy hol emas. Gap shundaki, yarim o‘troq va ko‘chmanchi tarzda hayot kechirgan aholining o‘troq hayotga o‘tishida muayyan tafovutlar bo‘lgan. SHu sababdan, ayrim hududlar toponimiyasi tarkibida bitta etnik birlik nomi etnotoponim sifatida bir necha bor takrorlanadi. Mutaxassislar bitta etnotoponimning bir necha bor takrorlanishini etnik guruh vakillari butun urug‘i bilan emas, balki nisbatan kichikroq bo‘laklarga bo‘linib o‘troqlikka o‘tganligi sabab bo‘lgan deyishadi. Etnonimlarning joy nomlari shaklida qayta-qayta takrorlanishida ijtimoiy voqelik ham muhim rol o‘ynagan. S.Qoraev ma’lumotlariga ko‘ra respublika toponimiyasi tarkibida ayronchi, arg‘in, achamayli, bag‘anali, beshbola, burqut, galabotir, kenagas, tama, ming, mitan, oytamg‘ali, uyas, qutchi kabi etnonimlar shahar va qishloqlar nomlari tarkibida 5 dan 10 martagacha; bolg‘ali, bolta, bahrin, qang‘li, qiyot, qirq, mirishkor, mo‘g‘ul kabi etnonimlar 11-20 martagacha; beshkapa, do‘rmon, jaloyir, qo‘ng‘irot, mang‘it kabi etnonimlar 21-30 martagacha; qipchoq, saroy etnonimlari 31-40 martagacha takrorlanadi. Xorazm toponimiyasini tadqiq qilgan Z.Do‘simovni yozishicha, Xorazm etnotoponimlarining xarakterli xususiyatlaridan biri shuki, ayrim etnik nomlar bir necha hatto o‘nlab etnotoponim sifatida uchraydi. Bu fakt mazkur hududda urug‘ qabilaga bo‘linish, urug‘chilik xususiyati uzoq davom etganligidan dalolat beradi. Etnotoponimlar SHimoliy Xorazmda juda sermahsul. Urug‘-qabila nomi bilan ataluvchi toponimlarning ko‘plab takrorlanishi bu yerdagi xalqlarning keyin ko‘chib kelganligini ko‘rsatadi. Etnotoponimlar Janubiy Xorazmda shimolga nisbatan ancha barqarordir. Janubda etnotoponimlar deyarli uchramaydi. Masalan, Nukus etnotoponimi SHimoliy Xorazmda o‘n ikki marta, janubda esa atigi bir marta uchraydi. Xorazm etnotoponimlarining diqqatga sazovor joyi shundaki, ular respublikadagi aksariyat mintaqalardagi kabi kichik aholi maskanlarini nomini emas, balki ancha katta shaharlar (Qo‘ng‘irot, Mang‘it, Qipchoq, Nukus) nomini tashkil etadi. Buni Xiva xonligida urug‘chilik boshqa hududlarga nisbatan kuchliroq bo‘lganligi va har qaysi urug‘ o‘troqlikka o‘tganda o‘zini yaxlit turkum deb his qilganligi hamda mayda qishloqlarga sochilib ketmaganligi bilan izohlash mumkin. SHahar va qishloqlar nomini tashkil etgan etnotoponimlarga qarab qadimda ushbu hududda qanday etnik guruhlar istiqomat qilganligini bemalol bashorat qilish mumkin. CHunonchi, Nukus, Qarluq, Boyovut, Olot, Do‘rmon, Qurama kabi mashhur nomlar ham etnonimlar asosida paydo bo‘lgan. Ma’lumki, har bir etnonimning o‘ziga xos kelib chiqishi tarixi bor. Ularni bilmasdan turib O‘zbekiston toponimikasi bilan shug‘ullanish ancha qiyin, chunki urug‘, qabila nomlari ham muayyan ma’noni anglatadi. Masalan, urug‘

nomlarini bilmagan kishi Bolg‘ali, O‘roqli, Oytamg‘ali kabi etnonimlarni «-li» affiksli toponimlarga kiritishi mumkin. Qirq, yuz, ming qabilalari nomlari toponimlar tarkibida kelganda sonni bildirmaydi. Samarqand viloyati oykonimlarining o‘ziga xos xususiyatlaridan biri tarkibida etnonimlarning ko‘pligidir. Chunonchi, viloyat tumanlari kesimida etnooykonimlarning ulushi: Go‘zalkentda - 20 %, Payariqda - 25 %, Ishtixonda - 33 %, Bulung‘urda - 40 %, Jomboyda - 45 %, Qo‘shrabotda - 35%, Kattaqo‘rg‘onda - 30%, Narpayda - 32%, Nurobodda - 23%, Oqdaryoda - 24%, Pastdarg‘omda - 31%, Paxtachida - 34%, Toyloqda - 30%, Urgutda -28% ni tashkil qiladi. Mutaxassislarning hisob-kitoblariga ko‘ra, o‘tmishda mintaqada etnooykonimlar soni bundan ham ko‘p bo‘lgan. XIX asr oxirida Zarafshon vodiysiga kelgan rus tadqiqotchisi N.F.Sitnyakovskiy 2800 dan ko‘proq qishloqlarni ro‘yxatga olgan va ularning 1/3 qismi etnik guruh nomlari bilan atalgan. Etnooykonimlar soni jihatidan Samarqand viloyati respublikada Janubiy O‘zbekiston viloyatlaridan keyin turadi. O‘zbekiston etnotoponimlari orasida jonivorlar, xususan, uy hayvonlari nomi bilan atalgan etnonimlar eng qadimiydir, chunki odamlar birinchi bo‘lib ana shu hayvonlarni xonakilashtirgan. Qadimda urug‘larning muqaddas hayvonlari (totemi) bo‘lgan. Majusiylar davridan qolgan totemistik qarash insoniyatning tabiatga, tabiiy hodisalarga, turli mavjudotlarga munosabati majmui sanaladi. Ko‘pgina etnonimlar urug‘ - aymoq tamg‘asi nomi bilan atalgan. Har bir urug‘ning o‘z tamg‘asi bo‘lgan. Tamg‘alar dehqonchilik bilan shug‘ullanuvchi aholi O‘rtasida emas, chorvador aholi uchun muhim belgi vazifasini o‘tagan. CHorvachilik bilan shug‘ullangan har bir etnik guruhning o‘z tamg‘asi bo‘lgan. Tamg‘alar shakli, tuzilishi, tasviri, anglatgan ijtimoiy mazmuni va mohiyati bilan bir-biridan farqlangan. Tamg‘a ramziy nishon, belgi vazifasini o‘tagan. Asosan chorvadorlar boshqalardan farq qilishi uchun o‘zlariga tegishli chorvani turli shakldа tamg‘alab qo‘yishgan. Jizzax viloyati toponimiyasini o‘rgangan A.Zokirovning yozishicha, viloyat hududidagi etnotoponimlar tarkibida uchraydigan taroqli, cho‘michli, qirg‘ili, bolg‘ali kabi urug‘larning tamg‘alari shaklan ana shu uy-ro‘zg‘or anjomlariga o‘xshash bo‘lgan. Bulardan tashqari, kishi ismlari, joy nomlaridan kelib chiqqan, kasb-hunar nomi, jamiyatdagi ijtimoiy mavqesi, urug‘-ajdodlarni laqabi bilan bog‘liq etnonimlar ham mavjud. Dunyo xaritasiga e’tibor bilan qarasangiz ko‘plab etnotoponimlarga ko‘zingiz tushadi. CHunki, ko‘pchilik mamlakatlarning nomlari xalq nomidan olingan, xalq nomiga “-iya”, “-iston” qo‘shimchalari qo‘shilib, mamlakat nomi hosil qilingan. Bu hodisa davlatlarni nomlashda asosiy qonuniyatlardan biri sanaladi. Masalan, alban - Albaniya, portugal - Portugaliya, rumin - Ruminiya, bolgar - Bolgariya, turk - Turkiya, turkman - Turkmaniston, qirg‘iz - Qirg‘iziston, tatar - Tatariston, tojik - Tojikiston va hokazo. Etnonimlar negizida paydo bo‘lgan davlatlar nomini barcha qit’alarda uchratish mumkin. Xususan, qadimiy davlatlari bilan mashhur bo‘lgan Yevrosiyoda bunday nomlar ko‘plab topiladi. Yevropada - Belgiya, Bolgariya, Gretsiya, Italiya, Ruminiya, SHvetsiya; Osiyoda - Bangladesh, Laos, Tailand, Mug‘uliston, Turkiya; Afrikada - Botsvana, Burundi, Mavritaniya, Malavi kabi davlatlar nomiga etnonimlar asos bo‘lgan. Birgina davlatlar nomi emas, balki etnonimlardan asos bo‘lgan boshqa geografik obyektlar nomlari ham ko‘p uchraydi, Masalan, Malik cho‘li (malik - urug‘i nomi), Baraba dashti (baraba - urug‘i nomi), Parij (parizi - qabila nomi), Eri, Guron ko‘llari (hindu qabilalari nomi), Appalachi tog‘lari (appalachi - hindu qabilasi), Dakota, Yuta, Ayova, Delaver, Oklaxoma kabi shtatlar nomlari ham hindu qabilalari nomlari bilan bog‘liq. Etnonimlar toponimlar tarkibida uzoq muddat saqlanib qolsa ham, ammo vaqt o‘tishi bilan, ular tushunarsiz bo‘lib qolishi mumkin. Mutaxassislarning fikricha, etnonimlar tarkibidagi «odam, inson, kishilar» kabi ma’nolarni anglatadigan so‘zlar eng qadimgi etnonimlar hisoblanadi. Etnotoponimlarning paydo bo‘lishi, shakllanishi va rivojlanishi uzoq va murakkab tarixiy jarayon bo‘lib, turli-tuman ijtimoiy, tarixiy, lingvistik omillar bilan bog‘liq. Aholining etnik tarkibi, ularning qaysi urug‘, qabila, xalq, millatga mansubligini ifodalovchi geografik nomlar har qanday hududiy toponimiya orasida katta bir guruhni tashkil etadi.

Xulosa. Hozirgi kunda, xalqning etnik guruhlarga taqsimlash faqat ilmiy-tadqiqot ishlari va tarixiy qiziqishlar bilan bog‘liq bo‘lib qoldi. SHuning uchun, tobora unitilib borayotgan etnonimlarni to‘plash, tahlil va tadqiq qilish, etnonimlarning hududiy joylashuvi sabablari, tarqalish areali, etnonim va toponimning o‘zaro aloqadorligi, etnonimlar xaritasini yaratish kabi muammolar soha tadqiqotchilari oldida turgan dolzarb masalalardan biri hisoblanadi.

Foydalanilgan adabiyotlar

1. K.M.Xakimov Toponimika Jizzax-2024   163-165 b.
2. M.T.Mirakmalov Xalq tabiiy geografik terminlari TOSHKENT-2009   111-114 b.
3. S.Qorayev Geografik nomlar ma’nosi TOSHKENT “O‘ZBEKISTON”-1978
4. A.Nizomov, G.Rahimova, N.Rasulova Toponimika TOSHKENT-2012 19-26 b.
5. H.Hasanov Geografik nomlar siri “O‘ZBEKISTON”-1985 29-30 b.
6. S.Qorayev Toponimika Toshkent -2006 74-82 b.
7. S.Qorayev O‘zbekiston viloyatlari toponimlari. –T.: 2005

Eshmonov O. U.
Iqtisodiyot va Pedagogika Universiteti dotsenti

IXTISOSLIK FANLARINI O‘QITISHNING TAJRIBA-SINOV ISHLARI TADQIQI

Annotatsiya. *Ixtisoslik fanlarini o‘qitishni takomillashtirish bo‘yicha olib borilgan ilmiy tadqiqot ishining tajriba-sinov ishlari tadqiqi natijalari keltirilgan.*
Калит сўзлар: *metodologik, didaktik, yondoshuv, tadqiqot, tajriba-sinov, model, qishloq xo‘jaligi, kasbiy faoliyat, ta’lim sifati, samaradorlik, metodika, daraja, guruh, respondent, mezon, dastur, kasbiy faoliyat.*

Eshmonov O. U.
Associate Professor
of the University of Economics and Pedagogy

SPECIALIZED SCIENCESEXPERIMENTAL RESEARCH OF TEACHING

Abstract. *The results of an experimental study of research work on improving the teaching of specialized subjects are presented.*
Key words: *methodological, didactic, approach, research, experimental test, model, agriculture, professional activity, quality of education, efficiency, methodology, level, group, respondent, criterion, program, professional activity*

Tajriba-sinov ishlarining maqsadi ixtisoslik fanlarini o‘qitish jarayonida talabalarning kasbiy tayyorgarligini rivojlantirish modelini amalga oshirishda pedagogik shart-sharoitlarning yetarliligi hamda metodologik yondashuvlar va didaktik tamoyillarni shakllantirish ixtisoslik fanlari bo‘yicha ta’limning modulli tizimini loyihalash asosida ishlab chiqilgan metodika va o‘quv uslubiy ta’minot samaradorligi darajasini aniqlashdan iborat bo‘ldi.

1-bosqich. Aniqlash va tayyorgarlik bosqichini qishloq xo‘jaligi bo‘lajak muhandislariga ixtisoslik fanlarini o‘qitish jarayonida kasbiy kompetentligini va kasbiy faoliyatga tayyorgarligini rivojlanganlik darajasini aniqlashga yo‘naltirilgan pedagogik faoliyat tashkil etildi.

2-bosqich. Amalga oshirish tajriba-sinov bosqichida qishloq xo‘jaligi bo‘lajak muhandislariga ixtisoslik fanlarini o‘qitish jarayonida kasbiy kompetentligini va kasbiy faoliyatga tayyorgarligini rivojlantirish modelining tashkiliy pedagogik shart-sharoitlari belgilandi va sinovdan o‘tkazildi.

3-bosqich. Yakunlovchi bosqichida tajriba-sinov ishlari natijalari sarhisob qilindi, natijalar qayta ko‘rib chiqildi, tajribadan o‘tkazilgan ma’lumotlar tizimlashtirildi, matematik-statistik tahlil qilindi va ish natijalari rasmiylashtirildi.

Pedagogik tajriba-sinov ishlarida tadqiqot natijasida ishlab chiqilgan pedagogik model va metodika tadbiq qilindi. Shuningdek, pedagogik tajriba-sinov ishlarida ishtirok etgan bo‘lajak qishloq xo‘jaligi soha mutaxassislarining fikr-mulohazalari o‘rganildi, ta’lim sifati va samaradorligi oshganligiga ishonsh hosil qilish maqsadida suhbatlar o‘tkazildi.

1-jadval

Tajriba-sinov o‘tkazilgan oliy ta’lim muassasalari

3№	OTMning nomi	Respondentlar soni			OTMlar boyicha jami respon-dentlar soni
		2020-2021 o‘quv yili	2021-2022 o‘quv yili	2022-2023 o‘quv yili	
11.	“TIQXMMI” MTUning QIAI	67	59	62	**188**
22.	NamMQI	30	28	31	**89**
33.	BTRBI	46	42	47	**135**
	Jami:	**143**	**129**	**140**	**412**

Tajriba-sinov ishlari shartli ravishda “tajriba guruhi” va “nazorat guruhi” deb belgilab olingan guruhlarda o‘tkazildi. Tajriba-sinov ishlari bir xil material va ikki xil metodikadan foydalangan holda o‘tkazilib, ikkala guruh talabalarida kasbiy tayyorgarlikni faollashganligi taqqoslandi. Shuningdek, tabiiy-ilmiy, umumkasbiy va ixtisoslik fanlarning mazmuni, o‘rganish shart-sharoitlari, metodlari tanlanib, savol-javob, pedagogik kuzatish natijalari, talabalarning bilimini nazorat qilish va baholash mezonlari jamlandi. Nazorat va tajriba-sinov guruhlarining natijalari muntazam tahlil qilib borildi va bir-biriga taqqoslanib xulosalar chiqarildi.

“TIQXMMI” MTUning Qarshi irrigatsiya va agrotexnologiyalar institutida olib borilgan pedagogik tajriba-sinov ishlari natijalariga ko‘ra, tajriba-sinov guruhida qatnashgan talabalarning kasbiy faoliyatga tayyorgarlik darajalari tajriba boshida 9,47%, tajriba oxirida 21,05% yuqori darajani ko‘rsatdi. O‘rta daraja tajriba boshida 17,89% dan tajriba oxirida 46,32% o‘sdi, past daraja esa 72,64% dan 32,63% ga kamaydi (2-jadval).

Nazorat guruhida qatnashgan talabalarining kasbiy faoliyatga tayyorgarlik darajalari tajriba boshida 7,53%, tajriba oxirida 10,75% yuqori darajani ko‘rsatdi.

O‘rta daraja tajriba boshida 18,28% dan tajriba oxirida 26,88% o‘sdi, past daraja esa 74,19% dan 62,36% ga kamaydi.

2-jadval

“TIQXMMI” MTUning Qarshi irrigatsiya va agrotexnologiyalar institutida olib borilgan pedagogik tajriba-sinov ishlari natijalari

Kasbiy faoliyatgatayyorgarlik darajasi	Tajriba guruhi				Nazorat guruhi			
	Tajriba boshida 95 nafar talaba		Tajriba oxirida 95 nafar talaba		Tajriba boshida 93 nafar talaba		Tajriba oxirida 93 nafar talaba	
	soni	%	soni	%	soni	%	soni	%
Yuqori	9	9,47	20	21,05	7	7,53	10	10,75
O‘rta	17	17,89	44	46,32	17	18,28	25	26,88
Past	69	72,64	31	32,63	69	74,19	58	62,36
Jami	**95**	**100**	**95**	**100,0**	**93**	**100,0**	**93**	**100,0**

Tajriba-sinov guruhida qatnashgan talabalarning kasbiy faoliyatga tayyorgarlik darajalari tajriba boshida 9,09%, tajriba oxirida 20,45% yuqori darajani ko‘rsatdi. O‘rta daraja tajriba boshida 18,18% dan tajriba oxirida 50% o‘sdi, past daraja esa 72,73% dan 29,55% ga kamaydi.

Nazorat guruhida qatnashgan talabalarining kasbiy faoliyatga tayyorgarlik darajalari tajriba boshida 8,89%, tajriba oxirida 13,33% yuqori darajani ko‘rsatdi. O‘rta daraja tajriba boshida 17,78% dan tajriba oxirida 20% o‘sdi, past daraja esa 73,33% dan 66,67% ga kamaydi.

Namangan muhandislik-qurilish instituti)da tajriba guruhidan 44 nafar, nazorat guruhidan 45 nafar talabalarga pedagogik tajriba-sinov ishlari olib borildi (3-jadval).

3-jadval

Namangan muhandislik-qurilish institutida olib berilgan pedagogik tajriba-sinov ishlari natijalari

Kasbiy faoliyatgata yyorgarlik darajasi	Tajriba guruhi				Nazorat guruhi			
	Tajriba boshida 44 nafar talaba		Tajriba oxirida 44 nafar talaba		Tajriba boshida 45 nafar talaba		Tajriba oxirida 45nafar talaba	
	soni	%	soni	%	soni	%	soni	%
Yuqori	4	9,09	9	20,45	4	8,89	6	13,33
O‘rta	8	18,18	22	50,00	8	17,78	9	20,00
Past	32	72,73	13	29,55	33	73,33	30	66,67
JAMI	**44**	**100**	**44**	**100**	**45**	**100**	**45**	**100**

Tajriba-sinov guruhida qatnashgan talabalarning kasbiy faoliyatga tayyorgarlik darajalari tajriba boshida 8,82%, tajriba oxirida 19,12% yuqori darajani ko‘rsatdi. O‘rta daraja tajriba boshida 20,59% dan tajriba oxirida 50,0% o‘sdi, past daraja esa 70,59% dan 30,88% ga kamaydi.

Nazorat guruhida qatnashgan talabalarining kasbiy faoliyatga tayyorgarlik darajalari tajriba boshida 7,46%, tajriba oxirida 11,94% yuqori darajani ko‘rsatdi. O‘rta daraja tajriba boshida 16,42% dan tajriba oxirida 25,37% o‘sdi, past daraja esa 74,62% dan 61,19% ga kamaydi.

Buxoro tabiiy resurslarni boshqarish institutida 5430100-“Qishloq xo‘jaligini mexanizatsiyalash” bakalavriat ta’lim yo‘nalishida tajriba guruhidan 68 nafar, unga parallel ravishda nazorat guruhida 67 nafar talabalarga pedagogik tajriba-sinov ishlari olib borildi. Tajriba-sinov ishlari jarayonida talabalarning kasbiy faoliyatga tayyorgarlik darajasi aniqlandi (4-jadval).

Tajriba-sinov guruhida qatnashgan talabalarning kasbiy faoliyatga tayyorgarlik darajalari tajriba boshida 9,18%, tajribaoxirida 20,29% yuqori darajani ko‘rsatdi. O‘rta daraja tajriba boshida 18,84% dan tajribaoxirida 48,31% o‘sdi, past darajaesa 71,98% dan 31,40% ga kamaydi.

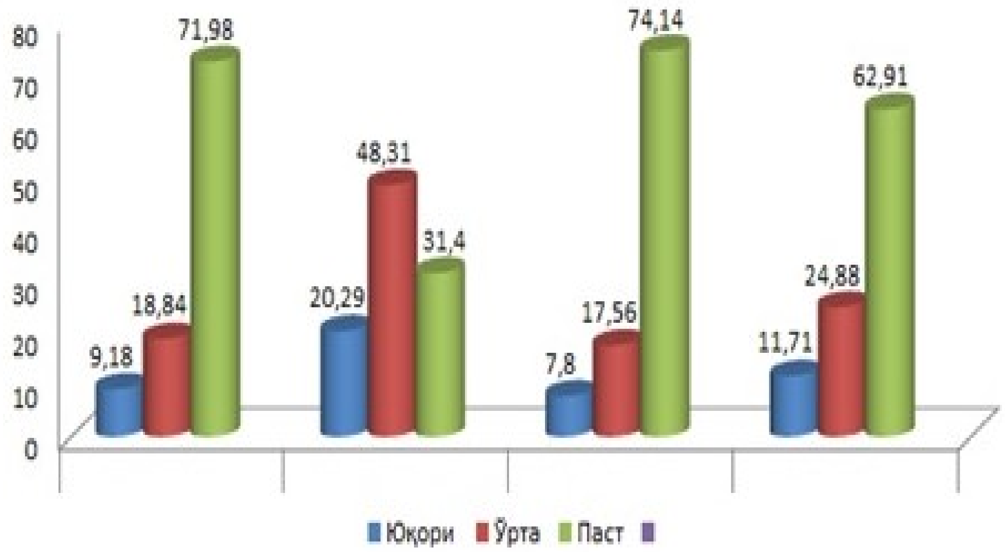
Nazorat guruhida qatnashgan talabalarining kasbiy faoliyatga tayyorgarlik darajalari tajriba boshida 7,80%, tajriba oxirida 11,71% yuqori darajani ko‘rsatdi. O‘rta daraja tajriba boshida 17,56% dan tajriba oxirida 24,88% o‘sdi, past daraja esa 74,14% dan 62,91% ga kamaydi.

Tajriba-sinov ishlari talabalarining kasbiy faoliyatga tayyorgarlik darajasini oshirish metodikasi asosidaolib borildi. Mashg‘ulotlarda muammoli vaziyatlarni yuzaga keltirish, bahs-munozara uyushtirish, talabalarning fikr-mulohazalari bilan o‘rtoqlashish, amaliy faolliklarini o‘stirish, mustaqil qaror qabul qilishni shakllantirish asosidao‘tkazildi.

4-jadval

Buxoro tabiiy resurslarni boshqarish institutida olib berilgan pedagogik tajriba-sinov ishlari natijalari

Kasbiy faoliyatgata yyorgarlik darajasi	Tajriba guruhi				Nazorat guruhi			
	Tajriba boshida 68 nafar talaba		Tajriba oxirida 68 nafar talaba		Tajriba boshida 67 nafar talaba		Tajriba oxirida 67nafar talaba	
	soni	%	soni	%	soni	%	soni	%
Yuqori	6	8,82	13	19,12	6	7,46	8	11,94
O‘rta	14	20,59	34	50,0	11	16,42	17	25,37
Past	48	70,59	21	30,88	50	74,62	41	61,19
JAMI	**68**	**100**	**68**	**100**	**67**	**1100**	**67**	**100**



1-rasm. “TIQXMMI” MTUning Qarshi irrigatsiya va agrotexnologiyalar instituti, Namangan muhandislik-qurilish instituti hamda Buxoro tabiiy resurslarni boshqarish institutida olib berilgan pedagogik tajriba-sinov ishlari natijalari diagrammasi

Olingan natijalar Styudent statistikasi mezoni yordamida tahlil qilindi va Misrosoft Oxsol dasturida qayta ishlandi.

Tadqiqotimiz natijasida, barcha tajriba-sinov maydonshalari sifatida tanlab olingan tajriba-sinov ishlari nihoyasida, tajriba guruhidagi talabalarning kasbiy faoliyatga tayyorgarlik darajalarining samaradorligi 12,1% yuqori ko‘rsatkishga ega bo‘ldi. Bu esa olib borilgan tadqiqot ishining samarali ekanligini ko‘rsatadi.

Foydalanilgan adabiyotlar ro‘yxati

1. Eshmanov O.U. Qishloq xo‘jaligi soha mutaxassislarining kasbiy tayyorgarligini tashkil etishning istiqbolli imkoniyatlari// “Ilm-fan muammolari tadqiqotchilar talqinida” mavzusidagi 12-sonli Respublika ilmiy konferensiyasi. №12. 15-iyun 2023y. – B. 286-293.

2. Eshmanov. O.U. Oliy ta’lim muassasalarida o‘quv va kasbiy tayyorgarlik jarayonini takomillashtirish// “Ilm-fan muammolari tadqiqotchilar talqinida” mavzusidagi 12-sonli Respublika ilmiy konferensiyasi. 2023. – № 12. – B. 272-275.

Eshmonov O.U.
Iqtisodiyot va Pedagogika Universiteti dotsenti

O‘QUVCHILARNI MUTOLAA MADANIYATIGA O‘RGATISHDA XALQARO TADQIQOTLARNING AHAMIYATI (PIRLS TADQIQOTI MISOLIDA)

Annotatsiya: *Maqolada jamiyatimizda mutolaa masalasiga bo‘lgan yondashuv va boshlang‘ich sinf o‘quvchilarida mutolaa madaniyatini shakllantirishda PIRLS tadqiqotiningo‘rni haqida fikr bildirilgan.*

Tayanch so‘zlar*: PIRLS, xalqaro, tadqiqot, kitob, baholash, boshlang‘ich ta’lim, sifat, mutolaa, topshiriq.*

Eshmonov O.U.
Associate Professor
of the University of Economics and Pedagogy

INTERNATIONAL IN TEACHING STUDENTS READING CULTU RESIGNIFICANCE OF THE STUDY (IN THE CASE OF THE PIRLS STUDY)

Annotation: *The article discusses the approach to reading in our society and the role of PIRLS research in shaping the culture of reading in primary school students.*

Key words: *PIRLS, international, study, book, to evaluate, elementary education, the quality, reading, the task.*

Kitob – insonning yaqin do‘sti, suhbatdoshi, sirdoshi. U kishining dunyoqarashi, so‘zboyligini oshiradi. Amerikalik olim, yozuvchi Nil Geyman olib borgan tadqiqot natijasi shuni ko‘rsatdiki, kitob mutolaa qilmaydigan bolalar kelajakda bezori bo‘lib ulg‘ayishi ehtimoli yuqori ekan. Shu bilan birga, kitob o‘qish odamlarni empatiyaga – faqat o‘z xohish-istaklari va manfaatlarini o‘ylashdan voz kechib, umumiy maqsad yo‘lida birlashishga undaydi.

Jamiyatimizda kitobxonlik masalasiga yondoshuv turli davrlarda turlicha bo‘lgan. Har bir davrning o‘z ehtiyojidan kelib chiqib, kitobxonlik darajasi belgilangan. Binobarin, har qanday davlatning kuch-qudrati o‘z fuqarolarining ongliligi bilan belgilanar ekan, bunda albatta kitobxonlik masalasiga alohida e’tibor berilgan. Bugungi kunda “Mutolaa madaniyati”,“Kitobxonlik madaniyati”, “O‘qish madaniyati” kabi atamalar bilan qo‘llanilib kelayotgan ijtimoiy hodisalar axborot olish madaniyatining tarkibiy qismlaridir.

“Mutolaa” so‘zi arabcha “o‘qish” degan ma’noga ega bo‘lsa-da, bugungi kunda u kitob o‘qishdan ko‘ra kengroq tushunchani anglatmoqda.

O‘qish – axborot olish madaniyati bo‘lib, badiiy adabiyotni to‘g‘ri tushunish, undan estetikzavq olish, shuningdek, ilmiy adabiyotlar, barcha turdagi resurslar bilan ishlash, ma’lumot- bibliografiya va barcha turdagi axborot materiallaridan o‘zini qiziqtirgan ma’lumotlarni qidirib topish, cheksiz axborot oqimlari orasidan kerakli, muhim bo‘lgan ma’lumotlarni ola bilish, o‘z kasbiy malakalarini oshirishda foydalanish, axborot-kutubxona muassasasidan to‘g‘ri foydalanish yo‘llarini o‘rganish ham axborot olish madaniyati tushunchasi doirasiga kiradi.

Boshlang‘ich sinf o‘quvchilarida mutolaa madaniyatini shakllantirishning bir qancha usullari, yo‘llari mavjud bo‘lib, 2021-yildan boshlab O‘zbekiston yoshlari, boshlang‘ich sinf o‘quvchilari ilk bor qatnashayotgan PIRLS tadqiqotining o‘rni beqiyosdir.

PIRLS – *(inglizcha – Progress in International Reading Literacy Study)* matnni o‘qish va tushunish darajasini aniqlovchi xalqaro tadqiqot bo‘lib, maqsadi turli xil ta’lim tizimidan iborat bo‘lgan davlatlardagi boshlang‘ich sinf o‘quvchilarining matnni o‘qish va qabul qilish bo‘yicha tayyorgarligi hamda o‘quvchilarning har xil yutuqlarga erishishga sabab bo‘luvchi ta’lim tizimidagi o‘ziga xos xususiyatlarni aniqlash va baholashdan iborat. Albatta, bunday tadqiqot xalq ta’limi sohasidagi mutaxassislar, olimlar, metodistlar, o‘qituvchilar, ota-onalar va jamoat vakillari uchun katta ahamiyatga ega.

PIRLS dunyoning turli mamlakatlari boshlang‘ich sinf o‘quvchilarining matnni tushunish darajasini taqqoslash, shuningdek, milliy ta’lim tizimlarining o‘qish savodxonligi o‘rtasidagi tafovutlarni aniqlaydi.

Tadqiqotning xalqaro lug‘atiga ko‘ra, “o‘qish savodxonligi” - o‘quvchining matn shaklida berilgan ma‘lumotlarni tushuna olish va ularga reaksiya bera olish ko‘nikmasi, o‘qigan ma‘lumotlaridan hayoti davomida to‘g‘ri foydalana olishi, bilim va imkoniyatlarini oshira olish layoqatidir.

PIRLSda o‘qish savodxonligining asosi matnlar bilan to‘liq ishlash uchun zarur bo‘lgan o‘qish qobiliyatlarini shakllantirish hisoblanadi. Bu o‘quvchi tomonidan kerakli ma’lumotlarni topish va tarqatish, matnning ma’lum qismi bo‘yicha xulosalar chiqarish, asosiy belgilarning harakatlarini sharhlash, matn namunalari va matn tuzilishini dastlabki tahlil qilish bilan tasdiqlash kabilardir.

PIRLS tadqiqotida o‘quvchilarga ikki turdagi matn taqdim etiladi, badiiy matn va axborotlimatn. Shuning uchun o‘quvchilar bilimi quyidagi ikki mezon asosida baholanadi:

1. Adabiy kitobxonlik malakasini egallash maqsadida o‘qish.
2. Axborotni o‘zlashtirish va foydalanish maqsadida o‘qish.

Adabiy kitobxonlik malakasini egallash maqsadidagi o‘qish uchun quyidagi mahorattavsiflari belgilangan:

- matnning muayyan qismlarini ajratib ko‘rsatish va ulardan oddiy xulosalarni ifodalashdafoydalanish;
- voqealar o‘rtasidagi o‘zaro aloqalarni ko‘rsatish;
- matnning umumiy g‘oyasini aniqlash;

- matn tarkibining elementlarini ochib berish;
- qahramonlar xatti-harakatiga izoh berish;
- asar qahramonlarining xatti-harakatlari va his –tuyg‘ularini taqqoslash va qiyoslash;
- matnda qo‘llangan til vositalarining xususiyatlari ustida birlamchi tahlil o‘tkazish;
- matnning asosiy g‘oyasini tushunish, yashiringan axborotlarni aniqlash vaumumlashtirish;
- matndagi savollarga qahramonlarni asosiy tavsiflari, ularning intilishlari va his-tuyg‘ularini izohlash orqali javob berish;
- matndan misollar keltirgan holda, javoblarni asoslash.

Axborotni o‘zlashtirish va foydalanish maqsadidagi o‘qish uchun quyidagi mahorattavsiflari belgilangan:

- matnda keltirilgan dalillarni aniqlash va tasvirlash;
- kerakli axborotni o‘zida mujassamlashtirgan gapni ajratish;
- xulosalarni izohlash uchun olingan axborotdan foydalanish;
- matnda yaqqol taqdim etilgan axborotga muvofiq xulosa chiqarish;
- matnning turli qismlarini tahlil qilish va kerakli axborotni ajratish;
- matnda yashirin berilgan axborotni aniqlash;
- matndagi alohida gaplar o‘rtasidagi mazmuniy aloqalar asosida xulosalarni ifodalash;
- matn mazmunini izohlab berish;
- turli tipdagi matnlardan foydalanish va alohida tavsiflarni belgilash;
- matnning turli qismlaridagi murakkab ma’lumotlarni anglash va asoslash;
- matndagi ma’lumotlarni tushunish uchun aniq va noaniq elementlarni baholash va ahamiyatini tushuntirish;
- matnlar, xaritalar, illuystratsiyalar,diagrammalar va rasmlar kiritilgan materiallar asosida turli matnlardagi ma’lumotlarni umumlashtirish.

PIRLS tadqiqotida belgilangan mahorat tavsiflaridan ko‘rinib turibdiki, o‘quvchilar matnninafaqat tushunishadi, balki matnda berilgan ma‘lumotlarni tushuna olish va ularga o‘ziningshaxsiy munosabatini bildira olish ko‘nikmasi, olgan ma‘lumotlaridan hayoti davomida to‘g‘ri foydalana olishi, bilim va imkoniyatlarini oshira olish layoqati ham shakllanib, rivojlanib boradi.

Mutolaa – bu insonning o‘z ustida ishlashi, faoliyatini ma’lum yo‘nalishga burib yuborishi, ongida ma’lum tuyg‘ularni, e’tiqod va dunyoqarashni hosil qilish, uni o‘ylashga, hayotda qanday yashashga o‘rgatish, fikr yuritish, yozuvchining insonparvarlik, axloqiy, estetik, badiiy, fuqarolik nuqtayi nazarini bilib olish, uning ma’naviy o‘gitlarini ilg‘ab olish va bular asosida o‘z hayot yo‘li dasturini belgilash, yozuvchi bilan munozaraga kirishish, har bir o‘qigan kitobidan yangilik topish, ma’naviy dunyosini boyitishdan iborat ekan, bu borada PIRLS matnlari va uning matnlari uchun tuzilgan topshiriqlari, belgilangan mahorat tavsiflari o‘quvchilarda kitobxonlik madaniyatini shakllantirish va rivojlantirishda yaqindan yordam beradi.

Haqiqatan ham kitobxonlik insonni barkamollikka yo‘llasa, kitob o‘qimaslik johillikka, ma’rifatsizlikka olib kelib, natijada bolada ma’naviy qashshoqlik yuzaga keladi. Maktabda, bolalar bog‘chasida, oilada muhim vazifa, bu kitobxonlikni inson hayotida zaruriyatga aylantirishdan iboratdir. Agar kitobxonlik zaruriyatga aylanmasa, oilada ham, maktabda ham unga mehr-muhabbat, e’tibor kuchaytirilmasa farzandni kitobga bo‘lgan munosabatini o‘zgartirish mumkin emas.

Foydalanilgan adabiyotlar:

1. Vazirlar Mahkamasining 2018-yil 8-dekabr kuni qabul qilgan *“Xalq ta’limi tizimida ta’lim sifatini baholash sohasidagi xalqaro tadqiqotlarni tashkil etish chora-tadbirlari to‘g‘risida”*gi 997-sonli qarori.
2. Баранова В.Ю., Ковалева Г.С., Кузнецова М.И., Цукерман Г.А., Нурминская Н.В.ОСНОВНЫЕ РЕЗУЛЬТАТЫ МЕЖДУНАРОДНОГО ИССЛЕДОВАНИЯ «Изучение качества чтения и понимания текста» - Москва, 2007, 3-4 ст.

Mirqosimova M. O‘quvchilarda adabiy tahlil malakasini shakllantirish va takomillashtirish asoslari. –Toshkent. “Fan” . 2006.

3. Baxranovna M. R. (2022). International System Assessment of Reading Literacy of Primary School Pupils Pirls. International Journal of Culture and Modernity, 14, 35-38.

4,Bakhranovna R. M. (2021). Formation of orthography competences of primary school students through programming pedagogical tools. ACADEMICIA: An InternationalMultidisciplinary Research Journal, 11(7), 63-68.

Ganiyev F.G.
teacher
of the military-academic lyceum
"School of Temurbeks"
Shahrisabz city

ENVIRONMENTAL EDUCATION IN PRIMARY EDUCATION

Annotation: *In the article important points about basic role of teaching environmental education in primary education are highlighted. On the other hand, effective usage of interactive methods in environmental education teaching and learning process.*

Key words: *eco-consciousness, environmental education, holistic approach, practical experiences, daily learning, environmental awareness, Hands-on Learning, Nature-based Activities.*

It is known that environmental education plays a crucial role in shaping the future of our planet. By introducing eco-consciousness to young minds during their formative years, we can instill a sense of responsibility and care for the environment. Elementary education provide an excellent platform to impart environmental knowledge and promote sustainable practices among children. Environmental education has made significant strides in recent years, with an increasing recognition of its importance in fostering environmental awareness and sustainable practices. However, despite these advancements, there are still challenges that need to be addressed in order to fully integrate comprehensive environmental education into primary school curricula.

One positive aspect of the current state of environmental education is the growing acknowledgment of its interdisciplinary nature. Many schools now understand that environmental education should not be limited to a single subject but should be integrated across various disciplines, including science, social studies, and even arts and humanities [1]. This holistic approach allows students to develop a deeper understanding of environmental issues and their interconnectedness with other aspects of society. Additionally, there has been a shift towards more hands-on and experiential learning methods in environmental education. Recognizing the importance of practical experiences, many schools now incorporate field trips, outdoor activities, and project-based learning into their environmental education programs. These approaches not only engage students actively but also provide them with real-world experiences that foster a sense of connection to the environment. It is obvious that it is necessary to strengthen environmental education in primary school as one of the most important components of natural science education. The results of a study conducted in Indonesia showed that most teachers agreed that it was important to integrate environmental education into the learning process of students, especially primary school students. However, this integration still has limitations, e.g., lack of time. On the other hand, despite the fact that the relevance of environmental education has been recognised, there are still very few changes in school practices. The implementation and effectiveness of environmental education depends mainly on the competence of teachers. Spanish researchers analysed the situation of environmental education, teacher competencies and teacher training. The analysis revealed the lack of environmental competencies of future primary school teachers, as well as obvious gaps in teacher training programmes in terms of environmental education. A similar situation has been recorded in previous studies, stating that the training of future teachers in the field of environmental education is insufficient. Various approaches are used for the improvement of environmental literacy. Saribas et al. analysed the impact of special environmental courses on improving the environmental literacy of university students[2]. The results showed that the participants' attitude towards the environment, awareness of the use of the environment and beliefs about their effectiveness increased significantly, although, at the end of the course, their environmental knowledge and concern for the environment did not change significantly. Turkoglu study showed that pre-service teachers had more theoretical knowledge than in-service teachers and in-service teachers had more practical knowledge than pre-service teachers. Thus, an important question remains, how to integrate environmental education into the daily learning of students. Researchers claim that there is a need for more specific content of environmental education in teacher training study programmes.

The importance of natural science knowledge in environmental education is emphasized by Kuckienė and Makarskaitė-Petkevičienė, Yeşilyurt et al.[3]. Recent Turkish researchers presented an action study, confirming that environmental knowledge provision improves primary school students' environmental awareness. Fokides and Kefalinou (2020) revealed measures, i.e., the impact of spherical videos on primary school students' environmental education, teaching them about endangered species. Nowadays, utilizing different interactive methods and approaches are demanded in every sphere of education. So, now we will analyze approaches to Environmental Education in Elementary education Schools[4].

➢ Hands-on Learning through Nature-based Activities

Engaging students in outdoor activities like nature walks, gardening, and field trips to parks or nature reserves allows them to connect with nature firsthand. These experiences provide practical knowledge and instill a sense of stewardship for the environment.

➢ Incorporating Environmental Themes Across Subjects

Environmental education need not be confined to a specific subject; it can be integrated across the curriculum. For example, teachers can explore environmental themes in science classes, discuss environmental issues in social studies, or even encourage eco-themed creative writing exercises in language arts.

➢ Guest Speakers and Collaborations

Bringing in guest speakers, such as local environmentalists or experts, can expose students to real-world environmental challenges and success stories. Collaborations with environmental organizations can also enrich the learning experience and inspire students to take action.

Benefits of Nurturing Eco-Consciousness in Elementary School Students:

a. Fostering a Sense of Responsibility and Empowerment- when children learn that their actions have an impact on the environment, they begin to understand their role in preserving it. Feeling empowered to make a positive difference cultivates a sense of responsibility that extends beyond the classroom.

b. Building Sustainable Habits for the Future- by incorporating eco-conscious behaviors like waste reduction, energy conservation, and water-saving practices into daily routines, students develop sustainable habits that can last a lifetime.

c. Creating Future Environmental Leaders- nurturing eco-consciousness from a young age can pave the way for the emergence of future environmental leaders. These students may pursue careers in environmental science, conservation, or advocacy, contributing significantly to the planet's well-being.

To sum up all given facts above it should be noted that in the general programme of natural sciences (grades 1-8) students are encouraged to recognize natural science problems and solve them, guided by the principles of sustainable development, healthy lifestyle, responsibly applying the acquired knowledge and skills in various life situations. The emphasis on natural science literacy is evident in the programme, as this would help the student in making personal decisions, the validity of solutions to local and global natural science problems; to understand the changes in nature caused by human activity and to take personal responsibility for preserving the environment, protecting one's own and other people's health. However, when describing achievements, it is more viewed from the perspective of a person but not from the position of nature, emphasizing the benefits provided to a person by nature. For example, it explains the importance of preservation and care of natural resources for people's quality of life, the usefulness of recycling secondary raw materials. It gives examples of how it contributes and could contribute to the preservation of the environment, and conservation of resources. And this is confusing because knowledge does not mean understanding and living according to environmental principles. Thus, the pursuit of one of the most important educational priorities of the 21st century – educational renewal – encourages analysing and evaluating the possibilities of environmental education in primary school, on the other hand, the integration of environmental issues into the content of university study programmes. The aim of the study was to analyse the position of students, future teachers of preschool and primary education, in terms of the significance, problems and vision of practical implementation of environmental education.

REFERENCES:

1. Uralovich, K. S., Toshmamatovich, T. U., Kubayevich, K. F., Sapaev, I. B., Saylaubaevna, S. S., Beknazarova, Z. F., & Khurramov, A. (2023). A primary factor in sustainable development and environmental sustainability is environmental education. Caspian Journal of Environmental Sciences, 21(4), 965-975.
2. Saribas, D., Doganca Kucuk, Z., & Ertepinar, H. (2017). Implementation of an environmental education course to improve pre-service elementary teachers' environmental literacy and self-efficacy beliefs. International Research in Geographical and Environmental Education, 26(4), 311-326. https://doi.org/10.1080/10382046.2016.1262512
3. Kuckienė, A., & Makarskaitė-Petkevičienė, R. (2006). Aplinkosaugos elementai 1-os klasės ugdymo turinį įgyvendinančiuose vadovėliuose [Elements of environmental protection in textbooks implementing the 1st grade educational content]. Gamtamokslinis ugdymas / Natural Science Education, 3(2), 37-44. https://www.doi.org/10.48127/gu-nse/06.3.37a
4. https://medium.com/@mansurali2343/education-in-elementary-schools-nurturing-eco-consciousness-from-a-young-age-820696a46908?ysclid=m1yinlirrv142064921

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Garifullina A.R.
Professor
of the Department of Philology
Turan International University
Uzbekistan, Namangan

METAPHORS AND EPITHETS: HOW THEY SHAPE THE WORLD OF RUSSIAN FAIRY TALES

Abstract: *This article explores the role of linguistic means in creating a magical atmosphere and figurative system of folk art. It analyses how metaphors and epithets not only decorate the text of fairy tales, but also deepen the semantic relations between characters, objects and events. Using examples of classic Russian fairy tales, it is shown how these linguistic elements help to convey emotional mood, reflect cultural traditions and worldview of the Russian people.*

Keywords: *epithets, metaphors, fairy tales, Russian folk tales, means of expression, linguistic means.*

Russian fairy tales are a unique phenomenon in the world culture, in which traditions, mythology and national identity are intertwined. These works of art are not only interesting in their plot and colour, but are also saturated with vivid linguistic means that give them special expressiveness and depth. Among such means are metaphors and epithets, which play a key role in the formation of the fairy-tale world.

They not only make the text more expressive, but also deepen the understanding of characters, their motivations and relationships, creating a multi-layered structure in which every word has a meaning.

Metaphors, as a means of transferring meaning, open up a wide range of sensory perception and association. They allow readers and listeners to see familiar things from a new angle, creating unique images that are remembered and become part of the cultural landscape. It is not without reason that they are sometimes referred to as hidden comparisons.

Epithets, in turn, are designed to enhance the characterisation of characters and setting, setting the tone and atmosphere in which the action unfolds. The combined use of these linguistic means creates the magic of the text, allowing the reader to dive into a world where the laws of reality are replaced by magic and fantasy.

Consider the well-known Russian fairy tale "The Snow Maiden": Here it is said about the image of the Snow Maiden: "a girl as white as snow", which emphasises her purity and innocence. In this case the metaphor helps us to see the essence of the character.

The Russian folk tale "The Swan-Geese" also uses many metaphors. For example, "geese like dreams", which emphasises that geese are like and symbol of the dream of freedom and safety.

Alexander Sergeyevich Pushkin also often used metaphor in his fairy tales. Here are vivid examples of his figurative comparisons.

"The Tale of Tsar Saltan":

* "abyss of waters" = deep water.
* "reveries of the night" = night dreams.
* "poppies of churches" = church domes.

"The Tale of the Dead Princess and the Seven Rich Men":

* "quietly blossoming" = imperceptibly becoming more beautiful *
* "a year passed like an empty dream" = a year passed quickly and aimlessly.

"The Tale of the Donkey and his Worker Balda":

* "everything dances at him" = any job works out.

There are also so-called zoometaphors, which use animal images to describe human qualities. For example, the image of a pig as a metaphor for greed and low instincts. Or the image of a fox, that is, a cunning person.

Undoubtedly, each fairy tale is saturated with bright and memorable epithets that emphasise the expressiveness of Russian speech. Some of them have already become not only constant, but also used as phraseological phrases.

This is the long familiar "good young man" - denotes an exclamation, an encouraging challenge in Russian folk tales.

"Krasnaya Devitsa" - a beautiful girl with her "golden braid".

"Molodilnye apples" and "living water", capable of returning youth, from A.N. Afanasyev's "The Tale of the Molodets-Udalets, Molodilnye apples and living water".

Epithets are widely used in fairy tales to create a magical world full of adventures and dangers: "Black Forest", "swampy marshes", "wilderness".

In conclusion, metaphors and epithets in Russian fairy tales have not only expressive but also significant cultural function. They help not only to enrich the content, but also convey the spirit of the time in which they were created. Russian folk tales, containing a wealth of linguistic means, help to understand the worldview of the Slavic people, their mythology and philosophy, in which each character is endowed with a unique role.

References:

1. Bogatyrev A.A. Elements of implicit meaning formation in an art text. Tver: Tver State University, 1998. – 101.
2. Dahl V.I. Explanatory Dictionary of the Living Great Russian Language: in 4 vol. M., Drofa, 2011. - VOL.1, VOL.2, VOL.4
3. Dmitrieva I.A. Metaphor as a way of cognition: logical and gnoseological status: Avtoref. dis. . kand. philos. nauk. Yakutsk, 2000. – 16.
4. Gak V.G. Metaphor: universal and specific // Metaphor in language and text / Ed. by V.G. Gak et al. V.G. Gak et al. Moscow: Nauka, 1988. -. 11-26.

5. Kryukova N.F. Metaphor as a means of understanding the meaningfulness of a text: Author's thesis. Cand. of philological sciences.-M., 1988.- 19 p.

Gaybullayeva M.F. PhD
Senior Lecturer
Department of Botany, Biotechnology and ecology
Fergana State University
ORCID ID: 0000-0001-6329-7137

ENVIRONMENTAL IMPACT OF ENVIRONMENTAL PROBLEMS.

Annotation: *this article examined the environmental problems and the measures that are being carried out in a wide range to eliminate them and the causes and consequences of the greenhouse effect, ozone hole, drinking water shortage, desertification processes and their consequences. Environmental problems threaten the lives of all human beings and also undermine the living conditions of people. In order to eliminate these consequences, to find a solution to the problem, our opinion and the necessary recommendations are covered.*
Keywords: *desertification problem, drought, environmental insecurity, environmental problem, socio-economic backwardness of states and the problem of poverty, underground resources, water, forests, Environmental Protection.*

INTRODUCTION

The interaction of Man and nature is so close that each, even the smallest, movement of it is reflected in the state of the environment that surrounds it. Unfortunately, recently people began to more actively interfere in the measured life of the surrounding nature. In this regard, humanity is faced with the environmental problems of our time. They demand an immediate solution. Their scale is so large that it affects not one country, but the whole world.

In the decision of the president of the Republic of Uzbekistan on measures to effectively organize the activities of the Ministry of Ecology, Environmental Protection and climate change, PQ-171 dated 31.05.2023, the decision of the president of the Republic of Uzbekistan on measures for the effective organization of the activities of the Ministry of Ecology, Environmental Protection and climate change, including the implementation of, important tasks were set out to increase their productivity and ensure their rational use.

PURPOSE OF WORK

The reasons for the emergence and aggravation of environmental problems consist in the fact that the number of World residents has grown several times in a short time, the rapid development of industry and other production sectors, the violation of the balance in the natural environment under the influence of human economic activity, the formation of international economic ties in the world economy as a single global system, the Among the main global problems are usually included: the problem of maintaining peace and ensuring world security, environmental problems, socio-economic backwardness of developing countries and the problem of poverty, demographic problem (high-rate growth of the population of developing countries and demographic crisis in developed countries), food problem, energy problem, raw material resources problem.

RESULTS AND THEIR OPPOSITION

As a result of human economic activity, there are increasing impacts on the environment to varying degrees. Such negative influences are the cause of environmental problems. For example, part of the waste (solid, gaseous and liquid) accumulates over time, affecting the atmosphere, another-water, earth, flora and fauna. It is now fully confirmed that their gradual accumulation over the years will cause various problems, sometimes extremely dangerous for human life.

Human economic activity is causing major environmental problems not only in Uzbekistan, but also in the world. They are: greenhouse effect, ozone hole, shortage of drinking water, desertification.

"Greenhouse effect". The concentration and evaporation of heat from the sun at ground level is called the greenhouse effect. That is, light from the sun is also returned to the universe by the Earth in turn through the atmosphere. Some of these rays are absorbed into various gases released from humans instead of escaping into the universe. As a result of its failure to escape back into the universe, the earth heats up beyond normal and a greenhouse layer is formed that affects the climate. As a result, there is little difference between the highest and lowest temperature during the day. That is, people and nature remain exposed to warm and dim air at night, as well as during the day. Such daily heat, on the other hand, causes a sharp warming phenomenon.

Since the 50s of the 20th century around the world, in connection with a sharp increase in energy production, large amounts of waste began to be released into the atmosphere. The amount of emissions into the atmosphere was 5 billion tons per year. This amount began to increase year after year. This caused the average temperature on Earth to increase from 14.5 c in 1890 to 15.2 C in 1980, which is 0.7 degrees Celsius. This indicator has the property of increasing every year. This is causing the" greenhouse effect " to occur. Scientists believe that if the current rate of increase in the gases that give rise to the" greenhouse effect " is maintained, then every 10 years, as a result of an increase in temperature by 0.2-0.5 degrees, the North shift of the tundra, forest-tundra, Taiga, mixed and broad-leaved forests, forest-steppe and steppe nature zones is expected in Eurasia. In addition, in Europe and Africa, the water flow of rivers increases. According to the prediction of American Scientists, by 2100, the world ocean level can rise by 1.4-2.2 meters. This causes most of the states located on the ocean coasts to be submerged.

Ozone "hole". Since the 50s of the 20th century, an increase in the amount of freon gases (chlorine, fluorine, carbon) began to be observed in the air. These gases began to erode the ozone layer at an altitude of 25 kilometers. It is known that the ozone layer traps harmful ultraviolet rays coming from The Sun. The erosion of the ozone layer resulted in the formation of an ozone “hole”. The penetration of ultraviolet rays from this hole to the surface of the Earth has been found to drastically reduce the yield of grain crops, causing people to experience skin cancer. The world community has taken and is taking several measures while understanding the importance of maintaining the ozone layer. The Montreal act of 1987 compiled a list of the most dangerous chlorphtoruglerodes, and manufacturers of these substances took it upon themselves to reduce the volume of production. The act was amended in June 1990. According to it, it was envisaged to double the production of freon in 1995, to be completely discontinued in 2000. But even if things in this regard are all heartfelt, the first positive result, the effect of the work done, is visible only by going to 2050. Because millions of tons of chlorphtoruglerodes released into the atmosphere will have time to deliver considerable damage until they are exhausted.

Chlorine in the atmosphere acts as a specific catalyst in ozone degradation, and despite the reactions, its amount is practically not reduced. A single chlorine atom can break down 100,000 ozone molecules before it is exhausted or it can fall back into the non-ozone lower layers of the atmosphere.

According to data, in 1998, the volume of the hole in the ozone layer at the top of the North Pole reached a record level – 26 million. kv. km.ga reached. This means an area 3 times larger than the entire Australian continent.

Drinking water shortage. Currently, the demand and need for water is growing more and more than ever. As a result, there is a shortage of water around the world. This issue has not bypassed the Central Asian region either. Experts estimate that water resources are expected to decrease by up to 5% in the Syrdarya Basin and up to 15% in the Amudarya basin by 2050. On the other hand, due to population growth, Uzbekistan has a water demand of 7 billion by 2030. it can reach cubic meters, and by 2050 it can double. The use of Water Resources in our country is being radically reformed. According to the data, in 2017 - 2023, a total of 1.2 million tons. water-saving technologies were introduced on hectares, about 31% of agricultural arable land. This includes technologies such as drip, raining, discrete irrigation, flexible pipe, film bed irrigation, with 630,000 hectares of land laser leveled in these years.

Concrete measures are being implemented in order to eliminate the existing shortcomings in the introduction of water-saving technologies, mitigate the negative effects of water shortages, as well as more efficiently use water resources in the cultivation of agricultural crops. Today, serious attention is paid to the introduction of digital technologies into the water industry as well. To this end, 5,479” Smart Water “devices were installed, 1,446 online control devices were installed at pumping stations, as well as 5,055” Dayver " devices that control the degree of mineralization online to reclamation observation wells, the management process of 45 large water farm facilities was automated. It is undoubtedly gratifying that Uzbekistan is the first in Central Asia for the introduction of water-saving technologies, the second among the CIS countries, the fourth in Asia and the 13th in the world. This is the result of the effective implementation of measures aimed at further reforming the system's activities.

Currently, in order to further accelerate the reforms in this direction, climate change is expected to make some areas drier and some more humid. It has measured and assessed water shortages occurring in 167 countries as of the 2030s and 2040s. In Chile, Estonia, Namibia and Botswana, it has been found that water tension can increase particularly significantly by 2040. This means that businesses, farms and communities in these countries may be exposed to more waterlessness in the future than they are today. This problem also applies to other countries. Water is an important part of the decades-long conflict between Palestine and Israel. The dependence of the population of Saudi Arabia on grain imports has increased. The U.S. National Intelligence Council wrote that water problems would put the major states of North Africa and the Middle East at risk of instability and state failures, and distract them from foreign policy relations with the United States.

Although Africa and the Middle East are not Indigenous, global powers such as the United States, China, and India also face water-related risks. In all three countries, the situation is projected to remain approximately constant until 2040. However, in individual areas of each, such as the southwestern United States and Ningxia province in China, Water Scarcity can be observed to increase by 40-70 percent.

Desertification. In order to implement the UN Convention on the fight against desertification in countries experiencing desertification, as well as to promote public awareness of desertification and the problem of drought, the UN General Assembly declared 17 June 1994 World desertification and drought day. This day reminds us that desertification problems can be effectively solved, and that public participation and all-scale cooperation in achieving this goal are considered an important tool.

For example, as a result of a catastrophic drought in the coastal region of Sub-Saharan Kabir in 1968-1974, more than 60% of Lake Chad's may-grain, Neger, Senegal rivers dried up, the lack of moisture resulted in a sharp decrease in pasture productivity, with the desert invading Savannah for 100-150 kilometers. As a result of human misuse of land, large areas of fertile land are becoming desolate.

Currently, under the influence of human activity, a desert was formed on an area of 9 million square kilometers. Approximately 21 million acres of land is being completely degraded and turned into a desert every year. Every year, 6 million hectares of irrigated land Become Desert. In one of the methods used by China against desertification, a plant called Halochlon ammodendron, known as the "Desert Guardian", is planted on the highway in the border area between northwest China territory and the Xinjiang Uyghur Autonomous Republic. This plant is considered a wind protector and sand strengthening plant. Through this experiment, China has preserved more than 6.7 million hectares of land from desertification until 2021. This information was published from the eve of June 2021-17, the day of the fight against desertification and drought. Also according to data before 2021, China saved about 11 million hectares of land from desertification from 2016 to 2020. These achievements are the result of financial support from the Central Government, years of research by scientists, international cooperation, etc. Now the method that Israel developed in the experiment against desertification is the drip irrigation method. In this method, plants are not given water to all parts of the entire field by drip irrigation-instead only water is injected into each plant root by drip. The main purpose of this is to save water. That is, in the past, water was included in all parts of the cultivated area (both in the regions where the plant grew and did not grow). Since this method is carried out through special rubber pipes, these pipes are placed between the rows of crops and only water is supplied to the plants themselves. And the water spent on the part of the area where the pipes are located is saved.

Below we will share some of them. "When desertification occurs, people starve and leave their land and are forced to find other places to live," says U.S. soil scientist Jeff Herrick. The U.S. Representative to the Agricultural Research Service and the United Nations Convention on the fight against desertification (UNCCD), however, said "We all provide people with the information they need to better manage the land by helping them stay on their land."he said. Both of the above scientists are concerned that the population is abandoning its habitat due to desertification. Indeed , it is necessary to combat desertification by not letting the population living in the areas where desertification is taking place leave for other areas, but by engaging the same population itself as a labor force.

CONCLUSION

Compared to the last century, the way of human existence has changed to such an extent that it is clear to all that a number of negative situations are also occurring, such as global warming, unprecedented depletion of marine and terrestrial ecosystems, desertification, drought in different regions of the Earth's surface, floods, which are not yet completely observed in human civilization. Human intervention in nature has had time to reach an unthinkable level.

A number of recommendations and their results on the elimination of environmental problems are important to discuss scientifically and legally, and environmental legal responsibility is manifested in violation of the established requirements and norms of nature protection and environmental law, excessive use of natural resources, violation of conservation regulations, pollution of the environment, pollution of nature, illegal and unholy use of Natural Resources,

LIST OF BIBLIOGRAPHY:

1. Gaybullaeva, M. F. (2022). Influence of soil and climatic conditions of the experiment area in Fergana region on the weight of pea pods. Asian Journal of Multidimensional Research, 11(6), 89-92.
2. Abdullayeva, M., & Gaybullayeva, M. (2022). No ‘xatni fotosintez jadalligi va maxsuldorligiga ekologik omillar ta’siri. ijodkor o'qituvchi, 2(22), 341-346.
3. Abdullayeva, M. T. (2023). Manzarali o ‘simliklarning inson hayotidagi ahamiyati. world of science, 6(5), 16-20.

4. To’lanovna, A. M., & Djurayevna, A. G. (2022). Ekologik omillarning inson salomatligiga ta’siri.
5. Madina, G. (2023). OCH TUSLI ADIR BO ‘Z TUPROQLARI GUMUSINI YAXSHILASHDA DON–DUKKAKLI O‘SIMLIKLARDAN NO‘XATNI ROLI. PROSPECTS OF DEVELOPMENT OF SCIENCE AND EDUCATION, 1(14), 239-242.
6. Gaybullayeva, M. (2023). DON DUKKAKLI EKINLARDAN NO’XATNI XALQ XO’JALIGIDAGI AHAMIYATI. Talqin va tadqiqotlar, 1(20).
7. Gaybullayeva, M. (2023). DON DUKKAKLI EKINLARDAN NO’XATNI XALQ XO’JALIGIDAGI AHAMIYATI. Talqin va tadqiqotlar, 1(20).
8. Мадина, Ғ. (2023). УРУҒ ЭКИШ МУДДАТЛАРИ ВА МИНЕРАЛ ЎҒИТЛАР БИЛАН ОЗИҚЛАНТИРИШ МЕЪЁРЛАРИНИ НЎХАТ НАВЛАРИНИНГ РИВОЖЛАНИШГА ТАЪСИРИ. INNOVATION IN THE MODERN EDUCATION SYSTEM, 3(33), 89-95.
9. Гайбуллаева, М. Ф. (2023). УРУҒ ЭКИШ МУДДАТЛАРИ ВА МИНЕРАЛ ЎҒИТЛАР БИЛАН ОЗИҚЛАНТИРИШ МЕЪЁРЛАРИНИ НЎХАТ НАВЛАРИНИНГ БАРГ САТҲИНИНГ ШАКЛЛАНИШИГА ТАЪСИРИ. O'ZBEKISTONDA FANLARARO INNOVATSIYALAR VA ILMIY TADQIQOTLAR JURNALI, 2(24), 86-95.
10. https://www.israeltoday.co.il/read/combating-desertification-and-drought-the-israeli.
11. https://nocamels.com/2022/06/drought-desertification-israel-innovation-agriculture.

Dr. Ghazanfer Ali
Teaching assistant
candidate of medical sciences
Department of Pathophysiology
Samarkand State Medical University

ALTERED CALLOSAL MORPHOLOGY IN POST-STROKE COGNITIVE IMPAIRMENT

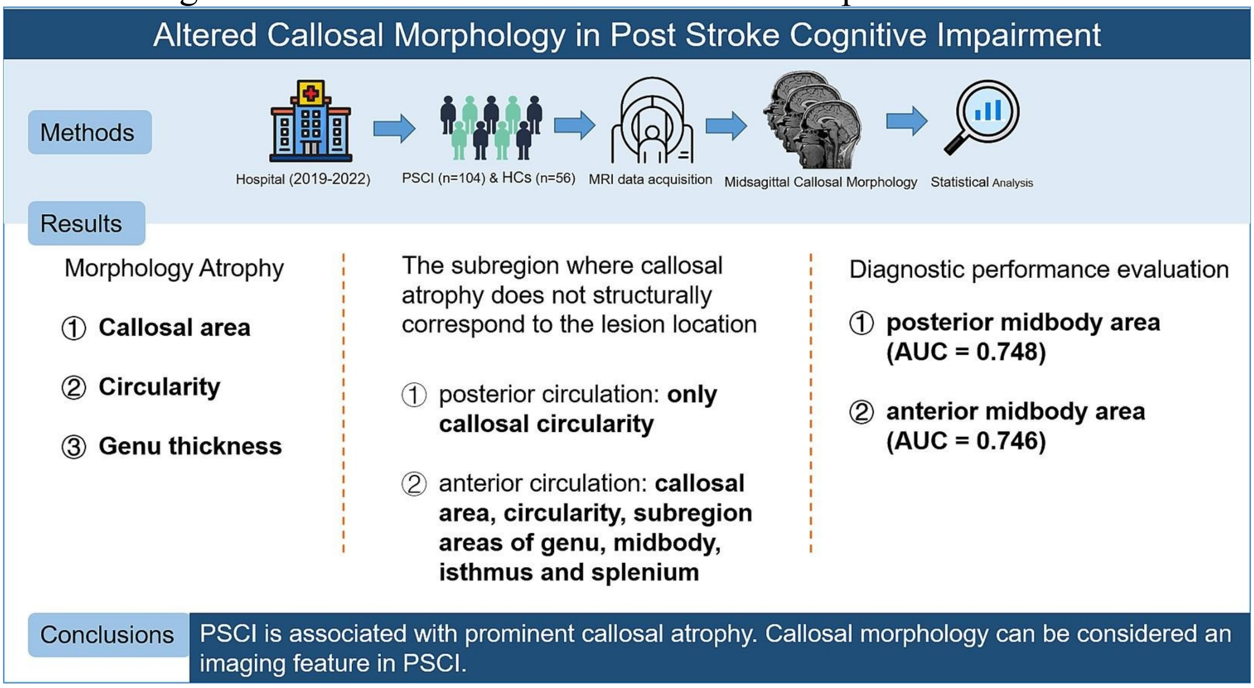
Abstract: *The second most common cause of death and cognitive decline is stroke. Although the underlying brain mechanisms of post-stroke cognitive impairment (PSCI), one of the most prevalent sequelae among stroke survivors, are still mostly unknown. Changes in the morphology of the corpus callosum (CC) may overlap with the spectrum of PSCI, because CC is essential for both hemisphere segregation and interhemispheric integration. The purpose of this study was to examine the morphological alterations in the CC and their diagnostic utility in patients with PSCI. Neurobehavioral, clinical, and structural MRI data were gathered from 4 demographically matched healthy controls and 50 PSCI patients. PSCI patients showed notable decreases in genu thickness, circularity, and CC area; these alterations were highly correlated with overall cognitive performance. Subgroup analysis showed that lesions in the posterior circulation considerably reduced CC circularity, whereas lesions in the anterior circulation significantly reduced both CC area and circularity. With corresponding area under the curve values of 0.748 and 0.746, receiver operating characteristic evaluations revealed that the CC's midbody regions had a strong diagnostic value. According to additional validation investigations, the transcallosal fibers in these CC subregions are associated with the frontoparietal system, dorsal attention, and premotor functions. Accordingly, CC morphology could be used as an imaging marker for PSCI diagnosis and prognosis.*

Introduction

Globally, stroke ranks as the second most common cause of death and cognitive decline [1]. The prevalence of post-stroke cognitive impairment (PSCI), which is defined as cognitive dysfunction after a stroke, ranges from 20% to 80% [1,4]. The executive dysfunction, attention disorders, memory issues, language challenges, and visuospatial abnormalities are examples of common cognitive dysfunctions [6]. These disabilities have a major negative influence on patients' quality of life and place a heavy financial strain on their families. The neuroanatomical mechanisms underpinning PSCI are still not well understood, despite these worries. An essential part of interhemispheric integration and segregation is the corpus callosum (CC), the biggest bundle of commissural fibers in the brain that connects the left and right hemispheres. CC atrophy has been shown to occur in Alzheimer's disease (AD) and moderate cognitive impairment, with the degree of atrophy indicating subsequent cognitive decline [4,5,6,7]. Similar to this, stroke frequently results in brain atrophy, with ventricular enlargement and CC atrophy being the most common symptoms [1,5,8]. The main method used to investigate post-stroke alterations in the CC is diffusion MRI, which offers data on transcallosal fibers and white matter integrity. These investigations have examined the theoretical theory of post-stroke homotopic diaschisis. These results provide fresh information about the deterioration of post-stroke CC tractography, but straightforward and useful clinical indicators for PSCI diagnosis and prediction are still lacking.

An easy method for evaluating CC morphology is to use anatomical MRI. Prior research has produced quick and reliable methods to divide the CC and measure its size, circularity, length, and thickness—all of which have been suggested as p It is still unclear how PSCI-related changes in CC morphology, especially those based on distinct anatomical subdivisions, have occurred. A biomarker for tracking cognitive status in AD may be CC morphology, according to earlier research (Adamson et al., 2018), there is also evidence that the microstructural integrity of the CC is disrupted by cerebral small vessel disease.

Investigating structural alterations in the CC in PSCI patients and their relationship to cognitive dysfunction is the goal of this study. Our specific objectives were to: (1) determine the degree of CC atrophy and its relationship to cognitive function in PSCI patients; (2) investigate the influence of stroke lesion site on CC atrophy; and (3) assess the diagnostic utility of callosalossible biomarkers for AD (Ardekani and Alzheimer, 2022; Ardekani et al., 2014). Our specific objectives were to: (1) determine the degree of CC atrophy and its relationship to cognitive function in patients with PSCI; (2) investigate the influence of stroke lesion site on CC atrophy; and (3) assess the diagnostic utility of alterations in callosal morphology. We predicted that substantial CC atrophy linked to cognitive deterioration would be seen in PSCI patients.



Methods and materials

50 PSCI patients were admitted to Pakistan Hospital between April 2019 and December 2022. 4 community members who were demographically matched as health controls (HCs) were gathered during the same period. The Ethical Medicine Society at Pakistan Hospital approved this study, and informed consent forms were signed by each participant.

Discussion

This study specifically examined the impact of PSCI on the CC's morphology. We computed morphological parameters, including the area, thickness, and circularity of the midsagittal CC, using anatomical MRI and discovered that individuals with PSCI had substantial regional atrophy of the CC. Additional investigation based on the location of stroke lesions (anterior versus posterior circulation) showed that more CC subregions are affected by strokes in the anterior circulation.

In conclusion

The findings of our investigation show that the CC in PSCI patients exhibits morphological alterations, such as a reduction in thickness at the genu and a decrease in area and circularity. The PSCI patients' global cognition and these alterations are significantly positively correlated. This implies that one of the imaging characteristics of PSCI is changes in CC morphology, which makes it easier to identify people who are at a high risk of developing vascular dementia.

References (42)

1.B.A. Ardekani et al.A new approach to symmetric registration of longitudinal structural MRI of the human brain.J. Neurosci(2022)

2.P. Dubey et al.Quantitative microstructural deficits in chronic phase of stroke with small volume infarcts: a diffusion tensor 3-D tractographic analysis

3.Magn. Reson. Imaging (2016).Topography of the human corpus callosum revisited—comprehensive fiber tractography using diffusion tensor magnetic resonance imaging.Neuroimage. (2006)

4. ДА Вохидова, ДД Усманова, ДН Ходжиметов.Роль HIF-1α в развитие патогенеза ишемического повреждения головного мозга. Проблемы биологии и медицины, 2020.

5. A Muratova, AA Khozhimetov, AM Khaidarov.Analysis of the peculiarities of the dental status and hemostasis indicators in patients with chronic cerebral ischemia.Problems of Biology and Medicine 118

6.C. Iadecola et al.Vascular cognitive impairment and dementia: JACC scientific expert panel.J. Am. College Cardiol.(2019)

7.Voxidova Z.T.Complexity of alzheimer's disease: introduction and its pathophysiology. J. Econom socium (2024

8.R. Katzman et al. A Chinese version of the mini-mental state examination; impact of illiteracy in a Shanghai dementia survey.J. Clin. Epidemiol.(1988)

9.S.H. Lee et al.Application of fused lasso logistic regression to the study of corpus callosum thickness in early Alzheimer's disease.J. Neurosci. Methods (2014).

10.S. Shrestha et al.Relationship of size of corpus callosum with white matter changes in elderly population; a retrospective analytical cross-sectional study.Ann. Med. Surg.(2022)

11.J.C. Stewart et al.Role of corpus callosum integrity in arm function differs based on motor severity after stroke.NeuroImage: Clinical (2017).

12.J. Van Schependom et al.Callosal circularity as an early marker for Alzheimer's disease.NeuroImage: Clinical (2018).

Dr. Ghazanfer Ali
Teaching assistant
candidate of medical sciences
Department of Pathophysiology
Samarkand State Medical University

ADVANCES AND CHALLENGES IN THE TREATMENT OF LUNG CANCER

Abstract:*One of the most common types of malignant tumors is lung cancer. NSCLC is the most common type of lung cancer and is distinguished by a high rate of morbidity and mortality. The current treatment arsenal includes radiotherapy, chemotherapy, targeted therapy, and surgical resection. With a low 5-year survival rate, the outlook is still dreadfully bad in spite of these possibilities. Thus, it is imperative to work toward a paradigm change in therapeutic approaches. Modern methods for treating lung cancer have been made possible by the development of advanced biotechnologies and interdisciplinary integration in recent years. For lung cancer, this article examines the most recent advancements in immunotherapy, photothermal treatment, molecular targeted treatment, and nanodrug delivery.*

Keywords: *Lung cancer**,** nano drug delivery system**,** molecular targeted treatment system**,** photothermal treatment strategy**,** immunotherapy.*

The introduction

Lung cancer has a high rate of morbidity and mortality, making it one of the most prevalent diseases worldwide [1]. Lung cancer is mainly classified as either small cell lung cancer (SCLC) or non-small cell lung cancer (NSCLC) based on the histology of cancer cells. Between 85 and 90 percent of all forms of lung cancer are NSCLC, making it the most prevalent subtype. Large-cell lung cancer, lung squamous carcinoma, and lung adenocarcinoma (LUAD) are among the several histological subtypes that make up non-small cell lung cancer (NSCLC) [2]. For stage I or II NSCLC, adjuvant therapy is used in conjunction with surgical tumor excision. By contrast, chemotherapy or radiation therapy are used when the disease reaches stage III or IV [3], [4]. Nevertheless, the effectiveness of conventional chemotherapeutic medications in treating cancer is restricted by their common drawbacks, which include low absorption, non-specific targeting, and the emergence of drug resistance [5].

Owing to its unique characteristics, the nanodrug delivery system encapsulates therapeutic agents to stop them from degrading. This enhances anticancer efficacy by precisely delivering anticancer medications to tumor sites and minimizing non-specific damage to the target tissue [6, 7, 8, 9]. With the following advantages, drug delivery by nanocarriers is a revolutionary approach to treating lung cancer. These consist of improved drug bioavailability in the body, improved safety via site-specific anticancer drug delivery, and the ability to release pharmaceuticals over time with regulated release during targeted drug delivery, all of which improve lung therapeutic effects.

As a promising treatment method to investigate in the field of lung cancer therapy, the nanomedicine delivery system offers an alternative to the traditional chemotherapy treatment with several adverse effects [10].

Molecular targeted therapy has emerged as a key NSCLC treatment approach [1,2]. Many receptor tyrosine kinases, including anaplastic lymphoma kinase (ALK), hepatocyte growth factor receptor (c-Met), and epidermal growth factor receptor (EGFR), are essential targets for molecular targeted therapy because they are implicated in cell development and survival [4], [5]. Tyrosine kinase inhibitors, such as gefitinib and erlotinib, have been designed to target EGFR mutations, which are the medicinal target. Additionally, studies on inhibitors that target different targets are also ongoing [8].

Even though there are numerous therapies for lung cancer, there are still many obstacles to overcome. As a result, new and efficient lung cancer therapy methods must be created.

Delivery systems for nanomedicine in the treatment of lung cancer

The following properties of nanoparticle structure include regulated drug release, improved stability of anticancer medications, and simplicity of surface modification [1]. Through the use of their special characteristics, nanoparticles transport nucleic acids and anti-cancer medications to tumor tissues, thereby minimizing side effects and enhancing treatment effectiveness (Fig. 1). A thorough analysis of lung cancer treatment using nano-drug delivery systems was given in this section, with an emphasis on those mediated by several kinds of nanoparticles, including liposomes, exosomes, polymer nanoparticles, magnetic nanoparticles, lipid nanoparticles, and polylactic-co-glycolic acid.

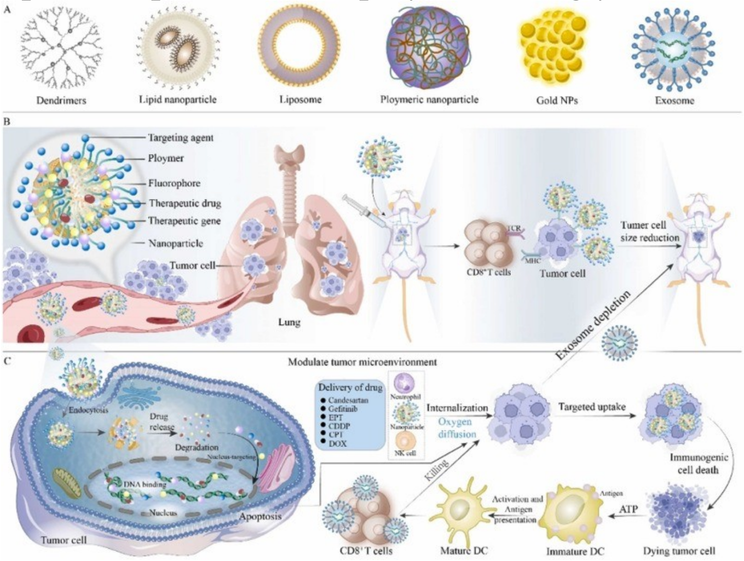


Figure 1: Schematic illustration of medications used to treat lung cancer that are administered by nanotechnology. In order for NPs to more precisely target and eradicate tumor cells, this procedure required altering certain ligands. The advantage of these nanoparticle-based drug delivery systems over conventional therapeutic pharmaceuticals was their ability to deliver medications to tumor tissues more efficiently and specifically, which reduced adverse effects.

Materials and methods Immunization

Immunotherapy provided a novel strategy for fighting lung cancer. In order to create or improve efficient immune responses against tumors, it encompassed a range of techniques, including cellular immunotherapies, cancer vaccines, and immune checkpoint inhibitors (ICIs) (Fig. 4). Immunotherapy has been demonstrated to not only increase patient survival but also enhance their quality of life, and it was notably linked to less adverse effects than chemotherapy [7], [8]. Immunotherapy offered a promising approach to the treatment of lung cancer and was both safe and effective [9],[11].

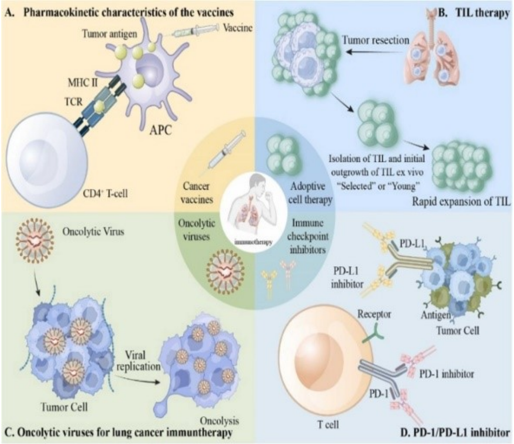


Figure 4. The several immunotherapy approaches for lung cancer were shown in a schematic graphic. Among these tactics were: A: The use of vaccinations tailored to a particular tumor in immunotherapy to prevent lung cancer. B: The use of TIL treatment. C: The use of oncolytic viruses in lung cancer immunotherapy. D: The application of immune checkpoint inhibitors in lung cancer immunotherapy.

Discussion and results

Anti-tumor immune responses may be strengthened by therapeutic cancer vaccines that target particular immune system stimulation [3]. Mutated neoantigens from cancer cells were prime targets for T cell-mediated immunity and showed a great potential to elicit anti-tumor immune responses due to their tumor specificity. These factors were examined for the creation of customized therapeutic cancer vaccines [3], [4]. Animal xenograft models of human lung cancer may show reduced tumor growth when paclitaxel and the oncolytic adenovirus are enclosed in extracellular vesicles [5]. By inducing cytotoxicity linked to immune cell infiltration, a modified oncolytic myxoma virus in conjunction with low-dose cisplatin may considerably increase the survival rate of patients with lung cancer [6].

In conclusion

The prevalence and fatality rate of lung cancer are still frighteningly high worldwide, despite advances in medicine. It is true that early detection and screening can lower the death rate from lung cancer. Over the past few decades, we have gained a better understanding of the molecular biology and clinical characteristics of lung cancer patients, but a really successful treatment is still elusive. This is because conventional lung cancer chemotherapy regimens have numerous drawbacks, which presents a recurring problem for the medical community. Thus, there is a pressing need for lung cancer treatment strategies that are more effective and well-tolerated.

Because of this, the quick development of nanotechnology has made it possible to create medication delivery systems that target nanoparticles, which offers a promising approach to treating lung cancer. Immunotherapy has emerged as a universal, safe, and efficient therapeutic approach. Though primary and secondary drug resistance are still common, ICIs have increased patient survival when compared to conventional chemotherapy medications. Finding biomarkers that can forecast immunotherapy's outcome and prognosis is essential as a remedy.

Reference

1.N. Wathoni, L.E. Puluhulawa, I.M. Joni, M. Muchtaridi, A.F.A. Mohammed, K.M. Elamin, T. Milanda, D. Gozali

Monoclonal antibody as a targeting mediator for nanoparticle targeted delivery system for lung cancer

Drug Deliv., 29 (1) (2022), pp. 2959-2970

2.L.E. Mathieu LN, A.K. Sinha, P.S. Mishra-Kalyani, S. Jafri, S. Kalavar, S. Ghosh, K.B. Goldberg, R. Pazdur, J.A. Beaver, H. Singh

FDA approval summary: atezolizumab as adjuvant treatment following surgical resection and platinum-based chemotherapy for stage II to IIIA NSCLC

Clin. Cancer Res, 29 (16) (2023), pp. 2973-2978

3.X. Zhu, Z. Yu, L. Feng, L. Deng, Z. Fang, Z. Liu, Y. Li, X. Wu, L. Qin, R. Guo, Y. Zheng

Chitosan-based nanoparticle co-delivery of docetaxel and curcumin ameliorates anti-tumor chemoimmunotherapy in lung cancer

Carbohydr. Polym., 268 (2021), Article 118237

4.C. Pi, W. Zhao, M. Zeng, J. Yuan, H. Shen, K. Li, Z. Su, Z. Liu, J. Wen, X. Song, R.J. Lee, Y. Wei, L. Zhao

Anti-lung cancer effect of paclitaxel solid lipid nanoparticles delivery system with curcumin as co-loading partner in vitro and in vivo

Drug Deliv., 29 (1) (2022), pp. 1878-1891

5.R. Itani, A. Al Faraj

siRNA conjugated nanoparticles-a next generation strategy to treat lung cancer

Int J. Mol. Sci., 20 (23) (2019)

6.H. Tang, Z. Zhang, M. Zhu, Y. Xie, Z. Lv, R. Liu, Y. Shen, J. Pei

Efficient delivery of gemcitabine by estrogen receptor-targeted PEGylated liposome and its anti-lung cancer activity in vivo and in vitro

Pharmaceutics, 15 (3) (2023)

7.S. Rawal, S. Khot, V. Bora, B. Patel, M.M. Patel

Surface-modified nanoparticles of docetaxel for chemotherapy of lung cancer: an intravenous to oral switch

Int J. Pharm., 636 (2023), Article 122846
8.J.D. Vanza, R.B. Patel, M.R. Patel
Nanocarrier centered therapeutic approaches: recent developments with insight towards the future in the management of lung cancer
J. Drug Deliv. Sci. Technol., 60 (2020)
9.K. Kumar, R. Chawla
Nanocarriers-mediated therapeutics as a promising approach for treatment and diagnosis of lung cancer
J. Drug Deliv. Sci. Technol., 65 (2021)
10.M. Habeeb, T.A. Kareem, K.L. Deepthi, V.S. Khot, Y.H. Woon, S.S. Pawar
Nanomedicine for targeting the lung cancer cells by interpreting the signaling pathways
J. Drug Deliv. Sci. Technol., 77 (2022)
11. Voxidova Z .T.The role snail, slug and tgb factor in osteosarcoma. J.Econom socium Vol.112 (2024)

Dr. Ghazanfer Ali
Teaching assistant
candidate of medical sciences
Department of Pathophysiology
Samarkand State Medical University

GASTRIC CANCER METASTASES TO THE PERITONEUM IN A MOUSE MODEL

Resume: *Using gene array analysis, we found that this protective effect is linked to a significant downregulation of the expression of Fms-related tyrosine kinase 4 (FLT4), CXC chemokine receptor-4, collagen α2(IV) (COL4A2), non-receptor spleen tyrosine kinase (SYK), and Fms-related tyrosine kinase 4 (FLT4) in neoplasic foci. Because it acts at multiple crucial points during the tumor cells' attachment and diffusion process, a modest medication that inhibits p38 MAPK generally helps prevent poorly differentiated gastric cancer cells from migrating throughout the peritoneum.*

Keywords: *Tyrosin, gene array, p38MAPK, gastric cancer, fms-related tyrosine kinase, collagen, CXC chemokine receptor-4, neoplastic foci, multidrug resistance, chemotherapeutic resistance, spleen.*

Abstract: The relatively common consequence of poorly differentiated stomach tumors is peritoneal dissemination, for which there are currently no effective treatments. It is known that the constitutive activation of mitogen-activated protein kinases (MAPKs) signaling cascades causes the malignant transformation of several cancer cell types. In this work, we use a mouse model of peritoneal carcinomatosis to show that suppression of p38 MAPK prevents the spread of gastric cancer cells, and that giving mice strong and selective p38 MAPK inhibitors such as ML3403 and SB203580 reduces the development of neoplastic foci caused by intraperitoneal injection of stomach cancer cells.

In neoplasic foci, we found that the expression of collagen α2(IV) (COL4A2), non-receptor spleen tyrosine kinase (SYK), and Fms-related tyrosine kinase 4 (FLT4) is strongly downregulated, which is linked to this protective effect, according to gene array analysis. In vivo suppression of p38 MAPK increased tumor cell sensitivity to cisplatin and was associated with a significant downregulation of multidrug resistance (MDR)-1 expression, a known indicator of chemotherapeutic resistance. In conclusion, by acting at multiple crucial points during the attachment and diffusion process of the tumor cells, a modest medication that suppresses p38 MAPK helps prevent poorly differentiated gastric cancer cells from spreading throughout the peritoneum.

Introduction

A variety of external stimuli can activate serine/threonine kinases, or MAPKs 1, 2. The three primary subclasses of MAPKs that have been identified are p38, c-Jun NH2-terminal kinase (JNK), and extracellular signal-regulated kinase (ERK). G proteins, oncogene products, cytokine receptors, and other receptor tyrosine kinases can all activate MAPKs. Accordingly, it is proposed that MAPKs are engaged in a variety of cellular processes, including apoptosis, differentiation, cell division, and transformation, and that they are essential for the integration of numerous signaling transduction systems 1, 2, and 3.

Constitutive activation of these signaling cascades has been identified as one of the primary contributing factors to the malignant transformation of cancer cell lines. 4. It has been associated with the development of human malignancies and their potential for dissemination 5,6. Therefore, there is compelling evidence that the p38 MAPK signaling pathway is activated in tumor cell invasion related to head and neck, breast, colon, and melanoma malignancies 7,8. Human scirrhous gastric carcinoma frequently spreads peritoneally or distantly to lymph nodes after a clinical diagnosis. This kind of poorly differentiated gastric carcinoma thickens the stomach wall in a fibrous-like manner as a result of diffusely infiltrating a large area of the stomach wall. 4, 6. There are no proven treatments for peritoneal spread. Peritoneal spread, which frequently occurs even after extensive surgery, is the primary cause of the poor prognosis for patients with scirrhous stomach cancer. Additional systemic chemotherapy frequently has little effect on peritoneal dispersion because the peritoneal-blood barrier can stop drug distribution throughout the peritoneal cavity. 8.

Peritoneal gastric cancer distribution and pospho-p38 MAPK levels

Poorly differentiated stomach carcinomas have been suggested to express p38 MAPK, and the likelihood of peritoneal dissemination is associated with this expression. In line with findings from other studies, the diffuse-type, poorly differentiated gastric carcinomas showed positive staining for both the total and phosphorylated forms of p38 MAPK 9. Most of the cancerous cells have p38 MAPK expression.

Discussion

Using a mouse model of peritoneal carcinomatosis, we have shown in this work that p38 MAPK inhibition prevents non-differentiated gastric cancer cells from proliferating throughout the peritoneum. Additionally, p38 inhibition increases the chemosensitivity of cisplatin, which may be helpful in treating chemoresistant stomach tumors, according to our research.

Early on in the invasion and metastasis of carcinoma cells, the p38 MAPK pathway plays a critical role.

In conclusion

However, the precise mechanism behind stomach cancer's peritoneal spread is still unknown. Phospho-p38 MAPK levels are elevated in poorly differentiated gastric tumors compared to differentiated malignancies. E-cadherin transcriptional suppression and cytoskeletal F-actin filament disarray have been associated with poorly differentiated gastric cancers; these findings may be connected to p38 MAPK activation. Amorphous morphology and a lack of cell-cell adhesion may be the outcomes of these effects.7. Here, we detail how the p38 MAPK pathway contributes to the spread of gastric cancer cells in humans across the peritoneum. According to this study, pharmacological inhibition of p38 MAPK limits the spread of gastric cancer cells and increases treatment sensitivity, indicating that small molecule p38 MAPK inhibitors may have anti-cancer potential.

References

1.D.E. Costea et al.Species-specific fibroblasts required for triggering invasiveness of partially transformed oral keratinocytes.AM.J.Pathol.(2006)

2.S. Huang et al.Urokinase plasminogen activator/urokinase-specific surface receptorexpression and matrix invasionby breast cancer cells require constitutive p38 alpha mitogen-activated protein kinase activity.J.Biol.Chem.(2000)

3.H. Nakashima et al.Clinical significance of nuclear expression of spleen tyrosine kinase(Syk) in gastric cancer. Cancer Lett.,(2006)

4.J.M. Olson et al.p38 MAP,kinase: a convergence point in cancer therapy.Trends Mol.Med.(2004)

5.A. Orimo et al. Stromal fibroblasts present in invasive human breast carcinomas promote tumor growth and angiogenesis through elevated SDF-1/CXCL12.Cell(2005)

6.M. Riccaboni et al.Spleen tyrosine kinases:biology, therapeutic targets and drugs. Drug Discov.Today(2010)

7.Z. T. Voxidova Research Status of Systemic Adjuvant Therapy for Early Breast Cancer.J Econom Sociium. (2024)

8. Z.T.Voxidova, High-fat and carbohydrate diet caused chronic kidney damage by disrupting kidney function, caspase-3, oxidative stress and inflammation.J. Econom Socium(2024)

9.A.R.Mamataliev and Z.T. Voxidova, **The level of study of the morphology of the lowerporto-caval venous system in the conditions of experimental liver cirrhosis.** J. of Healthcare and Lifescience.

Dr. Ghazanfer Ali
Teaching assistant
candidate of medical sciences
Department of Pathophysiology
Samarkand State Medical University

COMBINING IMMUNOTHERAPY AND CIRCADIAN RHYTHMS FOR MORE ACCURATE TREATMENT OF BRAIN TUMORS

Resume:*There is a strong correlation between abnormalities in circadian rhythms and increased susceptibility to cancer and neurological illnesses. Immunotherapy is still not very effective in treating brain tumors, despite its potential in treating other types of cancer. This review examines the relationship between immunotherapy and circadian rhythms in the treatment of brain cancer, with a focus on accuracy through synchronization with the body's internal clock. We examine the ways in which circadian dysregulation impacts anti-cancer immunity and assess the circadian control of immunological responses, including cell localization and functional phenotype. For brain cancer, we also examine and evaluate the efficacy of contemporary immunotherapeutic techniques, such as adoptive cellular treatments, immune checkpoint blockades, and other cutting-edge tactics. In order to maximize the precision of immunotherapy against brain tumors, future options are suggested, including chronotherapy and customized treatment plans.*

Keywords: *Immunotherapeutic techniques, circadian rhythms, brain cancer, immune system, immunotherapy, immune checkpoints, adoptive cellular therapy, chrono modulated therapy.*

Introduction

It is now known that circadian rhythms—from the Latin "circa diem," which means "about a day"—are an external representation of an internal time mechanism that is essential to an organism's ability to maintain homeostatic equilibrium.

A basic molecular clock, comprising an evolutionarily conserved transcriptional-translational feedback loop (TTFL; Fig. 1), is responsible for producing circadian rhythms at the molecular level.5. Positive and negative feedback loops are linked in the molecular clock process. Fundamentally, enhancer box elements (E-boxes) of cryptochrome (CRY1/2), period (PER1/2/3), and tyrosine-protein kinase transmembrane receptors RORα/β/γ and REV-ERBα/β are bound by the transcriptional activators circadian locomotor output cycles kaput (CLOCK; and its paralog, NPAS2) and brain and muscle ARNT-Like 1 (BMAL1), forming heterodimers that stimulate their transcription.5, 6. Following this, PER/CRY heterodimers build up and stop BMAL1/CLOCK activity. Competing for binding to ROR response element (RORE), a promotor for BMAL1, RORα/β/γ and REV-ERBα/β cause BMAL1 to either be activated or inhibited. The interaction of these feedback loops results in clock-controlled gene expression that fluctuates rhythmically over a period of around 24 hours. The TTFL is responsible for the autonomous circadian rhythms expressed by almost every cell type, including neurons and glial cells.9. Throughout the 24-hour cycle, cell function is driven by oscillations in the expression of the genes that make up the circadian core clock and the genes that they regulate by binding to transcription-enhancing variables.10

The gut clock, for example, controls intestinal motility and food absorption to align maximal monosaccharide uptake with regular eating times.11. Additionally, the kidneys' circadian cycles result in variations in tubular reabsorption and secretion processes, glomerular filtration rate, and renal plasma flow.12 Peripheral clocks must be synchronized everyday to avoid these cellular activities becoming out of harmony across the body.

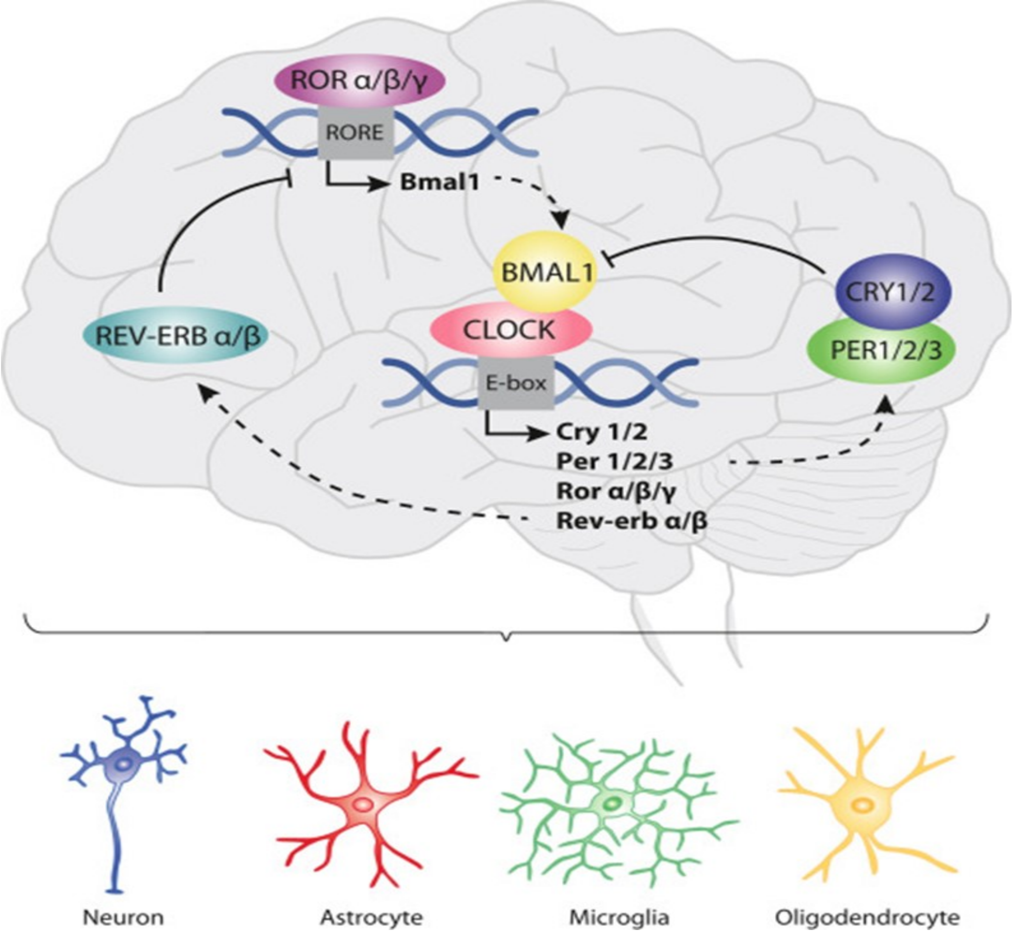


Fig. 1. **Overview of the core clock machinery in the brain.**

The tumor microenvironment's (TME) circadian clock components have a significant role in controlling the stemness of cancer cells, metastasis, and resistance to treatment.2: This review investigates the role of the circadian rhythm in immunosuppression, the brain TME, and brain tumor growth. Chronotherapy is used to optimize therapy scheduling, and the molecular role of the circadian clock in brain cancer is investigated. The effects of the circadian clock on the immune system and tumor immunology will also be discussed, with an emphasis on how it may improve the effectiveness of immunotherapy. To create successful (immuno)therapies and improve those that already exist, we hypothesize that a deeper knowledge of the intricate biology of brain tumors and TME—with a focus on the significance of the circadian clock—is necessary.

How does the healthy central nervous system's molecular clock work?

Glial cells and almost every other tissue have circadian clock oscillations, which are crucial for the growth and operation of the brain.8. The majority of brain cancers originate from glial cells or their ancestors, therefore knowing how the clock functions in their physiology is important.

The most prevalent glial cell population in the mammalian brain is called astrocytes.5, These cells are essential for the health of the nervous system because they give neurons vital trophic and metabolic support. Perisynaptic astrocyte activities, for example, reduce extra-synaptic buildup and spillover to neighboring synapses by removing neurotransmitters like glutamate from the interstitial space.7 Astrocytes also maintain appropriate synaptic transmission by regulating the ionic balance at the synapse.In vitro cultures of mouse cortical astrocytes have been used in studies to demonstrate that clock genes control the rhythmic variations that astrocytes undergo.8- Astrocytes' daily cycles of ATP release, for instance, are regulated by oscillations of Clock, Per1, Per2, and IP3-dependent calcium signaling.9 Astrogliosis is brought on by low levels of BMAL1, which also functions as a cell-autonomous regulator of astrocyte activation and neurotrophic activity. Microglia are another kind of cell found in the central nervous system (CNS). These immune cells, which resemble macrophages, help the brain develop normally by eliminating dead cells from the developing brain and the adult central nervous system.14 Microglia also play a role in the maintenance and growth of synapses. Microglia have a circadian rhythm that controls their immunological activity, just like the majority of cells.14 Rats, for example, exhibit a circadian rhythm of TNF-α, IL-1β, and IL-6 production that peaks in the middle of the light phase (rest phase). The early development of Alzheimer's disease has been linked to disruption of clock genes in microglia, which can cause chronic neuroinflammation.15.

Finally, the third class of glial cells, oligodendrocytes, are essential for the transmission of signals in the central nervous system. These cells provide a myelin sheath that supports metabolism and speeds up action potential transmission along the axon. There is currently insufficient proof to conclude that human oligodendrocytes possess a working molecular clock.

It is commonly known that circadian clock disruption is linked to neurological conditions like Parkinson's or Alzheimer's disease.11 Furthermore, disruption of the circadian rhythm, such as that caused by genetic abnormalities or jet lag-induced disturbances of normal physiological balance, has been linked to an increased risk of developing cancer.10 The circadian clock is disrupted in several malignancies.1 Furthermore, there is a correlation between early cancer patient death and the loss of circadian regulation and the ineffectiveness of anticancer therapies.13 Conversely, a healthy circadian rhythm prevents colon cancer and melanoma cells in mice from proliferating and growing into tumors.

Materials and methods

Immunotherapy has completely changed the oncology sector in recent years. These treatments seek to strengthen or stimulate the immune system so that it can target and destroy tumor cells.Twenty Adoptive cellular therapies including chimeric antigen receptor (CAR)-T cell therapy, oncolytic viruses, immune checkpoint inhibitors (ICI), and immunization are a few examples of immunotherapeutic approaches.

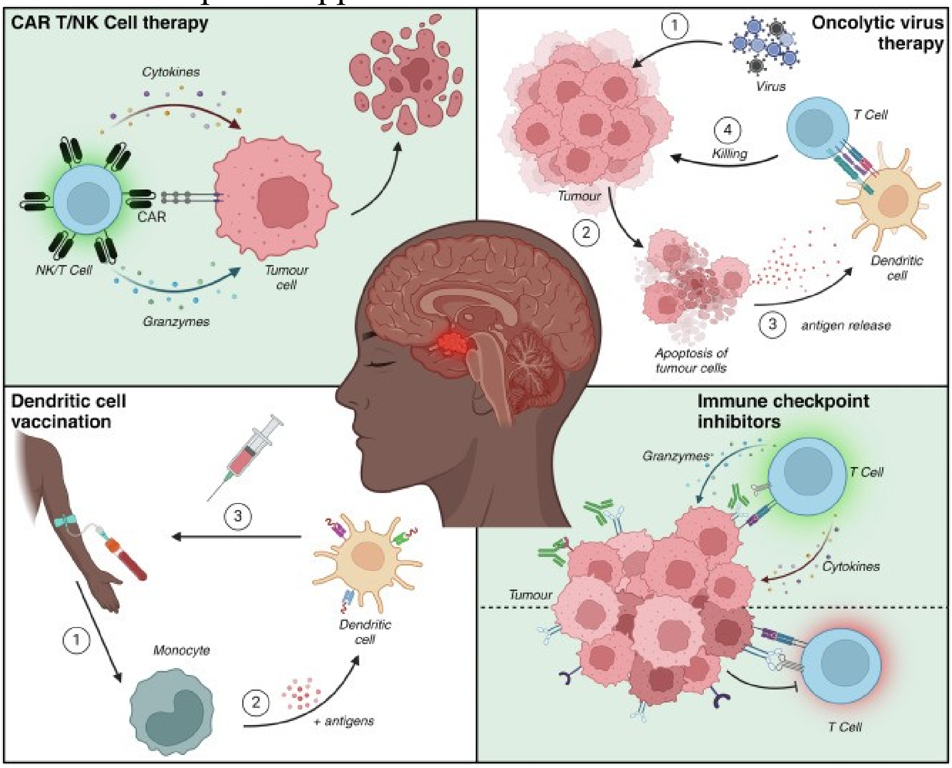


Fig.1. Immunotherapeutic approaches to brain cancer treatment. A number of immunotherapeutic approaches have been developed in recent decades with the goal of stimulating the immune system to produce an anti-tumor response. Via dendritic cells, oncolytic virus therapy and dendritic cell vaccine both stimulate the immune system's adaptive component. Oncolytic virus therapy depends on activating dendritic cells in vivo, while dendritic cell vaccine therapy uses monocytes to train dendritic cells ex vivo. By using modified receptors, CAR T/NK cell therapy, on the other hand, allows these cells to precisely target and kill the tumor. Immune checkpoint inhibitor therapy eliminates immunosuppression in the TME by inhibiting one or more inhibitory checkpoints, rather than concentrating on immune system training. produced using BioRender. TME: tumor microenvironment; CAR.

Discussion

The effectiveness of immunotherapy may be increased by coordinating treatment with circadian rhythms in terms of chronotherapy. Patients' sleep-wake cycles and clock synchronization (e.g., light/dark cycles, timing of meal intake, influence of electronic gadgets) should be protected for this and the benefit of the patients. In the clinic, it is relatively cheap to investigate the advantages of administering immunotherapy at particular times of the day. Given that tumors with an intact circadian rhythm, like glioblastoma, may exhibit temporal susceptibility to cancer immunity, this would likely be most helpful in these cases.7 Examining the circadian clock's integrity in various brain cancer types may help explain the temporal variance in vulnerability. All cell types that reside in the TME should be aware of this because of their timing. Targeting would be most effective, as we currently understand, when the BBB is most permeable, immune effector cells can easily enter the tumor location, and tumor cells themselves exhibit the least amount of resistance. Additionally, the circadian immunological state of tumor-associated macrophages and microglia has a timely impact on both effector cells and tumor cells. By investigating the brain's circadian rhythms, TME may be able to determine when immunotherapy should be administered.

Nonetheless, many malignancies exhibit disruptions in circadian rhythmicity.4. This lays the groundwork for more accurate molecular clock targeting. Immune evasion is linked to clock disruption; hence, restoring it may mitigate this effect and enhance immunotherapy results.

In conclusion

Many biological functions are carefully regulated by circadian rhythms. Circadian rhythms regulate activity in healthy cells, but in cancer, changes in the expression of the molecular clock frequently promote the survival and growth of cancerous cells, which in turn accelerates the evolution of tumors. The tumor's capacity to create an immunosuppressive TME is further strengthened by these alterations. Brain cancer has been treated with a variety of immunotherapeutic treatments, although their effectiveness is still quite low. The circadian rhythm that regulates the immune system and TME is a key factor in determining the results of immunotherapy. The treatment of brain cancer may undergo a revolution in therapeutic techniques and greatly increase the effectiveness of immunotherapy if the circadian clock is strategically targeted and harnessed.

Reference list

1.W. Xuan, F. Khan, C.D. James, A.B. Heimberger, M.S. Lesniak, P. Chen
Circadian regulation of cancer cell and tumor microenvironment crosstalk
Trends Cell Biol, 31 (2021), pp. 940-950

2.K. Arafa, M. Emara.Insights about circadian clock and molecular pathogenesis in gliomas
Front Oncol, 10 (2020), p.

3.N.J. Allen, C. Eroglu.Cell biology of astrocyte-synapse interactions.Neuron, 96 (2017), pp. 697-708

4.G.A. Banker.Trophic interactions between astroglial cells and hippocampal neurons in culture
Science, 209 (1980), pp. 809-810

5.C. Murphy-Royal, J. Dupuis, L. Groc, S.H.R. Oliet.Astroglial glutamate transporters in the brain: regulating neurotransmitter homeostasis and synaptic transmission.J Neurosci Res, 95 (2017), pp. 2140-2151
6.L.M. Prolo, J.S. Takahashi, E.D. Herzog.Circadian rhythm generation and entrainment in astrocytes.J Neurosci, 25 (2005), p. 404
7.L. Marpegan, A.E. Swanstrom, K. Chung, *et al.*Circadian regulation of ATP release in astrocytes.J Neurosci, 31 (2011), p. 8342
8.B.V. Lananna, C.J. Nadarajah, M. Izumo, *et al.*Cell-autonomous regulation of astrocyte activation by the circadian clock protein BMAL1.Cell Rep, 25 (2018), p. 1
9.S. Jolly, N. Journiac, F. Naudet, V. Gautheron, J. Mariani, B. Vernet-der Garabedia
Cell-autonomous and non-cell-autonomous neuroprotective functions of RORα in neurons and astrocytes during hypoxia.J Neurosci, 31 (2011), pp. 14314-14323
10.C. Beaulé, A. Swanstrom, M.J. Leone, E.D. Herzog
Circadian modulation of gene expression, but not glutamate uptake, in mouse and rat cortical astrocytes.PLoS One, 4 (2009), Article e7476
11.C.F. Tso, T. Simon, A.C. Greenlaw, T. Puri, M. Mieda, E.D. Herzog
Astrocytes regulate daily rhythms in the suprachiasmatic nucleus and behavior.Curr Biol, 27 (2017), p. 1055
12.M. Prinz, S. Jung, J. Priller.Microglia biology: one century of evolving concepts.Cell, 179 (2019), pp. 292-311
13.L.K. Fonken, M.G. Frank, M.M. Kitt, R.M. Barrientos, L.R. Watkins, S.F. Maier
Microglia inflammatory responses are controlled by an intrinsic circadian clock
Brain Behav Immun, 45 (2015), p. 171
14.J. Ni, Z. Wu, J. Meng, *et al.*
An impaired intrinsic microglial clock system induces neuroinflammatory alterations in the early stage of amyloid precursor protein knock-in mouse brain
J Neuroinflammation, 16 (2019), pp. 1-15
15. Voxidova Z. T.Complexity of Alzheimer's disease: Introduction and its pathophysiology.J.Econom Socium (2024).

G‘ulomov A.U.
great teacher
of Fergana Polytechnic Institute

INCREASING THE EFFICIENCY OF CARGO TRANSPORTATION BY ROAD TRANSPORT

Abstract: *This article is dedicated to the mathematical modeling of the impact of system-organizing factors on improving the efficiency of transporting heavy and/or oversized cargo by road transport.*

Keywords: *heavy cargo, oversized cargo, road transport, transportation efficiency, mathematical modeling, system factors, transportation logistics*.

The article discusses the mathematical modeling of various systems, methods, and factors for the efficient transportation of heavy and large-sized cargo by road transport. The main goal is to analyze the interaction of these factors and find ways to optimize them in order to increase transportation efficiency. To enhance the effectiveness of transporting large and heavy cargo (oversized cargo), it is necessary to consider all factors comprehensively and identify the interdependencies between factors and parameters. Additionally, it is important to assess the contribution of each factor that constitutes the system to the overall transportation cost. In accordance with the objectives of this work, the relevant criteria that make up the system are discussed below.

Dimensions and Weight of Cargo: Heavy and large-sized cargo requires special transport vehicles and road infrastructure. To efficiently transport such cargo, the performance characteristics of the transport vehicles and the restrictions they impose must be taken into account.

Road Infrastructure: The quality and specific characteristics of the road (e.g., road width, load-bearing capacity, and gradients) affect transportation efficiency. In mathematical models, the suitability of the road for transporting the cargo is also considered.

Transport Vehicles and Technical Specifications: The capacity of vehicles to carry large and heavy loads, the load distribution on the transport axles, and the necessary safety measures need to be considered.

Logistics and Transportation Organization: Optimizations in the transportation process, cargo storage, transport routes, and management systems for time savings are examined.

To track the interdependencies between the factors and determine their relationships, a mathematical model of the factors constituting the exploitation-technological system was developed. This model describes the impact of these factors on the efficiency of transporting large and heavy cargo. In the discussed model, the efficiency criterion (Q) for transporting large and heavy cargo (oversized cargo) is presented, which can be expressed as a mathematical model showing the effect of the factors that constitute the system on the efficiency of transportation. This model is represented as a function depending on a limited number of factors (n) and demonstrates the impact of these factors on the final transportation cost.

$$Q = f(x_1, x_2, x_3, x_4 \dots \dots x_n) \qquad (1)$$

x_1 – The actual mass of the vehicle (road train) with cargo, in tonna
x_2 – Actual axle load, t/axle. This is determined taking into account the number and type of axles, the distance between them, and the placement of the cargo on the semi-trailer(trailer)
x_3 – Dimensions of the vehicle (road train) with cargo: length, width, height;

x_4 – Route length, km.

x_5 – The permitted axle loads on the route, which depend on the road category, the calculated axle load for these roads, and the presence of temporary restrictions;

x_6 – Artificial structures on the route (bridges, underpasses, railway crossings, and others);

$x_7 \dots x_n$ – Other factors affecting transportation efficiency

Based on the analysis of the selected model, it can be concluded that the key factors influencing the efficiency of such transport operations are: the characteristics of the vehicle (or road train) with respect to the cargo, such as the number of axles, their mutual arrangement, the actual axle loads, the mass of the vehicle with the cargo (or vehicles), as well as the dimensions of this vehicle and its direction of movement. The direction is chosen based on available options, considering factors such as the category of the roads, the type of road surface, the existence of temporary (seasonal) restrictions, and the presence of artificial structures and toll sections on the roads.

Without taking into account the main variable costs (C), depreciation deductions, and expenses for lubricants and cleaning materials, the total costs for transporting large and/or heavy cargo via roads can be expressed as the sum of the following costs (formula 2.6): compensation for damage caused by the road transport, fuel costs (usually diesel fuel is used for transporting heavy cargo), the costs of using standard sealing machines, compensation for damage on federal roads of national importance, and toll costs through the "Platon" system [19, 59]. Additional variable costs are determined separately for each case, and their calculation is carried out by specialized organizations. Therefore, this study does not aim to optimize these costs further, which allows us to treat these additional costs as a constant value.

$$C = \sum_{i=1}^{5} C_i \qquad (2)$$

Here, C1 refers to the costs associated with compensating for damage when increasing the maximum permissible mass of a vehicle (or road train) on the roads of the Republic of Uzbekistan, measured in millions of Uzbek soums.

The costs C1 and C2 are determined for each road section based on the appropriate method for calculating the amount of damage caused by the transport vehicles (specifically, those engaged in heavy cargo transportation). There are specific methods for regional and local roads, and based on these methods, the damage compensation cost for every 100 km of road is determined. Typically, these calculations are simplified using special collection tables, especially when the total mass and axle loads increase by 60%. For large and/or heavy cargo transportation, federal roads are mainly used because they are designed to accommodate higher axle loads compared to regional and local roads.

Most regional roads are designed for a maximum axle load of 10 tons, while roads with paved surfaces for passing must not exceed 6 tons per axle. Federal roads, on the other hand, are usually designed for axle loads of 10 tons, and in some cases, they can handle up to 11.5 tons per axle. It is also important to note that regional and local roads should be closed for drying in April, which reduces the permissible maximum axle loads (usually by half), leading to a significant increase in the cost of transporting goods with increased axle loads.

In the territory of the Republic of Uzbekistan, the maximum permissible mass for vehicles (road trains) with six axles or more, including tractors and trailers, may be up to 44 tons. For large and/or heavy cargo, the mass of the vehicle with or without cargo is specified in the special permit and is calculated based on the following formulas:

In this case

- m_b – the mass of the road train without cargo,
- m_c – the loaded mass of the road train,
- m_{ct} – the mass of the fully equipped tractor,
- m_{cp} – the maximum mass of the fully equipped semi-trailer,
- m_y – the mass of the indivisible cargo.

The amount of damage caused on federal roads when exceeding the permitted maximum mass and axle loads can be calculated using the following formulas (1 – 5). The fee paid to compensate for the damage caused by transport vehicles when transporting heavy cargo via roadways is calculated separately for each road section, and this section corresponds to the direction of the vehicle.

$$k = m_c - m_{retvm} \quad (3)$$

In this case: m_r – the permitted vehicle mass.

When the total mass increases, the fee for damage compensation (P_{pm}) for the road section is calculated as follows:

$$P_{pm} = S \cdot T_{tg} \cdot R_{pm} \cdot K \quad (4)$$

Here:

P_{pm} – The amount of damage caused when increasing the permitted vehicle mass, set for the given road section;

S – The length of the road section (in hundreds of kilometers);

Base compensation index – The current year's base compensation index, equal to 1.8136;

K – This value is equal to 0.6.

When the permitted axle loads are increased, the fee for damage compensation (P_{pm}) for the road section is calculated as follows:

$$P_{o'q} = S \cdot T_{tg} \cdot i_{o'q} \cdot P_i \cdot K \quad (5)$$

Where: $i_{o'q}$ – The number of axles of the vehicle (TV) with the same excessive load; P_i – The amount of damage caused as a result of exceeding the permitted axle loads of the vehicle (TV), determined for the chosen road section.

Foydalanilgan adabiyotlar.

1. Сафиуллин Р. Р., Широкая М. В., Абрамова К.В., Тимофеева Н.Н.«Исследование влияния системообразующих факторов на эффективность перевозки крупногабаритных и тяжеловесных грузов»/Сборник«Альтернативные источники энергии в транспортно-технологическом комплексе:проблемы и перспективы рационального использования», Издательство: ВГЛТУ им. Г.Ф. Морозова, том 4, № 1 (7) 2017 г. с. 11-17.

Husanov Z. I.
Navoiy davlat universiteti talabasi

NARPAY TUMANI GEOGRAFIYASI VA TARIXI

Annotatsiya: *Narpay tumani va uning shakllanish bosqichlari hamda geografiyasi haqida ma'lumot berilgan. Shu bilan birga tumanning tabiati, xo'jaligi va aholisi haqida tushunchalar mavjud. Shuningdek tuman tarixi va geografiyasi uyg'unlashgan.*

Kalit so'zlar: *hudud, geografiya, tarix, Sug'd, shahar aholi manzilgohi, qishloq aholi manzilgohi.*

Husanov Z.I.
Student of Navoi State University

GEOGRAPHY AND HISTORY OF NARPAY DISTRICT

Abstract: *Information is given about Narpay district and its formation stages and geography. At the same time, there are concepts about the nature, economy and population of the district. Also, the history and geography of the district are combined.*

Key words: *territory, geography, history, Sugd, urban settlement, rural settlement.*

Narpay tumani Samarqand viloyatining asosiy qishloq xo'jaligiga ixtisoslashgan hududi bo'lib, uning maydoni 0,44 ming/km^2 hisoblanadi. Tuman 1974-yil 29-sentabrda tashkil etilgan. U viloyatning janubida joylashgan bo'lib, sharq va g'arbdan Kattaqo'rg'on va Paxtachi tumanlari, shimolda Navoiy viloyatining Xatirchi tumani, janubdan Nurobot tumani va Qashqadaryo viloyati bilan chegaradosh. Tumanda 2023-yil ma'lumotiga ko'ra 5372ming kishi istiqomat qiladi. Hududda 1ta shahar (Oqtosh), 2 ta shaharcha (Mirbozor, Islom Shoir) va 9 ta mahalla fuqarolar yig'ini (Olti o'g'il, Yangirabot, Yangiqo'rg'on, Qadim, Qorako'l, Qorasiyroq, Xo'jakarson, Kosongoron va Guliston) mavjud.

Tuman tarixiga nazar solinganda, uning shakllanishi ilk o'rta asrlarga borib taqaladi. Keyinchalik esa arablar bosqini sababli hudud haqidagi ma'lumotlar yo'qolgan. Dastlab Narpay hududi Fay deb atalgan bo'lib, arablar bosqinidan keyin Fay hukumdori Farzanj o'zining yaqinlari bilan hozirgi Sug'd yerlariga o'tgan. Bu ma'lumotlar hozirga qadar Sug'd yozma manbalarida keltirilgan. Xonliklar davrida Buxoro amirligi tarkibida bo'lib, amirlik tugatilgach Kattaqo'rg'on bekligiga qo'shilgan. Keyinchalik esa Zirabuloq pasyo'lkasi deb atalgan. Undan keyin Oqtosh qishlog'i tashkil topgan. Qishloq kengayib Oqtosh shaharchasi shakilangan.

Narpay tumani Buyuk ipak yo‘lining chorrahasida joylashgan bo‘lib, aholining zich joylashuviga sabab bo‘lgan. Narpay so‘zi “naxr” arabcha daryo, ariq, kanal “Pay” so‘zi esa forscha tugash joyi ya’ni daryoning tugash joyi ma’nolarini anglatadi.

Narpay - Samarqand viloyatidagi qishloq, tuman nomi. Narpay tumanidan shu nomdagi kanal oqib o‘tgan, ushbu kanal Zarafshon daryosi tarmog‘i hisoblangan Qoradaryodan boshlanadi. Narpay kanali Zarafshon vodiysidagi qadimgi yirik kanalardan biri sanaladi. Qoradaryo Zarafshon tarmog’idan to‘g‘onsiz suv olib, suv o‘tkazish imkoniyati 70 m^3, sug’orish maydoni 42,2 ming ga, o‘rtacha chuqurligi 1-2 metr hisoblanadi. Kanal trassasi daryoga parallel holda Zarafshon tizmasining g’arbiy tarmoqlari bo‘ylab o‘tgan bo‘lib, 370 ta shaxobchasi mavjud. 1950-yildan boshlab Narpay kanali Kattaqo‘rg‘on suv omboriga ulangan. Mirbozor qadimgi karvon yo‘lidagi manzil hisoblanib, tumanda mahalla fuqorolar yig‘inlari soni 57 ta shundan shahar mahallalari soni 16 ta, qishloq aholi punktlari esa 133 tani tashkil etadi.

Narpay tumani yer yuzasi asosan uchlamchi davrda cho‘kindi jinslardan tashkil topgan. Bu yer neogen davrigacha dengizdan iborat bo‘lgan. Neogen davridagi alp tog‘ organik jarayoni ta’sirida vodiy quruqlikka aylangan, iqlimi keskin kontintal, yozi jazirama issiq va quruq qishi sovuq. Yillik o‘rtacha harorat yanvarda -1,9^0C, yozda o‘rtacha 27,2^0C, eng yuqori harorat 40^0C, vegetatsiya davri 200 kun, yillik yog’in miqdori 200 mm yog‘inlar asosan bahor va qishda kuzatiladi. Tuproqlari sug’oriladigan bo‘z tuproq ba’zi joylarda sho‘rlangan tuproqlar, tog‘ etagida och bo‘z tuproqlar tarqalgan. Yovvoyi o‘simliklardan pashmak sho‘ra, oq sho‘ra, bug’doyiq, kampir soch, yulg’in o‘sadi. Yovvoyi hayvonlardan bo‘ri, tulki quyon, chiya bo‘ri, jayron va boshqalar uchraydi. Tuman hududining janubiy g’arbida Qarnob cho‘li markaziy qismi va shimoliy sharqda Ziyovuddin-Zirabuloq tog’lari, tog’ oralig’idagi soylik va botiqdan iborat.

Aholisi haqidagi ma’lumotlar qadimdan shakllangan bo‘lib, qabila, urug‘, elat shaklida takomillashgan. Hududda asosan o‘zbeklar, qozoq, rus, tatar va boshqa millat vakilari istiqomat qiladi. Narpay tumani asosan qishloq xo‘jaligiga ixtisoslashgan bo‘lib, unda paxtachilik, chorvachilik, ipakchilik, sabzavotchilik tarmoqlari rivojlangan. Narpay tumanida 5364 ta fermer xo‘jaligi mavjud bo‘lib, ular “Zirabuloq paxta” “Oqtoshdon” “Zirabuloq” tajriba sinov zavodlari, 10 dan ortiq qishloq qurilish kanbinatlari tashkil topgan. Zirabuloq magistiral gaz yo‘llaridan foydalanish boshqarmasi mavjud. Oqtosh va Mirbozor dehqon bozorlari savdo madaniy va mayishiy xizmat ko‘rsatadigan shaxobchalar shakllantirilgan.

Tumanda umumiy ekin maydoni 21 962,0 gektar bo‘lib, shu jumladan sug‘oriladigan yer maydoni 20 640 gektardan iborat. Umumiy ekin maydonidan 1322 gektar lalmikor yerlar, 802 gektar bog‘lar 779 gektar tokzorlar, 515 gektar tutzorlarlarga ajratilgan.

Hudud lagistik ahamiyatga ega bo‘lgan maskan bo‘lib, undan magistral avtomabil yo‘li hamda temir yo’l o’tgan. Zirabuloq temir yo‘l stansiyasining qurilishi hududda aholi maskanlarining ijtimoiy infrastrukrurasiga o‘z ta’sirini ko‘rsatgan.

Narpay tumani ijtimoiy sohalarda ham o‘ziga xos geografik o‘ringa ega. Unda Samarqand Chet tililar instituti Narpay filiali, maishiy xizmat va kasb-hunar maktablari hamda umumiy o‘rta ta’lim maktablari soni 71 tani tashkil etadi. Tuman hududida markaziy kasalxona, 3 ta poliklinika va 15 ta qishloq vrachlik punkiti, 2 ta qishloq xo‘jalik amblatoryasi, tibbiy yordam ko‘satish markazlari faoliyat ko’rsatadi.

Narpay tumanida “Navqiron Narpayim” hamda “Nigoh” nomli gazetalar nashriyoti faoliyat yuritadi. Ushbu gazetalar 1932-yildan boshlab faoliyat yurita boshlagan. Tumanda Ko’k ota nomiga erishgan Hazrat Abu Qosim Shayx ibn Sayid Ahad an Nasafiyga atab qurilgan masjid mavjud. Narpay ahli bu masjidni hurmat va ehtirom ila “Ko‘k ota” yoki “Avliyo ota” deb ulug’laydi, “Ko’k ota” qabristonining umumiy maydoni 18 gektar tashkil etadi.

Xulosa qilib aytadigan bo‘lsak, Narpay tumani tabiiy sharoiti o‘ziga xos xususiyatga ega bo‘lib, aholisining shakllanishi va rivojlanishiga ushbu muhit tabiiy omil sifatida ta’sir qilgan. Uning iqtisodiy va ijtimoiy rivojlanishiga esa lagistik ahamiyatga egaligi bilan asoslanbadi.

Foydalanilgan adabiyotlar:

1. O‘zbekiston milliy ensiklopediyasi. T.:-2005
2. Narpay sohillarida risolasi. Narpay hokimligi nashriyoti. B-128.
3. O‘zbekiston obidalaridagi bitiklar Samarqand Amir Temur davri monumental inshootlari. T.: 2023. B-338

Husanova Sh.E.
Uzbekistan State World Languages University

THE ROLE OF LULLABIES FOR DEVELOPING HEALTHY MIND

Abstract: *As we know, lullabies play essential role for growing up perfect children. Generally, they are considered as one of the extremely effective means of communication and education skills of children.*

When should I begin teaching my child? is a question that a mother once asks a scholar. In response, the scholar asks, "When will your child be born?" The woman responds, "Born? It's been five years already! The scholar replies, "You have already lost five complete years!" in shock. As the story makes clear, a child's education begins in the womb of the mother during the prenatal stage. It is mentioned in the due narrative that a child's education begins when they are still in the womb. In the past, moms would sing their kids lullabies and use a melodic style to tell them about the day's events. Thus far, singing lullabies has taken on a completely new dimension on contemporary society. In actuality, modern researches have demonstrated that infants can sense and react to their surroundings even while still inside their mothers. It has even been demonstrated that children's ability to comprehend is enhanced at later ages as a result of the lullabies they heard as babies. Being unbeknown of its significant benefit, our forefathers sought to raise their children with this sensitivity and managed situations with this consciousness.

Key Words: *melody, harmonious, educational, communication, forefather, soothing, dimension, transmitting, gentle tone.*

Introduction

Lullabies are meaningful, harmonious, rhyming words that are typically sung by mothers. However, they can also be sung by relatives like older sisters, grandmothers, aunts, etc., to calm wailing children or put them to sleep. They can be poetry or prose written to a specific melody. In order to put their infants to sleep, mothers typically sing lullabies, the first teller of which is nameless. Therefore, when mothers sing lullabies in the form of ballads, they are passing them on to their infants through improvisation, either rocking them on their legs or in their bosom. It is a cultural tradition that dates back to very ancient times for a mother to rock her infant while singing a lullaby in a gentle and melodic tone. Within this tradition there is also the mother’s unique kind of managing her voice by softening, rising, hardening, fastening or slowing it just according to the situation of the child at that moment. In this way the mother is in fact directing her baby with the tone of her voice. With the proper guidance, the mother is giving the infant a cozy and caring environment that allows it to go to sleep more quickly and easily. She is also calming the infant by reducing its fussing. The baby is also influenced by the lullaby's melodic words in addition to the mother's voice.

The essence of the mother's words, which are an improvisational reflection of her thoughts at the time, contains her deepest hopes for her kid, including good health, a bright future, rapid growth, not being a weeping child, becoming a bride or bridegroom in the future, and, of course, happiness.

Lullabies also cover a wide range of historical and social topics and issues, as well as local facts, customs, and traditions, in addition to all of these requests. The Lullaby style is not exclusive to one country. distinct countries have lullabies with distinct names. However, the fact that this special source, which has been a part of a society for a thousand years and has innumerable advantages for kids, is not in the position it truly deserves is a reality, even though it is undesirable. Along with the fact that it hasn't been well studied, the origin of lullabies is also likely to be forgotten. Scholars who study the country's literature and culture believe that it is a huge shame that lullabies haven't been collected and documented in their entirety.

The Characteristics of Lullabies and How They Impact Children

Everywhere in the world, people sing the lullaby to put kids to sleep. For youngsters, the proper tradition has highly beneficial and constructive benefits. This is why sources that are relevant to children's interests should be given particular weight. In addition to the benefits that lullabies provide for kids, the hints that they carry within their bodies help modern scientists. Boys and girls both have distinctive characteristics that make them suitable for singing lullabies. Babies' blood pressure and heartbeats instantly increase when they are frightened of abrupt movements and noises. It takes a relatively short time for Lullaby to bring the children's elevated blood pressure down to normal. The time spent growing up is healthier when lullabies are played. Lullaby language is straightforward, easy to understand, and fluid. Because of this, kids are able to learn the words quickly and understand them extremely quickly when they are sung. Additionally, listening to the mother's lullabies as a youngster will foster a far healthier form of communication between the two entities. As the infant uses lullabies to interact with its mother, its mind is stimulated.

Because the mother's singing or talking will continue to stimulate the child's connected perceptual centers. At the same time, this helps the baby understand the information more quickly. Children learn a lot about life from certain expressions included in lullabies. By relieving the child's tension, they facilitate the infant's ability to fall asleep. Children who hear lullabies are able to develop more composed personalities. The lullabies' phrases contain wishes, desires, and love, which is one of the most important facts. They undoubtedly play a vital part in the child's overall wellbeing.

As a result, the child's subconscious is positively impacted by the appropriate wants. Children feel their mother is constantly around them when lullabies are sung to them. And this fact helps the infant feel secure while it is sound asleep. Additionally, they facilitate wholesome communication between the mother and her child. Additionally, the mother and her child grow closer as a result of this circumstance. The mother can also use improvisation to guide her kid through the lullabies she sings. In other words, children's perceptual centers become more active the more they hear references to plants, objects, colors, and other elements in the lullabies. This indicates that by thinking about all those things, the children's minds grow considerably more. Because they incorporate social life, history, traditions, and customs, lullabies have the qualities of historical documents.

The mother's lullabies greatly strengthen the relationship that still exists between her and her stillborn child. Because the mother prevents the relationship between them from deteriorating by using her lullabies to maintain open and lasting communication. The infant is raised as a single, cohesive body without becoming alien to its mother in this way.

The Mother-Baby Relationship and How Lullabies Affect It

Typically, lullabies are sung in quatrains and take the shape of ballads. Nevertheless, there are numerous other types in addition to quatrains. The rhymes and repetitions at the conclusion of each line are also harmonious, as they are typically performed with the goal of lulling toddlers to sleep. The mother can alter the lullaby's expressions in different ways based on the babies' moods. For example, the mother's tone may become higher when the babies insist on not sleeping, and it may become lower when the newborns initiate sleeping positions.

The infant understands the message and responds as instructed in each scenario. By improvising and drawing inspiration from her life experiences, the mother performs the lullaby verses. In the relevant lines, the mother occasionally makes references to her husband, mother-in-law, wars, natural disasters, her joys and sorrows, etc. By telling the infant all of these things, the mother is essentially conversing with it and conveying to it everything that happens during the day. The mother revealing what makes her happy or sad in a genuine and heartfelt way is the true cause of the children's emotional reactions to the expressions in the lullabies. The infant can so follow daily events based on what it hears and has a profound sense of its mother's mood. Actually, the kid occupies a position in society even while it is still inside its mother's womb. When a baby is inside their mother's womb, they may sense the tension and love in the outside world.

As it has been mentioned above, the kid and mother share a biological and psychological link that begins during the mother's pregnancy. Hormones generated throughout the prenatal and extremely close to birth periods help to create this strong link. The proper hormones are helping to enhance the relationship between the mother and the infant and to emphasize the sense of motherhood that still exists.

The relationship between a mother and her child grows so strong and deep that the mother can distinguish her baby's voice among tens of other screaming newborns and senses that her baby is growing hungry due to the excruciating discomfort she experiences all over her breasts. Similarly, the infant can identify its mother's voice and aroma among tens of women, and it can only be calmed when it cries by hearing its mother's voice.

Due to the fact that the youngster is accustomed to hearing the mother's voice. Because of the constant communication that occurs throughout the prenatal stage, babies are able to distinguish their mother's voice even while they are still inside her. This indicates that infants can hear their mother's voice prior to birth. But because of the demanding work environments in their businesses, moms today are unable to dedicate adequate time to their kids. Mothers are in no physical or mental state to spend time with their children after a long day at work. Babies grow growing apart from their mothers due to the challenging circumstances of the commercial world.

Recent scientific studies have revealed that infants can hear their surroundings even while still within their mothers' wombs and respond appropriately. According to a statement, "Babies' ears begin to form around the eighth week, even though they are completely nonfunctional." By the 18th week, babies begin to hear what is going on outside, but by the 32nd week, they begin to respond to what they hear.

Another report states that newborns begin to hear around the 25th week of pregnancy. Despite the fact that there are different opinions regarding when babies begin to hear and react, there is a widely accepted belief that babies begin to hear while still inside their mothers. Therefore, during this prenatal stage, the mother's communication with the unborn child—including speaking to it, singing lullabies, and using kind words—is crucial to the child's emotional development.

The infant will suffer if there are arguments or foul language in the household, therefore parents should be very cautious during this time and make a concerted effort to avoid having arguments or using foul language. Knowing this, educators begin the child's education even when the mother is still in the womb. Considering the functions of intelligence, it has been determined that there is a six-month difference between babies who receive education and those who do not at the conclusion of the prenatal education period. In the wake of 19th-century investigations, it was determined that infants could hear the world outside the womb.

The custom of singing lullabies, on the other hand, has been serving the same purpose for millennia and has its roots in our own society. Since lullabies have been used to communicate with children for generations, this fact serves as proof of the importance of the singing lullabies related to the special custom and culture.

To sum up, we might state that lullabies are the heart of cultural heritage that are too valuable to ignore. Last but not the least, it is important to remember that lullaby-telling is a relatively new and highly successful approach to teaching youngsters.

References:

1. The Journal of International Social Research Volume 1/5 Fall 2008.
2. Gloria Frender, Learning To Learn: Strengthening Study Skills and Brain Power, G. 1990.

3. Gunesh Firdevs, Effects of Lullabies on Linguistic and Mental Development of Children, Vol. 2, No. 3, 2010.
4. Hebb Donald O.The Role of Neurological Ideas in Psychology, Journal of Personality, Sep51, Vol. 20 Issue 1.
5. Sprenger M.B. Becoming a "Wiz" at Brain-Based Teaching. Thousand Oaks, 2002.

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Ibragimova Z.Yu.
Jeymuratov E.B.
Kurbanbaeva Z.K.
Mambetova R.P.
Qoraqalpog'iston qishlok xo'jaligi va agrotexnologiyalar institute

QORAQALPOG'ISTON RESPUBLIKASI SHAROITIDA YOG'OCHLASHGAN BARGSIZ QALAMCHALARDAN NAVDOR TUT KO'CHATLARINI ETISHTIRISH VA SHAKL BERISH TARTIBI

Annotatsiya: *Hozirgi kunda dolzarb masalalardan biri Respublikamiz hududida tutning sifatli va navdor barg beradigan navlarni yaratish, yangi intensiv tutzorlar tashkil etish, ularni ishlab chiqarishiga bosqichma-bosqich tavsiya etish va ularni tashqi muhit sharoitiga chidamlilik, hamda ozuqaboplik xususiyatlarini ilmiy tomonidan o'rganish hisoblanadi. Bargsiz qalamchalarning ko'karishi uchun qalamcha tayyorlashga mo'ljallangan ona tutzorni tashkil etish, novdalarni halqalash, qalamchalarni tayyorlash va ularni ekishga saqlash, ekish muddati va usuli hamda o'sish davrida parvarish qilish darajasi ta`minlanishi shart*

Kalit so'zlar: *tut daraxti, Sovuqqa chidamli, Jarariq-7, Qishki -1, Mankent, Pioner, O'zbekiston, Tojikiston urug'siz tuti (qiyoslovchi).*

Ibragimova Z.Yu.
Jeymuratov E.B.
Kurbanbaeva Z.K.
Mambetova R.P.
Karakalpakstan Institute
of Agriculture and Agrotechnologies

PROCEDURE FOR PROCEDURE AND SHAPING OF FERTILIZED MULBERRY SEEDLINGS FROM LEAFLESS CUTTINGS GROWN IN THE REPUBLIC OF KARAKALPAKSTAN

Abstract: *Currently, one of the urgent issues is the creation of high-quality and fertile varieties of mulberry in the territory of our Republic, the establishment of new intensive mulberry plantations, the step-by-step recommendation for their production, and the scientific study of their resistance to external environmental conditions and nutritional properties. In order to grow leafless cuttings, it is necessary to establish a mother plant intended for preparation of cuttings, ringing of branches, preparation of cuttings and their storage for planting, the period and method of planting, and the level of care during the growth period.*

Key words: *mulberry tree, Cold-resistant, Jarariq-7, Winter-1, Mankent, Pioner, Uzbekistan, Tajikistan seedless mulberry (comparative).*

KIRISh

Dunyoning ipakchilik ilm-fani rivojlangan etakchi davlatlari ilmiy muassasalarida tutning genetik resurslaridan oqilona foydalangan holda in-vitro (molekulyar-genetika) va payvandlash selektsiya uslubiyotlaridan samarali foydalanib, tutning serhosil, to'yimliligi yuqori, turli iqlim sharoitlariga mos yangi navlarini yaratish va ular asosida intensiv hamda buta tutzorlar tashkil etish borasida ilmiy-tadqiqot ishlari olib borilmoqda. Tadqiq etilgan selektsiya ishlar natijasida kimyoviy tarkibi ipak qurtlari boqishga mos, turli ekstremal iqlim sharoitlariga to'g'ri keladigan tut navlari yaratishga erishilmoqda [1].

Tut daraxti qiyin ildiz oladigan o'simlikdir. Shunga ko'ra, qalamchalarning ildiz olishi tut daraxtlarining turi, tarkibi va navdorlik xususiyatlari ona o'simliklarning yoshi va ularning biologik xususiyatlariga bog'liq bo'ladi [2]. O'tgan asrning 50-yillarida K.Raxmonberdiev halqalangan tut qalamchalaridan tut ko'chatlarini ko'paytirish bo'yicha ilmiy ish olib borgan. Tutning yog'ochlashgan qalamchalari odatda bir yillik novdalaridan tayyorlanib, ularning o'sishi ancha oldin tezlashadi va to'qimalari yaxshi etilgan bo'ladi. Shunga o'xshash regeneratsiya (qayta tiklanish) (U.Abdullaev) jarayoni qalamcha uchun kesiladigan novdalarning o'sish tezligi va uning davomiyligini belgilash muallif tomonidan ilmiy-tadqiqot ishlarida o'tkazilgan. 1951 yildan boshlab, Toshkent qishloq xo'jalik instituti, hozirgi Toshkent davlat agrar universiteti professori K.Raxmonberdiev tomonidan tutni bargsiz qalamchasini o'stirish ustida tajriba olib borilib, ijobiy natijalarga erishilganligini o'tkazilgan tadqiqot ishlarida isbotlab bergan. 1959-1960 yildan boshlab, qalamcha tayyorlashga mo'ljallangan ona daraxt novdalarining oldindan halqalanib qo'yilishi qalamchaning ko'karishiga ijobiy ta`sir etishi aniqlandi. Bargsiz qalamchalarning ko'karishi uchun qalamcha tayyorlashga mo'ljallangan ona tutzorni tashkil etish, novdalarni halqalash, qalamchalarni tayyorlash va ularni ekishga saqlash, ekish muddati va usuli hamda o'sish davrida parvarish qilish darajasi ta`minlanishi shart. K.Raxmonberdievning ko'p yillik tajribasiga asoslanib, shuni aytish mumkinki, ona tut qalamchasidan o'stirilgan bo'lsa, undan kesib olingan qalamcha ham 80-100 % gacha ko'karishi mumkinligini aniqlagan. I.V.Michurinning (1950 y) ko'rsatishicha niholdan qalamcha olinib, ekilganda katta daraxt kesilsa, yangi o'sgan novdalar yovvoyi bo'lmay, aksincha, ushbu daraxtning o'suv holatini qaytaradi va madaniy belgi xususiyatiga ega bo'ladi. Binobarin, tutda ham ona ko'chat qalamchadan o'stirilgan bo'lsa, undan tayyorlangan qalamcha ekilgan taqdirda ko'chat ona nasliga tortishi va sifati yaxshilanishini isbotlab bergan [3-4-5].

Qorakalpog'iston Respublikasi sharoitida shox-shabbasi shakllanmagan va o'z ildiziga ega bo'lgan tut ko'chatlarining ikkinchi yilgi ko'chatlar bo'limida rivojlanishini o'rganish maqsadida tut ko'chatlarining bo'yi,tanasining yo'g'onligi va tanadan o'sib chiqqan navdalarining yo'g'onligi va uzunligi kabi ko'rsatkichlarning rivojlanishi borasida tadqiqotlar olib borildi.

1-jadval

Qorakalpog'iston Respublikasi sharoitida halqalanmagan va halqalangan qalamchalarni ekish usuliga qarab ko'karishi va o'sish darajasining ko'rsatkichlari. (2020-2021 yy.)

Ekish usullari	Ekilgan qalamchalar soni			Bir yillik novdasining o'rtacha uzunligi, sm
	Hammasi	Shundan ko'kargani		
		Dona hisobida	% hisobida	
Halqalanmagan qalamchalar				
Yotqizib (gorizontal) ekilgan qalamchalar	300	123	61,5	212
45^0 da qiyalikda ekilgan qalamchalar	220	82	32,9	175
Halqalangan qalamchalar				
Yotqizib (gorizontal) ekilgan qalamchalar	300	270	90.0	291
45^0S da qiyalikda ekilgan qalamchalar	250	165	66	278

Ushbu jadval orqali shuni aytish mumkinki halqalanmagan va halqalangan qalamchalar 45 ^{0} S qiyalikda ekilganga nisbatan yotqizib ekilganda ildiz olish darajasi 1,4-1,9 % ga yuqori bo'lgan. Shuningdek, novdaning qalamcha tayyorlash uchun foydalanadigan qismi evaziga novdalarga halqa solish soni ham kamayadi, bularning hammasi ona buta tutlardagi novdalarni siyraklashtirish,ya`ni 4-5 tadan novda qoldirish yo'li bilan gektar boshiga ko'p miqdorda diametri 20 mm dan kam bo'lmagan halqalangan qalamchalar olishga erishish mumkinligini tasdiqlaydi. Demak, novdaning foydali qismi diametri 1 sm dan kam bo'lmaganligi lozim bo'lib, bir yillik novdaning kuchliligi asosining yo'g'onligiga qarab belgilanadi. Bunday sharoitda novdaning 1 sm ga to'g'ri keladigan yo'g'onligi uning eng yuqori qismiga to'g'ri kelishi kerakligi va ona tut daraxtlari har yili ko'klamda fevralь oyining ikkinchi yarmida, mart oyining boshlarida qalamchalar tayyorlash maqsadida kesiladi.

2-jadval

Qorakalpog'iston Respublikasi sharoitida shox-shabbasi shakllanmagan va o'z ildiziga ega bo'lgan tut ko'chatlarining ikkinchi yilgi ko'chatlar bo'limida rivojlanishi (2020-2021 yil)

Tut navlarini nomi	Ko'chatning bo'yi, sm	Tanasining yo'g'onligi		Nazoratga nisbatan %	Novdalar	
		Asosidan mm M±m	120 sm baland-likda mm M±m		Yo'g'on-ligi, mm M±m	Uzunligi sm, M±m
Pioner	384,4	31,4± 1,129	22,2 ± 0,733	152,0	15,9 ± 0,351	264± 5,38
O'zbekiston	349,6	30,3 ± 1,411	20,1 ± 0,808	137,6	15,6± 0,374	228,6 ± 5,28

Tojikiston urug'siz tuti (qiyoslovchi)	258,0	24,1 ± 0,436	14,6 ± 0,323	100,0	10,2± 0,214	137,6 ± 2,64

Etishtirilgan qalamchadan o'stirilgan ko'chatlar urug'idan etishtirilgan ko'chatlarga o'xshash tarzda kuzda xazonrezgilikdan so'ng yoki erta ko'klamda shira harakati yurishmasdan maxsus qishloq xo'jalik traktorlari va qazish pluglarida 35-40 sm chuqurlikda qazib olinadi. Ko'chatlarni qazib olishdan 7-12 kun oldin ko'chatzor engil sug'oriladi. Qazilgan qalamchadan unib chiqqan ko'chatlarni xillash oldidan yotqizib ekilganlari 2-3 sm joyidan ildizlari qirqiladi.

Bunda, har bir ko'chatning novdasi va ildizlari bo'lishi kerak. Shu [ilda tayyorlangan ko'chatlar O'zDST №1027-2002 Davlat standartlariga muvofiq I.II.III navlarga ajratilib, tuproqqa ko'mishdan oldin chuqurga tashlanib, kasallik va zararkunandalarga qarshi dorilanadi va fumigatsiya qilinadi hamda tuproq va qumni aralashtirgan holda ko'mib qo'yiladi. Bunda qalamchadan navdor tut ko'chatlarini ko'paytirishning iqtisodiy afzalligini aniqlash uchun ularni oziqalik sifati yuqori bo'lgan ko'chatlarni payvandlash orqali ko'paytirish usuli bilan taqqoslash to'g'ri bo'ladi.

Tajriba natijalari: Tadqiqot Qoraqalpog'iston Respublikasi Xo'jayli tumani "Agro Pilla" MChJ ga qarashli "Sartbay Pirniyozov" fermer xo'jaligida 2019-2021 yillarda tut ko'chatini qalamchasidan etishtirishda yuqorida bayon qilinganlardan tashqari egat bilan egat oralig'i 4 metr egat pastki qismining kengligi 70-75 sm (namlikni yaxshi saqlash maqsadida egatlarning uzunligi 20-25 metrdan) sug'orishni tekis olib borish uchun bo'lib chiqildi. Egatning usti ketmon yordamida 7-10 sm chuqurlikda ariqchalar qilinib, ana shu ariqchalarga 5-7 sm chuqurlikka 30-40 sm uzunlikdagi qalamchalar yotqizib ekib chiqildi. Tuproq namligiga qarab,ya`ni tuproq quruq bo'lsa ertasi kuni, agar tuproq namligi 70-75 % bo'lsa 2-3 kundan keyin egatlarga jildiratib suv yuborildi.

Qoraqalpog'iston Respublikasi sharoitida egatni bostirib sug'ormaslik kerak, aks holda egat usti qatqaloq bo'lib, suvning parlanishi natijasida tuproqning pastki qismi ortiqcha issiq harorat tashkil qilib, qalamcha ildizi va kurtagi chirib ko'karmay qoladi.

Har haftada ketmon yordamida egat atrofi chopiq qilinishi kerak bo'lib, chopiqning yana bir afzallik tomoni, begona o'tlarning ildiz olishga to'sqinlik qilib, ularning unib chiqishini batamom to'xtatib qo'yadi.

3-jadval

Ekilgan qalamchalarni o’sishi va hayotchanlik ko’rsatkichlarini nisbati (2019-2020 yy.)

№	Qalamchalar olingan navlar va duragay nomi	Ekilgan qalamchalar, dona	Unib chiqqan qalamchalar, dona	Unuvchanlik, %	Nazoratga nisbatan, %	Pd
1	Sovuqqa chidamli	100	77±1,87	77±1,81	423,0±2,92	0,992
2	Jarariq-7	100	85±1,95	85±1,94	500,0±3,21	0,998
3	Qishki -1	100	72±1,83	72±1,89	453,0±2,94	0,999
4	Mankent	100	53±1,61	53±1,74	311,0±1,14	0,989
5	Tojikiston urug’siz tuti (qiyoslovchi)	100	17±1,21	17±1,19	100,0±1,021	-

O’zaro natijalarni taqqoslaganimizda, kuzatuv (nazorat) sifatida ekilgan halqalanmagan tut qalamchasiga nisbatan halqalangan tut qalamchasidan unib chiqqan ko’chatlar 4-5 marta ortiq unib chiqishiga erishildi.

Tajribalarni kuzatganimizda, Pioner navi uch barobar ortiq unib chiqdi. Navlar bo’yicha qalamchadan tut ko’chatlarining unib chiqishi ham har xil ko’rsatkichga ega bo’ldi. Jarariq-7 ertagi, Sovuqqa chidamli o’rtagi va Qishki-1 kechki unuvchanlikka erishdi. Buni quyidagi jadvalda kuzatishimiz mumkin.

4-jadval

Tajribada ekilgan qalamchalarni unib chiqish muddatlari (2019 -2020 yy.)

№	Tut navlari va duragay nomi	Tuproq ustida unib chiqishi (kun, oy, yil)		Baholash
1	Sovuqqa chidamli	15.05.2019	25.05.2019	O’rtagi
2	Jarariq-7	12.05.2019	21.05.2019	Ertagi
3	Qishki -1	14.05.2019	24.05.2019	O’rtagi
4	Mankent	16.05.2019	28.05.2019	Kechki
5	Tojikiston urug’siz tuti (qiyoslovchi)	20.05.2019	30.05.2019	Kechki

Natijalardan qo’rinib turibdiki, halqalangan tut qalamchasining tez va sifatli hosil qilishiga, takror aytilgan so’zlar bo’lsa ham eng avvalo tayyorlangan qalamchalarning bir yillik novdalarni qaysi qismidan va qaysi tut navlari yoki duragaylardan tayyorlanganligiga ham bog’liq hisoblanadi.

5-jadval.

Tut navlarni vegetatsiya davri yakuni bo'yicha taqqoslash

(2019 -2020 yy.)

№	Tut navlari va duragay nomi	O'simlikning o'rtacha uzunligi, sm	Ildiz bo'g'zining yo'g'onligi, sm	Har bir o'simlikda barg soni, dona	**Pd**
1	Sovuqqa chidamli	251±2,95	1,89±0,04	83,3±1,18	**0,991**
2	Jarariq-7	252±2,98	1,94±0,06	63,0±1,14	**0,994**
3	Qishki -1	242±2,84	1,97±0,09	69,1±1,15	**0,987**
4	Mankent	243±2,86	2,01±0,11	54,0±1,11	**0,986**
5	Tojikiston urug'siz tuti (qiyoslovchi)	121±2,27	1,31±0,01	37,0±1,01	**-**

Xulosa. Qoraqalpog'iston Respublikasining ekstremal shart-sharoiti uchun qalamchalarni halqalash usulida ekilgan har 100 dona qalamchalardan 72-85 dona qalamchalar unib chiqishini ta`minlash mumkinligi aniqlandi.

Foydalanilgan adabiyotlar

1. Alekseychenko N.A., Babaeva G.I., Nadkernichna E.V., Bulatova Yu.O. Vliyanie mikrobiologicheskix udobreniy na razvitie novых vыsokoproduktivnых sortov shelkovitsы. //«Ipakchilik sohasidagi dolzarb muammolar echimining ilmiy asoslari». «Fan». –Tashkent. 2004. – S. 291-294.
2. Abdullaev U. Tutchilik. - Toshkent: Mehnat, 1991. 7-9-b.
3. Azimov E., Bekkamov Ch.I., Mirzaeva Yo.Ya., Rajabov N.O. Tutchilikda dala tajribasini o'tkazish.//Zooveterinariya, №3. – Toshkent, 2016.-B. 27-28.
4. Bekkamov Ch.I., Mirzaeva Yo.Ya., Haydaraliev J.R., Ravshanova S.A. Tutchilikni jadal rivojlantirishda mikroklonlashtirishni takomillashtirish va undan foydalanishning istiqbollari.//O'zbekiston agrar fani xabarnomasi, №4(74). – Toshkent, 2018. –B.82-85.
5. Z.Yu.Ibragimova, G.A. Asenbayeva, E.B. Jiemuratov. General information about mulberry and ways of its reproduction. JMEA Journal of Modern Educational Achievements 2023, Volume 5, P. 502-508

Ibroimov Sh.I.
Associate Professor
of the Department of Geography
Faculty of Natural Sciences
Chirchik State Pedagogical University

RELIEF STRUCTURE AND RECLAMATION MEASURES OF THE CURRENT AMUDARYA DELTA

***Abstract**: The article describes the practical application of the method of relief plasticity in the study of the spatial order of the delta, the founders of the basin concept, the sequence of studies, the periods of study of scientists who contributed to the basin concept, the relief structure of the current Amudarya and land reclamation.*

***Key words:** tree, structure, delta, branching, elongation, landscape, component, reclamation, ecology.*

The practical application of the relief plastic method can create certain conditions for studying the spatial arrangement of the delta surface. The spatial arrangement of the delta requires several criteria, that is, the small deltas are part of the large delta (the Amudarya), which forms a certain whole. If we consider any small delta as a geosystem, it has its starting point, middle and lower parts. " forms a single whole with the shape. The starting point of the Amudarya river delta is located near the city of Tachyotosh, and the lower part of the delta ends at the shores of the Aral Sea. The starting point of the Erkindarya small delta is located around the village of Parlitau, and the middle part is located between the mountains of Kuskanatau and Itkir. The only parts of the system differ from each other in their internal structure, that is, in the angles between the two currents located at the point of divergence.

When studying the integrity or integrity of the delta, it is very important to study its structure, that is, its internal structure. By structure, we understand the interrelationship and relationship of elements in the system, that is, the concept of element plays a key role here. Academician B.B. Polinov understood that the elements of the landscape mean that one type of soil is found in a certain place, that is, in a certain elemental landscape group. In other words, the soil type is directly related to the relief element. [4,6]

Determining the structure, in turn, requires knowledge of geometric laws. This process is clear to all of us. What is meant is that any scientific knowledge moves from the concrete, from what exists to the general, the abstract. For example, from landscape shell (actually existing) to landscape space (abstract concept). A geographer can study primarily the structure of the landscape space (simplified model), that is, he does not study all the complexity of the landscape shell. That is why the geographer gives up so many parameters, that is, they leave the most desirable parameters. A special role is played in the study of the landscape shell by geometrical forms, i.e., the representation of the natural forms of elementary landscapes in the form of straight lines or triangles. A deep study of such forms requires the application of mathematical methods to geography. This learning process leads the geographer to a more scientific, geometric way of thinking. Based on these basic rules, our geographers first describe the geometric structure of landscapes on maps, and then determine the material composition of soils, sediments and groundwater in these structures [1]. At the first stage of knowledge, without paying attention to the material composition of landscapes, only their geometrical forms are described, and then the relationship of these forms to each other, in other words, their structure, is studied.

V.M. Friedland, I.N. Stepanov, the concept of the landscape structure is very close to the concept of the structure of elements in mathematics. From this point of view, we can consider the current Amudarya delta as a geosystem covering small deltas, and this system has the following characteristics:

1) Amudarya delta as a geosystem consists of elements, that is, small deltas;

2) Small deltas in this geosystem also form their own "tree-like" structure, but on a smaller scale;

3) Each small delta has a starting point, dividing points, middle and lower parts;

4) There is a similarity between the changes in the material composition of the Amudarya delta and the changes in its parts, Kazogdarya, Shortonbay and other small deltas.

If we pay attention to the relief plastic map of the Amudarya delta, we can distinguish several small deltas (Erkindarya, Kazakdarya, etc.). Lower parts of surface water streams with different directions serve as borders of small deltas. Small deltas, in turn, have a starting point of formation and an internal structure. From the initial part of the small deltas to the final part, the natural-ameliorative conditions change based on a certain law, that is, the mechanical composition of the soil becomes heavier, the level of mineralization of groundwater and soil salinity increases, etc. Therefore, showing small deltas on the maps in the form of a "branch" and depicting their internal structure in a natural state gives a clear idea of the directions of the surface water flow and the changes in the structure of soil and groundwater. [7]

Inter-river depressions and junctions of inland surface water streams with different directions are sharply distinguished by their natural and meliorative conditions. Due to the confluence of liquid and solid streams in such lands, the soils are highly saline. The "tree-like" structure of deltas plays a major role in determining the geometric forms of the soil cover. Based on this method, one of the most important criteria is geometric similarities, that is, the similarity of "tree-like" shapes in objects. Therefore, it is important to study land cover patterns, which in turn requires examining the relative similarity of land cover systems.

If the geometric forms of two objects are similar, their content, that is, the mechanical composition of soil, groundwater, plants, and nanos, will also be similar. If we study well from these objects and plant various crops as a result of its development in agriculture, then it is natural that specific geographical processes will take place in this massif. After several years, if we acquire the second facility, we can take into account the negative and positive results that occurred as a result of the acquisition of the first facility, and this in turn can lead to huge savings and great achievements. The exact similarity between these two objects is that they are geometrically "tree-shaped".[12]

Small deltas of the current Amudarya delta, Shortonboy, Kizketken-Chimboy, differ from each other in their internal structures. The Shortonboy delta is characterized by a structure with an "extensive" structure. The Kizketken-Chimboy delta is characterized by an "extended" structure. It is important that deltas have such forms

is related to the stage of development and forces of currents. In the formation of the Shortonboy delta, the currents were strong and powerful, but in the second delta, the speed and power of the currents were not enough to create an "stretchy" structure. We can know this from the angles between the two streams located at the "branching" points: the angle is equal to 200-250 in the Shu'rtonboy delta, and 40^0-45^0 in the Kizketken-Chimboy delta.

The variety of angles also affects the land reclamation in these deltas. Due to the good slope of the terrain in the Shortonboy delta, the flow of ditch water is also good. As a result of studying the melioration conditions of these small deltas, we can determine that there is a difference between the soil and gunt water in these deltas. Salt balances in the Shortonboy delta are positive, that is, the soils are mostly non-saline and low salinity, while in the Kizketken-Chimboy delta, the salt balances are negative, they are mostly moderately and strongly saline.[5]

In each small delta, the change of natural-ameliorative conditions based on a certain law is primarily related to surface water flows. In the initial parts of deltas, soils with light mechanical composition dominate, while in the lower parts, on the contrary, soils with heavy composition prevail. Thus, the study of the internal structure of pedosystems through geometric shapes can be the basis for predicting the most basic properties of soils. That is why it is necessary to pay great attention to the description of the structure of the earth's surface on relief plastic cards, to show their "idealized" forms, and to study them in the work of investigating the natural-reclamation conditions.

It should be noted that the two elements of the relief shown on the basis of the relief plastic method, which are elevations and depressions, are called the main contours. Some experts are opposed to calling these contours basic, they are mainly reclamationists. They try to prove their point as follows, that while the reserve is taking over the land, the relief is flattened and loses its characteristics. But the thematic maps compiled during our research show that the mesoforms of the earth's surface are preserved while flattening the land. For example, there are heights located along the riverbeds of Erkindaryo, Shortonboy and others. Before creating the thematic maps, drawing up the relief plasticity and taking this map as a basis can serve as a basis for studying the relationship between the relief and landscape components on the one hand, and on the other hand, it serves as a basic map for reclamation workers.

References

1. Борсук О.А. Системый подход к анализу речных сетей //Вопр-геогр., М.: Мысл, 1975.-сб.98-с.107-113

2. Глушков В.Г. Географо-гидрологический метод // Изв. Гост. Гидрол. Ин-та.-1933.-№57-58.-С.5-9

3. Корытный Л.М. Речной бассейн как геосистема // Докл. Ин-та геогр. Сибир и Дальнего Вастока.-1974-Вып.42 стр.33-38

4. Корытный Л.М. Бассейновая концепция в априродопользовании.- Иркутск: Изд-во Ин-та географии СО РАН, 2001-164 стр.

5. Корытный Л.М. Бассейновая концепция: от гидрологии к природопользованию // География и природные ресурсы.-2017. №2

6. Мильков Ф.Н. Парагенитические ланшафтные комплексы // Научные записки Воронежского отдела ГО ССР.- Воронеж: Изд-во Воронежского университета, 1966.- Стр. 3-7

7. Полынов Б.Б. Учение о ланшафтах. Избранные труда.-М.: Изд-во АН СССР, 1956.-751 стр.

8. ИБРОИМОВ, Ш. (2024). АМУДАРЁ ХОЗИРГИ ДЕЛЬТАСИ КОЛЛЕКТОР ХАВЗАЛАРИДАГИ ПАРАГЕНЕТИК ЛАНДШАФТ КОМПЛЕКСЛАРИ ВА УЛАРНИНГ ТАБИИ МЕЛИОРАТИВ ШАРОИТИ. УзМУ Хабарлари, 3 (3, 1), 229-233.

9. Sherzod IBROIMOV. (2024). PARAGENETIC LANDSCAPE COMPLEXES OF RESERVOIR BASINS OF THE MODERN AMU DARYA DELTA AND THEIR NATURAL AND AMELIORATIVE CONDITIONS. *News of the NUUz*, *3*(3.1), 229-233. https://doi.org/10.69617/uzmu.v3i3.1.1780

10. Уразбаев А.К. системная организация природного-мелиоративных условий современной дельты: Автореферат диссерт. На соиск. Уч. Степени док. Геогр. Наук- Ташкент.2002-48 стр.

11. TABIIY GEOGRAFIK FANLAR TIZIMIDAGI HAVZAVIY USUL VA UNING TABIAT KOMPONENTLARINING O‘ZARO ALOQADORLIGINI TADQIQ QILISHDAGI ROLI. (2024). Konferensiyalar | Conferences, 1(11), 63-67. https://www.uzresearchers.com/index.php/Conferences/article/view/3013

12. Sherzod IBROIMOV. (2024). ПАРАГЕНЕТИЧЕСКИЕ ЛАНДШАФТНЫЕ КОМПЛЕКСЫ БАССЕЙНОВ КОЛЛЕКТОРОВ СОВРЕМЕННОЙ ДЕЛЬТЫ АМУДАРЬИ И ИХ ПРИРОДНО-МЕЛИОРАТИВНЫЕ УСЛОВИЯ. Вестник УзМУ, 3(3.1), 229-233. https://doi.org/10.69617/uzmu.v3i3.1.1780

Ikramova Z.A.
Toshkent pediatriya tibbiyot institute

AZOT MONOOKSIDINING FIZIOLOGIK VAZIFALARI

Annotatsiya. *Tabiatda NO momaqaldiroq hisobiga chaqmoq paydo bo'lganda hosil bo'ladi. Yoqilg'ilarning yonishi azot oksidining 90% miqdori NO ga, 10% miqdori* NO_2 *ga aylanadi. Kimyoviy jarayonlar natijasida ning oz miqdori* N_2O *ga aylanadi. Shirin ta'mga ega bo'lgan ushbu gaz og'riqni sezish xislari kamayishiga va xushni yoqotishga olib keladi. Shu xususiyatlaridan foydalanib, uning kislorod bilan aralashmasi 80%* N_2O*+20%* O_2 *tibbiyotda narkoz sifatida foydalaniladi. Izlanishlanishlar natijasiga ko'ra azot oksidi organizmning turli organ va to'qimalarida hosil bo'lib, quyidagi moddalar tarkibiga kiradi: endoteliotsitlar, epiteliotsitlar, mezangiotsitlar va boshqalar.*

Kalt so'zlar. *Azot oksidlari, azot qo'sh oksid, fiziologik faol moddalar, endoteliotsitlar, epiteliotsitlar, mezangiotsitlar.*

Ikramova Z.A.
Tashkent Pediatric Medical Institute

PHYSIOLOGICAL FUNCTIONS OF NITROGEN MONOXIDE

Annotation. *In nature, nitrogen monoxide is formed by electrical discharges during thunderstorms. When burning fuels, 90% NO is formed, 10% is converted to* NO_2*. In chemical processes, part of the NO is converted into* N_2O*. This is laughing gas with a sweet taste; when used, a person loses consciousness and the feeling of pain is reduced. Taking advantage of these properties, a mixture containing 80%* N_2O *+ 20%* O_2 *is used in medicine as anesthesia. According to research results, the resulting nitric oxide in the body is contained in such compounds as: endothelial cells, epitheliocytes, mesangioscites and others.*

Key words. *Nitric oxides, nitric oxide, physiologically active substances, endothelial cells, epithelial cells, mesangiocytes.*

Hozirgi kunda azot (II) oksidi xossa va xususiyatlarini o'rganishga katta e'tibor qaratilmoqda. U odam organizmida neyromediator vazifasini bajaradi, silliq mushaklarni bo'shashtiradi. Shu kabi ma'lumotlarni chuqur o'rganish natijasida tibbiyotda qo'llanilishi mumkin bo'lgan holatlari ustida izlanishlar olib borilmoqda.

Azot oksidlari — azotning kislorod bilan hosil qilgan birikmalari bo'lib, bu reaksiya issiqlik yutilishi bilan boradi. Ba'zi azot oksidlari termodinamik jihatdan beqaror. Azot kislorod bilan quyidagicha oksidlarni hosil qiladi: N_2O- azot (I) oksidi NO - azot (II) oksidi, N_2O_3 azot (III)-oksid, azot, NO_2 - azot (IV)-oksidi, azot qo'sh oksid - N_2O_4 va azot (V)-oksid - N_2O_5. Azot (1) oksidi N_2O —

rangsiz, u kulduruvchi gaz bo‘lib tibbiyotda narkoz vazifasida ishlatiladi, xushbo‘y shirinroq gaz, suvda oz miqdorda eriydi; kislota, ishqor va suv bilan birikmalar hosil qilmaydi; yuqori (900°) haroratda azot bilan kislorodga ajraladi, havo bilan aralashmasi tibbiyotda narkoz sifatida ishlatiladi. Azot (N)-oksid NO — rangsiz gaz, suvda kam eriy-di, havodagi kislorod bilan oksidlanib, azot (IV)-oksidga aylanadi; birikish reaksiyalariga kirishadi; nitrat kis-lota ishlab chiqarishda asosiy oraliq mahsulot hisoblanadi. Azot oksidi ammiakni katalitik oksidlash yoki azot bilan kislorod aralashmasini Volt yoyidan o‘tkazish orqali olinadi. Azot (III)-oksid N_2O_3 — qo‘ng‘ir tusli gaz, kondensatlanganida ko‘k tusli suyuqlikka aylanadi; suv bilan birikib, nitrit kis-lota (HNO_2) hosil qiladi. Azot (II)- va (1V)-oksidlar aralashmasini sovitish natijasida hosil bo‘ladi; beqaror modda. Azot (IV)-oksid NO_2 — qo‘ng‘ir rangli gaz, suv bilan birikib, nitrat kislota (HNO_3) va nitrit kislota hosil qiladi. U kuchli oksidlovchi, raketaning suyuq yonilg‘isini oksidlash, organik moddalarni nitrolash uchun ishlatiladi. Azot qo‘sh oksid N_2O_4 va azot (U)-oksid N_2O_5 — rangsiz kristall modda. Amalda deyarli ishlatilmaydi. Azot oksidlari fiziologik faol moddalardir.

Erkin holda azot monooksidi rangsiz, hidsiz gaz bo‘lib reaksion qobiliyati sust. Uning molekulyar massasi 30,01g/mol, suvda eruvchanligi -74 $см^3/дм^3$, nur sindirish ko‘rsatkichi - 1,0002697, suyuqlanish harorati -163,6 °C, qaynash harorati -151,7 °C. Fiziologik roli va ta’sir mexanizmiga ko‘ra NO keng ko‘lamdagi vazifalarni bajaradi, ularni jamlab uch turga bo‘lish mumkin: boshqaruvchanlikka ta’siri, himoya ta’siri, zararli ta’siri.

Tabiatda NO momaqaldiroq hisobiga chaqmoq paydo bo‘lganda hosil bo‘ladi. Yoqilg‘ilarning yonishi azot oksidining 90% miqdori NO ga, 10% miqdori NO_2 ga aylanadi. Kimyoviy jarayonlar natijasida NO ning oz miqdori N_2O ga aylanadi. Shirin ta’mga ega bo‘lgan ushbu gaz og‘riqni sezish xislari kamayishiga va xushni yoqotishga olib keladi. Shu xususiyatlaridan foydalanib, uning kislorod bilan aralashmasi 80% N_2O+20% O_2 tibbiyotda narkoz sifatida foydalaniladi. Izlanishlanishlar natijasiga ko‘ra azot oksidi organizmning turli organ va to‘qimalarida hosil bo‘ladi: endoteliotsitlar, epiteliotsitlar, mezangiotsitlar va boshqalar. Professor A.F. Vanin 1965 yilda biologik ob’yektlarda elektron paramagnet rezonans jihozi yordamida izlanishlar olib borib noma’lum tabiatli radikallarni aniqladi. Bu gepoteza 1985 yilda o‘z natijasini berdi va bu radikallar azot oksidiga tegishli ekani aniqlandi. F.Myuard azot oksidi ajralish jarayonini o‘rganib, nitroglitserin va boshqa shu kabi dorivor preparatlar ta’sirida ajralib chiqishini aniqladi. Organizmda azot monooksidi quyidagi jarayonda hosil bo‘ladi:

$$2L\text{-аргинин} + 3\text{НАДФН} + 4O_2 + 3H^+ \rightarrow 2L\text{-цитруллин} + 2NO + 3\text{НАДФ}^+ + 4H_2O$$

Tuzilishiga ko‘ra va joylashuviga ko‘ra NO- sintetazalarning (NOS) quyidagi turlari mavjud: cNOS, eNOS, nNOS, mNOS. nNOS molekulasi 1434 ta aminokislota qoldiqlaridan iborat. cNOS faolligi Ca^{2+} ionlarining konsentratsiyasiga bog‘liq.

Ferchgottu, L. Ignarro va F. Myuard fiziologiya va tibbiyot yo‘nalishlari bo‘yicha Nobel mukofotiga savzovor bo‘ldilar, bu mukofot yurak qon tomir sistemasida azot oksidining signal molekula vazifasida ishtirokini aniqlaganlari uchun berilgan.

Использованные источники:

1. Соколов А.В. Значимость определения нитритов в ротовой жидкости у здоровых людей. Фундаментальная медицина. 215-217 стр.
2. Гоженко А.И. и др. Почечные механизмы регуляции цикла оксида азота у белых крыс при нагрузке нитритом натрия. Нефрология 2005, т-9,97-100 стр.

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Ismadiyorova N.I.
Teacher
of the Uzbek language and literature department of ADPI
Dostlik street 4, Andijan city

THE METHOD OF USING INTERNATIONAL EXPERIENCES IN THE ORGANIZATION OF MOTHER TONGUE CLASSES BASED ON INTERNATIONAL RESEARCH

Annotatsiya. *Maqolada ona tili darslarini xalqaro tadqiqotlar asosida tashkil etishda xalqaro tajribalardan foydalanish, shuningdek, Finlandiya, Vetnam, Avstraliya mamlakatlarining o‘qitish usullarini o‘rganish haqida so‘z boradi. Ta’lim sifati yuqori bo‘lgan va xalqaro tadqiqotlarda yuqori natijalarga erishgan mamlakatlarning sohadagi xususiyatlari haqida ma’lumotlar keltirilgan.*

Kalit so‘z: *A.Shlyaxer, Finlandiya, Vetnam, Avstraliya ta’lim tizimi, D.Siddiqov, Finlandiya dars rejasi.*

Ismadiyorova N. I.
ADPI o‘zbek tili va adabiyoti kafedrasi o‘qituvchisi,

ONA TILI DARSLARINI XALQARO TADQIQOTLAR ASOSIDA TASHKIL ETISHDA XALQARO TAJRIBALARDAN FOYDALANISH METODIKASI

Abstract. *This article explores the application of international experience in organizing native language lessons based on global research, as well as examining teaching methodologies in Finland, Vietnam, and Australia. It presents information on the characteristics of countries that have achieved high-quality education and demonstrated exceptional results in international studies.*

Key words: *A. Schleicher, Finland, Vietnam, Australian education system, D. Siddikov, Finnish lesson plan.*

Kirish. Dunyoda xalqaro tadqiqotlar turli sohalar bo‘yicha amalga oshiriladi. Xususan, hozirgi davrda ta’lim sohasidagi xalqaro tadqiqotlar ham yangilik emas. Bunday xalqaro tadqiqotlar yosh tanlamaydi, ya’ni yosh bolalar uchun ham, o‘smirlar uchun ham, yoshi yuqori bo‘lgan insonlar uchun ham mo‘ljallangan. Xalqaro tadqiqotlarning o‘tkazilish tarixi XX asr o‘rtalariga borib taqaladi. O‘zbekiston xalqaro tadqiqotlarning boshlang‘ich sinf va o‘smirlar o‘rtasida amalga oshiriluvchi turida qatnashadi. Bunday xalqaro tadqiqotlarda qatnashish o‘quvchi shaxsini rivojlantirishga imkon beradi. O‘quvchi ijtimoiy hayotning bir bo‘lagi sifatida rivojlanadi. O‘rgangan bilimlarini amalda qo‘llay oladilar va maqsadli foydalanadilar. Hozirgi tez taraqqiy qilib borayotgan jahonda ta’limsiz muvaffaqiyatli natijaga erishib bo‘lmaydi. Shuning uchun ta’lim sohasida ko‘plab olg‘a siljishlar kuzatilmoqda. Buni Prezidentimiz Sh. M. Mirziyoyevning ta’limga III resennans sifatida baho berib, Taraqqiyot strategiyasining asosiy yo‘nalishi sifatida ta’limga e’tibor qaratayotganligidan bilish ham mumkin. Jumladan, yangi davlat ta’lim standarti va Milliy o`quv dasturining qabul qilinishi, Xalqaro baholash dasturlariga muvofiq keluvchi yangi darsliklarning yaratilishi ta’lim yangilanayotganining isbotidir. Shu o‘rinda o‘quvchilarning o‘qish savodxonligi – o‘qib tushunish, tinglab tushunish, gapirish, yozish ko‘nikmalarini rivojlantirish uchun yangi pedagogik mahorat darslari ham kerak bo‘lib, ushbu yo‘nalishda yangi pedagogik texnologiyalarning yaratilishi, dars ishlanmalari ishlab chiqilishi muhim hisoblanadi.

Andreas Shlyaxer o‘z nutqida quyidagi fikrlarni bayon qiladi: “O‘quv dasturlarining o‘zini o‘zgartirib qo‘yish bilan yuqori natija kutish mantiqqa to‘g‘ri kelmaydi. Buning uchun o‘qitish jarayonini, uning ishtirokchilari bo‘lgan o‘quvchilar va ularning ota-onalarining dunyoqarashini o‘zgartirish lozim[9].” Bunda o‘qituvchilar mahorati mahorati, bilim va saviyasining muntazam o‘sib borishi hal qiluvchi kuch kabi ahamiyat kasb etadi. Zero, biz o‘quvchilarni hozirgi zamon uchun emas, kelajak uchun tayyorlashimiz kerak.

Xususan, Vyetnam ta’lim tizimining o‘ziga xosliklarini o‘rganib, undan yaxshi amaliy natijalarni o‘zlashtirsak, bu foydadan holi bo‘lmaydi. Vyetnam maktablarida bir sinfda ko‘p bolalar ta’lim olishadi, bir sinfda 60-70 ta o‘quvchi ta’lim olganini guvohi bo‘ldim, bu ko‘rsatkich o‘rtacha 50 ta o‘quvchini tashkil etadi. Bu O‘zbekiston maktablarida o‘qitish samaradorligi sinfda bolalar ko‘p deb bahona qilinishga asos bo‘lmasligining isbotidir. Shunday sharoitda ishlab “Yil o‘qituvchi” unvonini qo‘lga kiritgan o‘zbek o‘qituvchisi o‘z metodlarini sanab o‘tadi. Ovoz- dars davomida o‘quvchilarni ohang bilan boshqarish, guruhlar bilan ishlash- guruhlarga bo‘ib, barcha harakat uchun baho berish, yomonlari uchun jarima baho, do‘stona munosabatlar- o‘quvchi yomon ko‘rgan o‘qituvchilaridan hech nima o‘rganolmaydi, bolaga bola bo‘lish, rag‘bat- albatta, bola o‘zining mehnatiga yarasha rag‘bat berilishi kerak, har bir bola e’tiborda- bunda hech bir o‘quvchi o‘zini sinfga begona his qilmasligi kerak, sinfda hamma bola o‘zlashtira olmaydi, lekin darsda qandaydir qobiliyatini namoyon qilishi kerak.[10] Vyetnamda o‘qituvchilar xonasiga kirilmaydi, hovlida o‘tiriladi, bu o‘quvchilarni o‘rganishga yordam beradi. O‘quvchilarni “qolip”dan chiqarish muhim, ularni fikrlashga o‘rgatish uchun kitobdan hayotga olib chiqib, mantiqiy mulohaza yuritishga zamin yaratish kerak. Hozirda Vyetnamda Kembrij ta’lim dasturiga muvofiq ta’lim beriladi. Bu dastur o‘quvchilarni darslikdan sug‘urib, hayotga olib chiqishga

[9] Shlyaxer A. Jahon miqyosidagi ta’lim. XXI asr maktab tizimini qanday barpo etmoq kerak? Muvaffaqiyatli islohotlar va yuqori natijalar – Toshkent: Zamin nashr, 2022. – 334 b.

[10] Siddiqov D. “Dars jarayonida o‘quvchilar bilan samarali ishlash usullari (Vyetnam tajribasi)”

mo‘ljallangan. Vyetnamda baholash tizimi 20 balli hisoblanib, 10 balli bilimi uchun va 10 balli xulqi uchun qo‘yiladi. Shuningdek, baho o‘qituvchi tomonidan qo‘yilmaydi, o‘quvchilarni baholash yordamchi o‘qituvchi tomonidan amalga oshiriladi. Vyetnam o‘qituvchilari milliy kiyimda, xorijiy o‘qituvchilarga majburiy emas, o‘quvchilarda bog‘chadan boshlab oliy ta’limgacha formaga jalb etilgan. Vyetnamda ham ota- onalar bilan ishlashga juda jiddiy qaraladi. O‘quvchilar 70 ta bo‘lsa ham, tartib joyida bo‘ladi. Tarbiya ya’ni telefon yoki boshqa darsdan chalg‘ituvchi vositalarga og‘ib ketuvchi o‘quvchilar uchun “maxsus bo‘lim” tuzilgan. Bu bo‘lim ro‘yxatiga tushgan o‘quvchi mashg‘ulotlarga jalb etiladi. Ish rejalarga testlar kiritilmagan, bo‘lsa ham oz. Testlar ota-onalar iltimosi orqali amalga oshiriladi. Ayrim ixtisoslashgan maktablarda 6 tagacha til o‘rgatiladi.

Jumladan, Avstraliya ta’lim tizimi ham eng yaxshi tajriba orttirish uchun o‘z texnologiyalarini taqdim eta oladi. Avstraliya ta’lim tizimini tubdan isloh qilish maqsadida 2009-yili Avstraliya ta’lim dasturini baholash tashkiloti (ACARA) tuzilgan. Unda belgilangan ta’lim sohalari sifatida ingliz tili, matematika, salomatlik va jismoniy tarbiya, gumanitar va ijtimoiy fanlar, san’at, texnologiyalar, tillar va ish o‘rganish belgilab qo‘yilgan. Avstraliya o‘quv dasturi barcha yosh avstraliyaliklarga muvaffaqiyatli o‘quvchilar, o‘ziga ishongan va ijodiy shaxslar, faol va xabardor fuqarolar bo‘lishga yordam berish uchun mo‘ljallangan. Har bir o‘quv sohasi yoki fanida mazmun tavsiflari, yoshlar nimani o‘rganishini, yutuqlar standartlari esa har bir yil oxirida o‘quvchilardan kutilayotgan bilim va ko‘nikmalarning chuqurligini va murakkabligini tavsiflaydi.

Finlandiya maktablarida dars ssenariysi juda oddiy bo‘lib, ularni quyidagicha tasvirlash mumkin:

- ✓ o‘quvchilarni ruhlantirish va undash;
- ✓ umumiy va qisqacha faktlarni tushuntirish;
- ✓ o‘quvchini faollashtirish;
- ✓ o‘rganishdan zavq olish;
- ✓ aks ettirish;
- ✓ takrorlash;
- ✓ eslash – uyga vazifa.

Yuqoridagi dars qismlariga muayyan vaqt ajratiladi, dars rejasi[11] esa quyidagicha:

1- jadval

Minutes	Phase	Method	Content	Source	Other
0-5	Motivation				
5-15	Teaching				
15-30	Active learning				
30-40	Reflection				

[11] petri.lounaskorpigmail.com

40-43	Repetition				
43-45	Setting the homework				
45-60	Active break				

Ya’ni bunda “phase” bosqichni anglatib, darsning motivatsiya berish, o‘qitish, faol o‘rganish, aks ettirish, takrorlash, uy vazifasini belgilash va faol tanaffus qismlarini anglatadi. O‘qituvchilar, odatda, kuniga 4 soatdan dars olib boradilar va har hafta kasbiy ta’limni rivojlantirishga qaratilgan mashg‘ulotlar uchun 2 soat vaqt ajratiladi. Finlandiyada ota-onalarning roli muhim hisoblanib, shu o‘rinda ota-onalar ham mas’uliyatlidirlar. Ota-onalar baholash va ta’limiy reja tuzish majlislarida qatnashadilar, homiylik qiladilar, buvilar esa bolalar bilan dars qiladilar.

Finlandiya ta’limining “o‘rta” bosqichida 7 ta tamoyil ustuvorlikka ega:

- tenglik; bunda barcha maktablar bir xil moliyalashtirilgan holda, bir xil jihozlanadi, bir fan ikkinchisidan ustuvor qo‘yilmaydi;
- bepul; tushlik, maktab avtobusi, darslik va o‘quv qurollari;
- individuallik;
- amaliyot; “Yo hayotga tayyorlaymiz, yo – imtihonlarga. Biz birinchisini tanlaymiz”;
- ishonch; o‘qituvchilarga ham, o‘quvchilarga ham ishonch bildiriladi;
- istak-xohish; bola vazifalarni bajarmasa, hech kim tanbeh bermaydi, shunchaki, sinfdan sinfga ko‘chirilmaydi;
- mustaqillik; mavzular so‘zlatilmaydi, u kitobda bor, o‘quvchilar o‘rtasidagi mojaroga aralashilmaydi.

Xulosa. Xalqaro tadqiqotlar mamlakatlararo har qanday sohalar (siyosiy, ijtimoiy, iqtisodiyni solishtirish, o‘zaro tajriba almashtirish, yutuq va kamchiliklar aniqlanib, natijalarni taqdim etuvchi tadqiqotdir. Jumladan, ushbu tadqiqot ta’lim sohasida ham keng ko‘lamli rivojlantiruvchi faoliyatlarni amalga oshirmoqda. Ta’lim tizimi rivojlangan mamlakatlarning yutuqlaridan amaliy foydalanish barcha uchun muhimdir.

Foydalanilgan adabiyotlar ro‘yxati:

1. Siddiqov D. “Dars jarayonida o‘quvchilar bilan samarali ishlash usullari (Vyetnam tajribasi)”
2. Matkarimov A. “PISA” xalqaro baholash dasturi asosida o‘quvchilar tayanch kompetensiyalarini shakllantirish: Ped. fan. nomz. ... diss. – Toshkent, 2022. – 143 b.
3. Shlyaxer A. Jahon miqyosidagi ta’lim. XXI asr maktab tizimini qanday barpo etmoq kerak? Muvaffaqiyatli islohotlar va yuqori natijalar – Toshkent: Zamin nashr, 2022. – 334 b.
4. petri.lounaskorpigmail.com

Iztleuov G.
South Kazakhstan State University named after M. Auezov
Azamkulov A.
Lector
of Jizzakh Polytechnic Institute
Mamadaliyev A.
Student
of Jizzakh Polytechnic Institute

THEORETICAL ASPECTS OF INTRODUCING ENVIRONMENTAL INNOVATIONS IN EDUCATIONAL INSTITUTIONS

Abstract. *Researchers and practitioners view innovation as the result of long-term projects that include research and testing phases. Unfortunately, statistics show that only a few environmental innovations are successfully implemented and commercialized. It encourages researchers and practitioners for further active work in this direction. The topic of innovation in modern science is reflected in the field of environmental management, resource conservation and treatment facilities.*

Key words: *innovation, ecological development, sustainable development, technology, anthropogenic impact, environment, waste.*

Currently, innovation is an active driving force in all aspects of society. It is impossible to imagine a world without the technological innovations that have already entered our lives and the promising innovations that have yet to be presented to society. Innovations have become the driving force of economic, social and environmental development of the countries of the world.

Therefore, in the near future, science, technology and innovation are one of the main factors for achieving the goals of sustainable development of the society's economy. One of the new and promising areas of development is ecological innovation. Innovations of this type allow to improve the production activity of enterprises, ensure their safety, make people's conditions more comfortable and reduce the consumption of natural resources, reduce the negative impact of enterprises and household waste on the environment. Accordingly, taking into account the importance of ecological innovations for achieving the goals of sustainable development, the motivation of the state to focus on the problem of developing ecological innovations and introducing them into the life of society is understandable.

The concept of "ecological innovation" appeared in the second half of the 20s. As defined in the European Union Green Technology Action Plan, green innovation is the production, deployment or use of innovations in products, processes, services or management and business practices that reduce negative environmental impacts and are sustainable throughout their life cycle. optimizes the used resources. advising on economic activity.

The term "Eco-innovation" has been used in modern scientific literature relatively recently. That is why today scientists have not formed a single and unambiguous opinion on the essence of the concept of eco-innovations, they have not considered all possible mechanisms for stimulating their development, so it is necessary to further study and improve this area.

There are many terms synonymous with the concept of "ecological innovation" in various foreign sources: eco-innovation, "clean" technologies, "green" technologies. All these terms include a wide range of innovations united by one common feature: their application should simultaneously generate positive economic and environmental effects. Environmental technologies include: energy efficiency improvement, optimization of waste processing, renewable energy, green construction, ecological transportation, resource and waste management, and developments in materials processing; environmentally friendly construction methods and building materials (environmental development, including the creation of specialized machinery, the formation of the market for environmentally friendly products and ecological services); alternative transport and environmental management.

The goal of eco-innovation is to stimulate various innovations aimed at reducing the anthropogenic impact on the environment, as well as improving the life of society as a whole. All current environmental measures normalize the ratio of production forces and production relations to the resource component in the economy through the introduction of innovative technologies.

Based on this goal, the following tasks of ecological innovations in the modern economy can be formulated:

- promoting sustainable economic growth by introducing "green economy";
- saving natural resources and directing the saved funds to the needs of society;
- introduction of high-tech environmental innovations to improve production processes;
-Improve the efficiency of environmental management;
- achieving the level of economic profitability of alternative energy technologies.

From all of the above, we can conclude that environmental innovation is a very broad concept that affects many areas of economic activity. Despite the novelty of this concept, there are many variations of the term "eco-innovation".

As an example, consider the classification of the concept of "ecological innovation" developed by researchers from Maastricht University.

Arundel and R. Kemp give several possible classifications of environmental innovations in their work. The first classification is based on the purpose of introducing new technologies. According to this classification, eco-innovations are divided into four groups:

1) technologies aimed at environmental protection;
2) organizational innovations for the environment;
3) innovative products and services, the use of which will benefit the environment;
4) ecosystem innovation.

The first group includes eco-innovations such as pollution control technologies, including water treatment technologies; technologies that allow to eliminate the negative effects of environmental pollution; technologies introduced into production, for example, new production processes that help reduce environmental pollution, use production resources most efficiently; technologies and equipment that optimize the waste disposal process; technologies and tools for environmental monitoring; energy saving technologies; water availability monitoring technologies; noise control technologies.

According to this classification, the second group of ecological innovations includes: measures to prevent environmental pollution; environmental audit: a management system that includes measuring, reporting, and monitoring issues related to the use of resources, energy, water, and waste, for example, creating control chains: reducing negative environmental impacts and improving overall productivity interaction of organizations to prevent environmental damage along the supply chain.

The third group of eco-innovations includes: new or ecologically improved products, for example, ECO houses and buildings; "green" financial products; environmental services: solid and hazardous waste and wastewater management, environmental consulting, testing and design; services aimed at reducing environmental pollution and optimal use of resources.

In the fourth group, the authors include alternative production methods and consumption habits that are more environmentally friendly than the existing systems: biological agriculture and renewable energy sources.

If we classify environmental innovations according to broader criteria, we can distinguish the following subgroups, for example: by the period of implementation, permissibility of use, economic characteristics, scope of application, sources of origin, type of innovation; in terms of efficiency and utilization. Let's take a closer look at each element of this classification.

REFERENCES:

1. Alekseeva, M. B. Analyz innovatsionnoy deyatelnosti: uchebnik i praktikum dlya vuzov /M. B. Alekseeva, P. P. Vetrenko. - Moscow: Izdatelstvo Yurayt, 2021.
2. Arundel, A. Measuring eco-innovation. - Working paper series / A. Arundel, R. Kemp // United Nations University, UNU-MERIT. 2009. No. 017
3. Ilyushkina E.S.; Konikhova V.Yu. 2019 #25
4. Yale Center for Environmental Law & Policy. Environmental Performance Index (EPI). — New Haven, CT: Yale Center for Environmental Law & Policy [URL: epi.yale.edu]

5. Leluh A.V. Sovershenstvovanie mechanisma stimulirovaniya ekologicheskikh innovatsii. Krasnodar - 2022

Iztleuov G.
South Kazakhstan State University named after M. Auezov
Abduazizov B.
Lector
of Jizzakh Polytechnic Institute
Haydarov Z.
Student
of Jizzakh Polytechnic Institute

SOIL EROSION IN AGRICULTURE OF THE SH.RASHIDOV REGION

***Annotation**. As a result of the active influence of man on the soil, a change in its properties, an increase or decrease in fertility, salinity, erosion, degumification, rational use of nonirrigated lalmi lands in farming, its protection requires even more attention than before. Increasing the fertility and production capacity of the soil should largely depend on the careful and economical treatment of it, its complex aimed at improving it.*
***Key words**: soil, fertility, measure, erosion, concentration, fertilizer, microorganism, humus, element.*

Of great importance is the development of solutions to problems related to the consistent acceleration of agricultural production, the rational use of the land fund, the productivity of each irrigated hectare, and its economic efficiency. The lands intensively used in agriculture in Uzbekistan are mainly irrigated lands, equal to 4.28 million hectares.

In our country, every year the prevention and control of soil erosion, increasing the productivity of soils eroded by water and wind is recognized as an event of national importance. Laws have been adopted to protect soil from water and wind erosion. The law defines organizational, agrotechnical, forest reclamation, hydrotechnical and other measures for the protection of soils from water and wind erosion. To protect the soil from erosion, it is necessary to carry out agro-complex measures:

* when farming in mountainous areas, level the land in the form of terraces (supachs), plant fruit trees and vineyards around the fields; * proper organization of transverse plowing and irrigation work on steeply sloping lands; * landscaping the edges of ravines, preventing the expansion of erosion of ravines, preventing the flow of water from irrigated fields into ravines, building various barriers and water collectors; * to combat wind erosion, the most basic and necessary measures are planting shrubs, saxovuli on sandy soils and hedges. As well as planting various grasses, rational use of pastures, creating various fences, as well as creating a thin top layer of sand using chemicals with adhesive properties (oil waste, nerosin, K-4 polymers, SKS-65 LATEX); * in order to prevent irrigation erosion, taking into account the physical and chemical properties of the soil and the slope of the site,

using the experience of advanced irrigators, it is extremely important to plan the amount of water supplied to wells for proper irrigation of crops, as well as freezing and diversion of water on lands prone to erosion.

Increasing the productivity and productive capacity of the soil should largely depend on the careful and economical handling of it, a complex aimed at improving it. Currently, the problem of soil pollution with heavy metals in technogenic and agricultural industries is acute. Heavy metals occupy one of the leading places among environmental pollutants. Many representatives of this group of substances, such as lead, copper, zinc, cadmium, even in very small quantities, can cause immunological, oncological and other types of diseases. As a result of studies conducted by scientists from different countries, it has been proven that about 70 percent of heavy metals enter the human body with food. Today, Sh.Rashidovsky district is one of the regions where the quality of agricultural land has declined, the main lands of the district are considered close to the city center, the soil is polluted with various pollutants by industrial enterprises, the balance of nature is disturbed, and the ecological environment is considered very serious. Human use of chemicals in economic activities and their inclusion in the cycle of anthropogenic transformations in the environment is constantly growing. According to GOST 17.4.1.0283 pollutants in the soil are divided into three classes: Class I (high risk) - As, Cd, Hg, Se, Pb, F, benzo (a) pyrene, Zn; Class II (moderately dangerous) - B, Co, Ni, Mo, Cu, Sb, Cr; Class III (low risk) - Ba, V, W, Mn, Sr, acetophenone. Heavy metals far outperform common pollutants such as carbon dioxide and sulfur and are second only to pesticides in terms of pollution. In the future, they may turn out to be more dangerous than NPP and MSW emissions. Soil contamination with heavy metals is associated with their widespread use in industrial production. Due to the imperfection of purification systems, heavy metals enter the environment, including the soil, polluting and poisoning it. Soil is the main environment in which heavy metals accumulate. Heavy metals enter the soil both with atmospheric air and with water. It is a secondary source of pollution of the upper atmosphere of the oceans. Heavy metals can be absorbed through the soil and ingested. According to the results of the monitoring, more than 40 elements of the table of D.I. Mendeleev were found in the soil. Including: V, Cr, Mn, Fe, Co, Ni, Cu, Zn, Mo, Cd, Sn, Hg, Pb, Bi, etc. The most powerful suppliers of metal-containing waste are enterprises for the smelting of non-ferrous metals (aluminum, aluminum oxide, copper-zinc, lead-smelting, nickel, titanium-magnesium, mercury, etc.), as well as enterprises for the processing of nonferrous metals (radio engineering), electrical engineering, instrumentation, galvanic sky, etc.). When determining and assessing the composition of soils in the Sh. Rashidovsky district by ingredients in July 2020, 9 samples were taken from the sampling point with soil layers of 0-30 cm, 30-50 cm and 50-70 cm. The pH of the soil composition pH was determined in the field. For the analysis of water samples, atomic absorption, gas chromatographic, photometric, photocolorimetric, gravimetric, spectrophotometric, titrimetric and other physicochemical methods were used. The mineralization of water was determined by the gravimetric method. The determination method is based on the gravimetric determination of dissolved substances, which is determined by filtering the sample to a constant weight, evaporating the residue and drying at 150°C for weakly mineral waters (105-110°C) and highly mineralized waters. Ammonium ions were determined photometrically. The main method for determining ammonium nitrogen is the calorimetric method using Nessler's reagent.

Heavy metals were determined by photometric and photocolorimetric methods. For example, a yellow complex compound in a ferric iron medium was determined by the hydroxide formation reaction, forming a colored complex compound in the presence of copper xylenol. Based on the results of field and laboratory studies and observations, the sources and level of soil pollution in the Sh. Rashidovsky district were determined. Conclusions. Thus, the analysis of soil contamination with heavy metals at the landfill in Sh. Rashidovsky district shows that most of the pollutants were found in soil samples. Analysis of soil pollution with heavy metals in the region shows that the content of chromium, manganese, cobalt, nickel, copper, silver, zinc and other elements slightly exceeds the maximum allowable concentrations for soils. The concentration of all other heavy metals does not exceed the MPC, which confirms the conclusions made in the review part of the work about the low information content of heavy metals in environmental monitoring.

REFERENCES:

1. B.D. Shodiyarovna “Ecological state of irrigated gray-meadow soils and ways to improve them” ACADEMICIA: An International Multidisciplinary, 2022-Issue 05
https://www.indianjournals.com/ijor.aspx?target=ijor:aca&volume=12&issue=5&article=043
2. D.Sh.Berdieva “Soil pollution with pollutants in sh. Rashidov district of Jizzakh region and prevention measures” Economics and Society, 12-1 (103) pp 465-472
https://cyberleninka.ru/article/n/zagryaznenie-pochv-zagryaznyayuschimiveschestvami-v-sh-rashidovskom-rayone-dzhizakskoy-oblasti-i-mery-predotvrascheniya
3. D.Sh. Berdiyeva “Soil pollution with heavy metals in the sh. Rashidov district of the Jizzakh region and ways to reduce them from the soil composition” Academic research in educational sciences, 2021 VOLUME 2 | ISSUE 5 | 2021 ISSN: 2181- 1385 (SJIF) 2021: 5.723
https://cyberleninka.ru/article/n/zagryaznenie-pochv-tyazhelymi-metallami-vsh-rashidovskogo-rayona-dzhizakskoy-oblasti-i-sposoby-ih-umensheniya-izsostava-pochvy
4. D.Sh. Berdiyeva “Soil pollution with heavy metals in the Rashidov district of the Jizzakh region and methods for its reduction” Actual problems of ecology and nature management, collection of scientific papers of the XXII International

Scientific and Practical Conference: Volume 1. Moscow, 2021 https://www.elibrary.ru/item.asp?id=47140073

Jalolova M. A.
NamMQI o'qituvchisi

KICHIK BIZNES SUBYEKTLARI MIQDORIY CHEGARASINING TAKOMILLASHUV BOSQICHLARI

Annotatsiya:*Kichik biznesni boshqarish" fani tadbirkorlik va biznes tushunchalari, ularning iqtisodiy rivojlantirishdagi o'rni respublikada tadbirkorlik va kichik biznesni rivojlantirishning o'ziga xos xususiyatlari kichik biznes va tadbirkorlikning xuquqiy asolsari va ularni davlat tomonidan qo'llab - quvvatlsh masalalarini talabalarga o'rgatish maqsadida qo'yilgan.*
Kalit so'zlar*: " Kichik biznes,iqtisodiyot,rivojlanish,bozor iqtisodiyoti*

Jalolova M. A.
Nammqi teacher

STAGES OF IMPROVEMENT OF THE QUANTITATIVE LIMIT OF SMALL BUSINESS ENTITIES

Abstract
The subject "Small Business Management" is designed to teach students the concepts of entrepreneurship and business, their role in economic development, the specific features of the development of entrepreneurship and small business in the republic, the legal foundations of small business and entrepreneurship, and their support by the state.
Keywords: *" Small business, economics, development, market economy*

Hozirgi kunda respublikada kichik biznes sohasi bilan shug'ullanuvchi ishbilarmonlarga talab yanada oshmoqda. Bu respublikadagi oliy va o'rta maxsus o'quv yurtlarining oldiga bir qator va zifalar qo'yadi. Ulardan biri kichik biznes uchun malakali mutaxassislar tayyorlash, qayta tayyorlash, xodimlar malakasini oshirish, ularni zamonaviy i j t imoiy-iqtisodiy va huquqiy bilimlar bilan qurollangan etuk kadr qilib tayyorlashdan iboratdir.

Kichik biznesni boshqarish fani yangi kirib kelayotgan iqtisodiy fan sifatida boshqa fanlardan ajralgan holda rivojlana olmaydi. U o'ziga yaqin fan yutuqlari ma'lumotlardan keng foydalanadi.

"Kichik biznesni boshqarish" fani muayyan iqtisodiy fanlar bilan: korxonalarda ishlab chiqarishni rejalashtirish va uyushtirish, menejment, buxgalteriya hisobi, moliya va kredit, statistika kabi ko'plab fanlar bilan chambarchas bog'liq.

Ushbu fanning vazifasi – iqtisodiy bilimlarning amaldagi yutuqlaridan biznes, tadbirkorlik faoliyatida maqsadga muvofiq foydalanish, uning natijasida kichik korxonalarning samaradorligini oshirish, jahon bozoriga raqobatbardosh yuqori sifatli mahsulot turlarini ishlab chiqarishni ta'minlash va xalq farovonligini oshirishdir.

Mazkur fanning o'rganish ob'ektini tadbirkorlik faoliyati bilan shug'ullanuvchi shaxslar korxonada muassasalar va tashkilotlar tashkil qilishi fannning iqtisodiyotdagi ahamiyatida n darak beradiganlar tashkil qiladi.

Fannni o'rganishda bozor iqtisodi bo' yicha malakali mutaxassislar, biznesmenlar, tadbirkor va ishbilarmonlarni tashkil etish talabalarni yanada chuqurroq bilim olishlariga, dunyoqarashlarini kengaytirishga imkon berad i.

O'zbekiston o'zining tarixan qisqa muddatli, biroq amalga oshirilayotgan tub islohotlar va o'zgarishlar mazmun -mohiyati, ko'lami jihatidan beqiyos bo'lgan ijtimoiy- iqtisodiy taraqqiyoti davrida olamshumul muvaffaqiyat v a natijalarga erishmoqda. Bunday yutuqlar negizida, eng avvalo, mamlakatimiz rahbari tomonidan mustaqil taraqqiyotning “o'zbek modeli” to'g'ri tanlanganligi, uni amalga oshirish borasida olib borilgan samarali, qat'iy va izchil iqtisodiy siyosat va, eng muhimi, mehnatkash xalqimizni bunyodkorlik va yaratuvchanlik tomon harakatlantiruvchi yuksak milliy g'oya yo'lida jipslashtirish, ularning ertangi kunga bo'lgan mustahkam ishonch va intilishlari shakllantirilishi yotadi.

Mustaqil taraqqiyot davrida mamlakatimiz iqtisodiyotini zamon talablari asosida tarkibiy o'zgartirish, iqtisodiy munosabat va jarayonlarni erkinlashtirish, iqtisodiyotning etakchi tarmoqlarini modernizasiyalash orqali yuqori va barqaror o'sish sur'atlarini ta'minlash, aholi bandligi va

farovonligini oshirishning muhim yo'nalishi sifatida kichik biznes va xususiy tadbirkorlikni rivojlantirishga alohida e'tibor qaratildi. Jumladan, 2011 yil Prezidentimiz tomonidan “Kichik biznes va xususiy tadbirkorlik

yili” deb e'lon qilinib, yil davomida ama lga oshirilishi lozim bo'lgan dolzarb vazifa va chora-tadbirlarni o'z ichiga olgan maxsus Davlat dasturi ishlab chiqildi.

Ushbu chora-tadbirlarning o'ziga xos ahamiyati haqida to'xtalib, mamlakatimiz rahbari “Alohida katta e'tiborni talab etadigan yana bir masala shuki, hozirgi vaqtda yurtimizda kichik biznes va xususiy tadbirkorlik asosan savdo-sotiq, xizmat va aloqa sohasida , qishloq xo'jaligi mahsulotlarini qayta ishlash bo' yicha ko'proq rivoj topmoqda. Lekin, shu bilan birga, sanoat sohasida, yuqori texnologiyalarni talab etadigan zamonaviy ishlab chiqarish tarmoqlarini tashkil etishda, innovasion va innotexnologiyalar, farmakologiya va farmasevtika, axborot- kommunikasiya tizimi, biotexnologiya, muqobil energetika turlaridan foydalanish sohasida, muxtasar aytganda, i lg'or ilm-fan yutuqlariga asoslangankichik biznes va xususiy tadbirkorlikni rivojlantirishga keng yo'l ochib berishimiz zaurur”, deb ta'kidladilar. Bu esa zamonaviy texnika va texnologiyalardan foydalanib, talabga javob beruvchi tayyor mahsu lot ishlabchiqaruvchi, innovasion loyiha va ishlanmalarni amalga oshiruvchi, kichik biznes sub'ektlarini ustuvor darajada rivojlantirish zarurligini ko'rsatadi.

Mamlakatimizda kichik biznes va xususiy tadbirkorlikning mustaqillik yillaridagi rivojlanish j arayonlariga baho berar ekanmiz, eng avvalo, bugungi kunga qadar kichik biznes tarkibiga kiruvchi korxonalarning chegaralarini aniqlash o'ziga xos tadrijiy rivojlanish bosqichlari orqali amalga oshirilib kelinayotganligini ta'kidlash lozim. Har bir muayyan bosqichda belgilangan miqdoriy chegaralar Prezidentimiz farmonlari hamda hukumatimiz qarorlariga asoslanadi. Bularning barchasi mazkur soha rivojining mamlakatimiz ijtimoiy –

iqtisodiy taraqqiyotidagi yuksak ahamiyatidan darak beradi mustaqillikni ilk davridanoq mamlakatimizda kichik biznes sub'ektlarini har tomonlama qo'llab - quvvatlash, ular faoliyatini davlat tomonidan

samarali tartibga solish maqsadida alohida soha sifatida belgilab olishga katta e'tibor qaratib keli nmoqda. Iqtisodiyot rivojlanishi, tadbirkorlik faoliyatini yuritish uchun qulay muhit yaratilishi natijasida kichik biznes sub'ektlari sifat va miqdoriy jihatdan taraqqiy etgan sari ularning miqdoriy chegaralari ham takomillashtirib borilmoqda. Ushbu jarayonlarni, ulardagi miqdoriy o'zgarishlarni yaqqolroq ifodalash maqsadida alohida jadvaldan foydalanish maqsadga muvofiqdir

Mustaqillik davrida malakatimizda kichik biznes faoliyatiga oid dastlabki me' yoriy hujjat – “O'zbekiston Respublikasidagi kichik korxonalar to'g'risidagi Nizom” (O'zbekiston Respublikasi Vazirlar Mahkamasining 1992 yil 26 fevraldagi 85- sonli qaroriga 2 -ilova) qabul qilinib, unda kichik korxonalarning miqdoriy chegaralari belgilab berildi. O'sha davrda respublikamizda hali o'rta va yirik korxonalar ko'lamlari miqdoriy che garalari mavjud emasligi kichik biznes sohasi asosan kichik korxonalar faoliyati orqali belgilanishiga olib keldi.

mustaqil taraqqiyotning ilk davrida kichik korxonalarning miqdoriy chegaralari nisbatan kenroq, ya'ni sanoat va

qurilishda – 200 kishigacha, fan sohasida va ilmiy xizmat ko'rsatishda – 100 kishigacha, ishlab chiqarishi sohasining boshqa tarmoqlarida – 50 kishigacha, noishlab chiqarish soha tarmoqlarida – 25 kishigacha, chakana savdoda – 15 kishigacha ishlovchidan iborat bo'lgan. Bu esa, asosan, ma' muriy - buyruqbozlik tizimidan ijtimoiy yo'naltirilgan bozor iqtisodiyotiga o'tishning dastlabki pallasida hali yirik davlat korxonalari salmog'i yuqori bo'lib, davlat tomonidan mazkur korxonalar bilan teng iqtisodiy sharoitlarni ta'minlash, turli usul va vositalar orqali qo'llab-quvvatlashga ehtiyoj sezuvchi xo'jalik yurituvchi sub'ektlar ko'pligi orqali izohlanadi.

Shu o'rinda ta'kidlash lozimki, O'zbekistonda bozor iqtisodiyoti infratuzilmasini shakllantirish, raqobatni rivojlantirish, yangi ish

o'rinlarini yaratish, iqtisodiyotda tarkibiy o'zgarishlarni amalga oshirish , tovar ishlab chiqarish va xizmatlar ko'paytirishn orqali iste'mol bozorini to'ldirish maqsadlarida kichik korxonalar faol rivojlanishi uchun sharoit yaratishga yo'naltirilgan bu me' yoriy hujjat haqiqatdan ham mazkur jarayonga berilgan dastlabki turtki bo'ldi. Buning natijasida mamlakatimizdagi kichik korxonalar jadal sur'atlar bilan rivojlana boshladi.

Yuqorida ta'kidlangandek, mamlakatimizda olib borilayotgan keng ijtimoiy - iqtisodiy islohotlar iqtisodiyotimiz tarkibiy tuzilishi takomillashib borishiga zamin yaratib, tegishli ravishda, kichik biznes sohasini belgilashn i yanada takomillashtirishni taqozo etadi. Jumladan, amalga oshirilgan kichik xususiylashtirish natijasida savdo, xizmat ko'rsatish sohasi, mahalliy, engil, oziq - ovqat sanoati, avtomobil transporti, qurilish va qurilish materiallari ishlab chiqarish sohalaridagi deyarli 54 mingta kichik va o'rta korxonalar xususiy mulkka o'tkazildi.

Shuningdek, bu qonunda kichik biznesni davlat tomonidan rag'batlantirishning asosiy yo'nalishlari ham belgilab berildi:

- kichik tadbirkorlikning me' yoriy- huquqiy negizini takomillashtirish;
- infratuzilmani shakllantirish va rivojlantirish;
- kichik tadbirkorlik sub'ektlari faoliyati uchun sha rt-sharoitlar yaratish.

O'zbekistonda kichik biznes sub'ektlari chegaralarini aniqlash navbatdagi bosqichining asosiy xususiyati shundaki, unda kichik va o'rta biznes sub'ektlari tarkibidagi bir qator tadbirkorlik tuzilmalari ajratib olindi. Jumladan, O'zbekiston Respublikasi Prezidentining 1998 yil 9 apreldagi “Xususiy tadbirkorlik, kichik va o'rta biznesni rivojlantirishni yanada rag'batlantirish bo' yicha chora -tadbirlar to'g'risida”gi farmoniga binoan kichik va o'rta tadbirkorlik (biznes) sub'ektlari yakka tartibdagi

tadbirkorlar, mikrofirmalar, kichik korxonalar va o'rta korxonalar tarkib topishi belgilab berildi.

Bu jarayonda yana bir xususiyatli jihat ya'ni, kichik biznes sub'ektining ishlovchilar soniga ko'ra o'lchamlari asosan qisqarish

tomonga borishi yaqqol namoyon bo'ldi. Masalan, kichik korxonalardagi xodimlarning o'rtacha yillik soni qurilishda 2 ,5, sanoat, ulgurji savdo, qishloq xo'jaligi va ishlab chiqarishning boshqa tarmoqlarida 1,25 baravar qisqarib, fan va i lmiy xizmat ko'rsatish, noishlab chiqarish sohalarining boshqa tarmoqlari chegarasi o'zgarmay qoldi. Aksincha, chakana savdo yo'nalishidagi kichik korxonalarda xodimlar soni 2 baravar o'sdi.

Kichik va o'rta biznes sub'ektlari miqdoriy chegaral ari yanada takomillashtirilishi hamda ularni davlat tomonidan qo'llab -quvvatlash bo' yicha manzilli chora-tadbirlar kuchaytirilishi natijasida ushbu davrda faoli Kichik tadbirkorlikni yanada rivojlantirish, iqtisodiyotda xususiy sektor ulushini oshirish, ishlab chiqarish sohasida aholi bandligini to'laroq ta'minlash uchun qulay sharoit yaratish maqsadida 2003 yil 30 avgustda O'zbekiston Respublikasining Prezidentining “O'zbekiston Respublikasining Prezidentining 1998 yil 9 apreldagi “Xususiy tadbirkorlik, kichik va o'rta biznesni rivojlantirishni yanada rag'batlantirish chora-tadbirlari to'g' risida”gi farmoniga o'zgartirish va qo'shimchalar kiritish haqida”gi farmoni qabul qilindi. Ushbu farmon mamlakatimizda kichik biznes sub'ektlari chegaralarini aniqlash b orasida navbatdagi bosqichni boshlab berdi. Unga mazkur bosqichning xususiyatli tomoni

– mikrofirma va kichik korxonalarda band bo'lgan xodimlar o'rtacha yillik soni tarmoqlar bo' yicha yanada aniq belgilab berildi.

Xulosa qilib aytganda, samarali amalga oshi rilishini ta'minlash borasida iqtisodiyotda amalga oshirilishi lozim bo'lgan vazifalar quyidagilardan iborat:

joylardagi kichik biznes va xususiy tadbirkorlik sub'ektlarini samarali faoliyatiga halal berayotgan, to'sqinlik qilayotgan yoki qilishi mumkin

b o'lgan muammolarni muntazam ravishda o'rganib borish va o'z vaqtida bartaraf etish chora -tadbirlarini ko'rish;

hududdagi bo'sh yoki samarali foydalanilmayotgan bino va inshootlar to'g'risidagi aniq ma'lumotlar qisqa muddatlarda olinishi hamda ularning kich ik biznes va xususiy tadbirkorlik sub'ektlariga taqdim etilishi jarayonlarini samarali tashkil etish;

kichik biznes va xususiy tadbirkorlik faoliyati uchun yanada qulay muhit yaratish borasida har bir hududdagi o'ziga xos xususiyatlarni aniqlash va ulardan kelib chiqqan holda barcha imkoniyatlarni safarbar qilish;

Faydalanilgan adabiyotlar

1. Икрамов, М. Х., Мияссаров, И. М. У., & Исабоева, Д. С. (2022). ИССЛЕДОВАНИЕ ПРОЦЕССА ОБОГАЩЕНИЯ СИЛЬВИНИТОВ ТЮБЕГАТАНСКОГО МЕСТОРОЖДЕНИЯ. *Universum: технические науки*, (6-4 (99)), 65-68.

2. Исабоева, Д., & Собиров, М. (2023). ТЕХНОГЕН ЧИҚИНДИЛАРНИ НИТРАТ КИСЛОТАЛИ ПАРЧАЛАШ МАХСУЛОТЛАРИНИ 2-ФИЛЬТРЛАШ ЖАРАЁНИ. *Экономика и социум*, (10 (113)-1), 453-458.

3. Sobirov, M. M., Djurayeva, D. U., & Isaboyeva, D. S. (2024). TERMOKONSENTRATDAN OLINGAN FOSFOKONSENTRAT, KARBAMID VA KALIY SULFAT ASOSIDA NPK-O‘G‘ITLAR OLISH. *Экономика и социум*, (6-1 (121)), 620-624.

4. Mo‘Minjonov N. N. et al. XAVFSIZ HARAKATNI TASHKIL ETISHDA MEHNAT MUHOFAZASI FANINI O ‘QITISHNI O ‘RNI //Экономика и социум. – 2024. – №. 6-1 (121). – С. 821-824.

5.Fayzullayev A. et al. ISH JOYLARINI TAKOMILLASHTIRISH MUAMMOLARI //Экономика и социум. – 2024. – №. 5-2 (1

Jorabaeva N.K.
Muxtar Auezov nomli Qozog'iston universiteti katta o'qituvchisi
Quvondiqova D.I.
Jizzax politexnika instituti assistenti

SHISHA IDISHLARDAN FOYDALANИISH SAMARADORLIGINI OSHIRISH

Annotatsiya. *Shisha maxsulotlari har qanday kimyoviy holatga chidamli bo'lib, chirimaydi, zanglamaydi, har qanday agressiya holatga chidamli. Uning bunday kimyoviy turg'unligi chiqindi sifatida tashlab yuborilgan har qanday shisha sinig'i 1000 yillab oz xususiyatini yuqotmasligi bizdan kiyingi avlodga, tabiatni qanday xolatda tashlab ketayotganligimizdan dalolat beradi.*
Kalit so'zlar. *Shisha, rang beruvchi oksidlar, tabiiy kvarts, glinozem, dala shpati*

Jorabaeva N.K.
Senior Lecturer
of Mukhtar Auezov Kazakhistan University
D.I.Quvondikova
Assistant Professor
of Jizzakh Polytechnic institute

IMPROVING THE EFFICIENCY OF THE USE OF GLASSWARE

Annotation. *Glass products are resistant to any chemical condition, do not rot, do not rust, are resistant to any aggressive condition. The fact that any glass fracture, in which such a chemical stagnation of it was discarded as waste, does not infect its character for 1000 years, testifies to the generation we wear, how we are abandoning nature.*
Keywords. *Glass, coloring oxides, natural quartz, glynozem, field veneer*

Hozirgi texnika – texnologiyalar va kimyo sanoati jadal rivojlanayotgan bir paytda yangi maxsulotlar ishlab chiqarish o'zining afzalliklari bilan shisha maxsulotlaridan ustunligini ko'rsatmoqda. Ishlab chiqarishning boshqa soxalari bilan birgalikda suyuq maxsulotlarni qadoqlash va saqlash jarayonlari ham katta yutuqlarga erishilmoqda.

Bular jumlasiga plastik, qog'oz, alyumin idishlar misol bo'lishi mumkin. Ular o'zining ijobiy tomonlarini ko'rsatdi, asrlar mobaynida foydalanib kelinayotgan, ekologik toza o'zidan hech qanday zaharli moddalar chiqarmaydigan, qayta ishlash jarayoni iqtisodiy samarador bo'lgan shisha idishlarni ishlab chiqarishdan siqib chiqarish holatlari kuzatilmoqda.

Shisha – ekologik toza, tabiiy xom ashyolar shixtasini (xom ashyolarning optimal aralashmasi) 1500-1600ºC da eritib, eritilgani qoliblarda qoliblash usulida olingan maxsulotlarga aytiladi. Undan nafaqat oziq – ovqat sanoati balki meditsina, kimyo sanoati, qishloq xoʻjaligi va boshqa koʻplab tarmoqlarda sifatli va ekologik toza xom ashyo sifatida foydalanilsa boʻladi.

Uning asosiy xom ashyolari jumlasiga tabiiy kvarts SiO_2, glinozem Al_2O_3, dala shpati Fe_2O_3 va sodalar boʻlib ular shisha tarkibidagi kimyoviy elementlarni tarkibini tashkil etadi.

Shishaning asosiy kimyoviy tarkibida SiO_2 -72, Al_2O_3 -2, Fe_2O_3 -0.2 % dan koʻp boʻlmagan xolda, K_2O ±2 %ni tashkil etgan xolda ular shishaga kerakli boʻlgan fizik – mexanik xossalarni beradi. Shisha idishlarga rang berish maqsadida ularning tarkibiga har xil rang beruvchi oksidlar qoʻshiladi. Masalan, sut rangli shisha uchun 3 foiz bariy oksidi (B_2O_3), malla rang uchun 12 foiz rux oksidi (Zn_2O) va boshqa moddalar qoʻshiladi.

*Oʻzbekiston Respublikasi Prezidenti Sh.Mirziyoyev tomonidan joriy yilning 2-fevral kuni chiqindilar bilan ishlash tizimini takomillashtirish va hududlardagi ekologik holatni yaxshilash, “Yashil makon” umummilliy loyihasini amalga oshirish boʻyicha 2022-yildagi ustuvor vazifalar yuzasidan videoselektor yigʻilishida maishiy chiqindi toʻplash qamrovini **95 %**ga, qayta ishlash hajmini **40 %**ga yetkazish vazifasi qoʻyilgan.*

Katta xarajatlar evaziga tayyorlangan shisha idishlarning xozirgi kundagi ahvoli qanday, ularni ishlatish qanday xolatda, ularning keyingi ahvoli nima bilan tugamoqda? Bu savollarga javob hozirgi kundagi oʻta achinarli boʻlib, atrof muhitga katta zarar yetkazmoqda. Shisha maxsulotlari har qanday kimyoviy holatga chidamli boʻlib, chirimaydi, zanglamaydi, har qanday agressiya holatga chidamli. Uning bunday kimyoviy turgʻunligi chiqindi sifatida tashlab yuborilgan har qanday shisha sinig’i ***1000*** yillab oʻz xususiyatini yuqotmasligi bizdan kiyingi avlodga, tabiatni qanday xolatda tashlab ketayotganligimizdan dalolat beradi. Bu turdagi chiqindilar tuproq ostida va ustida xatto plastik va alyumin mahsulotlardan ham koʻp yillar davomida chiriydi. Plastik mahsulotlar va alyumin mahsulotlariga – ***500*** yil kerak.

Har bir uyning uy bekalari biz bilan sizga qish mavsumi uchun mazzali konserva maxsulotlari shisha idishlarda, bankalarda tayyorlab, tabiiy vitaminli maxsulotlar kamligida dasturxonimizni tayyorlagan konservasi bilan siylashadi va mazzali tayyorlagan shirinligi bilan g’ururlanib shisha bankalarni bir necha oʻn yillab qayta foydalanishadi.

Uy bekalarimiz oʻz shisha bankalaridan va idishlaridan bir necha marotaba qayta foydalanayotgan bir paytda, katta ishlab chiqarish tashkilotlarimiz oʻzining firma tamgʻasi tushurilgan shisha idishlaridan qaytadan foydalanmasliklari kerak! Har bir chiqindixonada, uylarda, bogʻlarda, suv xavzalarida, togʻlarda va boshqa jamoat joylarda shisha idishlar, ularning chiqindi siniqlari shahar va qishloq tabiati xusnini buzib kelmoqda. Hayvonlar va insonlarning sogʻligʻiga salbiy ta’sir etib, ularni ishga yaroqsizlik holiga keltirib jaroxat yetkazmoqda. Bular esa oʻz navbatida tabiatning jonli va jonsiz ne’matlari va jamiytimizning mehnat resurslarining kamayishi olib keladi. Ba’zi hollarda esa hozirgi katta ekologik muommolarga aylanayotgan chiqindilar turiga kirib qolmoqda. Bu esa yuqorida aytilganidek tabiatda tashqi muhit ta’siri ostida ham koʻplab yillar davomida chirimaydigan va uzoq yillar davomida ona tabiatimizga, tuproqqa oʻz zararini keltiradigan manbaga aylanmoqda va ishlab chiqarish samaradorligini pasayishiga, ishlab chiqarishning rivojlanishi va iqtisodiyotimizga oʻz ta’sirini oʻtkazadi.

Yuqorida keltirilganlardan kerakli xulosa chiqarib, shisha idishlardan foydalanayotgan yoshu-qarilar shisha idishlardan foydalangandan soʻng, ularni butunligini buzmasdan, belgilangan joylarga tashlash kerakligini esda tutishlari, mutasaddi tashkilotlar, ishlab chiqarish tashkilotlari esa shisha idishlarni aholidan yigʻib olish va ulardan qayta foydalanish chora tadbirlarini ishlab chiqish fursati kelganligini anglab yetishlari kerakligini bildirmoqda. Qayta foydalanishga yaroqsiz shisha buyumlarini qayta ishlab chiqarish chora tadbirlari tuzish, olimlar va tadbirkorlar oldiga ulardan foydalanish yoʻllarini taklif etishni soʻrash kerak bo’ladi deb oʻylaymiz.

Foydalanilgan adabiyotlar:

1. Amindjanova M., Sayko E., Keramika, steklo i farfor v Sredney Azii, T., 1968;
2. Artamonova M.V., Aslanova M.S., Bujinskiy I. M. i dr., Ximicheskaya texnologiya stekla i sitallov, M., 1983;
3. Abdurazakov A. A., Bezborodov M.A., Srednevekovme stekla Sredney Azii, T., 1966.
4. I.X.Ayubova M.N.Musayev I.A.Jamgaryan “Atrof muhit sifat analizi va monitoringi” Toshkent-2011 y
5. Израел. Ю. А. Экология и контрол состояния природной среда L., Gidrometeoizdat, 1994.

Jurayev Z.Y.
O'zbekiston Sanoat Qurilish aksiyadorlik tijorat banki
Davlat dasturlari va loyihalari bilan ishlash departamenti
katta menedjer

TIJORAT BANKLARIDA KORPORATIV BOSHQARUV

Annotatsiya: *bank tizimidagi korporativ boshqaruv tizimi bugungi kunda muhim ahamiyatga ega. Korporativ boshqaruv orqali moliyaviy shaffoflik, javobgarlik va yuqori darajadagi risklarni boshqarish amalga oshiriladi. Ushbu maqolada tijorat banklarida korporativ boshqaruv samaradorligini baholash, ularning barqarorlikka ta'sirini o'rganish va amaldagi boshqaruv tizimlarini tahlil qilishga qaratilgan.*
Kalit so'zlar: *tijorat banklari, korporativ boshqaruv, rahbar, bank barqarorligi, bank aktivlari.*

Jurayev Z.Y.
senior manager
Joint-stock commercial bank of Uzbekistan Sanoat Kurilish
Department of State Programs and Projects

CORPORATE MANAGEMENT IN COMMERCIAL BANKS

Abstract. *The corporate governance system in the banking system is important today. Corporate governance ensures financial transparency, accountability and high level of risk management. This article aims to assess the effectiveness of corporate governance in commercial banks, to study their impact on stability and to analyze the current governance regimes.*
Key words: *commercial banks, corporate management, manager, bank stability, bank assets*

Kirish. Bugungi global moliyaviy tizimda tijorat banklarining korporativ boshqaruviga katta e'tibor qaratilmoqda. Bu tizimning asosiy vazifalaridan biri bank operatsiyalarini shaffoflik, javobgarlik va samaradorlik tamoyillariga muvofiq boshqarish orqali bank barqarorligini va xalq ishonchini mustahkamlashdir. Korporativ boshqaruv tamoyillari bank faoliyatining ochiqligini ta'minlab, mijozlar va aksiyadorlar uchun katta ahamiyat kasb etadi. Ayniqsa, banklarning iqtisodiy o'sishga ta'sirini hisobga olsak, korporativ boshqaruv tizimini kuchaytirish muhim ahamiyatga ega.

So'nggi yillarda moliyaviy inqirozlar ko'plab tijorat banklarining faoliyatida korporativ boshqaruv tizimlaridagi kamchiliklarni yaqqol namoyon qildi. Banklarda manfaatlar to'qnashuvi, shaffoflikning yetishmasligi va javobgarlik darajasining pastligi kabi muammolar moliyaviy barqarorlikka salbiy ta'sir ko‘rsatmoqda. Xatarlarni boshqarish tizimining yetarlicha samarador bo‘lmaganligi ham inqiroz davrida banklarning inqirozga qarshi chidamliligini zaiflashtirdi. Shu sababli, banklarda korporativ boshqaruvning qay darajada samarali ekanligi va uning barqarorlikka ta’sirini baholash muhim masala bo‘lib qolmoqda.

Mazkur tadqiqotning asosiy maqsadi — tijorat banklarida qo‘llanilayotgan korporativ boshqaruv tizimlarining o‘ziga xos jihatlarini o‘rganish, ularning amaliy samaradorligini baholash va bank barqarorligiga ta’sirini tahlil qilishdan iborat. Ushbu tadqiqot natijalari bank rahbarlari, investorlari va davlat nazorat organlari uchun muhim bo‘lib, ular orqali tijorat banklarida boshqaruv tizimlarini takomillashtirish uchun yangi yo‘nalishlar taklif etilishi mumkin.

Tadqiqot metadologiyasi. Mazkur tadqiqot tijorat banklarida korporativ boshqaruvning amaliy jihatlarini tahlil qilish uchun empirik va sifatli tadqiqot usullarini birlashtirgan kompleks metodologiyaga asoslangan. Tadqiqot dizaynida korporativ boshqaruv tizimlari va bank samaradorligi o‘rtasidagi bog‘liqlikni o‘rganishga e’tibor qaratildi. Bu bog‘liqlikni aniqlash uchun banklarning hisobotlari va moliyaviy ko‘rsatkichlari o‘rganilib, turli statistik usullar qo‘llanildi.

Tadqiqotda ishlatilgan ma’lumotlar bir nechta manbalardan yig‘ildi. Asosiy ma’lumotlar banklarning yillik hisobotlari, boshqaruv kengashining qarorlari, bank rahbarlari va xodimlari bilan o‘tkazilgan so‘rovnomalar hamda davlat moliyaviy nazorati tashkilotlari tomonidan berilgan hisobotlardan olinadi. So‘rovnomalar yordamida bank rahbarlarining korporativ boshqaruvga bo‘lgan yondashuvi va o‘zlarining boshqaruv strategiyalari haqidagi fikrlari aniqlangan.

Tadqiqot davomida yig‘ilgan ma’lumotlar qator statistik va matematik tahlil usullari yordamida o‘rganildi:

Deskriptiv Tahlil: Bu usul yordamida banklarning umumiy boshqaruv ko‘rsatkichlari va ularning barqarorligiga ta’sir etuvchi asosiy omillar tahlil qilindi.

Regressiya Tahlili: Ushbu tahlil banklar faoliyatida korporativ boshqaruv va samaradorlik o‘rtasidagi bog‘liqlikni aniqlash uchun qo‘llanildi. Bu yerda boshqaruv kengashining mustaqilligi, shaffoflik darajasi va risklarni boshqarishning samaradorligi o‘zgaruvchilar sifatida olinib, ularning bank natijalariga ta’siri o‘rganildi.

Korelatsiya Tahlili: Korelatsion tahlil yordamida banklarda korporativ boshqaruv amaliyotlari va moliyaviy barqarorlik o‘rtasidagi bog‘liqlik o‘lchandi. Bu bog‘liqlik orqali turli boshqaruv ko‘rsatkichlari bankning moliyaviy natijalariga qanday ta’sir qilishi o‘rganildi. Ma’lumotlar asosan bank rahbarlari bilan o‘tkazilgan so‘rovnomalar orqali yig‘ilgani bois, ular sub’ektiv bo‘lishi ehtimoli ham mavjud.

Natija. Tadqiqot natijalariga ko‘ra, korporativ boshqaruv tizimining ayrim komponentlari bank samaradorligiga sezilarli ta’sir ko‘rsatmoqda. Ayniqsa, boshqaruv kengashining mustaqilligi va faoliyati yuqori darajada bo‘lgan banklar o‘zlarining moliyaviy ko‘rsatkichlarini yaxshiroq saqlab kelishgan. Mustaqil a’zolar sonining ko‘pligi banklarda strategik qarorlar qabul qilishda yordam bergan bo‘lsa, rahbarlikning shaffofligi bankning tashqi obro‘sini oshirishga xizmat qilgan.

Risklarni boshqarish tizimi samaradorligini tahlil qilish orqali banklar barqarorligini oshirishdagi muhim omillar aniqlandi. Ma’lumotlarga ko‘ra, risklarni boshqarish tizimi yaxshi rivojlangan banklarda moliyaviy inqirozlarga qarshi chidamlilik kuchli ekanligi kuzatildi. Regressiya tahlil natijalari shuni ko‘rsatadiki, xatarlarni boshqarishning yaxshi tashkil etilishi bankning umumiy faoliyat natijalarini ijobiy tomonga o‘zgartirgan.

Banklarda hisobotlik va shaffoflik darajasining yuqori bo‘lishi mijozlar va aksiyadorlar tomonidan bankka nisbatan ishonchni oshirgan. Korelatsiya tahlili natijalari shuni ko‘rsatadiki, shaffoflikning yuqori darajasi bankning yillik foydalilik darajasiga ijobiy ta’sir ko‘rsatadi. Bu esa, o‘z navbatida, aksiyadorlarning bankka bo‘lgan qiziqishini va investitsiyalarni ko‘paytirishga xizmat qilgan

Tadqiqot natijalari boshqaruv kengashi faoliyati va bank samaradorligi o‘rtasidagi bog‘liqlikni tasdiqladi. Ko‘pchilik tijorat banklarida boshqaruv kengashi qanchalik faol va mustaqil bo‘lsa, ular o‘z strategik maqsadlariga samarali erishgan. Tadqiqot davomida aniqlangan natijalarga ko‘ra, boshqaruv kengashining faoliyati kuchli bo‘lgan banklarda kredit portfeli sifatining yuqori darajada saqlanishi, investitsion qarorlarning oqilona qabul qilinishi va risklarni boshqarishning samarali amalga oshirilishi qayd etildi.

Regressiya va korelatsiya tahlili natijalari korporativ boshqaruvning turli ko‘rsatkichlari bilan bank barqarorligi o‘rtasidagi bog‘liqlikni tasdiqladi:

Boshqaruv kengashi faoliyatining yuqori darajasi va shaffoflik darajasi bank barqarorligi ko‘rsatkichlariga ijobiy ta’sir ko‘rsatdi.

Risklarni boshqarish tizimining samaradorligi va moliyaviy hisobotlarning ochiqligi bankning yillik moliyaviy natijalarini ijobiy tomonga o‘zgartirdi.

Korelatsion tahlilda shaffoflik darajasi va bank foydalilik ko‘rsatkichlari o‘rtasida o‘rtacha ijobiy bog‘liqlik aniqlangan, bu esa shaffoflikning bank faoliyatiga ijobiy ta’sirini tasdiqlaydi.

Muhokama. Tadqiqot natijalari shuni ko‘rsatadiki, korporativ boshqaruv amaliyotlari samaradorligini oshiradigan eng asosiy omillardan biri boshqaruv kengashining mustaqilligi va faoliyati hisoblanadi. Bankning rahbarlik tuzilmasida mustaqil a’zolarning bo‘lishi moliyaviy qarorlar qabul qilish jarayonini ochiq va adolatli qiladi. Ushbu natija oldingi tadqiqotlarda qayd etilgan xulosalarga hamohang bo‘lib, mustaqil boshqaruvning uzoq muddatli moliyaviy barqarorlikka ta’siri borligini tasdiqlaydi.

Tadqiqot risklarni boshqarish tizimi korporativ boshqaruvning ajralmas qismi ekanligini va u samarali tashkil etilgan holda bankning barqarorligi va foydalilik darajasiga ijobiy ta’sir ko‘rsatishini ko‘rsatdi. Risklarni boshqarish tizimi samarador bo‘lgan banklarda xatarlarni boshqarish jarayonida yuqori darajadagi shaffoflik va hisobotlik ta’minlanishi, ularga qarshi tegishli choralar ko‘rilishi kuzatilgan. Bu natijalar ko‘rsatadiki, yaxshi rivojlangan risklarni boshqarish tizimi banklar barqarorligini oshirish uchun muhim ahamiyatga ega.

Bankda shaffoflik va hisobotlik darajasining yuqori bo‘lishi aksiyadorlar va mijozlar tomonidan katta ishonch uyg‘otdi. Tadqiqot shuni ko‘rsatadiki, shaffoflik darajasi yuqori bo‘lgan banklar investorlarga jozibadorlikni saqlab qolishadi va ularga yangi moliyaviy resurslarni jalb qilish imkonini beradi. Bu, o‘z navbatida, bankning uzoq muddatli rivojlanishiga xizmat qiladi.

Ushbu tadqiqot natijalari banklar boshqaruv kengashlariga va moliyaviy nazorat organlariga korporativ boshqaruvni takomillashtirish bo‘yicha muhim tavsiyalar taqdim etadi. Banklarda shaffoflik, risklarni boshqarish va mustaqil boshqaruv kengashi a’zolarining faoliyati samaradorligini oshirish bankning umumiy barqarorligini kuchaytiradi. Bu esa, nafaqat banklar, balki umumiy iqtisodiy tizim uchun ham muhim hisoblanadi.

Tadqiqotning cheklovlari sifatida kichik namuna hajmi va ma’lumotlarning sub’ektivligini qayd etish mumkin. Kengroq miqyosdagi tadqiqotlar uchun banklarning ko‘proq ma’lumotlar bazasi va turli mamlakatlar banklarining korporativ boshqaruv amaliyotlarini tahlil qilish foydali bo‘ladi.

Xulosa. Boshqaruv kengashining mustaqilligi — Bankda strategik qarorlar qabul qilish jarayonida mustaqil boshqaruv a’zolarining mavjudligi samaradorlik va moliyaviy barqarorlikni oshiradi. Bu boshqaruv kengashiga turli manfaatlar to‘qnashuvini oldini olish va ochiq qaror qabul qilishda yordam beradi. Risklarni samarali boshqarish tizimiga ega banklarda moliyaviy natijalar yaxshilanib, inqirozli vaziyatlarda barqarorlik darajasi yuqoriligini ko‘rsatdi. Bu esa risklarni boshqarishning bank faoliyatidagi o‘rnini tasdiqlaydi.Shaffoflik darajasining yuqoriligi aksiyadorlar va mijozlar ishonchini oshiradi hamda yangi investitsiyalarni jalb qilish imkonini yaratadi. Bu jihat uzoq muddatli rivojlanishga xizmat qiladi va banklar uchun raqobatbardoshlikni oshiradi. Korporativ boshqaruvning samarador tashkil etilishi banklar uchun moliyaviy jihatdan ham, boshqaruv jihatidan ham katta foyda keltiradi. Bu, nafaqat bank faoliyatiga, balki umumiy moliyaviy tizim barqarorligiga ham ijobiy ta’sir qiladi.

Amaliy Tavsiyalar

1. Banklarda korporativ boshqaruv amaliyotlarini mustahkamlash uchun mustaqil boshqaruv a’zolarini jalb qilish tavsiya etiladi.
2. Risklarni boshqarish tizimini rivojlantirish uchun zamonaviy tahlil vositalaridan foydalanish va tizimni muntazam yangilab turish zarur.
3. Bank hisobotlari va moliyaviy natijalar bo‘yicha ochiq ma’lumot taqdim etish orqali shaffoflikni oshirish mumkin.
4. Korporativ boshqaruvga raqamli texnologiyalarni joriy qilish orqali boshqaruv jarayonlarining samaradorligini oshirishga erishish mumkin.

Adabiyotlar ro’yhati.

1. O’zbekiston Respublikasi Markaziy Bank “ Tijorat banklarida korporativ boshqaruvni tasdiqlash to’g’risida nizomni tasdiqlash to’g’risida” qarori 3254, 2020

2. Karaliyev T.M. , Sattarov O.B.,Sayfiddinov I.F. Tijorat banklari faoliyati tahlili. O'quv qo'llanma. 2013
3. Karimov B. M. Tijorat banklarida korporativ boshqaruvning iqtisodiy samaradorligini baholash . Научный импульс №21, 2024
4. Beknazarova B.B. Tijorat banklari tizimini takomillashtirish va banklarda korporativ boshqaruvning asosiy omillari. Экономика и социум. № 10(113), 2023

Kamoldinov M.B.
Oziq-ovqat texnologiyasi va muhandisligi xalqaro instituti o'qituvchisi

OLIY TA'LIM MUASSASALARIDA EXTIMOLLAR NAZARYASINI O'QITISH

Annotatsiya: *Mazkur maqolada oliy ta'lim muassasalarida ehtimollar nazariyasini o'qitishning dolzarb masalalari o'rganilgan. Tadqiqotda bu fanning ta'lim jarayonidagi o'rni va ahamiyati, shuningdek, zamonaviy pedagogik texnologiyalar yordamida o'qitish metodikasini takomillashtirish yo'llari tahlil qilingan. Ehtimollar nazariyasini o'qitish talabalarning analitik fikrlash qobiliyatlarini shakllantirish, ilmiy izlanishlar olib borish ko'nikmalarini rivojlantirish va texnik bilimlarni chuqurlashtirishda muhim ahamiyat kasb etadi. Tadqiqot natijalari zamonaviy ta'lim muhitida ushbu fanni o'qitishning samaradorligini oshirish uchun an'anaviy va innovatsion metodlarning uyg'unligi muhimligini ko'rsatdi.*

Kalit so'zlar*: ehtimollar nazariyasi, oliy ta'lim, o'qitish metodikasi, zamonaviy texnologiyalar, interfaol ta'lim, pedagogik yondashuvlar, analitik fikrlash, texnik bilimlar.*

Kamoldinov.M.B.
Lecturer
International Institute of Food Technologies and Engineering.

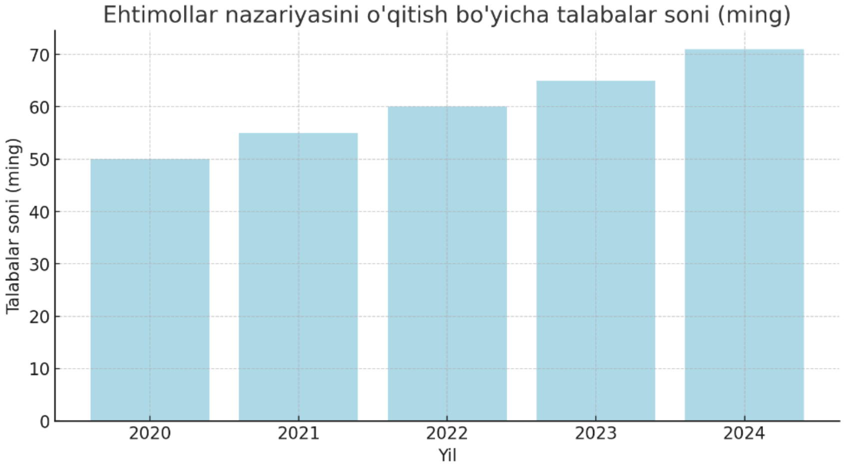
TEACHING PROBABILITY THEORY IN UNIVERSITIES

Annotation: *This article examines current issues in teaching probability theory in higher education institutions. The study analyzes the role and importance of this subject in the educational process, as well as ways to improve teaching methods using modern pedagogical technologies. Teaching probability theory is important for developing students' analytical thinking abilities, developing their research skills, and deepening their technical knowledge. The results of the study showed the importance of combining traditional and innovative methods to improve the effectiveness of teaching this subject in a modern educational environment.*

Key words: *probability theory, higher education, teaching methods, modern technologies, interactive learning, pedagogical approaches, analytical thinking, technical knowledge.*

Olib borilgan tadqiqotlar va tahlillar asosida shuni aytish mumkinki, oliy ta'lim muassasalarida ehtimollar nazariyasini o'qitish jarayonini takomillashtirish dolzarb va strategik ahamiyatga ega. Ehtimollar nazariyasi fanining talabalarning analitik fikrlash qobiliyatlarini shakllantirishda hal qiluvchi oʻrin tutishi ilmiy asoslangan boʻlib, bu fan mazmunini toʻgʻri va interfaol metodlar asosida oʻrgatish ta’lim sifatini oshirishga xizmat qiladi.

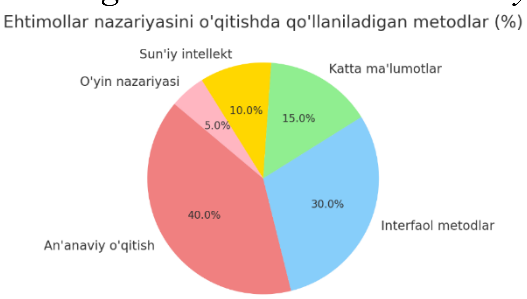
1-diagramma:Ehtimollar nazariyasi o‘qitish bo‘yicha talabalar soni



Tadqiqotlar shuni koʻrsatmoqdaki, hozirgi kunda ehtimollar nazariyasi nafaqat matematik yoʻnalishda, balki ijtimoiy fanlar, iqtisodiyot, axborot texnologiyalari va boshqa koʻplab sohalarda ham oʻzining amaliy ahamiyatini namoyon qilmoqda. Ross (2014) va Grimmett & Stirzaker (2020)[5] tomonidan taklif etilgan pedagogik yondashuvlar orqali ta’lim jarayonida bu fan boʻyicha nazariy bilimlarni amaliyot bilan uygʻunlashtirish talabalar uchun samarador oʻquv muhitini yaratadi.

Innovatsion texnologiyalar va interfaol metodlar yordamida ehtimollar nazariyasini oʻqitish jarayonini yanada samarali qilish mumkinligi aniqlangan. Masalan, sun’iy intellekt va katta ma’lumotlar (big data) tizimlaridan foydalanish orqali talabalar nafaqat nazariy bilimlarni oʻrganadi, balki ularning amaliy jihatlarini ham chuqur tushunib oladi. Bu esa talabalarni zamonaviy texnologik rivojlanish talablariga javob bera oladigan, oʻz mutaxassisliklarida yetakchi kadrlar sifatida shakllantiradi.

1-Diagramma: Ehtimollar nazariyasini o‘qitish metodlari qo‘llanilishi



Umuman olganda, ehtimollar nazariyasining hozirgi holati va kelajakdagi yoʻnalishlari haqida olib borilgan tahlillar shuni koʻrsatadiki, ushbu fan oliy ta’lim tizimida yetakchi oʻrin egallashi va talabalarning texnik bilimlarini mustahkamlashda katta rol oʻynashi lozim. Tadqiqot natijalariga koʻra, oʻqitish metodikasini yangilash va uni zamonaviy texnologiyalar bilan boyitish oliy ta’lim tizimida raqobatbardosh va keng bilim doirasiga ega kadrlar tayyorlash uchun muhim omil boʻlib xizmat qiladi.

Xulosa

Mazkur tadqiqotlar ehtimollar nazariyasini oliy ta’lim muassasalarida samarali oʻqitishning ilmiy-metodik asoslari va zamonaviy yondashuvlarini keng qamrovli tarzda tahlil qilgan holda, ushbu fanning nafaqat matematikaviy asosga ega boʻlib, balki talabalarning keng qamrovli kompetensiyalarini rivojlantirishdagi roli ham muhim ekanligini koʻrsatdi. Ehtimollar nazariyasini muvaffaqiyatli oʻqitish uchun an’anaviy dars metodlarini zamonaviy texnologiyalar va innovatsion usullar bilan uygʻunlashtirish dolzarb vazifa sifatida e’tirof etildi.

Adabiyotlar tahlili va amaliy tajriba natijalari shuni koʻrsatadiki, bu fanni oʻqitish jarayonida oʻquvchilarning faolligini oshirish, nazariy bilimlarni amaliy masalalar bilan bogʻlash, shuningdek, axborot texnologiyalari imkoniyatlaridan samarali foydalanish natijasida oʻqitish samaradorligini sezilarli darajada yaxshilash mumkin. Ayniqsa, ehtimollar nazariyasini oʻrganishda interfaol metodlardan foydalanish talabalar oʻrtasida chuqur tahliliy fikrlash qobiliyatlarini shakllantirishda yordam beradi va kelajakdagi ilmiy izlanishlarga poydevor yaratadi.

Xulosa qilib aytganda, ehtimollar nazariyasini oliy ta’lim muassasalarida oʻqitish jarayoni chuqur tahlil, innovatsion pedagogik texnologiyalarni integratsiya qilish va amaliyotga yoʻnaltirilgan metodlarni joriy qilish orqali yanada samarali boʻlishi mumkin. Kelgusida mazkur fan boʻyicha oʻqitish metodikasini yanada rivojlantirish va uni zamonaviy ta’lim talablariga moslashtirish orqali ta’lim sifatini oshirish va yuqori malakali kadrlar tayyorlashning muhim vositasi sifatida foydalanish zarur.

Foydalanilgan adabiyotlar

1. Boskovich, R. J. (1763). *De Theoria Probabilitatis*. Rome: Angelus.
2. Laplace, P. S. (1812). *Théorie analytique des probabilités*. Paris: Courcier.
3. Keynes, J. M. (1921). *A Treatise on Probability*. London: Macmillan.
4. von Neumann, J., & Morgenstern, O. (1944). *Theory of Games and Economic Behavior*. Princeton: Princeton University Press.
5. Ross, S. M. (2014). *Introduction to Probability Models* (11th ed.). Amsterdam: Academic Press.
6. Grimmett, G. R., & Stirzaker, D. R. (2020). *Probability and Random Processes* (4th ed.). Oxford: Oxford University Press.
7. Kolmogorov, A. N. (1933). *Foundations of the Theory of Probability*. Moscow: GTTI.
8. Frechet, M. (1937). *Generalized Probabilities and Their Applications*. Paris: Hermann.
9. Taleb, N. N. (2007). *The Black Swan: The Impact of the Highly Improbable*. New York: Random House.
10. Hastie, T., Tibshirani, R., & Friedman, J. (2017). *The Elements of Statistical Learning* (2nd ed.). New York: Springer.

Kamolitdinova M.B.
1-kurs magistranti
Fardu Pedagogika nazariyasi va tarixi
Aripov Sh.O.
Fardu Pedagogika kafedrasi p.f.b.f.d, (PhD) katta o‘qituvchi

PEDAGOGIK KOMPETENSIYANING TARIXI VA UNING O‘QITUVCHI FAOLIYATIDAGI O‘RNI

Annotatsiya: Ushbu maqola kompetensiya tushunchasini keng qamrovli tarzda tahlil qiladi va uning ahamiyatini, turli xil turlarini va rivojlanish yo‘llarini yoritib beradi. Maqolada pedagogik kompetensiya muhim ahamiyatga ega ekanligi, sababi u o‘qituvchilarning samarali o‘qitish qobiliyatini, o‘quvchilarning bilim va ko‘nikmalarini rivojlantirishda muhim rol o‘ynashini ta'kidlanadi.
Kalit so‘zlar: Kompetensiya, pedagogik jarayon, pedagog, pedagogik mahorat, ta’lim, ko‘mikma, malaka, nutqiy kompetensiya.

Kamolitdinova M.B.
1st year master’s student
Fersu Theory and history of pedagogy
Sh.O.Aripov
Phd senior teacher
Fersu Pedagogical Department

THE HISTORY OF PEDAGOGICAL COMPETENCE AND ITS ROLE IN TEACHER’S ACTIVITY

Abstract: This article comprehensively analyzes the concept of competence and highlights its importance, different types and ways of development. The article emphasizes that pedagogical competence is important because it plays an important role in the effective teaching ability of teachers and the development of students' knowledge and skills.
Keywords: Competence, pedagogical process, pedagogue, pedagogical skills, education, support, competence, speech competence.

Kompetensiya (lotincha “competo” so‘zidan olingan bo‘lib, “erishaman, muvofiqman, mos kelaman” ma’nolarini beradi) — kishi egallagan muayyan bilim, ko‘nikma, malakalar majmuasini anglatadi. Kompetensiya tushunchasi nisbatan yaqindan boshlab, 1960-yillarning oxiri va 1970-yillarning boshlaridan keng qo‘llanila boshlandi.

Kompetensiya – ma’lum bir sohada samarali faoliyat olib borish uchun zarur bo‘lgan mutaxassisning ta’limiy tayyorgarligiga qo‘yilgan talabdir. U davlat ixtiyorida bo‘lgan, oldindan belgilangan ijtimoiy talab bo‘lib, u o‘quvchi (ishchi)ning muayyan sohada samarali faoliyat ko‘rsatishi uchun zarur bo‘lgan ta’limiy (professional) tayyorgarligiga nisbatan qo‘yiladi. Kompetensiyalarni shakllantirishga yo‘naltirilgan ta’lim – o‘quvchilarning egallangan bilim, ko‘nikma va malakalarini o‘z shaxsiy, kasbiy va ijtimoiy faoliyatlarida amaliy qo‘llay olish imkoniyatidir. Kompetensiyaviy yondashuvga asoslangan ta’lim o‘quvchilarda mustaqillik, faol fuqarolik pozitsiyasiga ega bo‘lish, tashabbuskorlik, mediaresurslar va axborot-kommunikatsiya texnologiyalaridan o‘z faoliyatida oqilona foydalana olish, ongli ravishda kasb-hunar tanlash, sog‘lom raqobat hamda umummadaniy ko‘nikmalarini shakllantiradi. Bundan tashqari, ta’limda har bir o‘quv fanini o‘zlashtirish jarayonida o‘quvchilarda, shu fanning o‘ziga xosligi, mazmunidan kelib chiqqan holda, sohaga tegishli xususiy kompetensiyalar ham shakllantiriladi. Kompetensiyali yondashuv, inson faoliyatida har tomonlama kompetenlilikni shakllantirish hozirgi zamon jamiyati va ta’limining asosiy sharti hisoblanadi. Bu talab o‘qituvchi-pedagoglar faoliyatiga ham bevosita daxldordir.

Bugungi kunda dunyo ta’limini yangilashning asosiy yo‘nalishi ta’lim jarayonida faoliyatli yondashuv orqali dunyoni, hayotni, kasbiy faoliyatni yaxlit tizimli ko‘ra olish, unda tizimli faoliyat ko‘rsatish, yangi-yangi muammo va topshiriqlarni hal eta olish tajribasini shakllantirishdan iboratdir.

Zamonaviy sharoitda malakali ilmiy yondashuv kasb-hunar ta’limining zamonaviy talablariga javob beradigan innovatsion xususiyatga ega bo‘lib, aholining yangi avlodini shakllantirishda ta’limning rolini oshirishga xizmat qiladi, deya ta’kidlaydi Fijerald L. Fabeliko, o‘zining “O‘quv dasturini qayta ko‘rib chiqish: pedagogik malaka va akademik tayyorlov o‘qituvchilarining faoliyati haqida tushunchalar” nomli ilmiy maqolasida. Kompetensiyaga asoslangan yondashuvni amalga oshirishning mohiyati ta’limni modernizatsiya qilishda (ta’lim va tarbiyaning o‘zaro ta’siri), uni sifat jihatdan o‘zgartirishda, ta’limning ustuvor yo‘nalishi sifatida insoniy qadriyatlarning yangi tizimini yaratishda namoyon bo‘ladi. Biror bir mamlakat o‘z aholisiga taqdim etayotgan ta'lim darajasi jahon miqyosida raqobatbardoshlik qobiliyatining eng yaxshi ko‘rsatkichidir.

O‘qituvchilarning pedagogik mahorati ta’lim sifatini oshirishda anchagina qo‘l keladi. Ta’lim sifatining asoslaridan biri o‘qituvchining pedagogik malakasidir va u kurs hamda professional imkoniyatlar davomida ham shaxsiy, ham professional o‘sish jarayonlari orqali rivojlantiriladi. Bugungi madaniytda ta’limning muhim o‘zgarishlarga ehtiyoji borligini ko‘rsatuvchi eng katta belgilardan biri bu, o‘qtuvchiar bilimi inflatsiyasi dilemmasidir. Maktabdagi baholashlar o‘z-o‘zini tarbiyalash bilan faol shug‘ullanadigan va o‘z shogirdlariga to;g‘ri namuna bo‘la oladigan o‘qituvchilarni qo‘llab-quvvatlashdan kelib chiqishi kerak. Davomli shaxsiy, ijtimoiy, va kasbiy rivojlanish hamda bilim, malaka, kompetensiya bog‘liqligisiz hech bir o‘qituvchi kelajakda muvaffaqiyatga erisha olmaydi (Greathouse va boshqalar, 2019; Mohamed va boshqalar, 2016).

Oʻqituvchining pedagogik kompetensiyasi deganda tajriba, tushuncha va bilimlarning kombinatsiyasi va, real sharoitlarda javob bera olish qobiliyatini kafolatlaydigan layoqat tushuniladi. Shu nuqtai nazardan qaralganda, kompetensiya soʻzi tushunchalar, layoqatlar va e’tiqodlar kabu tubdan sodda tuzilishga ega pedagogik va protsessual elementlarni ifodalaydi. Oʻrganish, shuningdek, uni amalga oshiradigan konseptual va amaliy unumdorlik xususiyatlari kompetensiya orqali namoyon boʻladi. Oʻzgaruvchan muhitga moslashish va kelajakni qobiliyat hamda oʻz-oʻzini anglay olish orqali oʻzgartish qobiliyatlari barqaror kompetensiyani ifodalaydi. Albatta bu barqaror pedagogik kompetensiya har bir oʻqituvchida boʻlishi muhimdir. Chunki ular barqaror jamiyat yaratishda muhim oʻringa egadirlar.

Koʻrinib turibdiki, kompetensiya keng qamrovli va juda chuqur tushuncha va albatta pedagogik jarayonni toʻgʻri tashkil etish etishda alohida hamiyatga egadir.

Qisqacha qiladigan boʻlsak esa, pedagogik kompetensiya - bu oʻqituvchining oʻquv jarayonini samarali boshqarish va oʻquvchilarga bilim berish uchun zarur boʻlgan bilimlar, koʻnikmalar, qobiliyatlar va xususiyatlarining toʻplami. Bunda quyidagi muhim 5 ta muhim turlarini saralashimiz mumkin:

1. Didaktik kompetensiya: oʻquv jarayonini rejalashtirish, oʻqitish usullarini tanlash, oʻquv materiallarini tayyorlash va baholash qobiliyati.
2. Kommunikativ kompetensiya: oʻquvchilar bilan samarali muloqot qilish qobiliyati.
3. Psixologik kompetensiya: oʻquvchilarning psixologik xususiyatlarini tushunish va ular bilan samarali ish olib borish qobiliyati.
4. Innovatsion kompetensiya: ta'lim jarayoniga yangiliklar kiritish qobiliyati.
5. Axborot-kommunikatsiya texnologiyalari kompetensiyasi: ta'limda texnologiyalarni samarali qoʻllash qobiliyati.

Xulosa qilib aytishimiz mumkinki, kompetensiya - bu shaxsning oʻzgaruvchan sharoitlarda muvaffaqiyatli harakat qilish uchun zarur boʻlgan bilimlar, koʻnikmalar, qobiliyatlar va xulq-atvor xususiyatlarining toʻplami. Ular nazariy bilimlar bilan cheklanmaydi, balki amaliy koʻnikmalar, muammolarni hal qilish qobiliyati va ijtimoiy-shaxsiy xususiyatlarni ham oʻz ichiga oladi.

Adabiyotlar roʻyxati:

1. Aliev, A. (2019). Pedagogik kompetensiya: Tushunchalar, tarkibi va rivojlanish yoʻllari. "Oʻqituvchilik san'ati" jurnali, 1(1), 43-52.
2. Asqarova, N. (2017). Pedagogik kompetensiya: Zamonaviy talablar. "Oʻzbekiston maktabi" jurnali, 5(11), 48-53.
3. Qosimov, M. (2015). Oʻqituvchilik kasbiga oid kompetensiyalar. "Oʻqituvchilik san'ati" jurnali, 2(2), 22-27.
4. Mirziyoev, Sh.M. (2017). Oʻzbekiston Respublikasini yanada rivojlantirish boʻyicha harakatlar strategiyasi. Toshkent: Oʻzbekiston Respublikasi Prezidenti matbuot xizmati.

5. Sharipov, Sh. (2018). O‘qituvchilik kompetensiyasi: Zamonaviy talablar. "O‘qituvchilik san'ati" jurnali, 4(3), 37-42.
6. Fitzgerald L. Fabelico1 and Bonimar T. Afalla Cogent Education (2023).
Revisiting the curriculum: Insights from pedagogical competence and academic performance of preservice teachers.

Karakulov N.M.
Acting Associate Professor
of the Department of Geography and its teaching methodology
Tashkent State Pedagogical University named after Nizami

THE ROLE AND SIGNIFICANCE OF WAGE IN THE POVERTY REDUCTION STRATEGY IN TASHKENT REGION

Abstract. *This article describes the role and importance of wages in the poverty reduction strategy in Tashkent region. The article also analyzes the average monthly wage by type of economic activity.*

Key words: *Monthly wages, poverty, strategy, inflation, employment, entrepreneurship, labor resources, living and dining services, unemployment, jobs, regional economy.*

KARAKULOV N.M.
Nizomiy nomidagi Toshkent davlat pedagogika universiteti
Geografiya va uni o'qitish metodikasi kafedrasi dotsenti v/b

TOSHKENT VILOYATIDA KAMBAG'ALLIKNI KAMAYTIRISH STRATEGIYASIDA ISH HAQINING O'RNI VA AHAMIYATI

Annotatsiya. *Ushbu maqolada Toshkent viloyatida kambag'allikni kamaytirish strategiyasida ish haqining o'rni va ahamiyati yoritilgan. Shuningdek, maqolada iqtisodiy faoliyat turlari bo'yicha o'rtacha hisoblangan oylik ish haqi tahlil qilingan.*

Kalit so'zlar: *Oylik ish haqi, kambag'allik, strategiya, inflyatsiya, bandlik, tadbirkorlik, mehnat resurslari, yashash va ovqatlanish bo'yicha xizmatlar, ishsizlik, ish o'rinlari, hududlar iqtisodiyoti.*

Jahon tajribasidan ma'lumki aholi farovonligi va ularning yashash sharoitining yuqoriligi ularning ish bilan bandligi ya'ni biron bir korxona yoki firmalarda ishlashi emas balki oylik ish haqi miqdoriga ham bog'liqdir. Ish haqi qancha yuqori bo'lsa albatta ishlovchilarning moliyaviy imkoniyati shunga yarasha yuqori bo'ladi. Shu sababli Toshkent viloyatida kambag'allikni kamaytirish strategiyasida ish haqining o'rni va ahamiyati juda kattadir.

Yaratilgan yalpi ichki mahsulotning ma'lum qismi, ya'ni ishchi va xizmatchilarga, ya'ni ishchi kuchiga tegishli qismi uning ishlab chiqaruvchilari o'rtasida mehnatning miqdori, sifati va unumdorligiga qarab taqsimlanadi, bu iqtisodiyotda ish haqi deb yuritiladi[1]. Ish haqi hozirgi davrda nafaqat O'zbekistonda balki barcha mamlakatlar iqtisodiyotida muhim o'rin tutadi. Shuning uchun ham iqtisodchi olimlar ish haqining mazmuniga katta e'tibor beradilar. Ish haqining mazmunini aniqlashda turli iqtisodchilar turli tomondan yondashib, unga har xil ta’rif beradilar. Masalan, mashhur ingliz iqtisodchilari D.Rikardo va T.Maltuslaring «Yashash uchun vosita minimum!» konsepsiyasida ish haqini yashash uchun zarur vositalarning fiziologik minimumi bilan bir xil deb hisoblanadi. Lekin bunday qarash to‘g‘ri emas. Bu minimum o‘z ichiga ishchi kuchi shakllanadigan iqtisodiy, ijtimoiy va madaniy shart-sharoitlar tug‘dirgan ehtiyojlarni ham oladi. Shu bilan birga ishchi kuchi narxining quyi chegarasini yashash uchun zarur vositalar miqdorining minimumi biIan aniqlash, ishga yollovchilarning ish haqini mazkur quyi chegaradan pasaytirishga intilishiga olib kelishi mumkin [4].

Hozirgi zamon iqtisodiyot nazariyasida ayrim mualliflar (jumladan, «Ekonomiks» darsliklarida, V.D.Kamayev rahbarligida nashr etilgan «Iqtisodiyot nazariyasi» darsligi va boshqalarda) ish haqini mehnat narxi sifatida, ayrimlari esa mehnat bozoridagi talab va taklifning muvozanat narxi sifatida talqin etadilar. Bunda ular asosan bozorda mehnat sotiladi degan noto‘g‘ri tushunchaga asoslanishadi. Mehnat ishchi kuchining funksiya qilishi, uning ma’lum maqsadga qaratilgan faoliyat jarayoni bo‘lib, uning na qiymati, na narxi yo‘qligi, bu jarayonni bozorga olib chiqib sotib bo‘lmasligi fanda ham, real hayotda ham, iqtisodiy amaliyotda ham hammaga ayon bo‘lgan va allaqachon isbotlangan masaladir. Shuning uchun buni isbotlashga harakat qilmasak ham bo‘ladi. Lekin bu g‘oyaning negizida bir ijobiy tomon borki, uni albatta hisobga olish zarur. Bu ham bo‘lsa ular mehnatni ishchining malakasi, intensivligi va natijasi bilan bog‘lashga harakat qilganlar.

Ushbu xulosalardan keyin ish haqining mazmuniga ta’rif berib aytish mumkinki, ish haqi - ishchi va xizmatchilar mehnatining miqdori, sifati va unumdorligiga qarab milliy mahsulotdan oladigan ulushining puldagi ifodasidir [1].

Ish haqi ishlab chiqarish jarayonida yaratilgan zaruriy mahsulot bilan chambarchas bogliqdir. Chunki ish haqi uning asosiy qismini tashkil etadi. Ish haqining asosiy vazifasi ishchi va xizmatchilarning turmush va mehnat sharoitini yaxshilash, boshqacha qilib aytganda, mehnat me’yori bilan iste’mol me’yori o‘rtasidagi bog’liqlikni ta’minlashdan iboratdir. Albatta ishchi kuchini takror hosil qilishda ish haqidan tashqari foiz, renta, foyda, dividend, turli imtiyozlar va nafaqalarning ham roli bor. Ish haqining mazmunini to’laroq tushunish uchun nominal va real ish haqi tushunchalarini bilish zarur. Ishchi uchun qanday shaklda va qancha miqdorda ish haqi olishi emas, balki unga qancha miqdorda tovarlar va xizmatlar sotib olishi mumkinligi muhim. Shu sababli nominal va real ish haqi farqlanadi.

Nominal ish haqi - bu ma’lum vaqt davomida olingan pul summasi yoki pul shaklidagi ish haqi. Nominal hisoblangan ish haqi – ma’lum bir davr (soat, oy, yil) mobaynida xodim tomonidan ishlab chiqarilgan mahsulot (bajarilgan ish yoki ko‘rsatilgan xizmat) evaziga ish beruvchilar tomonidan, amaldagi qonun hujjatlariga asoslangan holda soliq va boshqa to‘lovlarni o‘z ichiga oluvchi yollanma xodimning mehnatiga haq to‘lash tarzida jismoniy shaxsga pul shaklida hisoblangan daromadlardan iborat [4]. Misol uchun, non ishlab chiqarish korxonasi ishchisi mart oyida 3 mln. so‘m, aprel oyida 2 mln. so‘m, may oyida 3.5 mln. so‘m ish haqi oldi. Bular nominal ish haqi hisoblanadi.

O‘zbekiston Respublikasi Prezidenti huzuridagi statistika agentligiga ko’ra nominal hisoblangan ish haqi – ma’lum bir davr (soat, oy, yil) mobaynida xodim tomonidan ishlab chiqarilgan mahsulot (bajarilgan ish yoki ko‘rsatilgan xizmat) evaziga ish beruvchilar tomonidan, amaldagi qonun hujjatlariga asoslangan holda soliq va boshqa to‘lovlarni o‘z ichiga oluvchi yollanma xodimning mehnatiga haq to‘lash tarzida jismoniy shaxsga pul shaklida hisoblangan daromadlardan iborat[2].

Mehnat daftarchalari mavjud bo‘lgan xodimlar soni – oyning ma’lum bir sanasiga, ya’ni birinchi yoki oxirgi sanasiga ko‘rsatiladi. Bunda haqiqatda ishlayotganlar, vaqtincha ishlamayotgan, biroq ishga rasman biriktirilganligi huquqini saqlab qolganlar ham hisobga olinadi. Bitta tashkilotning ichida ichki o‘rindosh sifatida rasmiylashtirilgan xodim bir kishi sifatida hisobga olinadi.

Mehnat daftarchalari mavjud bo‘lgan xodimlar tarkibiga O‘zbekiston Respublikasi Mehnat kodeksi va boshqa mehnatga oid qonunchilik va me’yoriy hujjatlarda keltirilganlar kiritiladi.

Quyidagi xodimlar mehnat daftarchalari mavjud bo‘lgan xodimlar tarkibiga kiritilmaydi: boshqa tashkilotlardan o‘rindoshlik bo‘yicha ishga qabul qilinganlar; fuqarolik-huquqiy tusda tuzilgan shartnomalar bo‘yicha ish bajaruvchilar; tashkilot tomonidan, ishdan ajralgan holda, ta’lim muassasalariga yuborilganlar [2].

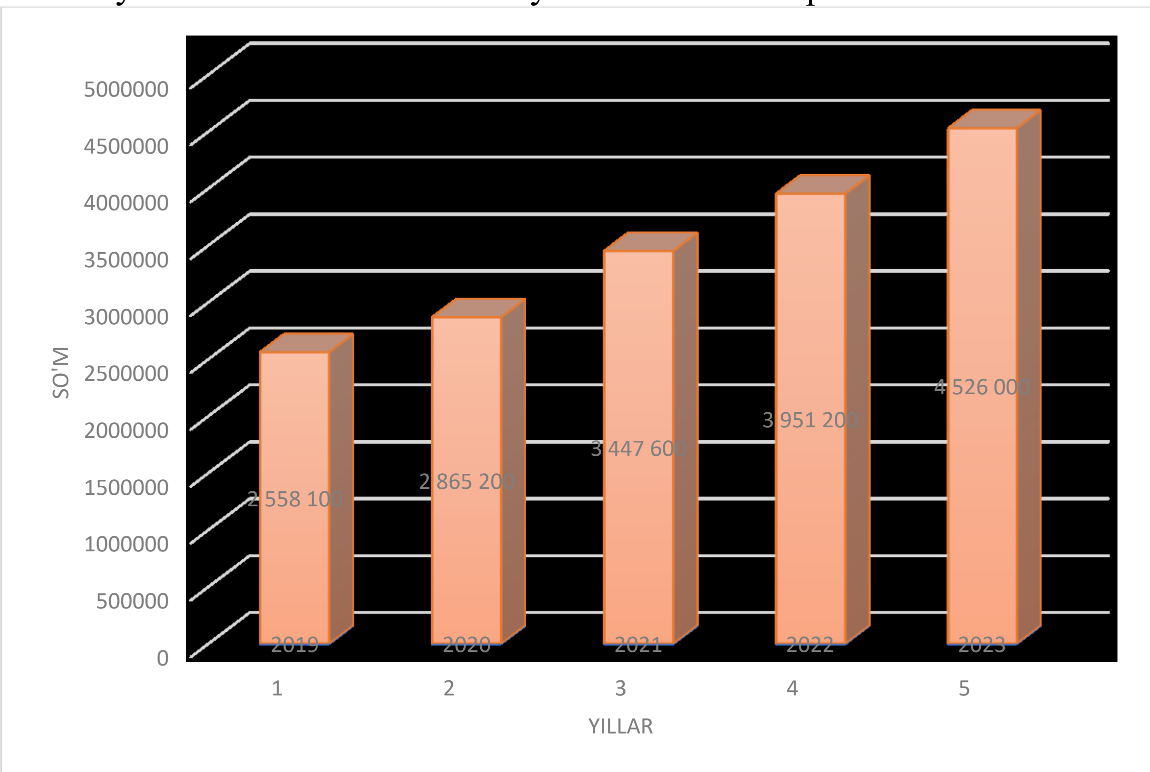
O‘rtacha ish haqini hisoblash uchun qabul qilinadigan xodimlar soni – homiladorlik va tug‘ish bo‘yicha ta’tilda bo‘lgan, bevosita tug‘uruqxonaning o‘zidan yangi tug‘ilgan chaqaloqni farzandlikka olish munosabati bilan ta’tilda bo‘lgan, hamda bolani uning qonun hujjatlariga muvofiq ma’lum bir yoshga to‘lguniga qadar parvarish qilish bo‘yicha ta’tilda bo‘lgan ayollar; ta’lim muassasalarida o‘qiyotgan va ish haqi saqlanmagan holda qo‘shimcha mehnat ta’tilida bo‘lganlar, shuningdek, ta’lim muassasalariga kirish imtihonlarini topshirish uchun ish haqi saqlanmagan holda ta’tilda bo‘lgan xodimlarlarni inobatga olmagan holda, mehnat daftarchalari mavjud bo‘lgan va ish haqi hisoblangan xodimlarning o‘rtacha sonini ifodalaydi[2].

Real ish haqi - bu nominal ish haqi summasining qanchalik tovarlar va xizmatlar miqdorini sotib olishga yetadigan quvvatidir. Boshqacha aytganda real ish haqi - bu nominal ish haqining «xarid qilish» qobiliyatidir. O’z-o’zidan ma’lumki, real ish haqi nominal ish haqi miqdoriga va xarid qilinadigan tovarlar (va xizmatlar) narxiga bog‘liq. Shunday ekan, real ish haqi boshqa sharoitlar bir xil bo‘lganda, nominal ish haqiga to‘g‘ri mutanosibdir va iste’mol buyumlari va xizmatlar narxining darajasiga teskari mutanosibdir [4].

2023-yilda o‘rtacha oylik nominal hisoblangan ish haqi miqdori respublikamizda 4 551 400 so’mni, Toshkent viloyatida esa 4 526 000 so’mni tashkil qilgan va bu 25 400 so’mga kamroqdir (1-rasm). Respublikadagi o‘rtacha oylik ish haqiga nisbatan Toshkent viloyatida o‘rtacha oylik ish haqi, 2023-yil yanvar-dekabr holatida 99.4 % ni tashkil qilgan. Bu ko’rsatkich bo’yicha viloyat O’zbekiston hududlari orasida uchinchi o’rinni egallaydi. Birinchi o’rinda Toshkent shahri (7 453 400 so’m) va ikkinchi o’rinda Navoiy viloyati (5 887 800 so’m) turadi. Eng kam ish haqi miqdori viloyatlar ichida Namangan viloyatiga to’g’ri keladi. Bu viloyatda ish haqi miqdori 3 310 600 so’mni tashkil qilganini ko’rishimiz mumkin.

Toshkent viloyatida o‘rtacha oylik ish haqi dinamikasi (qishloq xo‘jaligi korxonalari hamda kichik tadbirkorliksiz, yanvar-dekabr, ming so‘mda**)** 1-rasmda berilgan bo’lib, viloyatda 2019 yildan beri ish haqi oshib borganini kuzatish mumkin. Bunga asosiy sabab yangi korxonalar, kichik tadbirkorlik sub’ektlari, oilaviy korxonalar va yakka tartibdagi tadbirkorlar soning oshib borishidir.

Shuningdek mahalliy hokimiyat organlari tomonidan tadbirkorlarga qulay shart-sharoitlar yaratilayotgani, mahsulotlar sifati oshib borishi, korxonalar eksport salohiyoti oshib borishi ham salbiy ta’sir ko’rsatmoqda.



1-Rasm. Toshkent viloyatida o‘rtacha oylik ish haqi dinamikasi (qishloq xo‘jaligi korxonalari hamda kichik tadbirkorliksiz, yanvar-dekabr, ming so‘mda)

Izoh: Diagramma O‘zbekiston Respublikasi Prezidenti huzuridagi statistika agentligi ma’lumotlari asosida muallif tomonidan tuzilgan.

2023 yilning yanvar-dekabr oylarida respublika hududlari bo‘yicha o‘rtacha oylik nominal hisoblangan ish haqining eng yuqori o‘sish sur’atlari Farg‘ona viloyatida (119,1 %), Toshkent shahrida (118,7 %), Jizzax viloyatida (118,1 %), Xorazm viloyatida (118,0 %) hamda Samarqand viloyatida (117,8 %) kuzatildi.

Toshkent viloyati tumanlarlari bo’yicha o’rtacha oylik ish haqining viloyat o’rtacha oylik ish haqiga nisbatan yuqori miqdori Olmaliq shahrida – 7 026 400 ming so’mni (155,2 %), Nurafshon shahrida – 5 674 100 so’mni (125,4 %), Qibray tumanida – 5 546 400 so’mni (122,5 %) Bekobod shahrida – 4 926 300 so’mni (108,8 %), tashkil etdi (1-jadval). Aksincha, Bo’ka tumanida – 2 661 300 so’mni (58,8 %), Bekobod tumanida – 2 687 600 so’mni (59,4 %), Piskent tumanida – 2 856 800 so’mni (63,1 %), Parkent tumanida – 2 904 700 so’mni (64,2 %) tashkil etib, ushbu ko’rsatkichni pasayganligini ko’rish mumkin.

1. Jadval. Toshkent viloyati tumanlari bo‘yicha yuridik shaxslarda ishlovchilarning o‘rtacha oylik nominal hisoblangan ish haqi ming so‘mda (2023- yil yanvar-dekabr, qishloq xo‘jaligi va kichik biznes subyektlarisiz)

№	Ma’muriy-hududiy birlik nomi	O’rtacha oylik ish haqi miqdori, so’m
1	Olmaliq sh	7026,4
2	Nurafshon sh.	5674,1
3	Qibray t	5546,4
4	Bekobod sh.	4926,3
5	Ohangaron t.	4666,9
6	Chirchiq sh	4560,8
7	Ohangaron sh.	4496,8
8	Yangiyo‘l t.	3880,5
9	Bo‘stonliq t.	3840,1
10	Angren sh.	3822,0
11	Zangiota t.	3573,2
12	O‘rta Chirchiq t.	3507,3
13	Toshkent t.	3505,3
14	Yangiyo‘l sh.	3480,0
15	Yuqori Chirchiq t.	3399,5
16	Chinoz t	2961,5

17	Oqqo‘rg‘on t.	2961,2
18	Quyi Chirchiq t.	2942,9
19	Parkent t.	2904,7
20	Piskent t.	2856,8
21	Bekobod t.	2687,6
22	Bo‘ka t.	2661,3

Izoh: Jadval O‘zbekiston Respublikasi Prezidenti huzuridagi statistika agentligi ma’lumotlari asosida muallif tomonidan tuzilgan.

Yuridik shaxs maqomiga ega bo‘lgan korxona va tashkilotlarda ishlovchi xodimlarning o‘rtacha oylik nominal hisoblangan ish haqlari (keyingi o‘rinlarda – o‘rtacha oylik ish haqi) har bir iqtisodiy faoliyat turlarida turlicha farqlanadi. O‘rtacha oylik nominal hisoblangan ish haqi tarkibiga qo‘shimcha to‘lovlar, mukofot pullari, rag‘batlantiruvchi to‘lovlar, kompensatsiya va ishlamagan vaqti uchun to‘lovlar, shuningdek, jismoniy shaxslardan olinadigan daromad solig‘i va kasaba uyushmasiga ajratmalar kiradi.

Respublikamizda mehnatga haq to‘lashning eng kam miqdoriga so‘nggi marta 2023-yil 1-dekabrdan o‘zgartirish kiritildi hamda 1 050 000 so‘mga yetkazildi. Bu esa ish haqi hajmining ijobiy o’zgarishiga olib keldi. 2021-yilda bu ko’rsatkich 747 300 so’mga teng bo’lgan.

Toshkent viloyat **statistika** boshqarmasi ma’lumotlariga ko’ra 2023 yil yanvar-dekabr oylari uchun o‘rtacha oylik ish haqi ko‘rsatkichini shakllantirishda qishloq xo‘jaligi va kichik tadbirkorlik sub’ektlari hisobga olinmagan, chunki fermer xo‘jaliklari hamda kichik tadbirkorlik sub’ektlari yilda bir marta hisobot taqdim etishi belgilangan.

Iqtisodiy faoliyat turlari bo'yicha o'rtacha hisoblangan nominal oylik ish haqini tahlil qiladigan bo’lsak quyidagi natijalarni olishimiz mumkin.

Sanoatning asosiy tarmoqlari bo‘yicha o‘rtacha oylik ish haqining eng yuqori ko‘rsatkichi tog‘-kon sanoati va ochiq konlarni ishlash, elektr, gaz, bug‘ bilan ta’minlash va havoni konditsiyalash hamda ishlab chiqarish sanoatida kuzatildi.

Sanoat iqtisodiy faoliyat turi bo‘yicha o‘rtacha oylik ish haqining eng yuqori ko‘rsatkichi Navoiy viloyati (8 449 100 so‘m), Toshkent shahri (6 464 200 so‘m), Andijon (5 681 300 so‘m), Toshkent (5 648 000 so‘m) hamda Qashqadaryo (5 589 700 so‘m) viloyatlarida kuzatildi. Toshkent viloyatida bu o’tgan yilga nisbatan 12.0% o’sganligini ko’rish mumlin.

Qurilish faoliyat turi bo‘yicha o‘rtacha oylik ish haqining eng yuqori ko‘rsatkichi respublikada Toshkent viloyati (7 589 500 so‘m) da qayd etildi.

Savdo faoliyat turi bo‘yicha o‘rtacha oylik ish haqi Toshkent viloyatida 3 464 700 so’mni tshkil qilib, savdo sohasining asosiy tarmoqlari bo‘yicha o‘rtacha oylik ish haqining eng yuqori ko‘rsatkichi avtomobil va mototsikllarning ulgurji va chakana savdosi va ularni ta’mirlash sohasida, eng past ko‘rsatkich esa avtomobil va mototsikllarning savdosidan tashqari chakana savdoda kuzatilgan.

Statistika ma’lumotlariga ko’ra tashish va saqlash iqtisodiy faoliyat turining asosiy tarmoqlari bo‘yicha o‘rtacha oylik ish haqining eng yuqori ko‘rsatkichi ombor xo‘jaligi va yordamchi transport faoliyatida, eng past ko‘rsatkich esa pochta va kuryerlik faoliyatida kuzatilgan. Bu tarmoq bo’yicha o’rtacha oylik ish haqining miqdori bo’yicha Toshkent viloyati respublikamizdagi ma’muriy birliklar orasida 12-chi o’rinni egallaydi.

Axborot va aloqa sohasining asosiy tarmoqlari bo‘yicha o‘rtacha oylik ish haqining eng yuqori ko‘rsatkichi kompyuter dasturlashtirish, maslahat berish va boshqa yordamchi xizmatlarda, eng past ko‘rsatkich esa noshirlik faoliyatida kuzatildi.

Bu tarmoq bo’yicha o‘rtacha oylik ish haqi 6 652 200 so’mga teng bo’lgan.

Moliya va sug‘urta faoliyati iqtisodiy faoliyat turi bo‘yicha o‘rtacha oylik ish haqining eng yuqori ko‘rsatkichi moliyaviy xizmatlar ko‘rsatish va sug‘urtalash bo‘yicha yordamchi faoliyatda eng past ko‘rsatkichi esa sug‘urtalash va nafaqa ta’minotidan tashqari moliyaviy xizmatlarda kuzatildi.

Mazkur faoliyat bo’yicha o’rtacha 10 090 300 so’m oylik ish haqi qayd qilingan.

Ta’lim sohasining asosiy tarmoqlari bo‘yicha o‘rtacha oylik ish haqining eng yuqori ko‘rsatkichi oliy ta’limda, eng past ko‘rsatkich esa maktabgacha ta’limda kuzatildi. Ta’lim sohasida ish haqi hajmi (3 098 500 so’m) bo’yicha Toshkent shahridan keying ikkinchi o’rinni egallagan (2-jadval).

Sog‘liqni saqlash va ijtimoiy xizmatlar ko‘rsatish sohasi faoliyat turi bo‘yicha o‘rtacha oylik ish haqi viloyatda 2 909 200 so’mga teng bo’lib, respublikada 11 o’rinni band qilgan.

Yashash va ovqatlanish bo‘yicha xizmatlar sohasi bizga ma’lumki Toshkent viloyatida yaxshi rivojlangan. Shunga qaramasdan bu soha bo‘yicha o‘rtacha oylik ish haqi hajmi (1 869 000 so’m) jihatidan viloyat so’ngi o’rinlarni, aniqrog’i 14 ta ma’muriy-birliklar egallaydi (2-jadval).

O‘zbekiston Respublikasi Prezidenti huzuridagi statistika agentligi ma’lumotlariga ko’ra san’at, ko‘ngil ochish va dam olish sohasi faoliyat turi bo‘yicha o‘rtacha oylik ish haqining eng yuqori ko‘rsatkichi Toshkent viloyatida (5 798 600 so‘m), Namangan viloyatida (4 787 700 so‘m) hamda Toshkent shahrida (4 406 400 so‘m) kuzatilib, yuqori o‘sish sur’ati 17.1% qayd etildi.

2.Jadval. Toshkent viloyatida iqtisodiy faoliyat turlari bo'yicha o'rtacha hisoblangan oylik ish haqi, so‘m

№	Iqtisodiy faoliyat turlari	**2023 yil**
1	O'rtacha hisoblangan oylik ish haqi, so‘m	4 526 000
2	Iqtisodiy faoliyat turlari bo'yicha o'rtacha hisoblangan oylik ish haqi	
3	Sanoat	5 648 000
4	Qurilish	7 589 500
5	Savdo	3 464 700
6	Tashish va saqlash	4 255 900
7	Yashash va ovqatlanish bo‘yicha xizmatlar	1 869 000
8	Axborot va aloqa	6 652 200
9	Moliyaviy va sug'urta faoliyati	10 090 300
10	Ta'lim	3 098 500
11	Sog'liqni saqlash va ijtimoiy xizmatlar	2 909 200
12	San'at, ko'ngil ochish va dam olish	5 798 600

Izoh: Jadval O‘zbekiston Respublikasi Prezidenti huzuridagi statistika agentligi ma’lumotlari asosida muallif tomonidan tuzilgan.

Toshkent viloyatida o'rtacha ish haqini oshirish uchun quyidagi chora-tadbirlarni amalga oshirishga e’tibor qaratish lozim:

1. Korxonalarda ish haqini oshirish uchun mehnat unumdorligi va iqtisodiy natijalarni oshirishni ta'minlaydigan moliyaviy resurslar va vositalarni shakllantirish kerak. Ish haqi faqat korxona ishlab chiqarish xarajatlarining bir qismi emas, unda ish haqi uchun mablag'lar miqdori olingan daromadlar hajmiga bog'liq. Yuqori ish haqi darajasiga erishish uning faol, rag'batlantiruvchi rolni to'liqroq amalga oshirish maqsadga muvofiq bo’ladi;
2. Ishchi xodimlar uchun zamonaviy mukofotlash usullarini faollashtirish talab qilinadi. Bunda korxonani takomillashtirish va uning uchun muhim bo'lgan ishlab chiqarish natijalariga erishish uchun xodimlarning motivatsiyasini oshirish katta ahamiyatga ega;
3. Ishlab chiqarish miqdori va ishchilarning individual malakasini oshirish, bu umumiy mehnat unumdorligini oshirishga olib keladi;
4. Mahsulot birligiga mehnat, moddiy va energiya sarfini kamaytirish;
5. Biznes sub’ektlarining operatsion va strategik maqsadlariga erishishini ta’minlash;

6. Shahar va qishloq aholi punktlari infratuzilmasini yaxshilash va modernizatsiyalash;

7. Faoliyat ko’rsatayotgan sanoat korxonalarida mehnat unumdorligini oshirish uchun modernisatsiya qilish maqsadida ichki va xorijiy investitsiyalarni jalb qilish;

8. Eksportbob mahsulotlar ishlab chiqarishni maqsadli va samalari qo’llab quvvatlash mexanizmini ishlab chiqish va amaliyotda qo’llash hamda rag’batlantirish;

Xulosa o’rnida shuni ta’kidlash lozimki mamlakatdagi aholi bandligini ta’minlash va ishsizlarni ijtimoiy himoyalash hamda ularning ish haqini oshirish davlat iqtisodiy siyosatining asosiy yo‘nalishlaridan biri hisoblanishi zarur.

Ish haqini oshirish va bu orqali kambag’allik darajasini kamaytirish uchun viloyatda iqtisodiy islohotlarni samarali amalga oshirishni jadallashtirish lozim bo’ladi. Bunda albatta ilg’or xorijiy tajribalarni o’rganish va mazkur tajribalarni iqtisodiyotga tadbiq etish maqsadga muvofiq bo’ladi.

References:

1. Ishga joylashtirishga muhtoj aholi sonini aniqlash, shu jumladan, uy xo‘jaliklarini mehnat bilan bandlik masalalari bo‘yicha o‘rganishlar o‘tkazish, shuningdek, mehnat resurslari, bandlik va aholini ishga joylashtirish balansini shakllantirish metodikasini takomillashtirish to‘g‘risida O‘zbekiston Respublikasi Vazirlar Mahkamasining qarori 2017-yil 22-dekabrdagi 1011-son
2. O‘zbekiston Respublikasi Prezidenti huzuridagi statistika agentligi
3. Toshkent viloyati statistika boshqarmasi
4. Xodiyev B.Y., Shodmonov Sh.Sh., Iqtisodiyot nazariyasi darslik Barkamol fayz media 2017 569-571 betlar
5. Xatamovich, A. I., & Maidanovich, K. N. (2022). Climate Change and Its Impact on Increasing Poverty. *International Journal of Multicultural and Multireligious Understanding*, *9*(12), 485-493.
6. Maidanovich, K. N., Abduxamitovna, N. A., Eshmatovna, U. G., Qizi, E. N. N., & Ug'li, S. B. F. (2023). Place and Role of the Urtachirchik District in the Development of the Economy of the Tashkent Region. *International Journal of Multicultural and Multireligious Understanding*, *10*(3), 214-220.
7. As, F. E. Z. I. U. (2021). An Effective Form Of Socio-Economic Development Urol Xamrayevich Safarov, Nurbol Maidanovich Karakulov. *International Journal of Progressive Sciences and Technologies (IJPSAT)*.
8. Каракулов, Н. М., Нугманова, А. А., & Усманова, Г. Э. (2023). ПЕРСПЕКТИВЫ РАЗВИТИЯ ПРОМЫШЛЕННОСТИ УРТАЧИРЧИКСКОГО РАЙОНА: PROSPECTS FOR THE DEVELOPMENT OF INDUSTRY IN THE URTACHIRCHIK REGION. *Молодой специалист*, *2*(11), 17-26.
9. Maidanovich, K. N., Xamrayevich, S. U., Jumaqulovich, R. A., Eshmatovna, U. G., & Qizi, Z. S. S. (2023). The Organization of Activities in the Agro-Industrial

Complex of Urta-Chirchik District. *International Journal of Multicultural and Multireligious Understanding*, *10*(12), 32-38.
10. Karakulov, N. M., Safarov, U. X., Janzakov, A. B., & Mamadaliyeva, D. B. (2024). THE ROLE OF FAMILY ENTREPRENEURSHIP IN REDUCING POVERTY IN THE URTACHIRCHIK DISTRICT OF THE TASHKENT REGION. *Экономика и социум*, (9 (124)), 174-180.
11. Karakulov, N. M., Safarov, U. X., Janzakov, A. B., & Mamadaliyeva, D. B. (2024). THE ROLE OF FAMILY ENTREPRENEURSHIP IN REDUCING POVERTY IN THE URTACHIRCHIK DISTRICT OF THE TASHKENT REGION. *Экономика и социум*, (9 (124)), 174-180.

Internet sources:

1. https://gov.uz/oz/bv
2. http://ru.euronews.com/2013/04/02/spanish-unemployment-edges-down/.572
3. https://www.gazeta.uz/oz/2022/03/08/unempoyment/
4. https://scienceweb.uz/publication/20713

Karimova D.
Andijon Ichki Ishlar akademik
litseyi tarix fani o'qituvchisi

O'ZBEKISTONNNING ENG YANGI TARIXINI O'RGANISHNING METODOLOGIK TAMOYILLARI

Annotatsiya: *ushbu maqola O'zbekistonnning eng yangi tarixini o'rganishning metodologik tamoyillari haqida bo'lib,unda O'zbekiston tarixini davrlashtirish muammolari ko'rib chiqilgan.*
Kalit so'zlar: *tarix, davr, O'zbekiston, millat, taraqqiyot, madaniyat.*

Karimova D.
teacher
of Andijan Academic Lyceum of Internal Affairs

METHODOLOGICAL PRINCIPLES OF STUDYING THE RECENT HISTORY OF UZBEKISTAN

Abstract: *this article is about the methodological principles of studying the latest history of Uzbekistan, it considers the problems of periodization of the history of Uzbekistan.*
Key words*: history, era, Uzbekistan, nation, development, culture.*

Tarixiy xotira - milliy o'ziga xoslikni tarixan idrok etishda asos bo'lib xizmat qildi. Ma'lumki, tarixiy xotira xazinasi millat taraqqiyotiga yordam beradigan milliy ongning samarali kuchi sifatida ona tiliga, turmush tarziga, urf-odatlari va madaniyatiga ehtiyotkorlik bilan munosabatda bo'lishni talab qiladi. Bu shunchaki ma'naviy merosni saqlab qolish uchun tarixiy qadriyatlarni jalb qilish emas, balki ma'naviy yuksalish yo'lini boshlash uchun xalq o'zining ko'p asrlik tarixiga, ming yillik madaniy tajribasiga, buyuk ajdodlari merosiga murojaat qilishi va O'zbekistonning jahon hamjamiyatiga qanday ma'naviy-axloqiy boyliklar bilan kirishi kerakligini anglatadi.

O'rta Osiyo, jumladan O'zbekiston tarixini zamon talablariga asoslanib davrlashtirish masalasida olimlar orasida hamon bahslar davom etmoqda. Bu masala yuzasidan, xususan, eng qadimgi davrlardan bugungi kunga qadar bo'lgan tariximizni davrlashtirishda e'tibor berilishi lozim bo'lgan tarixiy-madaniy jarayonlar, masalaga sivilizatsion yondashuv, davrlashtirishning metodologik asoslari kabilarga A.Asqarov, E.Rtveladze, A.Sagdullaev va boshqa olimlar e'tibor qaratgan bo'lishlariga qaramay, davrlashtirish masalalari to„la yechimini topmagan. So'nggi yillarda amalga oshirilgan tadqiqotlardan kelib chiqib, O'zbekiston tarixini davrlashtirish masalalariga ham qisqacha to„xtalib o„tishni lozim topdik. Chunki, tarixni o'rganishda avvalo, xronologik izchillik asosida davrlarga bo’lib, har bir davrning o’ziga xos xususiyatlarini hisobga olgan holda ma’ruzalarni belgilash hamda dars soatlarini taqsimlash maqsadga muvofiqdir. Qanchalik sodda ko’rinmasin, ushbu jihat ham murakkab masala hisoblangan tarixni to’g’ri davrlashtirishni talab etadi. Masalaning eng muhim tomoni esa, yoshlarimizga ilmiy asoslangan davrlashtirish asosida tarix fanidan ta’lim berishdir.

Yuqorida ta’kidlanganimizdek, mustaqillik davriga kelib, haqqoniy tariximizni yaratish borasida olib borilgan tadqiqotlar tufayli sovet davri mafkurasiga asoslangan besh bosqichli formatsion davrlashtirish inkor etildi. Qadimgi tarixni davlashtirish masalasida tarixiy-madaniy taraqqiyotning ijtimoiy-iqtisodiy omillariga asosiy e’tiborni qaratish g’oyalari paydo bo„ldi. Xususan, A.Sagdullaevning fikricha, O’rta Osiyo tarixining eng qadimgi davri bir necha yuz ming yillarni o’z ichiga oladi. Yevropa va Osiyo hududlarida tarixiy va madaniy jarayonlar rivojlanishining notekisligi, ayniqsa, turli davrlarda moddiy madaniyatdagi o„zgarishlarning bir-biriga mos kelmasligi tufayli, ayrim hududlarga tegishli tarixiy sana va davrlashtirish bir-biridan farqlanadi. A.Asqarovning fikricha esa, O’zbekiston tarixi jahon tarixining tarkibiy qismidir. Bu zaminda yuz bergan tarixiy jarayonlarni jahon tarixidan ajratib o„rganish mumkin emas. Ular o’rtasidagi o’zaro bog’liqlik jamiyat taraqqiyoti qonuniyatlarining mahsulidir [1].

Har bir xalq yer kurrasining qaysi mintaqasida yashamasin, taraqqiyotning barcha bosqichlarini u yoki bu darajada bosib o„tishi shart. Ammo, jamiyat rivojlanishi hamma yerda birday kechmagan. Jamiyatning notekis rivojlanish qonuniyati esa, qadimgi zamonlarda ko’proq mintaqaning tabiiy-geografik va ekologik imkoniyatlariga bog’liq bo’lgan. Jamiyat hayotida yuz beradigan tub ijtimoiy-iqtisodiy o’zgarishlar, O’rta Osiyo tarixining rivojlanish darajasi va ana shu mintaqa tarixi taqozo etgan holatdan kelib chiqib, O’rta Osiyo, jumladan O’zbekiston tarixini davrlashtirish mumkin

O‘zbekiston tarixi, shuningdek, O‘zbekistonning eng yangi tarixi jahon tarixining ajralmas bir qismi bo‘lib, u bizning zamonamizdagi global jarayonlar bilan chambarchas bog‘liqdir. Eng yangi tarixni o‘rganishning muhimligi va dolzarbligi shundaki, u mamlakatimizning ijtimoiyiqtisodiy va siyosiy-ma'naviy jihatdan barqaror rivojlanishiga ta'sir qiluvchi voqea-xodisalarni tushunishga hamda teran idrok etishga yordam berishi bilan belgilanadi. Bundan tashqari, u bizga tarixiy taraqqiyot tendensiyalarini oldindan ko‘ra bilish va bashorat etish imkoniyatini beradi.

Ma'lumki, O‘zbekiston Respublikasining mustaqillikka erishish jarayoni sobiq sovet hududidagi boshqa mamlakatlar singari murakkab siyosiy o‘zgarishlar sharoitida yuz berdi. Davlat mustaqilligining e'lon qilinishi mamlakatning barcha siyosiy va ijtimoiyiqtisodiy tizimini tubdan o‘zgartirishga yo‘l ochdi. Demokratik prinsiplarga ko‘ra milliy davlatchilik va siyosiy tizimning asoslari shakllantirildi, ularda hokimiyatning qonun chiqaruvchi, ijro etuvchi va sud hokimiyatlari funksiyalari va vakolatlari taqsimlandi. Respublikaning siyosiy va ijtimoiy-iqtisodiy hayotini erkinlashtirish bosqichma-bosqich, keskin inqilobiy larzalarsiz amalga oshirildi.

Tashqi siyosatning milliy strategiyasi ishlab chiqilib, O‘zbekiston zamonaviy xalqaro munosabatlar tizimiga munosib ravishda kira oldi. } O‘zbekiston tanlagan mustaqil taraqqiyot yo‘li xalqimizning milliy xususiyatlari, urf-odatlari va madaniyatini har tomonlama hisobga olgan holda, to‘plangan xalqaro } tajribadan ijodiy foydalanishga asoslangandir.

1989 yildan 1991 yilgacha. Bu bosqich - yangi rahbarning siyosat maydonida paydo bo‘lishi, milliy istiqlol g‘oyasining pishib etilishi, SSSRning parchalanib ketishi negizida yuzaga kelgan muammolarni bartaraf etish bilan bog‘liq sa’y-harakatlar bilan tavsiflanadi.

1991 - 2000 yillar. Bu - ustuvor islohotlar va o‘zgarishlardan milliy davlatchilik asoslarini shakllantirish hamda ijtimoiy yo‘naltirilgan bozor iqtisodiyotiga o‘tish davri. Tarixan qisqa vaqt ichida "taraqqiyotning o‘zbek modeli" ni tanlab olish natijasida milliy davlat shakllanishi uchun ishonchli qonunchilik va huquqiy asos yaratildi. Davlat boshqaruvining yangi tuzilmalari yuzaga keldi, jamoat va fuqarolik institutlarining asoslari barpo etila boshlandi, bozor iqtisodiyotiga o‘tish amalga oshirildi.

Uchinchi bosqich. 2001-2010 yillar. Bu bosqichda - mamlakatni faol demokratik yangilash va modernizatsiya qilish boshlandi. Bu davrning asosiy vazifasi kuchli davlatdan kuchli fuqarolik jamiyatiga bosqichmabosqich o‘tish edi. Shu negizda siyosiy va iqtisodiy hayotning barcha jabhalarini demokratlashtirish va liberallashtirish, davlat va jamiyat qurilishi, inson huquqlari va erkinliklarini himoya qiladigan, fuqarolarning siyosiy va iqtisodiy faolligini oshiradigan, fuqarolik jamiyati asoslarini shakllantiradigan mustaqil sud tizimini mustahkamlash jarayonlari davom etdi.

To’rtinchi bosqich – 2010- 2016. Bu bosqichda mamlakatimizda demokratik islohotlarni yanada chuqurlashtirish va modernizatsiya qilish jarayoni davom etdi. Ushbu bosqich davlat hokimiyati va boshqaruvini yanada demokratlashtirish, sud-huquq tizimini, axborot sohasini isloh qilish, so‘z erkinligini ta’minlash, saylov qonunchiligini rivojlantirish, demokratik bozor islohotlarini chuqurlashtirish va iqtisodiyotni liberallashtirish bo‘yicha islohotlarning huquqiy asoslarini yaratish bilan tavsiflanadi.

Beshinchi bosqich. O‘zbekistonning zamonaviy tarixining beshinchi bosqichi 2017 yildan boshlandi. O‘zbekiston Prezidenti Sh.M.Mirziyoyev tashabbusi bilan 2017-2021 yillarda O‘zbekistonni yanada rivojlantirish bo‘yicha Harakatlar strategiyasining yangi konsepsiyasi ishlab chiqildi. Ushbu tarixiy hujjat mustaqillikni qo‘lga kiritilganidan boshlab, mamlakatni demokratik yangilash va rivojlantirish bo‘yicha keng ko‘lamli islohotlarni rivojlantirishni aks ettiradi, unda davlat va jamiyat rivojlanishining yangi bosqichida modernizatsiyani yanada davom ettirishning strategik dasturi belgilab berilgan. Ushbu bosqich davlat hokimiyati va boshqaruvini yanada demokratlashtirish, sud-huquq tizimini, axborot sohasini isloh qilish, so‘z erkinligini ta’minlash, saylov qonunchiligini rivojlantirish, demokratik bozor islohotlarini chuqurlashtirish va iqtisodiyotni liberallashtirish bo‘yicha islohotlar uchun huquqiy asoslarni yaratishni davom ettirish bilan tavsiflanadi.

Foydalanilgan adabiyotlar:

1. Inatov M.N., Xolnazarova L.S., Maxammadiyeva S.I. “O’zbekistonning eng yangi tarixi” fanidan o„quv - uslubiy qo’llanma. – Toshkent, ToshDTU, 2021. 83 b
2. Mustaqillik: Izohli ilmiy-ommabop lug’at // M.Abdullayev va boshqalar: to’ldirilgan uchinchi nashr. - Toshkent: Sharq, 2006.
3. 2017-2021- yillarda O’zbekiston Respublikasini rivojlantirishning beshta ustuvor yo’nalishi bo’yicha Harakatlar strategiyasi. – Toshkent: Ma’naviyat, 2017.

Kenzhibaeva G.
South Kazakhstan State University named after M. Auezov
Berdiyeva D.
Jizzakh Polytechnic Institute
Kalonov S.
Student
of ecology and environmental protection group

PROTECTION OF SOILS FROM ANTHROPOGENIC EROSION

Annotation. *As a result of the active influence of man on the soil, a change in its properties, an increase or decrease in fertility, salinity, erosion, degumification, rational use of non- irrigated lalmi lands in farming, its protection requires even more attention than before. It is required to rationally use the land, increase the fertility of the soil, know its quality, economic assessment, protection, plant various plants in a row, scientifically based on the condition of the soil, methods of environmentally "clean" processing of soil, carry out fertilizing at a high level.*

Key words: *soil, fertility, measure, erosion, concentration, fertilizer, microorganism, humus, element.*

Of great importance is the development of solutions to problems related to the consistent acceleration of agricultural production, the rational use of the land fund, the productivity of each irrigated hectare, and its economic efficiency. The lands intensively used in agriculture in Uzbekistan are mainly irrigated lands, equal to 4.28 million hectares. These lands are truly the golden fund of our republic and more than 95% of the gross agricultural output is grown on them. In this regard, an important task of agricultural specialists is to maintain and systematically increase soil fertility. It is not for nothing that the state allocates large sums of money for improving land reclamation, restoring soil fertility, building reclamation systems, and conducting rituals related to their use.

Unfortunately, today the soil layer is being eroded, good fertile lands are becoming less and less, and they are quickly becoming unusable. Throughout history, humanity has lost about a billion hectares of land (cities, settlements, buildings, roads, erosion, salt water, evaporation, etc.). Currently, 1.5 billion hectares of land are planted with crops around the planet. According to the data received, 6-7 million hectares of land are lost annually in the world, as mentioned above.

Considering that two-thirds of the world's population lives in poverty and hunger, and assuming that there is less arable land per inhabitant of the planet than 10-20 years ago, increasing soil fertility, doubling and tripling crop yields is an essential part of agriculture in the near future, it is obvious that it should remain the main task.

In order to provide legislative support for reforms in the agrarian sector of our country, a number of laws and their projects have been developed. Among them, the Land Code of the Republic of Uzbekistan, the Laws on the Land Cadastre and other laws aimed at developing and regulating land relations on the basis of the law, rational use and protection of land were adopted and approved by the Oliy Majlis. Under the influence of various improperly organized human activities, erosion and pollution of the soil layer occurs.

The problem of soil protection from erosion is an urgent problem for many countries located in the arid climatic region of the world, including the territory of Uzbekistan. Since the eroded areas of land in the republic are 2 million square meters. about a hectare or more than 40% of the total arable land.

According to our data, on the territory of Uzbekistan there are more than 3 million hectares of drylands suitable for use, of which about 1 million hectares are low- maintenance and semi-maintained drylands, and more than 70% of these drylands are subject to surface impact water erosion.

A classification of eroded soils of Uzbekistan has been developed and a map of erosion- hazardous lands of the republic has been compiled. Under the influence of the erosion process, weakly eroded, medium eroded, strongly eroded soils and sediments are formed, that is, washed away soils, which are the thickness of the soil layer, humus, the supply and composition of nutrients (micro and macro elements), the number of microorganisms and quality, chemical and physical properties, bioenergetic indicators indicate different levels of productivity.

It is known that as a result of soil erosion due to irrigation erosion on slopes with a slope of more than 50, up to 100-150 tons per hectare or more, or even up to 500 tons of soil, can be washed away. Together with this soil, 500-800 kg of humus, 100-120 kg of nitrogen, 75-100 kg of phosphorus and even more nutrients can be lost per hectare per year. It should be noted that erosion processes have a negative impact on the soil ecosystem, negatively affecting the amount of solar energy used in biomass and reducing it. As a result of erosion processes, 30-50 percent or more of solar energy is lost, absorbed by phytomass, humus and soil microorganisms, while the intensity of biological and soil processes occurring in the soil is mainly associated with solar energy reserves and changes in the appearance of scattered light can be imagined. the scale of damage caused by erosion to the ecosystem.

In our country, every year the prevention and control of soil erosion, increasing the productivity of soils eroded by water and wind is recognized as an event of national importance. Laws have been adopted to protect soil from water and wind erosion. The law defines organizational, agrotechnical, forest reclamation, hydrotechnical and other measures for the protection of soils from water and wind erosion.

To protect the soil from erosion, it is necessary to carry out agro-complex measures:

* when farming in mountainous areas, level the land in the form of terraces (supachs), plant fruit trees and vineyards around the fields;
* proper organization of transverse plowing and irrigation work on steeply sloping lands;
* landscaping the edges of ravines, preventing the expansion of erosion of ravines, preventing the flow of water from irrigated fields into ravines, building various barriers and water collectors;
* to combat wind erosion, the most basic and necessary measures are planting shrubs hedges. As well as planting various grasses, rational use of pastures, creating various fences, as well as creating a thin top layer of sand using chemicals with adhesive properties (oil waste, nerosin, K-4 polymers, SKS-65 LATEX);
* in order to prevent irrigation erosion, taking into account the physical and chemical properties of the soil and the slope of the site, using the experience of advanced irrigators, it is extremely important to plan the amount of water supplied to wells for proper irrigation of crops, as well as freezing and diversion of water on lands prone to erosion.

To prevent the compaction of the subsoil layer of irrigated soils, it is necessary to widely introduce the technology of sowing and minimum tillage. Experience has shown that soil density per cubic centimeter during the growing season is 1.20-1.35 g/cm3 and is maintained in an optimal state.

The correct and rational use of any means of production largely depends on how deeply and comprehensively its important features are studied. As a result of active human impact on the soil, changes in its properties, increase or decrease in productivity, salinization, erosion, dehumification, rational use of rainfed lands in agriculture and their protection require more attention than before. It is necessary to use the land wisely, increase the fertility of the soil, know its quality, economic value and protection, plant various plants on a scientific basis according to the state of the soil, apply environmentally "clean" methods of tillage. , and carry out fertilization at a high level. Increasing the productivity and productive capacity of the soil should largely depend on the careful and economical handling of it, a complex aimed at improving it.

Currently, the problem of soil pollution with heavy metals in technogenic and agricultural industries is acute. Heavy metals occupy one of the leading places among environmental pollutants. Many representatives of this group of substances, such as lead, copper, zinc, cadmium, even in very small quantities, can cause immunological, oncological and other types of diseases. As a result of studies conducted by scientists from different countries, it has been proven that about 70 percent of heavy metals enter the human body with food.

The purpose of this work is to study the significance of changes in the composition of soils of heavy metals and their influence in the Sh. Rashidov district of the Jizzakh region.

Sh. Rashidovsky district is considered the administrative center of the Jizzakh region, the main lands around the city of Jizzakh are located in the north-eastern part of the city of Jizzakh. The total area of irrigated land in the region is 34,690 ha, of which: non- saline land - 8,935 ha (25.8%), saline land - 25,755 ha (74.2%). Irrigated gray-meadow soils of the Sh. Rashidovsky district were chosen as the object of study.

Today, Sh.Rashidovsky district is one of the regions where the quality of agricultural land has declined, the main lands of the district are considered close to the city center, the soil is polluted with various pollutants by industrial enterprises, the balance of nature is disturbed, and the ecological environment is considered very serious.

Human use of chemicals in economic activities and their inclusion in the cycle of anthropogenic transformations in the environment is constantly growing.

According to GOST 17.4.1.0283 pollutants in the soil are divided into three classes: Class I (high risk) - As, Cd, Hg, Se, Pb, F, benzo (a) pyrene, Zn;

Class II (moderately dangerous) - B, Co, Ni, Mo, Cu, Sb, Cr; Class III (low risk) - Ba, V, W, Mn, Sr, acetophenone.

Heavy metals far outperform common pollutants such as carbon dioxide and sulfur and are second only to pesticides in terms of pollution. In the future, they may turn out to be more dangerous than NPP and MSW emissions.

Soil contamination with heavy metals is associated with their widespread use in industrial production. Due to the imperfection of purification systems, heavy metals enter the environment, including the soil, polluting and poisoning it.

Soil is the main environment in which heavy metals accumulate. Heavy metals enter the soil both with atmospheric air and with water. It is a secondary source of pollution of the upper atmosphere of the oceans. Heavy metals can be absorbed through the soil and ingested.

According to the results of the monitoring, more than 40 elements of the table of D.I. Mendeleev were found in the soil. Including: V, Cr, Mn, Fe, Co, Ni, Cu, Zn, Mo, Cd, Sn, Hg, Pb, Bi, etc.

The most powerful suppliers of metal-containing waste are enterprises for the smelting of non-ferrous metals (aluminum, aluminum oxide, copper-zinc, lead-smelting, nickel, titanium-magnesium, mercury, etc.), as well as enterprises for the processing of non- ferrous metals (radio engineering), electrical engineering, instrumentation, galvanic sky, etc.).

When determining and assessing the composition of soils in the Sh. Rashidovsky district by ingredients in July 2020, 9 samples were taken from the sampling point with soil layers of 0-30 cm, 30-50 cm and 50-70 cm.

The pH of the soil composition pH was determined in the field.

For the analysis of water samples, atomic absorption, gas chromatographic, photometric, photocolorimetric, gravimetric, spectrophotometric, titrimetric and other physicochemical methods were used.

The mineralization of water was determined by the gravimetric method. The determination method is based on the gravimetric determination of dissolved substances, which is determined by filtering the sample to a constant weight evaporating the residue and drying at 150°C for weakly mineral waters (105-110°C) and highly mineralized waters.

Ammonium ions were determined photometrically. The main method for determining ammonium nitrogen is the calorimetric method using Nessler's reagent. Allows determination of ammonium ions from 100 to 5 mg/l (with a high content of NH_4^+ it is necessary to dilute the test water).

Sulfate ions were determined by the complexometric method, chlorine - by the argonometric method, total hardness - by the complexometric method.

Methods for the analysis of heavy metals. Heavy metals were determined by photometric and photocolorimetric methods. For example, a yellow complex compound in a ferric iron medium was determined by the hydroxide formation reaction, forming a colored complex compound in the presence of copper xylenol.

Based on the results of field and laboratory studies and observations, the sources and level of soil pollution in the Sh. Rashidovsky district were determined.

Conclusions. Thus, the analysis of soil contamination with heavy metals at the landfill in Sh. Rashidovsky district shows that most of the pollutants were found in soil samples. Analysis of soil pollution with heavy metals in the region shows that the content of chromium, manganese, cobalt, nickel, copper, silver, zinc and other elements slightly exceeds the maximum allowable concentrations for soils. The concentration of all other heavy metals does not exceed the MPC, which confirms the conclusions made in the review part of the work about the low information content of heavy metals in environmental monitoring.

Literature:

1. B.D. Shodiyarovna "*Ecological state of irrigated gray-meadow soils and ways to improve them*" ACADEMICIA: An International Multidisciplinary, 2022-Issue 05, pp 238-243 https://www.indianjournals.com/ijor.aspx?target=ijor:aca&volume=12&issue=5& article=043
2. D.Sh. Berdiyeva, G.M. Nabiyeva, & S. Kalonov. (2023). THE ECOLOGICAL STATE OF IRRIGATED GRAY-MEADOW SOILS AND WAYS TO INCREASE THEIR PRODUCTIVITY (ON THE EXAMPLE OF SH. RASHIDOVSKY DISTRICT). *European Scholar Journal*, *4*(3), 21-23. Retrieved from https://www.scholarzest.com/index.php/esj/article/view/3276
3. D. Sh. Berdiyeva, G.M. Nabiyeva, & S. Rakhmatova. (2023). CHANGES IN HEAVY METALS IN SOIL AND REDUCTION IN THEIR CONCENTRATION. *European Scholar Journal*, *4*(3), 18-20. Retrieved from https://scholarzest.com/index.php/esj/article/view/3275
4. Д.Бердиева "Загрязнение почв загрязняющими веществами в ш.рашидовском районе джизакской области и меры предотвращения" "Экономика и социум" №12(103)-1 2022

https://cyberleninka.ru/article/n/zagryaznenie-pochv-zagryaznyayuschimi-veschestvami-v-sh-rashidovskom-rayone-dzhizakskoy-oblasti-i-mery-predotvrascheniya/viewer

5. Berdiyeva D. (2021). THE IMPORTANCE OF HEAVY METALS IN PLANT AND SOIL LIFE. *Archive of Conferences*, *24*(1), 86-88. Retrieved from https://conferencepublication.com/index.php/aoc/article/view/1187
6. Д.Бердиева Оценка загрязнения почвы тяжёлыми металлами (на примере джизакской области) “Инновационные подходы современой науке» сборник статей по материалам LXIX международной научно-практической конференции. Том 9 (69). Часть 1. Москва, 2020 https://www.elibrary.ru/item.asp?id=42833832

Khakkulova R.A.
Assistant of the department of
"Economy of Industries"
Tashkent University of Applied Sciences (TAFU),
Tashkent, Republic of Uzbekistan

REGIONAL FEATURES OF DEVELOPMENT OF TRANSPORT AND COMMUNICATION INFRASTRUCTURE

Abstract: *The article examines the features of the linear and nodal infrastructure of the regional transport system (roads, transport lines, the network of these lines; transport hubs and centers, transport vehicles (rolling stock), traffic flows. The transport system is the main element of the territorial structure.*

Keywords*: transport, communications, hub, region, features, network.*

The regional transport system includes linear and nodal infrastructure (roads, transport lines, a network of these lines; transport nodes and centers, vehicles (rolling stock), transport flows. These elements are interrelated and their research is an important task. Transport nodes and the road network are the main elements of the regional structure of the transport system [1].

As a result of modern technical progress, the following processes are taking place in the transport system: 1) the expansion of the transport network around the world and covering even the most remote areas; 2) reduction of communication speed and time in freight and passenger transportation, resulting in densification of the global economic and cultural space; 3) very uneven distribution and location of the transport network, regardless of technical progress.

In addition, the methods of determining the length and density of communication paths are very complex and labor-intensive processes. The fact that such studies have not been carried out in our country complicates the fulfillment of the assigned tasks. There are objective problems in assessing the level of development of the existing infrastructure from a regional point of view, and in its assessment, it is necessary to establish the transport provision of the regions by forming complex transport economic balances, taking into account the coordinated development of all sectors and regions. Therefore, when studying the regional characteristics of transport infrastructure, it is important to consider the widely used directions and approaches, to adapt them to the conditions of our country.

At the same time, different scientists interpret the functional task of the regional transport system in different ways. Among them, the interpretation given by G.A. Goltz is of great importance, according to which "the role of transport is not to change the location of population and production territorially, but to unite them territorially".[2] It should be noted that the regional characteristics of transport are of decisive importance compared to other sectors. One of the most important features is that its objects have a spatial-grid description, and are interconnected with the location of the territory, production and population. The density of the network and the power of transport flows represent the concentration of production, the level of exploitation of the territory, its potential, the level of socio-economic development of the region.

Based on the above considerations, taking into account regional and other factors, the main tasks of the development of the transport system are as follows:

- gradual and proportional development of the national transport system;
- effective use of the transit potential of the country;
- widening of large transport nodes and roads, complex formation of large transport nodes through which the main cargo flows pass;
- to improve the condition of all transport roads in accordance with international standards;
- formation of a system of integrated transport and logistics centers in the territory and regions of the country.

It is desirable to implement the development of transport infrastructure based on the following principles:

- compliance with social and economic development programs and prospective forecasts of countries and regions;
- a differential approach to the development and modernization of transport infrastructure;
- maximum use of all facilities and communications in the implementation of internal and external transit transportation;
- coordinated development of various types of transport.

In the development of transport infrastructure, it is necessary to study its regional characteristics. The most important elements in the transport system are the transport network and transport flows, which are the sum of all the communication routes connecting the settlements in the regions with each other. It is represented by the following concepts and indicators:

Transport flow (cargo and passenger flow) is the directed movement of a large volume of cargo and passengers from one place to another along a transport route or route with the help of vehicles. The main characteristics of the traffic flow: direction, volume (amount), intensity (number of cargoes and passengers per unit of time), stable or unstable, seasonality, etc. In the study of transport flows, the balance method, linear and non-linear programs, and transport problems are used. Transport flows are more intensive in large cities than in small cities, and in turn, the intensity is higher for short distances and lower for long distances.[3]

Transport node - a place where one or more types of transport are embodied, intersection of transport routes (not less than three), loading and unloading of goods, transfer of passengers to another place, place of sorting of vehicles in the volume of large cargo and passenger traffic, тypes of transport node - railway, highway, airplanes, etc. According to the combination of transport types, it is divided into transport nodes and complex nodes (it includes most types of transport, water-land, land, air-land). [4]

According to I.M. Maergoyz, the morphology (configuration) of the transport network is important for the economy of the country (district). He gives an example and states that the traditional radial network of roads and railways has become an obstacle in the development of the peripheral regions. [5]

The main functions of the regional transport network are:

1) implementation of cooperation between elements of economic and population territorial systems (nodes, centers, zones, districts, regions);

2) providing transport services to the region and its residents. The main territorial characteristics of the transport network: configuration (geometric shapes on the map), typological composition (mutualization of network elements), density (level of density in the area), length, permeability.

Various factors affect the location of transport routes and transport network:

- natural conditions (relief, climate, hydrographic objects, soil cover);
- level of socio-economic development of the region;
- location and culture of the population living in the territory and using it;
-political-geographic characteristics;
- main traffic flows and their directions;
- configuration of the network of transport types;
- characteristics of the space served by the transport network (anisotropy and isotropy, shape and size of the area, variety of spatial levels, type of neighborhood).

There are several approaches to the study of transportation networks and transportation relationships. They study the cooperation of different types of transport and the level of transport provision in a particular area.

CONCLUSION

In studying the problems of providing the regions with the transport network, the following areas were determined:

- statistical direction (the density of the transport network by administrative-territorial units is based on calculation based on statistical data);
-geometric direction (providing of areas with a transport network is represented by elementary geometric means);
- the direction of mathematical modeling (based on the study and forecasting of the impact of transport-territorial processes on the socio-economic development of regions).

In the second half of the 21th century, the beginning of complex research on transport, the development of new methods became the main issue in researching the level of provision of the transport network of the regions.

LIST OF REFERENCES

1. Semina I.A., Nosonov A.M., Loginova N.N. et al. Spatial analysis and assessment of the socio-economic development of the region: monograph / Ed. A.M. Nosonov, I.A. Semina. - Saransk: Publishing house of the Mordovian University, 2014. - P.228.

2. Golts G.A. Transport and settlement / G.A. Golts. - Moscow: Nauka, 1981. - P.31.

3. Tarkhov S.A. Evolutionary morphology of transport networks. - Smolensk-Moscow, Universum, 2005. P.384

4. Trofimenko Yu.V., Yakimov M.R. Transport planning: formation of efficient transport systems of large cities. — Moscow: Logos, 2013. — P.18.

5. Maergoiz I.M. Methodology of small-scale economic-geographical research. -M.: Moscow State University, 1981. P.101.

Khidirov D.
Assistant
Tashkent University of architecture and civil engineering

LEVEL OF PHYSICAL PREPARATION OF EFFICIENCY OF TECHNICAL-TACTICAL ACTIONS OF FOOTBALL PLAYERS

Abstract:*In this article, the scientific and practical experiences of local and foreign scientists in the field of sports on the technical-tactical and physical development of young football players, and scientific-theoretical information presented in the sources of scientific literature are studied. By analyzing the training process of young football players, modern methods of developing their technical-tactical and physical fitness were used in the research process. Scientific-theoretical opinions on the control of the level of preparation were put forward and scientific research works were carried out, the results obtained from the research were comparatively analyzed and appropriate conclusions were drawn.*

Keywords: rapid-force, technical-tactical training, annual training, research group, control group, training.

Аннотация:_В данной статье изучены научно-практический опыт отечественных и зарубежных ученых в области спорта по технико-тактическому и физическому развитию юных футболистов, а также научно-теоретические сведения, представленные в источниках научной литературы. Анализируя процесс подготовки юных футболистов, в процессе исследования использовались современные методы развития их технико-тактической и физической подготовленности. Выдвинуты научно-теоретические взгляды по контролю уровня подготовки и проведены научно-исследовательские работы, проведен сравнительный анализ полученных в ходе исследований результатов и сделаны соответствующие выводы._

Ключевые слова: *скоростная сила, технико-тактическая подготовка, годовая подготовка, исследовательская группа, контрольная группа, тренировка*

However, the problem of optimizing training sessions during the competition was left aside. We all know that in sports games, especially football, there is a specific importance of planning training and conducting it based on a specific program. The fact that football competitions consist of many "rounds" means that we must have an optimal program to ensure that the players are at a high level of physical and psychological preparation for each "round".

Due to the density of "tours" during the competition, players are required to develop high level of physical fitness and technical-tactical skills in order to prepare for each "tour".

Relevance of the study

The problem of training talented and competitive football players with high technical skills, wide physical and functional capabilities determines the need to develop alternative and effective pedagogical technologies.

A number of experts have recommended their method to increase the quickness of the players. But currently, in the training of football players, little attention is paid to the aspects of quick-strength qualities related to technical-tactical actions. First of all, it is necessary to pay great attention to the correct distribution of training loads and the development of quick-strength qualities from the initial stage of specialization. In order for football players to perform at a high level, it is necessary to develop well the various systems of the body.

The purpose of the research: The purpose of the scientific research: to improve the efficiency of the technical-tactical training of young football players during the annual training period and to study its connection with physical training.

In order to determine the dynamics of the effectiveness of technical and tactical actions of young football players during the annual training period, observations were made during training sessions and friendly matches.

Players of two groups participated in the research. 20 young players will participate in each group . In order to determine the physical and technical-tactical preparation of the students, their physical and technical-tactical preparation was checked through special tests and the following standards were adopted:

Before the study, control tests on the physical training of the experimental and control groups were taken and the following results were obtained.

Experimental group 30m before the study. 4.8 seconds, 69.2 seconds in 400 meters, 186 centimeters in long jump, 30 meters. 5.3 in the run with the ball, 77 in the footy, 29.7 meters in the long kick with the right foot and 24.4 meters in the kick with the left foot. They also showed a result of 14.2 meters when throwing the ball from the outside (Table 6).

Control group Participants 30m before the study. to run 4.9 seconds on average according to the standard of control, 68.6 seconds for running 400 meters, standing long jump 187 centimeters, 30m. 5.3 in the run with the ball, 72.7 in the footy, 29.3 meters in the long kick with the right foot and 24.3 meters in the kick with the left foot. They also showed a result of 14.2 meters in throwing the ball from the outside. (Table 1)

Tests for the assessment of physical and technical-tactical training of the experimental group before the study (Table 1)

No	FISH.	30 m. run to	400 m run	Standing long jump	Running with a ball for 30m	Playing the ball on foot	Kick the ball far		AUT
	Abdukodirov J.	5.0	70	190	5.3	51	30	20	14
	Abdufaizov M.	4.8	70	180	5.4	62	28	22	13
	Abdumajidov N.	4.7	72	185	5.5	95	31	23	15.5
	Akramjonov A.	4.9	70	190	5.2	80	26	31	14
	Algadumorov G.	5.0	69	180	5.1	60	31	21	13
	Abduvaliev S.	5.1	70	190	5.4	63	32	28	14
	Boriev V.	4.9	68	200	5.3	92	27	30	14
	Ganiev A.	4.9	69	180	5.3	60	26	23	13
	Zakirov B.	4.7	70	185	5.6	63	30	20	15
	Makhamatov Kh.	4.8	70	180	5.4	97	38	19	15.5
	Mirzaev M.	4.9	69	180	5.1	53	29	25	13.5
	Madusmanov J.	4.9	68	180	5.0	85	26	31	15
	Nasirkhanov N.	4.8	67	185	5.3	112	29	26	13
	Omonov A.	4.7	69	200	5.1	101	30	20	15.5
	Rakhimov T.	4.8	70	180	5.5	58	31	18	15
	Rakhimov S.	4.7	71	190	5.6	90	32	27	14.5
	Rustamov S.	5.1	68	195	5.3	101	30	25	14
	Sadritdinov Sh.	4.9	67	180	5.1	89	30	22	14.5
	Tojiboev B.	4.8	69	180	5.5	102	29	26	15.5
	Yergashev O.	5.0	68	190	5.4	78	30	31	13
X		**4.8**	**69.2**	**186**	**5.3**	**77**	**29.7**	**24.4**	**14.2**

After that, in order to improve the effectiveness of technical and tactical training in the study group during the annual training period, the proportion of technical-tactical training was increased in the planning of training hours, physical training exercises were added to match episodes, and in the experimental group, training through this distribution trainings were conducted. After six months of training, we again received control norms from the players of the experimental group.

Tests for the assessment of physical and technical-tactical training of the control group before the study (Table 2)

No	FISH.	30 m. run to	400 m run	Standing long jump	Running with a ball for 30m	Playing the ball on foot	Kick the ball far		AUT
1.	Abdukodirov J.	5.1	69	185	5.6	68	28	18	13
2.	Abdufaizov M.	4.9	71	190	5.4	70	27	22	14
3.	Abdumajidov N.	4.8	67	180	5.2	59	25	24	13.5
4.	Akramjonov A.	4.9	68	190	5.5	48	22	26	15
5.	Algadumorov G.	5.0	68	200	5.3	51	29	32	14
6.	Abduvaliev S.	4.9	69	185	5.1	62	31	28	13.5
7.	Boriev V.	5.0	67	195	5.6	87	33	20	14
8.	Ganiev A.	4.9	70	190	5.3	99	31	26	15.5
9.	Zakirov B.	5.0	70	180	5.5	133	29	21	14
10.	Makhamatov Kh.	5.1	69	180	5.5	48	27	25	13
11.	Mirzaev M.	4.9	68	195	5.4	59	32	24	14.5
12.	Madusmanov J.	4.9	68	190	5.3	75	31	22	14
13.	Nasirkhanov N.	4.8	67	185	5.2	81	29	24	15
14.	Omonov A.	4.9	69	200	5.0	72	28	22	16
15.	Rakhimov T.	4.8	69	190	5.2	42	29	31	14
16.	Rakhimov S.	4.9	68	180	5.1	44	33	24	15
17.	Rustamov S.	4.8	70	185	5.3	87	31	28	15
18.	Sadritdinov Sh.	5.0	71	180	5.4	129	32	19	14.5
19.	Tojiboev B.	4.9	68	185	5.6	66	30	24	14
20.	Yergashev O.	4.7	67	190	5.5	74	29	26	13.5
X		**4.9**	**68.6**	**187**	**5.3**	**72.7**	**29.3**	**24.3**	**14.2**

Experimental group 30m before the study. 4.8 seconds in the control standard, after the study this figure was 4.6 seconds, in the 400 meter run it was

69.2 seconds before the study, 66.8 seconds after study, standing long jump 186 centimeters before study, 197 centimeters after study, 30m. 5.3 in running with the ball, 5.0 seconds after the study, 77 before the study in footwork, 108 after the study, 29.7 meters in the long kick with the right foot and 29.7 meters with the left foot 24.4 meters in the kick, 32.9 meters in the right foot after the study and 27.4 in the left foot meter. And in throwing the ball from the outside, they showed the result of 14.2 meters before the study , and after the study, this indicator was 16.1 meters (Table 3).

Tests for the assessment of physical and technical-tactical training of the experimental group after the study (Table 3)

No	FISH.	30 m. run to	400 m run	Standing long jump	Running with a ball for 30m	Playing the ball on foot	Kick the ball far		AUT
21.	Abdukodirov J.	4.8	66	200	5.0	89	35	24	16
22.	Abdufaizov M.	4.6	67	190	5.2	97	33	26	14.5
23.	Abdumajidov N.	4.6	68	200	5.3	130	32	28	16.5
24.	Akramjonov A.	4.7	68	200	5.0	180	30	35	16.5
25.	Algadumorov G.	4.8	66	190	5.0	160	36	27	15.5
26.	Abduvaliev S.	4.7	66	210	5.2	76	38	33	16.5
27.	Boriev V.	4.8	67	215	5.0	130	31	33	18
28.	Ganiev A.	4.8	65	190	5.1	86	29	25	16.5
29.	Zakirov B.	4.5	67	200	5.0	78	32	24	16.5
30.	Makhamatov Kh.	4.7	68	190	5.2	105	36	22	17
31.	Mirzaev M.	4.6	68	190	5.0	139	30	27	15
32.	Madusmanov J.	4.8	67	205	4.8	78	28	34	16
33.	Nasirkhanov N.	4.6	66	190	5.0	167	31	28	15.5
34.	Omonov A.	4.5	66	185	4.9	91	33	21	17
35.	Rakhimov T.	4.6	67	200	5.2	90	34	19	16
36.	Rakhimov S.	4.6	68	200	5.3	73	36	29	16

37.	Rustamov S.	4.7	69	200	5.2	363	32	33	17
38.	Sadritdinov Sh.	4.8	65	205	5.1	97	36	28	17
39.	Tojiboev B.	4.6	66	190	4.9	107	34	24	15.5
40.	Yergashev O.	4.6	67	205	4.8	126	32	28	16
X		**4.6**	**66.8**	**197**	**5.0**	**108**	**32.9**	**27.4**	**16.1**

Training in the control group was carried out unchanged and after 6 training sessions, we rechecked them through control standards. **The control group** exercised 30m before the study. The average running time of 4.9 seconds was 4.8 seconds after the study. 68.6 seconds before the study in the 400 meters, 67.8 seconds after the study, 187 centimeters in the standing long jump, 191 centimeters after the study, 30m. in running with the ball was 5.3 seconds before the study and 5.2 seconds after the study. 72.7 in kicking the ball, 90.2 after the study, 29.3 meters in the right-footed long kick before the study and 24.3 meters in the left-footed kick, from the study then this indicator showed 30.8 meters in the right leg and 26.7 meters in the left leg. Before the study, the result of the throw was 14.2 meters, and after the study, this indicator reached 14.7 meters (Table 4).

According to the results of the study, the indicators of physical fitness increased in both groups compared to the initial results, but in the participants of the control group, these indicators increased at a low level, while in the research group, the results showed a significant increase. we can reach

Tests for the assessment of physical and technical-tactical training of the control group after the study (Table 4)

No	FISH.	30 m. run to	400 m run	Standing long jump	Running with a ball for 30m	Playing the ball on foot	Kick the ball far		AUT
21.	Abdukodirov J.	5.0	68	190	5.4	80	30	21	14
22.	Abdufaizov M.	4.9	69	190	5.2	105	29	22	14
23.	Abdumajidov N.	4.7	67	185	5.1	145	29	27	14.5
24.	Akramjonov A.	4.9	67	190	5.4	135	26	30	15.5
25.	Algadumorov G.	5.0	68	200	5.3	170	32	35	14
26.	Abduvaliev S.	4.8	67	190	5.1	65	32	30	14

27.	Boriev V.	4.9	66	200	5.4	89	33	25	15.5
28.	Ganiev A.	4.9	69	195	5.2	138	31	28	15.5
29.	Zakirov B.	4.9	68	185	5.4	100	31	24	14
30.	Makhamatov Kh.	5.0	68	185	5.3	70	28	26	14
31.	Mirzaev M.	4.8	68	195	5.2	105	33	28	15
32.	Madusmanov J.	4.8	67	200	5.1	89	32	24	14.5
33.	Nasirkhanov N.	4.7	66	190	5.2	90	30	25	15
34.	Omonov A.	4.8	68	190	5.0	88	28	26	16.5
35.	Rakhimov T.	4.7	69	195	5.1	50	31	32	15
36.	Rakhimov S.	4.8	67	185	5.0	70	34	26	16
37.	Rustamov S.	4.8	68	190	5.1	40	33	29	15
38.	Sadritdinov Sh.	4.9	69	185	5.2	51	34	24	15
39.	Tojiboev B.	4.8	68	195	5.2	45	31	24	14
40.	Yergashev O.	4.8	70	190	5.3	80	30	28	14.5
X		**4.8**	**67.8**	**191**	**5.2**	**90.2**	**30.8**	**26.7**	**14.7**

Conclusion Special literature shows that the control of competitive activity of football players plays an important role in the process of training football players. Along with the assessment of individual technical-tactical actions, players determine the qualities of speed, strength, special agility, endurance and technical movement skills. Based on the results of the analysis, a targeted impact can be made on various aspects of the player's training.

Technique training and its improvement depends on several factors, for example, the level of preparation of the players, the training period, the number of balls, the condition of the field and the meteorological conditions. Regular monitoring of movement training serves to consciously organize the work of the coach and is of great help to young players. Control and self-control instills a sense of freshness and self-confidence in the player.

Teaching and training methods of game technique should not contradict the essence of the game, on the contrary, it is necessary to take into account the requirements of the game. Exercises adapted to home situations and selected taking into account the players' obligations at home are very important, and training sessions should make up 50-60% of the training material.

List of used literature

1. Nurimov R.I. Sovershenstvovanie takticheskikh deistviy futbolistov vysokoy qualificatsii. Ucheb posobie, T., 2000 . -254 s.

2. Mel Ziddinov R.A. Motor activity of football players, how to show the first level of special physical fitness. FAN-SPORTGA scientific theoretical magazine. Issue 6 of 2020 . B. [13.00.00 #16]
3. Mel Ziddinov R.A. Pedagogical testing of the level of special physical fitness of football players . "PEDAGOGIKMAHORAT" Scientific-theoretical and methodical magazine, issue 4 (August 2020) . Pages 231-233 . [13.00.00 #23] Rajabov S. et al. Analysis of imaginary, general-imaginary and digital-imaginary rules //Science and Education. - 2024. - T. 5. – no. 5. - S. 262-268.
4. Rajabov S. ANALYSIS OF IMAGINARY, GENERAL-IMAGINARY AND DIGITAL-IMAGINARY RULES //Digital economy and information technologies. - 2024. - T. 4. – no. 1. – S. 113-119.
5. Abdullaev M. ORGANIZATION OF WASTE PROCESSING IN SOLVING ENVIRONMENTAL PROBLEMS IN UZBEKISTAN //Nordic_Press. - 2024. - T. 1. – no. 0001.
6. Kabilov A. et al. ANALYSIS OF ASSOCIATIVE RULES AND MARKET BASKETS //Digital economy and information technologies. - 2023. - T. 3. – no. 3. - S. 115-120.
7. Rajabov SB et al. Social mining and its development stages //Science and Education. - 2023. - T. 4. – no. 4. – S. 1342-1345.
8. Oybek oglu ON, Urinovich KA, Bakhtiyorovich RS USE OF DIGITAL TECHNOLOGIES IN IMPLEMENTATION OF TAXES AND OTHER MANDATORY CHARGES IN DIGITAL ECONOMY //Archiv nauchnyx issledovaniy. - 2022. - T. 5. – no. 5.
9. Ziyadullayevich SA, Mirzaliev SM, Bakhtiyorovich RS IMPROVING THE PROGRESSES OF WASTE PRODUCTS PROCESSING THE AUTOMATED MANAGEMENT SYSTEM //Galaxy International Interdisciplinary Research Journal. - 2022. - T. 10. – no. 5. - S. 372-381.
10. Mirzarakhimova A., Abdulakhatov M. Analysis of Healthcare Services in the Digital Economy //Proceedings of the 7th International Conference on Future Networks and Distributed Systems. - 2023. - S. 410-414.
11. Abdulakhatov MM, Avlokulova SS TECHNOLOGY OF SEARCH ORGANIZATION IN VIRTUAL E-SHOPS WITH IMAGE RECOGNITION //Archiv nauchnyx issledovaniy. - 2022. - T. 2. – no. 1.
12. Kobilov A., Abdulakhatov M., Jaloliddinova M. PECULIARITIES OF THE USE OF ARTIFICIAL INTELLIGENCE IN THE EDUCATIONAL PROCESS //Digital economy and information technologies. - 2021. - T. 1. – no. 3. - S. 32-37.
13. Nigmanov AU ANALYSIS OF INCREASING ENERGY EFFICIENCY IN CHINESE INDUSTRIAL NETWORKS // XXI Century: Science and Education Issues (XXI Century: Voprosy nauki i obrazovaniya). - 2024. - T. 1. – S. 146-162.
14. Nigmanov A. U. i dr. MAIN DIRECTIONS OF IMPLEMENTATION OF INVESTMENT ACTIVITY IN FREE ECONOMIC ZONES // GEOGRAPHY: NATURE I OBSHCHEESTVO. - 2020. - T. 1. – no. 2.

15. Bobojonov JBO Prospective trend of investment policy of the PRC //Science and Education. - 2024. - T. 5. – no. 10. – S. 203-209.

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Kholikulov I. B.
Teacher – Assistant
Uzbek State University of World Languages
Tashkent, Uzbekistan

UNCOVERING ORIGINS: A STUDY OF ETYMOLOGY AND WORD EVOLUTION

Abstract: *Etymology, a field within linguistics, utilizes comparative-historical analysis to reconstruct the earliest word-formation structures and the internal forms of words across languages. This study explores the evolution of word meanings, phonological changes, and the intersection of linguistic, cultural, and historical factors in word formation. Drawing on various etymological theories, including phonetic laws, folk etymology, and semasiological universals, it examines how words undergo transformations over time and the role of etymology in preserving cultural narratives. Emphasizing the scientific approach in modern etymology, this work discusses both the limitations and advancements in reconstructive linguistics, highlighting contributions from significant linguistic methodologies and scholars.*

Keywords: *Etymology, linguistics, comparative-historical method, word formation, phonetic laws, folk etymology, semantic evolution, lexical reconstruction, Indo-European languages, linguistic paleontology.*

Xoliqulov I.B.
O‘qituvchi - assistent
O'zbekiston davlat jahon tillari universiteti
Toshkent, O‘zbekiston

OCHISH KELIB CHIQISHI: ETIMOLOGIYA VA SO'Z EVOLYUTSIYASINI O'RGANISH

Annotatsiya:*Tilshunoslikning bir sohasi bo'lgan etimologiya eng qadimgi so'z yasalish tuzilmalarini va tillardagi so'zlarning ichki shakllarini qayta qurish uchun qiyosiy-tarixiy tahlildan foydalanadi. Ushbu tadqiqotda so‘z ma’nolarining rivojlanishi, fonologik o‘zgarishlar, so‘z yasalishidagi lingvistik, madaniy va tarixiy omillarning kesishishi o‘rganiladi. Turli etimologik nazariyalarga, jumladan, fonetik qonuniyatlarga, xalq etimologiyasiga va semasiologik universallarga tayangan holda, u so‘zlarning vaqt o‘tishi bilan qanday o‘zgarishlarga uchraganini va madaniy rivoyatlarni saqlashda etimologiyaning rolini o‘rganadi. Zamonaviy etimologiyada ilmiy yondashuvni ta'kidlagan holda, ushbu ish rekonstruktiv tilshunoslikdagi cheklovlar va yutuqlarni muhokama qiladi, muhim lingvistik metodologiyalar va olimlarning hissalarini ta'kidlaydi.*

Tayanch so'zlar: *Etimologiya, tilshunoslik, qiyosiy-tarixiy metod, so'z yasalishi, fonetik qonuniyatlar, xalq etimologiyasi, semantik evolyutsiya, leksik rekonstruksiya, hind-evropa tillari, lingvistik paleontologiya.*

Etymology is a section of linguistics, within the framework of which, on the basis of comparative-historical method, the most ancient word-formation structures and "internal form" (elements of meaning) of a word, which, as a result of various interlinguistic, cultural-social, interlinguistic and territorial-temporal processes, have been broken, displaced, lost or contaminated (subjected to mixing), are restored (reconstructed). The nature of the word's meaning motivation, possible crossing or concatenation of several semantic sequences or word forms, distribution area of the word (possible changes of area), as well as factors that have influenced the structure and meaning of the word are also reconstructed [the layering or collision of several languages in a given territory, the relationship between the meaning of the word and its changes with the facts of history, material culture, ethnography, religion and mythology of a particular people (so, taking into account the widespread ancient custom of eating the object one swears to eat, e.g. land, it can be assumed that English *oath* can be correlated with Old English *etan,* modern English *to eat*; English *bride* can be correlated with Russian *прут*, Old English brod 'rod, branch': in ancient times there was a custom to break a rod when concluding any transaction, including marriage; typologically cf. Lat. *brod – "rod, branch"*: in ancient times there was a custom to break a rod when concluding any transaction, including marriage; typologically cf. Latin *stipula –"rod"*, but Latin *stipulor –"to conclude a transaction"*;][12].

According to V. N. Toporov, the task of etymological analysis is "to determine the coordinates of different systems (phonological, word-formation, lexical, semantic, poetic, etc.), the intersection of which generates a given word, and to determine the subsequent trajectory of the word".[13] Hence it is clear that etymology is not in any way equivalent to the history of individual words separated or to the mechanical imprinting of similar forms and meanings: only if different connections between words within a given system are taken into account, if the connection of a word simultaneously allows to judge about connections of other words, if the validity of etymology of a word is confirmed and checked by the inconsistency of the links of this word and the intersecting relations with them of other words of the same system, It is possible to speak of the establishment of a certain etymology of the word, although in this case it can only be about one of the possible hypotheses, which can be confirmed, corrected or even rejected. On the other hand, the search for the so-called primordial elements of language – lexical (cf., for example, N. Y. Marr's postulated "primordial elements" *sal, ber, yon, rosh,* allegedly underlying all the languages of the world) or semantic (cf. A. Juret's

[12] Chevalier J., Gheerbrant A. Dictionnaire des symboles. Paris, 1982.

[13] Топоров В. Н. О некоторых теоретических основаниях этимологического анализа. - Вопр. языкознания, 1960, № 3, с. 49.

thesis that all meanings represented in the Indo-European languages can be reduced to the two – "unity" and "to be – to act") is completely futile. This is explained, in particular, by the fact that already at the earliest stages of its development language is presented as an integral system of levels, categories, links, which nevertheless unite different - chronologically, qualitatively and quantitatively – elements. If we take into account that the languages of mankind have existed for more than 30 thousand years, and also take into account the multiple reconstructions of the systems of individual languages, their mutual influences on each other and numerous layering – intralingual and foreign languages, it becomes clear that in historical linguistics it is impossible to operate with absolute categories. That is why the reconstruction of the Indo-European primordial language (Ursprache), as well as of the primordial languages of separate groups of Indo-European languages (Proto-Germanic, Proto-Romanic), is relative. Etymological analysis usually makes it possible to establish word formation-morphemic and semasiological correspondences between lexica-semantic elements both within the same language (internal reconstruction, i.e. establishing some forms and meanings on the basis of others) and within closely related and non-closely related languages (external reconstruction). Such an analysis also makes it possible to identify the earliest known (initial) form of a given unit of language (root, word, phraseological phrase), which is called "etymon".[14] In this connection, the depth of etymological analysis is very important, i.e. the establishment of either superficial or more ancient connections of this or that word or groups of words.

In American linguistics we sometimes speak of so-called linguistic paleontology, which is defined as the study of word meanings in reconstructed languages in order to obtain social, cultural and geographical data about (speech communities) that used these languages. By analyzing and comparing the constituents of words and their semantic transformations, the researcher-etymologist traces various possibilities of development of a certain sequence of meanings within a certain word-form (or several word-forms), the order of combination and properties of connections of these meanings, the analogy of semantic transitions in different languages, i.e. ultimately solves along with comparative-historical problems the problems of typology of lexical-semantic transformations.

Language is assimilated by a person from early childhood as a ready-made, well-oiled mechanism, although, as is known, the formation and development of language is a long dialectical process that takes place over millennia. The speaker is usually not aware of the complex and contradictory phenomena that led to the emergence, disappearance or preservation of certain elements of language, the possibility or impossibility of language changes. For him, language is only modern (or close to them in time) forms of oral and written speech, modern meanings of words.

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[14] Макаев Э. А. Структура слова в индоевропейских и германских языках. М., 1970, с. 34.

However, much is lost in such an approach. After all, individual words, especially borrowed words, are mute witnesses of human history and culture. Changes in the meanings of these words, especially in their transition from one language to another, reflect human destinies, interests, morals, customs, ways of thinking better than any chronicles and testimonies of contemporaries. And although in every period of language existence words are "silent" like sphinxes, such "silence" is in itself a persistent call to unravel their mystery. As O. N. Trubachev rightly pointed out, "an in-depth understanding of the modern meaning of a word is thus its reconstruction".[15]

In contrast to the traditional thesis about the "uniqueness" of etymological solutions, i.e. that a word can have only one etymology, the special literature has recently increasingly emphasized the idea of multiple etymologies of the same word.[16] Within the framework of successive semasiological transitions within a given root, adjacent elements may reveal unidirectional or inter-directional dependence, while non-adjacent elements are not necessarily connected by dependency relations. In this connection, the possibility of matching a number of lexemes previously considered homonymic opens up.

The following may be pointed out as examples. The Indo-European root * *meu* - means "wet, damp; dampness" and at first sight seems to have nothing in common with the root * *meu*- meaning "to move; to hasten; to show strength". However, on closer examination it turns out that these roots are not homonyms, but one and the same root. The point is that the meaning of *"wet"* in Indo-European languages often passes into the meaning of *"male, man, strong"* (literally *"fertilizing"*: cf. English *ox* - *"bull"* and Old Indian *uksati* - *"to spray, wet"*). Along with the meaning "wet", the root *meu - has the meaning "cheerful"; cf. Old Indian moda – "joy, fun", German. munter "cheerful", Russian *мудрый*. Since the meaning "wet" is usually correlated with the meaning "to crush, to turn into a liquid mass" (cf. Goth. Maitan – "to cut"), the English "mood" can probably be attributed to the above corium (as a semasculological parallel, cf. Latin *putare* "to cut", but *putare* "to think, reflect"), English "moat", mettle – "character", as well as French mot – "word" (the meaning "to cut; to beat" often turns into the meaning "to speak": cf. German. sprechen – "to speak", but German. brechen – "to break", Goth. qithan – "to speak", but English "to cut", etc.). In the light of the above, we can assume that English *"merry"* goes back to Indo-European. *meregh – "to wet", and the latter is probably a fusion of two roots: "*meu*- and **reg*- (both meaning *"wet"*). Similarly, O. N. Trubachev established that Russian *пить* and *петь* are not different words (cf. homonymic forms: *пою* – "making sounds" and *пою* – "giving drink"), but a modification of the same root (it refers to a sacrificial libation accompanied by shouting). Cf. also the correlation of English *to sing* with Old

[15] Трубачев О. Н. Реконструкция слов и их значений. - Вопр. языкознания, 1980, № 3, с. 3.
[16] Топоров В. Н. О некоторых теоретических аспектах этимологии. - В кн.: Международный симпозиум по проблемам этимологии, исторической лексикологии и лексикографии. Тезисы докладов. М., 1984; он же. Ведийское rta-: к соотношению смысловой структуры и этимологии. В кн.: Этимология. 1979. М., 1981, с. 140, and others.

English *sicerian – "to drip, ooze", sicera – "alcoholic drink",* on the one hand, and with Russian *(до)сягать, (при)сягать* (a loudly pronounced oath was usually accompanied by touching an object), on the other hand. When etymologizing, it is very important to take into account cases of merging several roots, which are often difficult to recognize. Cf.: Old English faeger (English fair) – "beautiful, lovely" < Indo-European "ap- – "water" + *reg- – "to wet"; English "noise" < Indo-European *nau- – "to wear out, exhaust" + *eu- – "lack; empty" +*se(i)- – "rest" (cf.: Schweizer Deutsch ösen – "to empty", nieschen – "to procrastinate", Osen – "diligence", neuseln – "to beat", but nislen – "to speak", cf. Sakic najs – "music").

Philological analysis of the reliability of words and their meanings presented in ancient language monuments, as well as errors and contaminations of words and meanings in these monuments, is extremely important for etymology. The identification of so-called imaginary words ("ghost-words" – V. Skeet's term) requires special analysis. Thus, the word crinc[17] – "shoe, boot" (Latin cothurnus), found only once in Old English language monuments, turns out to be imaginary: if we take into account that the initial *c* in this word, as it often happens in manuscripts, could have arisen under the influence of the final *c* (and also under the influence of the first letter in Latin cothurnus), if moreover, we take into account the possibility of metathesis and the contamination of *n c h,* we get the true form of this word – irch, which finds confirmation in the modern German dialect word Irch, Irsch – "wooden clogs for peasants"; cf. Old German. ir (a) h – the same.

On the other hand, the contamination of meanings is interesting. Thus, Old English haefer – "goat" is contaminated with Old English haefer (n) – "scorpion", in connection with which bucca (synonym of haefer – "goat") acquires an untypical meaning "beetle; insect" (cf. English bug). At the same time, Old English haefer – "goat" is contaminated with Old English haefer – "oats", in connection with which, along with Old English gat - modern English goat (synonym of haefer – "goat"), an imaginary word oat – "oats" appears (at <*gat: concerning the possibility of mobile initial consonants in the word cf. Russian *коза*, but Lithuanian ožys – "goat"). English hogshead – "big barrel" purely outwardly as if literally means "pig's head" (many researchers, e.g. E. Klein, E. Partridge and others, claim that the barrel was named by analogy with the hog's head). This is a folk etymology. It can be assumed that the Old English beor – "beer" was contaminated with the Old English bar "hog" and replaced in this word by the synonym of the latter hog (cf. English dial. hochie – "beer barrel"). The second element of this word – "head" has no relation to the English *head*, but correlates with the Old English heden – "vessel".[18]

Etymological extrapolation is also of great importance, i.e. the establishment, on the basis of existing forms and meanings, of those forms and meanings which are not actually represented, or of processes long overlapped by

[17] This word has no correspondence in any Indo-European language and is called "hapax ca" (hapax legomenon).
[18] Wright T. Old English Vocabularies. Darmstadt, 1968, vol. I-II, p. 212 (24).

later processes; data on certain values of one area and the relations between them may lead to conclusions about those or other values and relations between them in other areas. It must not be forgotten, however, that not all evolution in language involves change, and not all linguistic change involves evolution. It is necessary, however, to take into account the fact that in a number of cases the evolution of forms can be read through the evolution of meanings, and the evolution of meanings through – the evolution of forms.

The word-formation analysis, in particular the structure of the root, the nature of determinatives and mobile formatives, is of exceptional importance for etymology [here we should note the interesting theory of the dynamic character of the Indo-European root put forward by E. A. Makayev according to this theory, the Indo-European root does not represent a frozen formation, as E. Benveniste postulated, but underwent significant changes in the process of language evolution].[19]

The term "etymology" originated in ancient Greece. It was introduced by the Greek stoic philosopher Chrysippus and literally means "the true meaning of a word" (Greek etymos – "true" + logos – "word, doctrine"). In the history of science, the term in question appears in a variety of meanings. Etymology was the art of interpreting (exegesis) texts of various contents, which was the main subject of so-called hermeneutics. Cf., for example, the erroneous convergence of Latin malum – "evil" and mālum – "apple", in connection with which far-reaching conclusions were drawn that the language supposedly confirms the correctness of the biblical legend of original human sin. F. Engels justly criticized this kind of arbitrary "etymologies" on which pseudo-philosophical conclusions are based. He wrote that "etymology ... must be studied, it cannot be invented".[20]

The Stoics resorted to etymological research to substantiate their views in physics, cosmology, ethics, theology, and jurisprudence. Etymology was often identified with rhetoric, in particular with the selection and combination of words and the construction of stylistic (rhetorical) figures. Finally, up to the end of the 19th century, etymology, as opposed to syntax, was also referred to as the department of grammar devoted to the study of basic phonetic rules, morphology (inflection, conjugation) and word formation. In Ancient Greece and Ancient Rome, where semasiology was involved in the realm of philosophical scholasticism, the word and its meaning were considered the essence, the inherent belonging of the object it names, like its shape, color, chemical and physical properties, and composition. This view is particularly evident in Plato's famous dialog "Cratylus", in the writings of the Stoics and Heraclitus, and in Marcus Terentius Varron's treatise "On the Latin Language". In all these works, the fascination with sound-imitation (onomatopoeia) and sound symbolism in the interpretation of words can be clearly traced. The proponents of this concept

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[19] Schmidt L. Über den Gebrauch des Terminus "Wurzel" in der Sprachwissenschaft. – In: Gedenkschrift für Jost Trier. Köln, 1975.
[20] Маркс К., Энгельс Ф. Соч. 2-е изд., т. 36, с. 257

believed that, since names are “composed” of letters of the alphabet, it is the letters that should primarily reflect the properties of the object in question. For example, it was argued that the Greek letter *po* supposedly expresses impulse, movement, rigidity, while *a* the letter *lambda* – expresses something smooth, soft. Things themselves were thought to affect us in the way words were felt. In this connection, one of the most important research techniques, often leading to fantastic results, was the decomposition of words into parts, each of which was assigned its own meaning. Thus, the Latin *lapis* – “stone” was interpreted as “*laedens pedem*” – “damaging feet” (a person stumbles on stones); the Latin *fenestra* – “window” was interpreted as *“ferensnos extra”* – “taking us outside”; Latin *cadaver* – “corpse” was broken down into *ca* (from cadere - “to fall”, “to perish”), *da* (from dare – “to give”), *ver* (from vermis – “worm”) and interpreted as “fallen, given to worms”; *capillus* – “hair” was raised to *capitis pilus* – “head down”. By performing any operations on a name, the proponents of this concept argued, we influence the corresponding object as well, subjugate it to our will. In this connection, the meaning of verbal magic becomes clear, the desire to classify the names of those objects that need to be “secured” from hostile influence. Hence the desire to search for “primary”, “istanic” names, meanings and forms of words in order to better understand the essence of things and phenomena and the possibility of influencing them, which to a large extent determined the actual subject and methods of etymologizing in the period of antiquity and the Middle Ages. This concept was opposed to the view that all words of human language arose “by agreement” (Democritus, Aristotle). In accordance with this concept, the so-called well-assigned and badly, incorrectly assigned names were distinguished.

The etymology of antiquity and the Middle Ages was generally guesswork. From the point of view of the form of words, it was based on the possibility of arbitrary addition, deletion, transposition (inversion) and replacement of letters in a word. From the point of view of meaning, the rhetorical figures of similarity, proximity, contiguity (i.e. the relationship between cause and effect, between what contains and what is contained, between part and whole), catachresis (the use of a word in an unrelated, inaccurate or incorrect sense) and contrast (the opposite of meaning) were taken into account. In addition, etymology operated with naive approximations of consonant words and, as already mentioned, sound and religious symbolism. The absurdity of such constructions was obvious even to the Christian theologian Augustine (354-430), who wrote: “The origin of words is the same as the interpretation of dreams: everyone interprets them according to his own reasoning”. This characterization also applies to etymology in much later times, until the creation of the comparative-historical method and the overcoming of the naive constructions of pre-scientific linguistics.

The compilation of the first etymological dictionaries in Britain dates back to the 17th century. Most authors attribute the entire vocabulary of the English language to one of the known ancient languages – Hebrew, Arabic, Greek, Celtic languages, which are considered by them as peculiar primordial languages. At the same time, the peculiarities of the languages with which it is compared are often transferred to English. Thus, authors who correlate English vocabulary with Semitic vocabulary, taking into account the regularities of the latter, usually take into account only the combinations of consonants and pay no attention to vowels. It should also be pointed out that some authors reduce almost all English words to onomatopoetic (sound-imitation) formations. As for the meaning of words, early English etymological dictionaries are characterized by naive mnemonic interpretations of words based on the principles of etymologizing that prevailed in the Middle Ages (cf. the correlation of English monkey with French manqué – "a creature that never managed to become a man").

The material given in modern English etymological dictionaries is, unfortunately, rather scarce. Some long-outdated etymologies swarm from one dictionary to another without any critical reflection, and the vast majority of common English words remain without any etymology at all (they are labelled "of uncertain etymology", "origin unknown"). Special works (monographs and articles) devoted to the etymology of individual English words are not reflected in etymological dictionaries. The most reliable (though the least interesting) in etymological dictionaries of the English language are those etymologies that correlate with Latin (we are talking about French borrowings in English). Meanwhile, the overwhelming majority of words which, according to dictionaries, have no etymology, are quite amenable to etymologization. Thus, English ache – "pain" goes back to the Old English eacian – "to increase" (typologically cf. Russian *большой*, but *боль*). English "dog" goes back to the Indo-European root *dogh – "to burn, to shine; to watch": it refers to a dog as a guardian of the herd (typologically cf. Russ. *печь*, but *опекать*); since words with the meaning "to burn, to shine" correlate with words meaning "to move quickly" (cf. English to cast – "to throw", but Ossetian. caest – "eye", kasyn – "to look"), we can assume that the meaning of the word dog was also superimposed on the indicated meaning of "hound, following the trail" (cf. Ossetian doğ – "racing, running"). Most of the words denoting a house, a flat, correlate with the notion of "to burn; to warm; to warm" (cf. Czech tepla – "room"; German Stube – "room", but English stove – "oven"). However, as we have already said, words with the meaning "to burn" correlate with words meaning "to move quickly" (cf. German brennen – "to burn" < be-rennen – "to run, to move quickly"). We can assume in this connection that English *flat* – "apartment" has no relation to *flat* – "salverform", *a* is a prefixal formation (with a truncated prefix *for*-) from the root represented by German dial. lätteln – "to move quickly; to hang around", Tocharian. A lät – "to run" (cf. German. lodern – "to blaze", but Swiss dial. Lottern – "to move, walk"). English *"fish"* – correlates with Tocharian *A pusāk* "muscle" (pl. puskas). Cf. English dial. *fish* – "flat iron plate"; Indo-Aryan. *pišur* – "muscle, flesh". In this connection, it should be noted that in a number of languages the notion of *"fish"* correlates with the notion of "muscle" – cf. the paired word in Adygean: *lepca* – "fish", literally "muscle" + "fish". The word *fish* correlates also with Old English fysan – "to move quickly", English dial. *to fish* - "to strive, to achieve", English *busy*. English *to play* – "to play" correlates with Russian to *плакать* (originally "to perform cult actions accompanied by body movements and shouts"). Similarly, the English *toy* correlates with Russian *стучать, стук.* The etymology of the English word *ape* – "monkey" is interesting. Taking into account that, according to ancient beliefs, the monkey was a symbol of fertilization, it is possible, apparently, to compare this word with Tocharian *A apa* – "water; river", Old Indian *apa* – "water", Prussian *ape* – "river" (cf. the above etymology of the English *ox* – "bull"). In this connection it is interesting to compare also English "monkey", but Tocharian. *A muk* – "force", Indo-European **mak*- "to knead, knead, press" > English to make – "to do". English "star" correlates with Indo-European *ter – "to rub" > > "to shine (from friction)". In its turn, the meaning Russian "to rub" gives the meaning "hard" (cf. typologically, on the one hand, English *to grind*, but *ground*, and on the other hand, Russian *жесткий,* but *жечь*), in connection with which the same root can be attributed to the Latin terra – "earth" (in our case we mean the celestial firmament as the residence of stars). To the same root belongs the numeral *three* Russian *три* (as a symbol of heaven, in contrast to the numeral *two*, which is the personification of all earthly things). The etymology of English *weed* – "grass" is also interesting (cf. Russian *ветка*, English *to wed*, Russian *сватать* (branch as a symbol of a deal), to swathe – "to wrap up" (the bride's face was usually covered), "wet" (as a symbol of ritual libation), German *schwatzen*- "to speak, talk" (shouts as an attribute of ritual)].[21]

A truly scientific approach to etymological research emerged only after F. Bopp's justification of the comparative-historical method (comparativists) in the early twentieth century. It was the discovery of phonetic correspondences (so-called phonetic laws) of the Indo-European languages on the basis of this method that for the first time created a solid ground for understanding many deep phenomena of the language and excluded mechanistic convergence of outwardly consonant words. Only the comparative method, unlike the linguistic techniques that preceded it, presupposes the use of the principle of historicism in linguistic research. This principle, however, does not mean simply presenting the material in chronological sequence or mechanically identifying the earliest of the presented linguistic phenomena or realities. It requires the disclosure of those internal relations and interconnectedness of linguistic phenomena which determine not only their linguistic status and the reasons for their historical change, but also the whole process of linguistic development as a whole.

It should be emphasized that taking into account only the formal (sound) side of the words being compared cannot be the basis for a reliable etymology. Up until recently, however, just the establishment of the sound correspondence of certain words was considered the main proof of their genetic identity, and the semantic relations of the compared lexemes were arbitrarily interpreted on the basis of the researcher's "common sense" and "intuition". Meanwhile, it is quite

[21] Маковскый М.М. Английская этимология. М., 1986 – in print

clear that if we did not know the meanings of the compared words, we would not be able to correlate them phonetically with certain words of related languages or with other words of the same language. However, there are still no firm criteria for analyzing the semantic proximity of words. The determination of semasiological identity of the compared lexemes on the basis of "psychological associations" is unreliable due to quite objective facts - the same concepts may underlie completely different words [cf. the Indo-European root *ger- – "to twist; to bend", which gives Lithuanian krem—blys - "mushroom" (lit. "curve"), German Kranz – "wreath", Krampf – "cramp", krank – "sick", Kringel – "bagel", Lithuanian. krumpelys – "joint of the finger", English grease, Lithuanian. kreipti – "to turn over", Latin carpere – "to tear", Old Indian krpitam – "shrub", Russian *крепкий* "strong", etc.), and different notions can participate in the formation of the same meaning (cf. the meaning of "beautiful": 1) "form, outline": lat. formosus, rum. frumos, sp. hermoso; 2) "jewel": Welsh. tlws – "red" < "jewel" (cf. Irish tlus – "cattle"); 3) "to squeeze": Danish. smuk < New German. smuk – "flexible" (cf. German Schmuck and schmiegen); 4) "to wash": Dutch mooi, cf. moi(e) – "beautiful", but Russ. *мыть*, Lithuanian. maudyti, Latvian maudat; 5) "fight, battle; to beat": Welsh. cadr, Brit. Kaer – "beautiful", but Welsh, cadarn – "strong", Irish cath, Welsh. cad - "battle"].

Etymologizing only on the basis of phonetic laws invariably narrows, schematizes, simplifies (or, on the contrary, complicates) the scope of the study (in a number of cases the etymology of a word becomes impossible at all due to the lack of suitable sound correspondences), does not allow us to consider the language in all its complexity, in all its aspects and perspectives. Proceeding from the erroneous thesis of language homology (meaning the consideration of language as an absolutely "homogeneous" entity for all speakers, abstracting from its inherent variability, social, territorial and temporal heterogeneity), phonetic etymology focuses the researcher only on one facet of the language complex. A scholar who blindly follows the phonetic laws in etymology is often deprived of the possibility of attracting truly ancestral forms and lexemes for comparison, since they may not fulfil the predetermined formulae, but at the same time he is forced to interpret arbitrarily various phenomena of language in the light of these formulae, thus nullifying the main *raison d'être* of these laws - their strictness. Therefore, the phonetic laws, which in a number of cases undoubtedly constitute one of the most important parts of the procedure of etymological identification, are in themselves clearly insufficient to solve the question of the relation of individual words. Proponents of phonetic laws usually proceed from the erroneous theses that 1) language change is analogous to evolution in the animal and plant world, where each change is a consequence of a preceding movement (the principle of post *hoc, ergo propter hoc*), 2) there were no intermediate links between phonetic elements and they themselves are not intermediate links (thus often confusing cause and effect), and 3) any phonetic change is an isolated phenomenon, occurring independently of the linguistic environment in which it takes place, although, as it is now established, any linguistic change, including phonetic change, is the product of the interaction of a whole complex of phenomena, different in their hierarchical level, functional status and nature. The proponents of phonetic laws are characterized by the orientation only on unambiguous correspondences, the consideration of linguistic change as a mechanical transition of some elements into others, and the refusal to find out the causes of sound transitions. It is indicative that F. M. Müller, one of the prominent representatives of Young Grammatism, wrote: "Sound etymology has nothing to do with sound. We know words to be of the same origin, which have not a single letter in common and which differ in meanings much as black and white".[22]

It should be borne in mind that on the basis of one and the same sound correspondence in a number of cases quite different roots may be equated, i.e. sound correspondences cannot be an absolute guarantee of the infallibility of the identity established. On the other hand, one and the same phonetic element can change in several different ways, in connection with which it is hardly legitimate to postulate the uniqueness of phonetic transitions. In addition, the use of sound laws does not take into account such common phenomena in language as mobile formatives, change of consonants and vowels in the root. Cf. Swiss-German baggen ~ gaggen, – "to smell bad"; baugen ~ maugen ~ moggen, – "to squint (with the eyes)"; miren ~ tiren ~ liren, – "to be unsuccessful in work"; English dialect little ~ lickle – "little"; arrish ~ eddish – "stubble"; German argot Míß ~ Moß ~ Meis ~ Mese ~ Mais ~ Maus ~ Mosch – "girl"; Maure ~ Moire ~ Murer ~ Maier – "fear"; Rasch ~ Rosch ~ Resch ~ Risch – "head" and etc.

The use of phonetic laws in the process of etymological analysis caused controversy among linguists from the very beginning. A strong Opponent of these laws was G. Schuchardt.[23]

Along with phonetic methods of etymological analysis, the analysis of meanings is also used. In this analysis, it is important to take into account the so-called semasiological universals (parallels) that arise when creating similar combinatorial conditions in a language [linguistic combinatorics – is a branch of linguistics, studying within the linguistic time qualitative and quantitative characteristics both of the language continuum and of the language elements that comprise it in order to determine the possibility (impossibility) and the results of various types of their interaction (grouping and regrouping elements and their transformations - crossing, overlapping, merging, entering into and exiting from the system, reshuffling, folding, unfolding, changing order, etc.;][24], e.g. "place of prayer" > "pawnshop": English slang mosk (mosque < "mosque"), cf. French mont-de-piété – "pawnshop" (literally "mountain of godliness"); "reed" > "wicked, steep": Old English *hreod*, German Riedgras – "reed", but Latin crûdélis

[22] Müller F. M. The Science of Language. London, 1899, vol. II, p. 303.
[23] Schuchardt H. Ein Vademecum der allgemeinen Sprachwissenschaft. Darmstadt, 1976; see also the collection: The Lautgesetz-controversy. Amsterdam, 1977
[24] Маковский М. М. Проблемы лингвистической комбинаторики. Вопр. языкознания, 1985, № 3

"wicked", Old Nidian *krudh-jak* – "to make angry", Old English hreode – "tough"; "calf", "sheep" > "to rejoice, to joke": Latin vitulus - "calf", but vitulor - "to exult", Latin ovis - "sheep", but ovare - "to rejoice, to express joy loudly" (cf. Russian loanword *овация* and also Russian *телячий восторг*), German Kalb - "calf", but kalbern – "to joke"; "to go, to move" > "experience, art": Old Icelandic arna – "to go", but Latin ars – "art", German fahren – "to go", but Erfahrung – "experience", Latin curro – "to run", but Old Indian carana - "art", Old Icelandic mentr – "attendant", but ment – "art"; "share" > "crowd": Old Indian cât-ajati – "to divide", but Latin caterva – "crowd", German. scheren – "to shear", but Schar – "crowd"; "think" > > "chase": lat. cogere – «think», but also «chase», old-engl. witan - «know», but. gewitan - «persecute, punish».[25] It should be noted that when forming the meaning of a word in some languages, only a certain conceptual attribute is selected due to the internal combinatorial peculiarities inherent in this or that period of language development, and all other conceptual attributes are neutralized: this is the specificity of a certain sequence of ways of modelling the surrounding world. It should be taken into account, however, that semasiological parallels are not always provable, since correlated pairs of meanings may belong to homonyms (cf. Russian *весь* – obsolete "village, region" and *весь* – "whole"). In connection with the semantic side of etymological research, it is of great importance to take into account the phenomena of analogy, decomposition, pollination and the so-called folk etymology, i.e. the desire to look for the internal form of words as a rational explanation of their meanings without taking into account the real facts of their origin. Thus, English *fund*, Russian *фонд*, etc. are usually correlated with Latin *fundus* – "estate", but English *fund* goes back to a shortened form of Arabic *fonduq* – "tavern for foreign merchants; warehouse for goods" (from Greek pandocheion – "containing everything"); English *lurch* (in the expression *to leave smb. in the lurch*) has no relation to English *lurk* – "to hide in the garden, to hide", but corresponds with Latin orca- "dice box", which in Old French merged with the definite article *l'ourche - lourche.*

Since the creation of the comparative-historical method, etymology has always been considered the touchstone of linguistics. Linguists belonging to the most diverse schools of linguistics and working in the most diverse fields of linguistics have been engaged in etymology. A huge contribution to the development of etymology was made by Soviet scientists. The works of O. N. Trubachev, V. N. Toporov, E. A. Makayev and others have firmly entered the golden fund of etymological science.

Already in the 19th century attempts were made to regulate in a certain way the methodology of etymological research [cf., on the one hand, the etymological canons of W. Skeat[26] and on the other hand, the – "rules of etymologizing" put

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[25] Persson P. Beiträge zur indogermanischen Wortforschung. Leipzig, 1913, Bd. II.
[26] Skeat W. Principles of English Etymology. Oxford, 1891.

forward in the 1960s by O. Szemerényi].[27] The methods of linguistic geography, the study of toponymy, the method of “words and things” (“Wörter und Sachen”), successfully developed by O. Schrader and A. Nehring (the study of etymologies on the basis of the study of the history of material culture) became widespread. J. Trier drew attention to the need to take into account the peculiarities of joint labour activity of different human collectives (ergo-logical principle). V. N. Toporov proposed to use the concepts of probability theory and game theory in etymologizing words. Y. Malkiel in his numerous works showed various “pitfalls” of etymological research, usually not taken into account in the analysis.[28] All these methods, especially when combined judiciously, should certainly lead (and have already led to some extent) to an improvement in the reliability of etymological reconstructions.

At the same time, it should be noted that the use of the so-called component analysis has recently become widespread in etymology. Since this method is based on the artificial decomposition of meaning into components, and the criterion of such decomposition is not facts, but the researcher's intuition (of course, different for different scholars) and so-called common sense, component analysis in the study of the real history of words can hardly clarify anything. Thus, in the component analysis of words with the meaning “thief” the meaning “to burn” is never singled out (and cannot be singled out) (cf. Eng. steal, but Indo-Aryan täl – “to burn”, Eng. thief, but Russian *тепло*; typologically cf. Eng. slang to burn – “to cheat”); in the component analysis of words with the meaning “berry” the meaning “to beat” cannot be singled out (cf. Eng. Eng. berry, but English dial. to berry – “to beat”: transition of the meaning “to beat” >> “lump”); in the component analysis of words with the meaning “to lack” the following meanings cannot be singled out: 1) “to move quickly [cf. English to want, but to wander, English dial. want – “mole” (lit. “forcing its way into the ground”)]; 2) “branch”, “stick” (cf. English wand); 3) “to make sounds” (cf. Tocharian. A wark – “to speak, chatter”, Pahlavi vang “voice”; typologically cf. Indo-Eur. ghei – “empty”, but Old English ceigan – “to call”); 4) “thing” (cf. Tocharian. B wantare – “pestle”, “object”). As O. N. Trubachev rightly points out, “not a mechanical composition, but a single content, durable and changeable at the same time - this is the meaning of the word. The lexica-semantic reconstruction connects its hopes with its durability, as well as with its changeability”.[29]

USED LITERATURE

1. Chevalier J., Gheerbrant A. Dictionnaire des symboles. Paris, 1982.
2. Топоров В. Н. О некоторых теоретических основаниях этимологического анализа. - Вопр. языкознания, 1960.

[27] Szemerényi O. Principles of Etymological Research in the Indo-European Languages. - In: II. Fachtagung für indogermanische und allgemeine Sprachwissenschaft. Innsbruck, 1961.
[28] Malkiel Y. Essays on Linguistic Themes. Oxford, 1968; Malkiel Y. From Particular to General Linguistics. Amsterdam, 1983.
[29] Trubachev O. N. Op. cit., p. 14).

3. Макаев Э. А. Структура слова в индоевропейских и германских языках. М., 1970.
4. Wright T. Old English Vocabularies. Darmstadt, 1968.
5. Schmidt L. Über den Gebrauch des Terminus “Wurzel” in der Sprachwissenschaft. – In: Gedenkschrift für Jost Trier. Köln, 1975.
6. Müller F. M. The Science of Language. London, 1899.
7. Schuchardt H. Ein Vademecum der allgemeinen Sprachwissenschaft. Darmstadt, 1976; see also the collection: The Lautgesetz-controversy. Amsterdam, 1977.
8. Persson P. Beiträge zur indogermanischen Wortforschung. Leipzig, 1913.
9. Skeat W. Principles of English Etymology. Oxford, 1891.
10. Szemerényi O. Principles of Etymological Research in the Indo-European Languages. - In: II. Fachtagung für indogermanische und allgemeine Sprachwissenschaft. Innsbruck, 1961.
11. Маковскый М.М. Английская этимология. М., 1986.

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Kholikulov I. B.
Teacher – Assistant
Uzbek State University of World Languages
Tashkent, Uzbekistan

FUNCTIONS OF THE DATIVE CASE IN GERMAN SENTENCE STRUCTURE

Abstract:*This article explores the functions of the dative case (N_3) in German sentence structure, focusing on its role within various structural-functional sentence models. By examining models like initial, modifying, phraseological, and syntagmatic structures, the study illustrates how the dative case influences the sentence's grammatical and semantic meaning. The research highlights the nuances in obligatory and optional uses of the dative, demonstrating its role in conveying intensity, emotional effect, and syntagmatic relationships. This analysis provides insights into the broader impact of the dative case on German syntax and verb semantics.*

Keywords: *German linguistics, dative case, sentence structure, structural-functional models, syntagmatic analysis, phraseology, sentence semantics, grammatical function, German syntax*

Studying the semantics of the German verb within the framework of structural-functional sentence models, we noted the different behavior of the dative case (designated by the symbol N_3) within different types of sentence models depending on their functions. Let us cite the definition of a language model given by M. M. Gukhman: "A language model is understood as a mentally created structure reproducing in a schematized (simplified) and visual form the essential relations and connections of a language system"[30].

We have established the following types of structural-functional models of sentences: 1) initial, 2) modifying, 3) contextual-terminological, 4) phraseological, 5) syntagmatic. All the listed types of sentence models require a special explanation for their understanding.

Referring once again to M. M. Gukhman's understanding of the linguistic model, we want to stress that the schematisation of the linguistic material considered in our work is that only the logico-grammatical aspect of the sentence is taken into account, which is in agreement with R. Grosse's position: "Unter dem Begriff Satztyp, für den auch die Bezeichnungen Satzmodell, Satzbauplan, Satzschema, Grundform des Satzes verwendet werden, versteht die Germanistik den Satz als grammatisches Minimum in seiner unterschiedlichen Ausstaffierung mit Wortarten und Wortformen als Hauptkonstituenten des Satzes. Dabei muss man

[30] М. М. Гухман. О роли моделирования и общих понятиях в лингвистическом анализе. В сб. «Теоретические проблемы языкознания». М., «Наука», 1970, стр. 157.

weitgehend von der kommunikativen Leistung der konkreten einzelnen Äußerung abstrahieren."[31].

Thus, in our study, out of the seven aspects of V. G. Admoni's sentence consideration, six are irrelevant, namely: modality, completeness of the sentence (filling it with secondary members of the sentence), independence or non-self-independence of the sentence, cognitive attitude of the speaker, communicative task and, finally, the degree of emotionality of the sentence[32]. To these unaccounted aspects of consideration, we should add another temporal aspect.

In our understanding of the sentence model, the functional unity of form and content within the sentence structure comes to the fore, hence the name of the considered sentence models – "structural-functional sentence models".

The initial structural-functional model of a sentence is designed to reveal the nominative meaning of a verb as a representative of a certain paradigmatic lexical-semantic group of verbs. Based on this function of the initial structural-functional model of the sentence, a regularity can be deduced: any verb as a representative of a certain lexical-semantic group can have only one initial sentence model, and the same sentence model will, as a rule, be the initial one for another representative of the same paradigmatic lexical-semantic grouping. Thus, the initial sentence model for the verb liegen in the sentence Das Buch liegt auf dem Tisch is the same for the verbs stehen, sitzen, hängen, i.e. for verbs of oriented position in space. The sentence model $NVP_{3/4}N_3$[33] can be considered as an expression of the semantic idea of the lexical-semantic group of verbs of oriented position in space.

The dative case (N_3) can also be an obligatory part of the original sentence model for certain verbs as representatives of specific lexical-semantic groups. For example, for verbs that convey concrete objects, the dative case is a mandatory member of the sentence model, e.g. for sentences like Ich gebe dir ein Buch. The dative case is not always obligatory for the original sentence model of a verb, even if it appears quite often in sentences with this verb. Thus, for the lexical-semantic group of information transfer, the control of the dative case is quite typical, but, for example, in such sentences as Ich erzähle ihm ein Märchen the dative case can be eliminated without disturbing the correct sentence structure. Of course, in the case of Ich erzähle ein Märchen, it can be assumed that the addressee is established on the basis of context or known from a certain situation. However, the member N_3 is not part of the initial structural-functional model of the sentence Ich erzähle ihm ein Märchen, but is only a part of the communicative-strength model of the sentence.

[31] R. Große. Zur Problematik von Satztyp und Kernsatz in Deutschen. In: „Probleme der strukturellen Grammatik und Semantik". Leipzig 1968, S. 21.

[32] Detailed information on the sentence, See: В. Г. Адмони. Типология предложения. В сб. «Исследования по общей теории грамматики». М., «Наука», 1968, стр. 233-290.

[33] Coding characters used in our work: N - noun (or pronoun) in nominative case as subject to: N1 - noun (or pronoun) in nominative case as part of the predicate; N2 - noun (or pronoun) in parentage; N3 - noun (or pronoun) in the dative case; N4 - noun (or pronoun) in the intive case; V - conjugable verb; A - adjective as definition; P2 - preposition requiring the genitive case; P3 - preposition requiring the dative case; P3/4 - preposition requiring the double case; Inf. - infinitive; Part. II - Participle II.

By communicative-strong sentence model for a certain verb we mean the sentence that most typically reflects the denotative reality associated with this verb. It should be taken into account that a communicatively strong sentence model may include, in comparison with the original sentence model, only those additional members which will not lead to the formation of a potential second predicative centre, i.e. a communicatively strong sentence model may not include members which can be transformed into independent sentences, in other words, members of the sentence model called by Helbig as free indications (freie Angaben).

For the same verb there can be several communicative strong models. For example, the sentence Ich erzähle ein Märchen along with the sentences: Ich erzähle ihm ein Märchen. Ich erzähle von einem Märchen. Ich erzähle ihm von einem Märchen is communicatively strong, while the original sentence pattern for the verb erzählen – Ich erzähle. Several communicatively strong sentence patterns can be cited with the verb schreiben: Ich schreibe einen Brief. Ich schreibe ihm einen Brief. Ich schreibe von einem Brief. Ich schreibe ihm von einem Brief with the original sentence model being communicatively weak: Ich schreibe.

It should be noted that the number of communicatively strong sentence patterns is related to the semantic idea of a certain group of verbs, as the composition of communicatively strong sentence patterns reflects extra-linguistic moments. Therefore, it is easy to explain the fact that the three-fold verbs typa legen, stellen, setzen form both the original and communicative-strong model of the sentence, because the three-valued dependencies for these verbs exhaust the dantotic information within one predication center.

Due to the fact that for some groups of verbs the initial sentence model is simultaneously a communicatively weak sentence model, as it needs to be speculated based on context or situation, it is important to be able to extract the obligatory composition of the initial sentence model. The obligatoriness of any member of the sentence model can be determined based on the matrix on the substitutability of the tested member. For example, let's check the status of the member N_3 in the sentences Ich gebe ihm ein Buch and Ich erzähle ihm ein Märchen using the matrix:

Substitute members / Sentence Patterns	heute	Schnell	aus Nachlässigkeit	Ins/zum Zimmer
1) Ich gebe ihm ein Buch	-	-	-	-
2) Ich erzähle ihm ein Märchen	+	+	+	+

In the sentence Ich bringe ihm ein Buch, it is equally possible to replace the member N_3 with any other represented in the matrix. This means that the following sentences are grammatically correct. Ich bring aus Nachlässigkeit ein Buch. Ich bringe ins Zimmer ein Buch. Ich bringe heute ein Buch, Ich bringe schnell ein Buch. In turn, in sentences, Er gefällt mir. Er folgt ihr it is impossible to replace a member of N_3 with any other constructive element of the sentence without violating the grammatical minimum of sentence[34].

Thus, the test method for the possibility of replacing the tested member with members that are heterogeneous with it helps to establish the limits of the initial structural-functional model of the proposal and thus the involvement of each member in the grammatical minimum of the proposal.

Within the boundaries of the initial structural-functional model of the sentence, a transfer of meaning can take place, the very one about which K. Bühler wrote as a special technique of abstraction, when some of the shades of meaning are obscured and other, more abstract ones appear instead[35].

It should be noted that only unambiguous verbs with a concrete meaning cannot have a figurative meaning within the framework of the original sentence model. For example, such a meaning is absent in the verb baumeln in the $NVP_{3}/_{4}N_3$ sentence model, while its more abstract double – the verb hängen – in this same sentence model may have a transferable meaning, for example, in the Er hängt an einem Haar. This possibility of phraseologisation of the original sentence model is explained by the filling of the sentence model with a lexicon whose semantic features are divergent with respect to each other. Such divergence exists, for example, in the sentence Du liegst auf meinen Produktionsmitteln.

Contextually strong sentence patterns can also be subject to phraseologisation. Thus, we can compare the sentences Er kam über die Brücke and Keine Klage kam über ihre Lippen. In the second sentence, the semantic features of a verb are not combined in the direct with its meaning with the subject and with the member $P_{3}/_{4}N_4$; an image is created that serves as the basis for the transference. Such models of the sentence, which allow both direct and portable use, we call phraseolable models of the sentence.

The N_3 member can also be included as an obligatory part in phraseological source sentence patterns, e.g.: Sie folgen ihrer Pionierleiterin. – Sie folgen der Vorstellung. – Sie gab ihm ein Buch. – Der Vorsitzende gab ihm das Wort.

Sometimes the N_3 member serves as a signal for the value to be transferred within a given supply model. This is the case when the verb model as the core of the sentence model has a different initial sentence model. For example, there is a sentence with the verb kommen: $NVN_3P_3N_3$.... und damit können wir den Genossen nicht kommen. (H. Kant, Die Aula.) The presence of the N_3 member indicates that the meaning of the verb kommen has changed in the direction of acquiring the

[34] We have used Professor R. Grosse's term. See: R. Große. Op. cit. p. 21. We have in mind, of course, the structural correctness of the sentence.
[35] K. Bühler. Die Sprachtheorie. Jena 1934, S. 343–349.

meaning of speaking, of conveying information. One could, it seems, argue that in this case we are dealing with the pressure of the structure of the sentence model[36]. As for the N_3 member, this member has very little ability to transfer a certain verb from "its" lexical-semantic group to another group. Another example can be given, namely the sentence model NVN_3N_4 with the verb ausrichten: Er richtete uns einen Gruß aus. If we compare this sentence and the sentence with the verb kommen, we can first of all note that in both cases there is a transfer of meaning in the respective verbs, and in this connection, we can raise the question of the transfer of the verbs kommen and ausrichten from their "own" group to a certain lexical-semantic group of verbs. Moreover, it cannot be precisely stated that, for example, the verbs kommen and ausrichten are included in the sentence models $NVN_3P_3N_3(N_4)$, in the group of verbs of conveying information or speaking.

Based on the role of the dative case for modifying the lexical meaning of the verb, it should be noted that the N_3 member is not a strong position for revealing the modified meaning of information transfer. Perhaps, this position is due to the fact that the N_3 member is not an obligatory member of the initial sentence model for verbs of information transfer, but is included only in the composition of the communicative-strength sentence model. In the original sentence model with the N_3 member, which is also a communicative-strength sentence model, the modified semantics of the "foreign" verb can be more clearly defined. This situation is observed in the sentence Der Ball ist mir. (H. Becker. Stilwörterbuch). The sentence model NVN_3 – is the initial and at the same time communicatively strong for verbs of belonging (Der Ball gehört mir).

For sentence patterns with verbs of information transfer, a strong structural position is the presence of direct speech. Thus, in combination with direct speech, as a rule, any verb can have the meaning of speaking: Er tat: Na, ja! Er machte: Ja! Ja! Er donnerte: Ja! Ja! It is not without reason that A.-L. Paju, in his work on the functions of the dative case, refers the member N_3 in the following examples to cases of use of the free dative, easily elided and thus not included in the structural scheme of the sentences: Er verspricht mir, es bis zum nächsten Morgen zu erledigen. Ich erzähle ihm, daß ich Schulden gemacht habe[37]. Thus, the participation of the N_3 member in the formation of modifying patterns is very limited. A much stronger position within modifying sentence patterns is occupied by prepositional groups, i.e. members of type PN. Therefore, for the sake of comparison, we will dwell a little more closely on modifying sentence patterns with a prepositional group in their composition.

Sentences like: 1) Das Pferd setzte über den Graben. 2) Er machte nach dem Süden[38]. 3) Er tat sie aus der Familie. Er tat die Pferde nach Paris manifest the transition of the verbs setzen, machen, tun from 'their' groups (respectively): 1)

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[36] The leading role of structure in relation to semantics was convincingly shown by Y.D. Apresyan. See: Ю. Д. Апресян. Экспериментальное исследование семантики русского глагола. М., «Наука», 1967, стр. 29-3

[37] A.–L.Paju. Eine strukturelle Untersuchung der Funktionen des Dativs im Deutschen. Linguistik L. Tartu 1969, S. 106.

[38] Only used in spoken language

from the group of verbs of orientated movement of an object in space; 2) 3) from the group of verbs of abstract activity to lexico-semantic groups of verbs: 1) 2) – of movement. (verb-example kommen); 3) – of non-orientated movement of an object in space (verb-example bringen).

We could consider that the verbs setzen, tun, machen in the NVPN sentence model are homonyms with relation to the same verbs in the NVN_4PN (for the verb setzen) and NVN_4 (for the verbs machen u tun) sentence models.

But we have to reject this hypothesis, because all the above-mentioned verbs are modified again only within a certain structure, namely in the communicative-strong model of the proposal for the corresponding verbs. If we put the verbs setzen, tun and machen into the initial sentence models for verbs of movement and non-oriented movement in space, it is no longer possible to register the transition of these verbs into "foreign" lexico-semantic groups, and the sentences: 1) Er setzt (the original sentence model for verbs of movement NV), 2) Er tut sie, 3) Er macht sie (the original sentence model for verbs of undirected object movement NVN_4) will either be grammaticalized only in a certain context (1), or return the verb to the bosom of the "own" group. So, we are dealing with the modifying power of the sentence model. All attempts to consider the appearance of modified meanings in the verbs setzen, tun, machen outside the sentence model have been unsuccessful.

For example, we are completely in agreement with U. Wittich, who, by studying the role of prepositions in modern German[39], distinguishes the function of prepositions in the proposed complement and their function in the proposed group being the circumstance. In prepositional complements, the preposition is closely related to the verb and can therefore be seen as the defining part of the compound word. U. Wittich gives an example to prove this: Er wirbt um das Mädchen – Er umwirbt das Mädchen. In circumstances, on the contrary, the preposition does not belong to the verb, but to the noun, it forms a closed group with it. U. Wittig notes that in circumstantial groups the preposition is a substitutable member, while in prepositional complements the same preposition is always used[40] And in our case, if we tried to consider the verbs setzen, tun, machen in combination with the corresponding prepositions as compound verbs, this attempt would fail, since the combinations of verbs with the prepositions setzen über, machen nach, tun aus are not unique. Instead of setzen über, the word combinations setzen nach, setzen auf, setzen zu, etc. can be derived, i.e. any preposition denoting the direction of motion can be substituted for the preposition über. The same can be said of the verb combinations machen nach u tun nach.

As for modifying models of sentences, they are communicative-strong models of sentences for corresponding semantic verb groups. For modifying the lexical value, it is also possible to use the original models of sentences. This is the case when the original supply model and the communicative-strong supply model

[39] U. Wittig. Untersuchung zur Präposition in der deutschen Sprache der Gegenwart unter besonderer Berücksichtigung der Präpositionen in, an, auf. Dissertation, Berlin 1966.
[40] See: ibid. p. 48.

are in agreement. For example, for verbs of orientated movement of an object in space (the verb legen), there is simultaneously an initial structural-functional sentence model and a communicative-strength sentence model in the form of NVN_4PN. When the verb tun is used in this sentence model, a modification of its meaning occurs: Er tat die Sachen in den Schrank.

As our analysis has shown, the modifying power of the N_3 member is insignificant in comparison with the prepositional groups, despite the fact that this member, as well as the PN member, is included in the communicative-strength sentence model for a number of verb groups. Apparently, this is due to the special role of the N_3 member in phraseological and syntagmatic sentence models.

In contrast to the phraseological and syntagmatic models of sentences, in which the N_3 member is very widely represented (we will speak about them below), we have not recorded the N_3 member at all in the third type of models we have noted, namely in contextual-terminological usage. By contextual-terminological use we mean the use of sentences like: Er setzt (meaning ein Buch, eine Seite, einen Absatz). Er gibt (meaning Karten). Sie liegt (implied by tot or krank depending on the context). The meaning of the verb always depends in these sentence patterns on the context, often functionally professional, e.g. Sie (die Schicht) sperrt. Sometimes the meaning of the verb is derived from the whole situation. For example, the sentence Sie legte ab becomes intelligible only depending on what the situation is related to (the telephone or the coat rack). When considering the structure of the contextual-terminological sentence model from the point of view of the number of members, it should be noted that the number of members in this sentence model is minimal, so there is simply no room for the N_3 member. In the case of a contextual-terminological sentence model, there is usually a truncation of at least one term compared to the original sentence model.

Thus, the number of members in the sentence model may be relevant for the semantics of the verb. Our consideration of structural-functional sentence models precisely takes into account the quantitative side of the filling of sentence models as well. In this respect, the main principle of the consideration is to analyse the quantitative side of the filling of sentence models from their minimum to their maximum meaningful expression. This principle of “increasing” sentence models allows us to obtain a more complete picture of the relationship between sentence structure and verb semantics in comparison with P. Grebe's method of “crossing out”.

It can be guessed that the zero filling, the “point of reference”, will be the filling of the original sentence model. As we have shown above, the depths of the original sentence model already contain the possibility of transferring the meaning of the verb, as well as using it in an abstract sense. It is possible not only to transfer the meaning of the verb, but also to “weather” its concrete lexical meaning, as it happens in analytic constructions[41]. We mean sentences like: Er machte einen

[41] We use in this case the term of I.I. Chernysheva, See: И. И. Чернышева. Фразеология современного немецкого языка. М., «Высшая школа», 1970, стр. 36, 64.

Sprung. Er tat eine Reise. The meaning of the verb in analytic constructions is somewhat asemanticized, as a result of which the verb as part of the whole construction is transferred to another semantic group. But since this happens as part of the construction, the sentence models in which these constructions are used cannot be considered modifying, but should simply be referred to phraseological sentence models with a reduced degree of phraseological expression. The use of analytic constructions is possible for several verbs (and consequently for whole lexico-semantic groups of verbs), but only within a broader framework than the original sentence model, i.e. within the framework of a communicatively strong sentence model. This can be observed, for example, in verbs of movement: So kamen seine Gedanken zum Ausdruck. Diese Worte kamen zum Abdruck.

Metaphorical transfer of the meaning of the verb is also possible within the original sentence model. For example, we can compare: Meine Tochter kommt and Sein Brief kommt. Er legt das Buch auf den Tisch and Er legt viel Wert auf dieses Buch. Er setzt das Kind auf den Stuhl and Er setzt sein Leben aufs Spiel. In fact, the original sentence models for most verbs can have phraseological variants, i.e. they can be phraseologised, which is why we call such models phraseologised sentence models. Phraseologisable sentence models are a form of expressing the average degree of phraseologicity of verbs. When the number of members within the structural-functional model of the sentence increases, the degree of phraseologicality of the verb increases.

The dative case in the sentence model (member N_3) can act both as a part of an analytical construction: Er gibt ihr einen Rat, and as a member of the sentence model with a figurative meaning: Er schenkt ihr seine Aufmerk- samkeit. But in both cases the N3 member is used within the quantitative framework of the original sentence model. When the number of members of the original sentence model is increased at the expense of the N3 member, a sentence model with a slightly increased degree of phraseologicality or a sentence model with an additional grammatical meaning may appear. We will focus on the sentence models of the latter type below.

In J. Erben's grammar[42] a four-valent basic sentence model with linguistic manifestation is given: Er schleudert ihm den Handschuh ins Gesicht. Er stieß sich ein Loch in den Kopf. It is not clear why this sentence pattern, labelled by I. Erben № 4 is not given along with model № 2 in the linguistic interpretation: Katzen fangen Mäuse, since it is quite possible to use Er schleudert den Handschuh.

L. Weisgerber also cites an interesting use of the dative case within the sentence: Er klopfte seinem Freund auf die Schulter. Considering that this sentence expresses a directed action (zugewandte Betätigung), L. Weissgerber compares it with the expression of similar situations in English and French. Having established the complete absence of analogy in English and the partial possibility of using this model in French, L. Weisgerber argues that it expresses the basic relations of

[42] J. Erben. Abriß der deutschen Grammatik. 7. Auflage. Akademie-Verlag Berlin, 1964, S. 235.

human life[43]. We join this opinion, since in this case there is clearly a nominative meaning without the shadow of a transfer of meaning.

In G. Glinz the member N_3 appears under the name of either the magnitude of reference or the image of reference in the sentence Du erscheinst mir[44].

Comparing the sentences of J. Erben: Er schleudert ihm den Handschuh ins Gesicht, L. Weisgerber: Er klopfte seinem Freund auf die Schulter and G. Glinz: Du erscheinst mir, we get as if different sentence models, which are respectively coded as follows: $NVN_3N_4P_{3/4}N_4$; $NVN_3P_{3/4}N_4$; NVN_3. But for all these models of propositions it is characteristic that the member N_3 as if he does not belong to the structural model of proposition, being in the terminology of G. Helbiga «free dative case»[45]. Thus, comparing the sentences Ich halte ihm den Hand- schuh. Ich halte ihm die Treue, he writes that the first sentence uses the "free" dative case, traditionally called the dative of belonging, which in its logico-grammatical sense fulfils rather the function of definition than of object. In this case he resorts to a transformation: Er hält ihm den Handschuh – Er hält seinen Handschuh[46]. G. Helbig does not indicate the difference in the expression of nominative, concrete meaning in the first case and figurative meaning in the second case.

We agree with W. Schmidt about the meaning of the N_3 member in the nominative of the stem verb. W. Schmidt calls the dative accessory Dativus sympatheticus and assesses its role for sentence structure as follows: „Obwohl der Dativus sympatheticus in der Fachliteratur gewöhnlich unter die Formen des freien Dativs gezählt wird, zeigen unsere (und auch die bei anderen Grammatikern angeführten) Beispiele, daß er in den meisten Fällen für den Satzsinn erforderlich ist, also eigentlich nicht von dem notwendigen Dativ zu trennen wäre“[47].

Since we are considering the functions of the dative case not just in structural, but in structural-functional sentence models, let us try to consider them somewhat graded according to the increasing quantitative side of the sentence models: 1) Er scheint mir (cf.: Der Ball ist mir). 2) Ich koche dem Kind ein Ei (cf.: Ich bringe ihm den Koffer). 3) Ich wasche dem Kind die Hände (cf.: Ich halte ihm die Treue). 4) Ich klopfe ihm auf die Schulter (cf: Ich stehe ihm im Wege). 5) Ich werfe ihm den Handschuh ins Gesicht (cf., on the one hand: Ich bringe ihm den Koffer in das Zimmer, on the other hand: Er legt mir Hindernisse in den Weg).

If we analyze all the examples taken in brackets for comparison, they are sharply divided into three categories: 1) sentences in which the N_3 member is obligatory for the composition of the structural-functional model of the sentence: Der Ball ist mir; 2) sentences in which the N_3 member is an optional member: Ich bringe ihm den Koffer. Ich bringe ihm den Koffer in das Zimmer; 3) sentences in which the N_3 member is part of the phraseological model of the sentence, so it is

[43] L. Weisgerber. Die vier Stufen in der Erforschung der Sprachen. Düsseldorf 1963, S. 293.

[44] H. Glinz. Der deutsche Satz. Düsseldorf 1957.

[45] G. Helbig, W. Schenkel. Wörterbuch zur Valenz und Distribution deutscher Verben. Leipzig 1969. S. 15, 28.

[46] See: ibid. p. 48.

[47] W. Schmidt. Grundfragen der deutschen Grammatik. Berlin 1966, S. 153–154.

obligatory: Ich halte ihm die Treue. Ich stehe ihm im Wege. Er legt mir Hindernisse in den Weg.

The sentences outside the brackets contain the N_3 member, which is not obligatory for the structural, but is obligatory for the structural-functional model of the sentence. Individual authors call the N_3 member in different ways. For example, W. Schmidt called it Dativus commodi or incommodi in the sentence Du erscheinst mir. To the same type he referred the dative case in the sentence Ich koche dem Kind ein Ei. In the third sentence the dative case can be called Dativus sympatheticus. In the 4th and 5th sentences Dativus sympatheticus is used.

W. Schmidt notes some more cases of Dativus iudicantis: Die Zeit vergeht uns schnell. Der Fall ist mir völlig klar. Das ist mir zu hoch.

If we also take into account the ethical dative case (Dativus ethicus): Falle mir nicht, the semantic picture of the functions of the dative case appears to us as if in full[48]. All the above-mentioned functions of the use of the dative case are united by W. Schmidt under the general name of the dative case of interest, and the expression of this interest the author notes in one case is quite symptomatic: Es ist unverkennbar, daß der Dativus ethicus der Aussage einen emotionalen Charakter verleiht[49].

Interesting thought A.–L. Páy that in some cases can be replaced by dative case emotively colored, for example: Falle mir nur nicht! – Falle doch nicht! Du bist mir zu schlau. – Du bist (wirklich) zu schlau. Du bist ein schöner Schwindler. – Du bist (wirklich) ein schöner Schwindler[50].

Consider our examples from the point of view of increased emotional effect. Take, for example, sentences containing the ethical dative case, which, according to W. Schmidt, is rather Dativus commodi: 1) Mir sollte nur einer einmal kommen. 2) Aber es kommt mir keiner ins Haus. 3) Leute im roten Rock mit blue Aufschlägen sollten ihm nie ins Haus kommen. 4) Du kommst uns schon!

By analyzing sentences used in a certain situation, we can register a certain tension in the course of action: 2) Aber es kommt mir keiner ins Haus. Das habe ich Ihnen schon hundertmal gesagt! Und wenn wir drei freie Betten haben, es kommt nicht in Frage .... (*M. Frisch,* Biedermann und die Brandstifter.) 4) „Du kommst uns schon! Du kommst uns immer näher, unvermeidlich!“ kicherte der Kommissar und rieb sich die Hände. (*H. Fallada.* Jeder stirbt für sich allein.)

Some examples in which there is a sentence model without the N_3 member (sometimes it contains the genitive case of belonging), just speak of the opposite, namely of a softening of the intensity of the movement. Thus, we can compare: Dieser Sieg fiel uns nicht in den Schoß. Die vom Ritter geforderte Demut fällt nicht mühelos in den Schoß. The sentence Brenig hielt die Augen offen, denn er mochte es, wenn sich die Flocken an seinen Wimpern fest klebten, immer neue, während

[48] We deliberately do not use one of W. Schmidt's uses of the dative case, namely Dativus auctoris, as rarely occurring.

[49] W. Schmidt. Grundfragen der deutschen Grammatik. Berlin 1966, S. 154.

[50] A.–L.Paju. Eine strukturelle Untersuchung der Funktionen des Dativs im Deutschen. Linguistik L. Tartu 1969, S. 100-102.

die alten schmolzen und in kleinen Tropfen über seine Wangen liefen. (*H. Böll,* Die Waage der Baleks.) can be compared with the sentence Ich wagte kaum zu atmen, der Schweiß lief mir übers Gesicht, ohne daß ich darauf achtete, ich fror auf einmal. (*E. Dürrenmatt.* Das Versprechen.) and conclude that something pleasant need not necessarily be expressed through Dativus commodi. At first sight, the opposite would seem to be the case, i.e. that something unpleasant is expressed by Dativus incommodi. But if we understand the situation of the last sentence, it appears that the subject of the action, who is at the same time the object to whom the action is addressed, does not realise the unpleasant aspects of the situation in which he is placed. This is evidenced by the adjectival part of the compound sentence (ohne daß ich darauf achtete). So, there is some objective meaning of the verb, arising due to the presence of the dative case in the sentence model. We call this meaning the syntagmatic meaning of intensity of action. Thus, we refuse to understand the meaning of the dative case in the above examples as the dative case of interest and consider it more correct to call it an additional semantic aspectual meaning. Of course, this dimensional meaning is somewhere at the very beginning of the system of ways of action, it serves as a basis for the manifestation of other, more «strong» dimensional meanings, such as the one of aggressiveness or efficiency. Thus, in combination with the past tense form in the sentence Er sprang ihm auf den Rücken we are talking about the meaning of aggressiveness, and in the sentence Der Hund biß ihm in das Bein – we are talking about the meaning of effectiveness.

The manifestation of the intensity of action can be different depending on the model of the sentence. But this meaning is particularly intense in the phraseological[51] models of sentences; it is this meaning that creates an unexpected effect of intensity and is the idiomatic basis for the existence of numerous phraseological models of sentences in different lexical-semantic groups of verbs. Moreover, for phraseological models of propositions no transformations of member N_3 into a posessive parental case do not exist. Let us compare the sentences: 1) Ich muß ihnen auf die Spur kommen. (*B. Uhse.* Wir Söhne.) 2) ... so sind die Gläubiger nun ihm auf alle seine Schliche gekommen (*St. Zweig.* Balzac.).

In the second sentence, the possessive genitive case is used, but it has not displaced the N_3 member.

As has already been noted, the meaning of intensity of action is expressed in different ways by different sentence models containing the so-called dative interest. Perhaps it is worth noting the special relationship within these sentence models of three values: nominative case (subject), verb and dative case. Neither the subject nor the indirect object specifies the person concerned. It is simply that the action of the verb coming from the subject takes the indirect object into its orbit as well, as if to spend additional energy on it. If the indirect case is expressed by the person concerned, it is only a case of borderline use, and we will focus on it. In the sentence Ich schreibe dem Bruder einen Brief, the sentence pattern is homonymic.

[51] We draw the reader's attention to the fact that we are referring to phraseological, not phraseological sentence patterns like Er folgte ihr.

The member N_3 (ihm) can be characterized as a relatively obligatory member of the communicative-strength model of the sentence, expressing the addressee, and as an optional member of the structural model of the sentence, expressing the person concerned. In this case we can always make the transformation: Er schrieb für den Bruder einen Brief. In fact, a third interpretation supported by the transformation is also possible: Er schrieb den Brief statt seines Bruders. When it is possible to make a transformation using the prepositional group with the preposition instead, we can already speak of the existence of some intensity increase of action expressed by the verb. This is the case in the following sentences: Er hielt ihm den Handschuh (Er hielt den Handschuh statt seiner). Er trug ihm den Koffer (Er trug den Koffer statt seiner). The cases of the use of the sentences Er kochte dem Kind ein Ei. Er wusch dem Kind die Hände are borderline, transitive, and in the second example the involvement of the indirect object in the sphere of action of the verb is more perceptible than in the first example. Of course, the intensity of action is most strongly expressed in sentence patterns such as: Er sprang ihm auf den Rücken. Er warf ihr den Handschuh ins Gesicht.

What is interesting is the relatedness of all members of the sentence models even when expressing nominative, non-transitive meaning within the $NVN_3P_{3/4}N_4$ sentence models. We compare this sentence model by the $P_{3/4}N_3$ term substitutability check matrix with the $NVN_4P_{3/4}N_4$ sentence model:

Sentence Patterns \ Substitute members	Heute	Lange	ruhig	aus Nachlässigkeit
3) Ich schlage ihm *auf die Schulter*	-	-	-	-
4) Ich schlage ihn *auf die Schulter*	+	+	+	+

From the comparison, it is seen that the first model has an idiomatic structure, not capable of truncation. This stability of the structure of the proposal model and the resulting grammatical, syntagmatic value of the intensity of action are widely used as a basis for the formation of phraseological models of proposals. But since phraseological models of sentences arise from models of sentences with a specific meaning, showing yet additional grammatical meaning, the model of sentences is: 1) Die ihm unter die Augen kamen; 2) Wie Euch immer mehr der Zorn kommt und die Wut; 3) ... mit Euern Zechinen ist mir das Glück gekommen show the average level of phraseology. Thus, the member N_3 in these phraseological models of sentences does not fall within the m+n calculation formula, which serves to establish an increased degree of phraseology arising on a structural basis. As an example, the sentence Er steht bei ihm tief in der Kreide.

The quantitative limits of the original (and simultaneously communicative-strong) model of the $NVP_{3/4}N_3$ proposal for two members (D and P_3N_3) are exceeded.

Summing up the functioning of dative case, it should be noted that its most «strong» positions are manifested in syntagmatic[52] models of sentences and in the phraseological models of proposals formed on their basis. Of course, it is possible to use a dative case in the phraseological models of propositions formed on the basis of structural idiomatic, for example, in the proposal models $NesVN_3$ and $NesVN_3N$/ PN: Es schwindelt mir. Es fehlt mir Geduld (an Geduld), but the use of such drugs is rare.

USED LITERATURE

1. Адмони В. Г.. Типология предложения. В сб. «Исследования по общей теории грамматики». М., «Наука», 1968, стр. 233-290.
2. Апресян Ю. Д. Экспериментальное исследование семантики русского глагола. М., «Наука», 1967, стр. 29-32
3. Гухман М. М. О роли моделирования и общих понятиях в лингвистическом анализе. В сб. «Теоретические проблемы языкознания». М., «Наука», 1970, стр. 157.
4. Чернышева И. И. Фразеология современного немецкого языка. М., «Высшая школа», 1970, стр. 36, 64.
5. Bühler K. Die Sprachtheorie. Jena 1934, S. 343–349.
6. Große R. Zur Problematik von Satztyp und Kernsatz in Deutschen. In: „Probleme der strukturellen Grammatik und Semantik". Leipzig 1968, S. 21.
7. Erben J. Abriß der deutschen Grammatik. 7. Auflage. Akademie-Verlag Berlin, 1964, S. 235.
8. Glinz H. Der deutsche Satz. Düsseldorf 1957.
9. Helbig G., Schenkel W. Wörterbuch zur Valenz und Distribution deutscher Verben. Leipzig 1969. S. 15, 28.
10. Schmidt W. Grundfragen der deutschen Grammatik. Berlin 1966, S. 153–154.
11. Paju A.-L. Eine strukturelle Untersuchung der Funktionen des Dativs im Deutschen. Linguistik L. Tartu 1969, S. 100-102, 106.
12. Rachmankulowa E. S. Strukturelle Untersuchungen zum deutschen Verb im Satzmodell. In: „Probleme der Sprachwissenschaft“. Beiträge zur Linguistik. The Hague. Paris 1971, S. 385-390.
13. Wittig U. Untersuchung zur Präposition in der deutschen Sprache der Gegenwart unter besonderer Berücksichtigung der Präpositionen *in, an, auf*. Dissertation, Berlin 1966.
14. Weisgerber L. Die vier Stufen in der Erforschung der Sprachen. Düsseldorf 1963, S. 293.

[52] For more details on syntagmatic models of sentences, see: E. S. Rachmankulowa. Strukturelle Untersuchungen zum deutschen Verb im Satzmodell. In: „Probleme der Sprachwissenschaft“. Beiträge zur Linguistik. The Ha- gue. Paris 1971, S. 385-390.

Kobilov A.U.
Professor
of the Department of Digital Economy
Tashkent State University of Economics Associate

TAX POLICY IN DIGITAL TECHNOLOGIES

Abstract. *The article examines the types of digital technologies and areas of their application in the implementation of tax policy, identifies the strengths and weaknesses of the use of digital technologies, the experience of implementing and using digital technologies in the tax administration of different countries, and outlines the main areas for activating the use of digital technologies in the field of taxation.*

Keywords: *tax policy, tax administration, digitalization, digital technologies, digital tax services.*

Tax authorities around the world increasingly rely on digital technologies to collect and analyze tax data and implement intelligent systems that ensure the collection and assessment of taxes in real time[1]. Digital technologies are rapidly transforming the relationship between tax authorities and taxpayers, affecting the relationship between the state and the business entity in the taxation process. The relevance of the research topic is due to the need to use the capabilities of digital technologies and the potential of technological development in the formation and implementation of tax policy to modernize the existing tax system in order to comply with the ongoing changes in the global economy.

The use of digital technologies in the practical activities of tax authorities is the subject of research by: A.A. Anisimova, V.P. Vishnevsky and L.I. Goncharenko[2], E.F. Kireeva, S.P. Kolchin, I.A. Maiburov and O.M. Karpova[3] and others, as well as foreign authors and international organizations.

Thus, the paper examines the issues of applying tax administration technologies in the context of the functioning of integration associations. The author has determined that in the territory of a single market, digitalization of tax administration technologies provides for the creation of integrated digital platforms, and has indicated that tax cooperation processes within the framework of economic integration are impossible today without digitalization of economic platforms and the formation of integrated databases required for interaction between countries and economic entities. Conclusions have been made about the need to improve tax administration based on unified methodological approaches to the interaction of tax authorities and taxpayers, taking into account the formation of a single digital space.

In the works[4,5], the authors consider the main trends in the development of digital technologies in tax administration in the world and in Russia and analyze the possibilities of improving digital tax services and applying the global experience of tax authorities in Russian practice. It is noted that Russian tax authorities are in the global trend, as evidenced, among other things, by the availability of information materials, personal accounts of taxpayers with the ability to submit a tax return and an application for a tax refund, as well as the ability to submit a request for any information or complaint. According to the authors, digital processes within the framework of tax administration imply their constant improvement in order to ensure a customer-oriented approach and voluntary compliance with tax legislation by taxpayers.

Despite the presence of a large number of studies by leading scientists, economists and practitioners on individual issues of the use of digital technologies in the implementation of tax policy, it is worth noting the need to generalize and systematize the world experience of using digital technologies in the implementation of tax policy, identifying the strengths and weaknesses of using digital technologies to determine the main directions for activating the use of digital technologies in the field of taxation.

Thus, the purpose of the study is to identify the main directions for activating the use of digital technologies in the field of taxation based on the generalization of world experience in the implementation and use of digital technologies in the implementation of tax policy.

Tax policy is understood as an integral part of the socio-economic policy of the state, aimed at the formation of a tax system that stimulates accumulation and rational use of the country's national wealth, facilitating the harmonization of the interests of the economy and society and thereby ensuring the socio-economic progress of society.

The implementation of the formed tax policy is carried out through a tax mechanism, to the definition of which at the present stage a unified approach has not been developed, but in general it represents a set of forms, methods and ways of organizing and regulating tax relations, corresponding to the historically established goals and objectives of the state tax policy and enshrined in tax legislation[6]. The introduction of digital technologies allows improving the practice of: tax planning, tax forecasting, tax registration and accounting, tax regulation, tax control and tax analysis.

Their use reduces the costs of fulfilling tax obligations of both the state and the taxpayer, prevents tax fraud and erosion of the tax base, allows for the provision of new tax services in a simplified mode and remote access, realistically assesses the current state and predicts the future development of the economy and society. The constantly evolving infrastructure of tax technologies brings significant benefits to tax administrations and taxpayers, guarantees stable tax revenues to the budget, increases taxpayer satisfaction and ensures conscientious compliance with tax legislation. To achieve this, a correct holistic vision and strategy for the development of digital tax administration with a clear implementation plan and an appropriate system for monitoring ongoing tax processes are required[7].

Global experience shows that tax authorities in many countries are currently gradually adapting to digital processes, increasing the efficiency of tax administration [8].

Digital technologies in tax administration are used by developed countries in the field of: monitoring the operation of digital services, developing customer-oriented design of services, informing taxpayers about new opportunities for interaction with tax authorities, as well as information support for taxpayers within the digital environment [9].

Digital tax services are services of tax authorities provided to taxpayers via the Internet. They can be classified by the following features:

categories of taxpayers (legal entities, individuals; sole proprietors; and self-employed (tax regime "Tax on professional income"));

method of using tax services (mandatory or voluntary use);

breadth of coverage of taxpayers (services for individual use; services for mass use); structure of tax services (simple and complex digital services);

access to digital services (open and closed access);

placement (placement on the official Internet portal of the State Tax Service and mobile applications; placement on third-party Internet portals and mobile applications) [2].

The use of digital technologies in implementing tax policy has quite a few strengths that can be used to improve the quality of services provided to taxpayers, but it is not without its drawbacks and has its weaknesses (Table 1).

These tables show that the use of digital technologies in implementing tax policy has more strengths than weaknesses, but their list is not exhaustive, since digital technologies are developing rapidly and new problems may arise, as well as new opportunities for using digital technologies in implementing tax policy may open up.

Table 1

Strengths	**Weaknesses**
– increasing the transparency of taxation, the tax administration process, i.e. clarity and comprehensibility of tax rules for taxpayers, which in turn leads to a decrease in the likelihood of unexpected financial losses of taxpayers due to the possibility of making errors when filing tax reports and paying taxes; – convenience of the tax compliance process; – increasing tax revenues to budgets at various levels; – expanding the tax base;	– lack of regulatory legal acts to regulate new objects and processes inherent in the digital economy, as well as the rights, obligations and liability for violations of digital economy entities; – insufficient level of digitalization of tax processes (information, administration, maintenance and control); – hacker attacks and viruses; – insufficient level of security of communication channels and collected data, as well as the threat of their theft, which leads

– reducing the costs of tax administration, i.e. reducing the costs of consumables, postal services, paper, rent of space for placing an archive on paper; – reducing the time spent on processing the received data and exchanging data; – reducing the risk of technical errors; – increasing the speed of searching for necessary documents; – increasing the efficiency of tax administration; – strengthening control by tax authorities over transactions carried out by taxpayers; – the ability to exercise control in remote access; - reduction of the time for tax audits and their number, which became possible due to the creation of digital tax control tools, which generally has a positive effect on the business climate; - increase in the efficiency and quality of audits; - reduction in the labor costs of tax authorities aimed at explanatory work on tax administration and control and verification work;	to the emergence of risks to the information security of taxpayers and the tax security of the state; – lack of technical means for collecting, processing and storing collected data; – high costs of digitalization of tax authorities; – formation of additional costs for connection in the structure of taxpayers' expenses

Each specific country has its own experience in implementing and using digital technologies in tax administration. An analysis of global practice shows that rarely do countries use a systematic approach to the development of digital interaction channels reflected in a single document, for example, a strategy. More often, such strategies are developed to develop digital services for the entire public sector, and digitalization of tax administration is considered as part of this process. The most striking example of a systematic approach to the implementation of digital technologies in the tax sphere is the practice of the UK, where there is a strategy for the development of information technologies for tax authorities. This strategy sets out an approach to implementing the long-term task of developing digital services in order to solve the following problems: achieving maximum possible compliance with tax legislation; increasing the efficiency of tax authorities; improving the quality of services provided. Some countries focus on creating customer-oriented services, assuming that if taxpayers need the proposed digital solutions to perform their tasks in the tax sphere and if these solutions are easy to use, then the level of involvement in digital interaction with tax authorities will grow (Austria, Canada, Singapore). In a number of countries, attention is paid to informing about new opportunities for interaction in the digital environment (Australia, Norway, Singapore) and various tips (Denmark, Australia, Canada), rightly believing that taxpayers may not have the necessary special knowledge in this area (practical examples of the application of the provisions of behavioral theory have shown the effectiveness of using information messages and various tips, and not only in the tax sphere). Monitoring the interaction of taxpayers with tax authorities in order to identify problems that hinder such interaction (Netherlands, Canada), as well as providing support to taxpayers within the digital environment (Australia) is important for creating a high-quality customer-oriented tax environment [2].

The experience of different countries around the world shows the need to transform taxation using digital technologies and current tax rules to meet the new conditions of doing business, as well as the active use of digital technologies in the work of tax authorities, which will simplify routine processes, optimize labor costs, and increase the speed and quality of providing public services in the tax sphere.

Tax authorities are increasingly using modern technologies to improve the efficiency and effectiveness of their work [3]. Digital transformations and changes have great potential for improving the tax policy. By improving the methods of collecting, processing and analyzing information, digital technologies can transform the tax policy of the state and, if used wisely, the tax policy will be more effective, convenient, transparent and fair.

In order to activate the use of digital technologies in the field of taxation, the following areas can be identified: adoption of a strategy for the implementation of digital technologies in revenue and duty authorities; availability of funding for the implementation of digital technologies in the practical activities of revenue and duty authorities; ensuring the training of highly qualified personnel capable of working in the conditions of digital tax administration; when training specialists in higher educational institutions of the Republic for revenue and duty authorities, in the educational process, provide for disciplines on the digitalization of tax administration, the study of foreign experience in the digitalization of the taxation sphere; consider the possibility of training IT specialists in the field of taxation.

List of references

1. Tax technology a brave new world [Electronic source]. – URL: https://www.internationaltaxreview.com/article/b1f7ng9b3fcgxt/tax-technology-a-bravenew-world

2. Vishnevsky, V.P. Taxes and technologies: the past, present and future of the Russian tax system / V.P. Vishnevsky, L.I. Goncharenko, I.V. Nikulkina, A.V. Gurnak // Terra Economicus. – 2020. – No. 18 (4). – P. 6–31.

3. Karpova, O.M. Transformations of value added tax in the context of forced digitalization of the Russian economy / O.M. Karpova, I.A. Maiburov // Bulletin of Tomsk State University. Economics. – 2019. – No. 46. – P. 7–19.
4. Kolchin, S.P. Development of digital tax services in Russia against the background of global trends / S.P. Kolchin, A.A. Anisimov // Taxes and taxation. - 2020. - No. 2. - P. 40-51.
5. Anisimov, A.A. Methods for improving digital tax services in the modern practice of tax administration // Taxes and taxation. - 2021. - No. 1. - P. 71-80.
6. Valinurov, T.R. The essence of the state tax policy and the content of the tax mechanism // Modern science-intensive technologies. Regional supplement. - 2010. - No. 1. - P. 12-16.
7. Kireeva, E.F. Digital technologies in improving the quality of tax management / E.F. Kireeva, D.I. Egunov // Scientific works of the Belarusian State University of Economics. Minsk: BGEU, 2019. –№12. – P. 209–213.
8. Kolchin, S.P. Development of digital tax services in Russia against the background of global trends / S.P. Kolchin, A.A. Anisimov // Taxes and taxation. - 2020. - No. 2. - P. 40-51.
9. Anisimov, A.A. Development of tax administration in Russia in the context of digitalization of the economy: dis. candidate of economic sciences: 08.00.10 Finance, money circulation and credit / Federal State Budgetary Educational Institution of Higher Education "Plekhanov Russian University of Economics". - Moscow, 2021. – 146 p.
10. Matyushin, A.V. Trends in the development of financial institutions of the innovative economy in the context of digitalization / A.V. Matyushin, A.V. Aborchi, A.S. Pavliy // Digitalization of the economy and society: problems, prospects, security: Proceedings of the III international scientific and practical conference
11. Transformation of the tax function with the help of technologies 2020 [Electronic resource]. - URL: https:// assets.kpmg/content/dam/kpmg/ru/pdf/2020/01/ru-ru-transforming-the-tax-function-thro ugh-technology.pdf
12. Digital bailiff: how artificial intelligence is used in taxes [Electronic resource]. - URL: https:// trends.rbc.ru/trends/industry/5d9dc03f9a794 72a1a2056ee

Kobilov A.
Associate Professor
of the Department of Digital Economy and Information Technology
Tashkent State University of Economics
https://orcid.org/0000-0001-8537-8544
Rajabov Sh.
Associate Professor of Industrial management and digital technologies
Nordic International University
https://orcid.org/0000-0001-5656-8031
Nigmanov A.
Associate Professor
of Economics and Business Management
Nordic International University
https://orcid.org/0000-0002-2722-6902
Normurodov N., Doctorate PhD
Tashkent State University of Economics Department of Digital Economy

THE ROLE OF INNOVATION IN THE DIGITALIZATION OF THE ECONOMY

Annotation. *The allocation of innovations and investments in the digital economy plays an important role in the development of this area. The introduction of innovations in the field of digital economy implies the practical application of digital technologies and modern software tools, the results of experimental and design solutions, and requires constant investment in this area. One of the main directions in developing the digital economy is the analysis of investments and innovations of the world's leading countries and the definition of the main directions of development in this area, strengthening training in the field.*

Key words. *Digital economy, innovation, investment, Research & Development*

Introduction

In the context of the digital economy's development, introducing and developing innovative technologies in the world remains a constant problem. For the development of the digital economy, the issues of improving the introduction of innovative technologies in the field of telecommunications, and ensuring the attractiveness and financial sustainability of innovative technologies in telecommunications are receiving global attention. President of the Republic of Uzbekistan Sh.M.Mirziyoev in his Address to the Oliy Majlis of the Republic in 2020: "To further develop science in our country, to provide our youth with deep knowledge, high spirituality and culture, to continue working, we have begun to form a competitive economy and raise it to a new modern level. I propose to call the year the "Year of Science, Education and the Development of the Digital

Economy”. The application of innovations and innovative technologies in various fields, and the application of scientific and scientific developments in production is a key catalyst for development. Today, the introduction of innovations that improve process efficiency and product quality is becoming a requirement of a market economy around the world. At the same time, the implementation of innovations must be tailored to socio-economic and cultural needs. An example of the introduction of innovations is characterized by the introduction into the market of products with new consumer characteristics or aimed at increasing the production efficiency of certain products (2). Innovations in the digital economy will stimulate the development of the digital society, allow new developments to be applied in many areas, and lead to dramatic changes in the economy.

Research Methodology

The word and concept of “innovation” were first used in scientific research by the Austro-American scientist J.W. The chapter that emerged in Schumpeter’s scientific work was, in his definition, “Innovation is not any innovation or novelty, but the only thing that significantly increases the efficiency of production is a functioning system” (2). There are many scholarly studies on the problems of innovation, one of which B. Twiss describes in his study innovation as “the process by which an invention or new idea acquires economic content” (3). Another scientist, M. Khucek classifies innovations as a combination of technical and natural science material (4). Prigojin A.I. and other scholars view innovation as a complex process involving the production, introduction, and commercialization of new consumer values, such as goods, equipment, and technology, organizational forms (5). B. B. According to Santo, innovation is a socio-economic process that leads to the creation of the best products and technologies according to their characteristics through the practical use of ideas and inventions. Ultimately, it brings economic benefits and its appearance in the market can bring additional income (6). From the above, it can be said that innovation consists of new inventions, ideas developments and processes that serve to significantly increase the efficiency of production, and research and development will be necessary to create it. This research and studies require a certain amount of investment in this area. In particular, new inventions, ideas, proposals, scientific research and studies play a key role in the development of the digital economy.

Research methods

To study the role and importance of innovation in the development of the global digital economy, the methods of scientific abstraction, logical thinking, comparative analysis, monographic research, study in dynamics, data grouping, comparison, correlation and regression analysis were used.

Analysis and results

The study of the factors associated with the development of the digital economy in the world, we see that the introduction of innovation and investment in the development of this sector is one of the key factors in its development and it is expanding from year to year. For example, the annual research costs of the world's 1,000 largest companies in 2005 were estimated at $ 400 billion. US $ 700 billion by 2017. We see that the US dollar and it has grown by 4.8% per year in recent years (Figure 1).

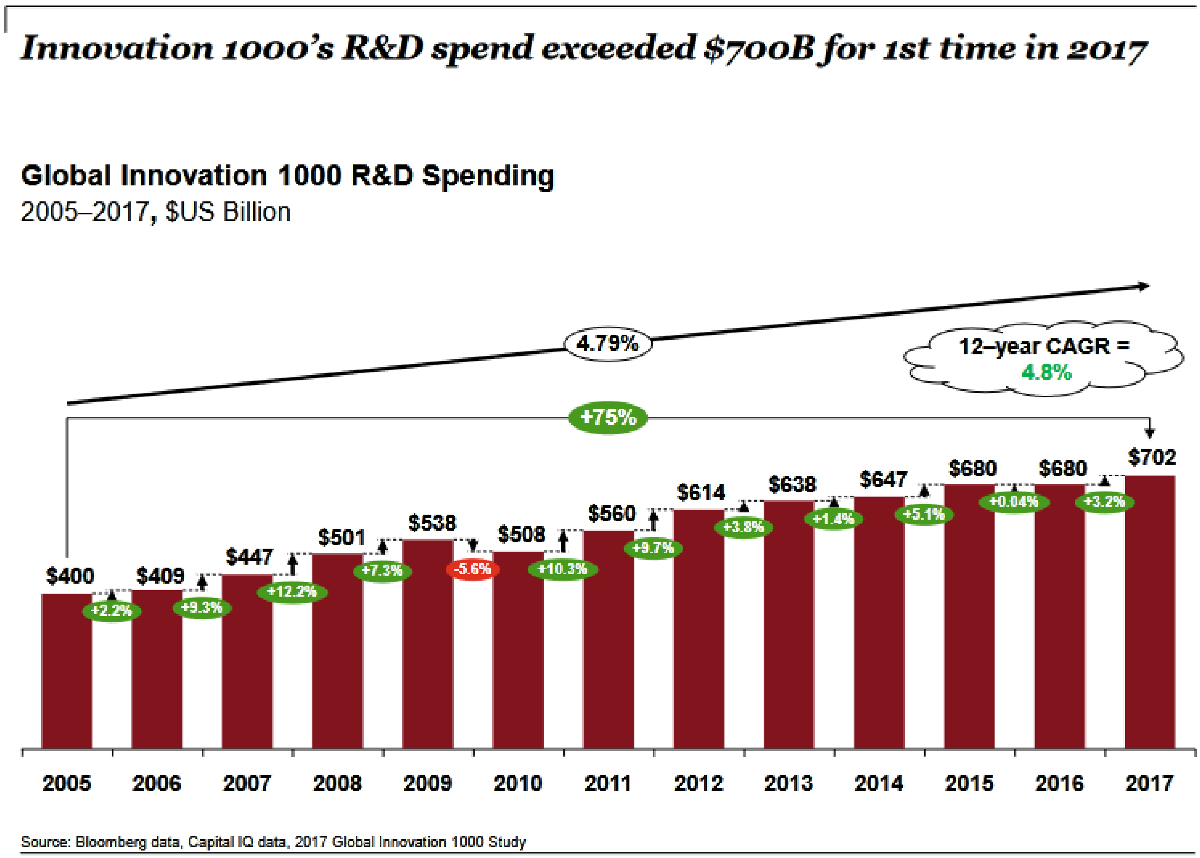


Figure 1. The annual research costs of the world's 1,000 largest companies are projected to reach $ 700 billion in 2017. dollars
Source: https://www.strategyand.pwc.com/uk/en/media/2017-global-innovation-1000-fact-pack.pdf

Competition in various markets is steadily growing, new companies and industries are being created, so the cost of research and development is increasing year by year. The graph shows that spending on research has been growing steadily since 2005 and has declined slightly since the 2009 crisis. On average, the growth rate of research and development is 4.8%. As can be seen from the graph, the world's largest companies are investing heavily in innovation, the introduction and development of new technologies, research and innovation in the era of competition.

If we look at the spending of the top 25 companies among them in this area in recent years, we can see that most of them are U.S. companies and there are many IT companies among them and they are world famous (Figure 2).

A study of the composition of R&D, i.e., research and innovation costs, shows that most costs are focused on solving the following goals and objectives:

• increase in productivity;

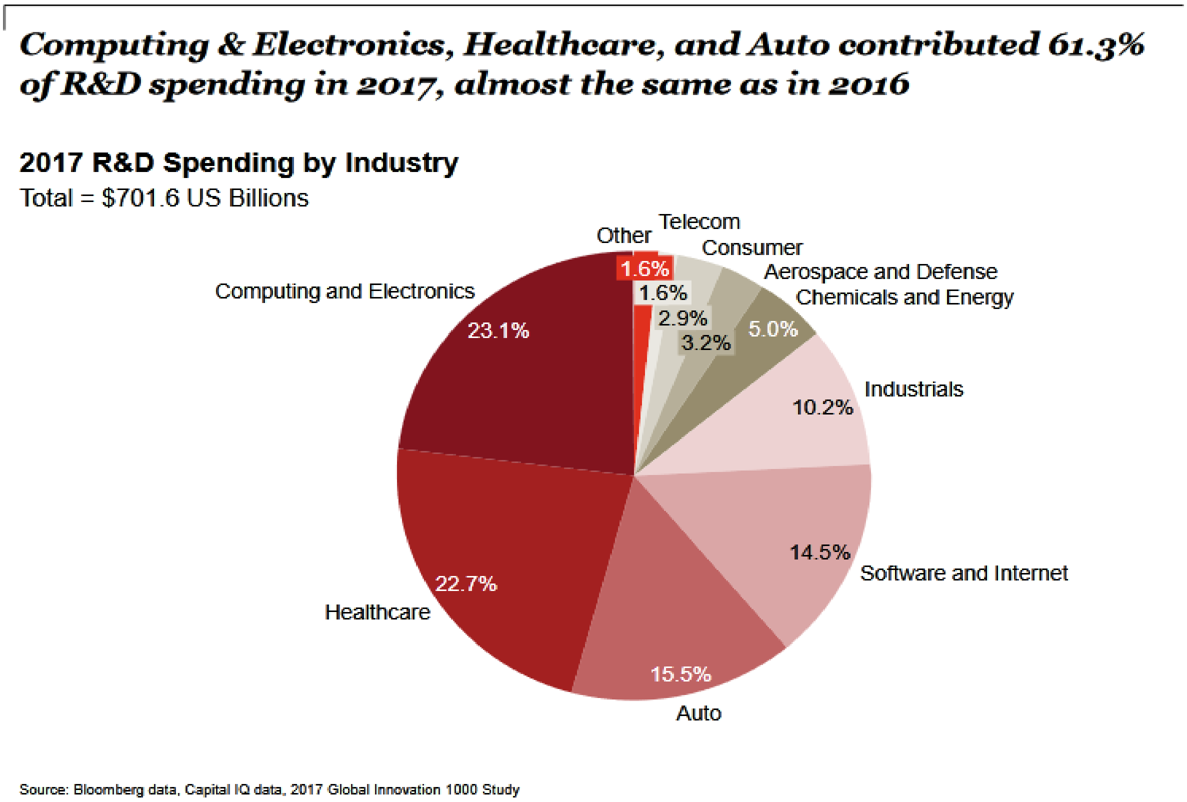
• improving product quality;
• product adaptation for a specific market;
• create a product with unique features;
• creation of cheap products for production (reduction of costs);
• creation of products that are universal for different markets;
• increase the speed of product launching;
• increase in the number of inventive products, etc.

				R&D Expenditures ($US Billions)		Revenue ($US Billions)		R&D Intensity	
2018 Rank	Company Name	Country	Industry group	2017	2018	2017	2018	2017	2018
1	Amazon.com, Inc.	United States	Retailing	16.1	22.6	136.0	177.9	11.8%	12.7%
2	Alphabet Inc.	United States	Software and Services	13.9	16.2	90.3	110.9	15.5%	14.6%
3	Volkswagen Aktiengesellsc...	Germany	Automobiles and Compone...	13.8	15.8	260.9	277.0	5.3%	5.7%
4	Samsung Electronics Co., L...	South Korea	Technology Hardware and ...	14.3	15.3	189.0	224.3	7.6%	6.8%
5	Intel Corporation	United States	Semiconductors and Semic...	12.7	13.1	59.4	62.8	21.5%	20.9%
6	Microsoft Corporation	United States	Software and Services	13.0	12.3	85.3	90.0	15.3%	13.7%
7	Apple Inc.	United States	Technology Hardware and ...	10.0	11.6	215.6	229.2	4.7%	5.1%
8	Roche Holding AG	Switzerland	Pharmaceuticals, Biotechn...	11.8	10.8	54.0	57.2	21.9%	18.9%
9	Johnson & Johnson	United States	Pharmaceuticals, Biotechn...	9.1	10.6	71.9	76.5	12.7%	13.8%
10	Merck & Co., Inc.	United States	Pharmaceuticals, Biotechn...	10.1	10.2	39.8	40.1	25.4%	25.4%
11	Toyota Motor Corporation	Japan	Automobiles and Compone...	9.8	10.0	267.4	259.8	3.7%	3.9%
12	Novartis AG	Switzerland	Pharmaceuticals, Biotechn...	9.6	8.5	49.4	50.1	19.4%	17.0%
13	Ford Motor Company	United States	Automobiles and Compone...	7.3	8.0	151.8	156.8	4.8%	5.1%
14	Facebook, Inc.	United States	Software and Services	5.9	7.8	27.6	40.7	21.4%	19.1%
15	Pfizer Inc.	United States	Pharmaceuticals, Biotechn...	7.9	7.7	52.8	52.5	14.9%	14.6%
16	General Motors Company	United States	Automobiles and Compone...	8.1	7.3	149.2	145.6	5.4%	5.0%
17	Daimler AG	Germany	Automobiles and Compone...	7.8	7.1	184.0	197.3	4.2%	3.6%
18	Honda Motor Co., Ltd.	Japan	Automobiles and Compone...	6.5	7.1	137.5	131.8	4.7%	5.4%
19	Sanofi	France	Pharmaceuticals, Biotechn...	6.2	6.6	41.7	43.5	14.9%	15.1%
20	Siemens Aktiengesellschaft	Germany	Capital Goods	5.8	6.1	94.1	98.2	6.2%	6.2%
21	Oracle Corporation	United States	Software and Services	6.8	6.1	37.0	37.7	18.4%	16.1%
22	Cisco Systems, Inc.	United States	Technology Hardware and ...	6.3	6.1	49.2	48.0	12.8%	12.6%
23	GlaxoSmithKline plc	United Kingdom	Pharmaceuticals, Biotechn...	4.9	6.0	37.7	40.8	13.0%	14.8%
24	Celgene Corporation	United States	Pharmaceuticals, Biotechn...	4.5	5.9	11.2	13.0	39.8%	45.5%
25	Bayerische Motoren Werke...	Germany	Automobiles and Compone...	5.2	5.9	113.1	118.5	4.6%	5.0%

Fig. 2 Table of cost analysis of the 25 largest companies in the world for 2017-2018
Source: 2017 Strategy & Global Innovation 1000

A study conducted by a sociological survey of America's 1,000 largest companies in the world shows that the largest amount is allocated to improve productivity and product quality. The analytical agency also shows in its research the share of various sectors of the economy, such as information technology and telecommunications (ICT), health, automotive and other areas, in total research expenditures. Figure 3 shows a pie chart of this distribution.

Distribution of research costs among sectors of the economy The three largest sectors in terms of expenditures on research and development are IT and telecommunications, healthcare and automotive. Also, the annual growth of research developments corresponds to the same structure.



Rice. 3. The structure of expenditures for research and development
Source: https://www.strategyand.pwc.com/uk/en/media/2017-global-innovation-1000-fact-pack.pdf

The analysis of the above data shows that in the structure of expenditures on research and development, 23.1% are spent on electronics and computers, 22.7% on health, 14.5% on programming and Internet development, and 15.5% on automotive. This means that the total expenditure on the development of electronics and computing, programming and the Internet is 37.6% or 263.8 billion US dollars. Currently, 5.5% of world GDP is accounted for by the ICT sector, and McKinsey estimates that by 2020 this figure will reach 9%. However, the share of this sector in GDP does not fully reflect the huge impact of ICT on economic growth and all aspects of human activity, including various health, social and educational services, depending on the nature of the product.

The analysis shows that spending on electronics, the Internet and programming is increasing year by year, which ensures that the development of the digital economy grows in a highly competitive environment.

Analysis and results

The scope and self-spread of modern information technologies (high-speed Internet, mobile broadband, computer services, etc.) is the cause of self-economic growth, improving and accelerating the process of interaction between people, increasing labour productivity, additional socio-economic benefits According to McKinsey Consulting, even a single direction - raising the level of mobile broadband connectivity in developing countries to the level of developed countries - could increase global GDP growth to $ 300-420 billion and create about 10-14 million new jobs in various industries (e.g. and in the manufacture of equipment), offshore services and outsourcing. The role of the IT sector in ensuring economic growth has increased significantly during the period of sharp struggles of states with the consequences of the global financial and economic crisis. U.S. President Barack Obama, in particular, reported in 2009: "Increasing the cost of broadband, introducing health electronic records, investing in green energy, new computers for schools and libraries are effective ways to keep America's investment and competitiveness new jobs." Former British Prime Minister Gordon Brown also announced his government's efforts to develop digital infrastructure "in the area of rail, road and bridge construction, which has been intensively carried out in recent years to stimulate the economy". The countries on the list are not alone in their aspirations. South Korea, for example, has long been a leader in broadband investment. Today, many countries, from Greece to Malaysia, are investing heavily in national IT development.

According to a recent study of consumer markets by international consulting firm McKinsey, ICT is one of the top four economic sectors in terms of the intensity of its impact on modern society alongside healthcare, agriculture and infrastructure. Figure 3 shows the sectors that have the greatest impact on social development.

A study of the level of development of the world's most innovative countries shows that per capita expenditures on innovation in these countries are high, averaging $ 50.8 thousand per year. In Uzbekistan, the figure is 2.1 thousand US dollars, which is 24.1 times less than the average. The Global Innovation Index of Innovative Development has a coefficient of 57.8 in developed countries and 29.1 in Uzbekistan, the publication of articles in international journals is 4455.7 in developed countries and 11.2 in Uzbekistan. These analyses show the need to strengthen innovative development in our country.

Countries	Level of evolution		Innovative development indicators		
	Gross domestic product (1000 $ per person)	Gross domestic product (PPS , 1000 $ per person)	Global innovation index	Export of high-tech goods (from industrial export %)	Articles in international journals
Switzerland	79,9	63,9	66,3	27,1	2534,4
United States	57,6	57,6	61,4	20	1265,7
Singapore	53,0	87,8	59,2	67,4	2007,0
Ireland	64,2	71,5	59,0	29,8	1431,8
The Netherlands	45,6	50,5	58,3	-	1759,8
Average value by country	50,8	53,8	57,8	21,4	4455,7
Uzbekistan	2,1	6,5	29,1	4,7	11,2
Difference between Uzbekistan and average (times)	24,1	8,3	2.0	4,5	397,5

Table 1. Countries with high level of innovation development
Source: Based on data from the World Bank and the State Statistics Committee

Uzbekistan's global innovation index is almost 30 points (100 points) and the country is ranked 80-90 in the WEF ranking of global competitiveness. For the leading countries, the difference in the average score of this indicator (57.8) is about 2 times.

Comparing the indicators of conditions and factors of innovative development in Uzbekistan with world indicators allows us to conclude that the main factors hindering the transition to an innovative economy in Uzbekistan are underdeveloped institutions in this area and insufficient funding of science and new technologies.

Conclusion

Research and analysis of the impact of innovation on the economy, and investment in research shows that the introduction of innovation in the digital economy can accelerate its development in the country. Developed countries and mega-companies today are benefiting greatly from innovations in the digital economy. According to the Decree of the President of the Republic of Uzbekistan "On measures to introduce the digital economy and e-government", by 2023 the share of the digital economy in GDP will double and the volume of services in this area will triple to $ 100 million. At the same time, in 2020-2022 it is planned to implement a total of 268 projects for the further development of the park of e-government, telecommunications and software products and information technology, the widespread introduction of digital technologies in the real sector. Thus, by the Decree of the President of the Republic of Uzbekistan dated April 28, 2020, No PP-4699 "On measures for the widespread introduction of digital economy and e-government" in 2020-2022, the total value of data in the field of technology and communications will reach 17.6 trillion. It is planned to implement 35 priority projects worth UZS. It is planned to implement 44.8% of these projects through foreign direct investment and unsecured loans, and 33% through government-guaranteed loans. The implementation of these tasks will undoubtedly have a significant impact on the development of the digital economy of our country.

REFERENCES

1. Schumpeter Yu. Theory of Economic Development: Research on Entrepreneurial Profit, Capital, Credit and Business Cycle. –M.: Progress.
2. Khuchek M. Innovations at enterprises and their implementation. –M.: Luch, 1992.
3. Prigogine A.I. Innovations: incentives and prospects. A.I. Prigogine. - M.: Polit-izdat, 1998
4. Santo B. Innovation as a means of economic development. per. from Hung. M.: Progress, 1990.
5. McKinsey Global Institute [Electronic resource]. URL:http://www.mckinsey.com/insights/mgi
6. 2017 Strategy& Global Innovation 1000 https://www.strategyand.pwc.com/uk/en/media/2017-global-innovation-1000-fact-pack.pdf
7. https://www.bcg.com/publications/2021/most-innovative-companies-overview
8. https://mineconomy.uz/en/info/4166
9. https://mitc.uz/en/news/category/18
10. https://uztelecom.uz/en/for-operators/internet-channels
11. https://www.adlittle.com/at-en/digital-ksa-assessment-and-way-forward-digital-economy
12. Kobilov, A. U., & Djuraboev, A. M. (2020). Texnologii kompyuternogo distansionnogo obucheniya. Academic Research in Educational Sciences, 1 (3), 287-293.
13. Kobilov A. U., Olxovskaya, I. V. (2021). Innovatsii–forma upravlencheskoy deyatelnosti gosudarstva i organizatsiy. Ekonomika i biznes teoriya i praktika, 1(1), 173-178.

14. Ziyaev, T. M., O‘rinovich, Q. A., Yoqub, D. T. (2019). Qulay investitsion muhit va faol investitsion siyosat–barqaror iqtisodiy o‘sish omili. Ekonomika i finansы (Uzbekistan), 2(10), 555-559.
15. Kobilov, A. U., Khashimova, D. P., Mannanova, S. G., Abdulakhatov, M. M. O. (2022). Modern Content and Concept of Digital Economy. International Journal of Multicultural and Multireligious Understanding, 9(2), 375-378.
16. Kobilov, A. (2021). The concept of digital economy, its features and prospects. Arxiv nauchnых issledovaniy, 2(1), 42-48.
Akhmedov, B. A. (2022). Analysis of the Reliability of the Test form of Knowledge Control in Cluster Education. Psychology and Education, *5*

Komilov M.G.
Andijon iqtisodiyot va qurilish institut stajyor-o'qituvchisi
Maxmudov D.
Andijon qishloq ho'jaligi va agrotexnologiyalari instituti assistenti

SHAHARNI SELDAN HIMOYA QILISH UCHUN GIDROTEXNIK INSHOOTLAR: MUAMMO, YECHIMLAR VA TEXNOLOGIYALAR

Annotatsiya*:Mazkur maqolada shaharlarda seldan himoya qilish maqsadida qo'llaniladigan gidrotexnik inshootlar haqida batafsil ma'lumot berilgan. Gidrotexnik inshootlarning asosiy turlari, shu jumladan, to'g'onlar, suv omborlari, qayta oqim kanallari, qurilish to'siqlari va tormozlovchi inshootlar haqida izohlangan. Shuningdek, ushbu inshootlarning iqlim o'zgarishlari va sel xavfining ortishi bilan qanday rol o'ynashi, ularning iqtisodiy va ekologik jihatlari ko'rib chiqilgan. Maqolada zamonaviy texnologiyalar – sun'iy intellekt, ob-havo va suv monitoringi tizimlari, sun'iy yo'ldosh yordamida masofaviy kuzatuv usullari ham o'z aksini topgan. Shu bilan birga, statistika va jadval orqali seldan himoya qilishning dinamikasi va hozirgi holati yoritilgan.*

Kalit so'zlar*:Shaharni seldan himoya qilish, gidrotexnik inshootlar, to'g'onlar, suv, omborlari, qayta oqim kanallari, sel xavfi, ekologik barqarorlik, iqtisodiy samaradorlik, zamonaviy texnologiyalar, iqlim o'zgarishi*

Komilov M.G.
Trainee-teacher
of the Andijan Institute of Economics and Construction
Makhmudov D.
Assistant
of the Andijan Institute of Agriculture and Agrotechnologies

HYDROTECHNICAL STRUCTURES FOR URBAN FLOOD PROTECTION: PROBLEMS, SOLUTIONS AND TECHNOLOGIES

Abstract:*This article provides detailed information about hydrotechnical structures used in cities to protect against floods. The main types of hydraulic structures are explained, including dams, reservoirs, backflow channels, construction barriers and braking structures. Also, the role of these structures in climate change and increased flood risk, as well as their economic and ecological aspects were considered. Modern technologies - artificial intelligence, weather and water monitoring systems, remote monitoring methods using satellites are also reflected in the article. At the same time, the dynamics and current state of flood protection are highlighted through statistics and tables.*

Keywords:*City flood protection, hydrotechnical structures, dams, water, reservoirs, return channels, flood risk, environmental sustainability, economic efficiency, modern technologies, climate change*

Shaharni seldan himoya qilish masalasi aholi xavfsizligi va infratuzilmaning barqarorligini ta’minlashdagi eng dolzarb muammolardan biri hisoblanadi. So‘nggi yillarda global iqlim o‘zgarishlari natijasida sel xavfi ortgan bo‘lib, bu shaharlarda suvni nazorat qilish tizimlarini yanada takomillashtirishni talab qilmoqda. Shahar infratuzilmasini sel oqimlaridan himoya qilish maqsadida qurilgan gidrotexnik inshootlar va bu boradagi eng so‘nggi texnologik yechimlar quyida keng yoritiladi.

Shaharni seldan himoya qilishning samaradorligini oshirishda statistik ma’lumotlar va jadval orqali sel xavfining vaqt o‘tishi bilan qanday o‘zgarayotganini, tabiiy ofatlarning shahar infratuzilmasiga ta’sirini hamda bu borada qabul qilingan choralarning natijasini tahlil qilish muhimdir. Quyida dunyo miqyosidagi asosiy statistik ma'lumotlar va o'zgarish tendensiyalarini ko‘rsatadigan jadval keltiriladi.

Shaharlarni seldan himoya qilish bo‘yicha asosiy statistik ma'lumotlar

Ko‘rsatkich	1970 yilda	1990 yilda	2010 yilda	2023 yilda
Seldan zarar ko‘rgan shaharlarda aholining umumiy soni, mln kishi	25	45	75	100
Sel oqibatida yetkazilgan iqtisodiy zarar, mlrd AQSh dollari	10	35	70	120
Gidrotexnik inshootlar orqali himoya qilingan hududlar, km²	12,000	18,000	25,000	32,000
Qurilgan to‘g‘onlar soni	300	600	1,200	2,000
Yiliga qurilgan sel omborlari soni	10	25	50	80

Statistika bo‘yicha asosiy kuzatishlar

- **Aholining ko‘payishi bilan xavf ortishi**: 1970 yildan boshlab, seldan zarar ko‘rgan shaharlardagi aholining umumiy soni sezilarli darajada o‘sdi. Bu, asosan, urbanizatsiya va aholining shaharlarga ko‘chishi bilan bog‘liq.
- **Iqtisodiy zararlarning ko‘payishi**: Sel tufayli yetkazilgan zararlar ham ko‘payib bormoqda. 1970 yilda bu ko‘rsatkich 10 mlrd AQSh dollarini tashkil etgan bo‘lsa, 2023 yilga kelib 120 mlrd dollarga yetdi. Bunda tabiiy ofatlar sonining ko‘payishi va infratuzilma qimmatlashuvi ham katta rol o‘ynaydi.

- **Gidrotexnik inshootlar koʻlamining kengayishi**: Shaharlarni himoya qilish uchun qurilgan gidrotexnik inshootlar soni ortib bormoqda. Xususan, toʻgʻonlar va sel omborlari yil sayin koʻpaymoqda, bu esa sel xavfini kamaytirishda samarali natija bermoqda.
- **Inshootlar geografik qamrovi**: Gidrotexnik inshootlar orqali himoya qilingan hududlarning umumiy maydoni 1970 yildan 2023 yilgacha 2.5 martaga ortgan. Bu shaharlarda xavfsizlik darajasini oshirishga xizmat qiladi.

Yuqoridagi ma’lumotlar orqali gidrotexnik inshootlarning ahamiyati va sel xavfini kamaytirish boʻyicha kiritilgan yechimlarning ijobiy natijalari sezilarli darajada ekanini koʻrish mumkin. Biroq, sel xavfining oʻsishi va tabiiy ofatlar sonining koʻpayishi natijasida bu boradagi sa’y-harakatlarni davom ettirish va takomillashtirish zaruriyati ham ortib bormoqda.

1. Sel xavfini tahlil qilish va gidrotexnik inshootlar zarurati

Shaharlar koʻpincha geografik joylashuvi, daryo va togʻ etaklariga yaqinligi yoki nam ob-havo zonasida joylashgani uchun seldan zararlanadi. Shu sababli, seldan himoya qilishda quyidagi omillar e’tiborga olinadi:

- **Iqlim oʻzgarishlari:** Yogʻingarchilik miqdori koʻpayishi va qishda qorning haddan tashqari erishi suv toshqinlariga olib kelishi mumkin.
- **Topografik omillar:** Togʻlardan tushadigan sel suvlarining yoʻli koʻp hollarda shaharlardan oʻtadi va shahar ichidagi tabiiy suv oqimlarini tartibsizlantiradi.
- **Shahar infratuzilmasi va urbanizatsiya:** Qishloq joylarida tabiiy ravishda oqib ketadigan suvlar shaharlarda asfalt va beton qoplamalar orqali harakat qilmaydi, natijada suv darajasi tez koʻtariladi.

Bu omillar gidrotexnik inshootlarning samarali tizimlarga asoslangan holda loyihalanishini talab qiladi. Sel xavfini oldini olishda gidrotexnik tizimlarning puxta rejalashtirilishi muhim ahamiyat kasb etadi.

2. Gidrotexnik inshootlarning turlari va ularning vazifalari

Gidrotexnik inshootlar har xil sel xavfini kamaytirish va uni yoʻnaltirish uchun maxsus loyihalashtirilgan qurilmalar va inshootlar majmuasidan iborat. Asosiy gidrotexnik inshootlar quyidagicha:

2.1. Toʻgʻonlar va suv omborlari

- **Toʻgʻonlar:** Toʻgʻonlar daryo yoki boshqa suv manbalaridagi sel oqimlarini toʻxtatish va boshqarish maqsadida quriladi. Toʻgʻonning asosiy vazifasi - suv oqimining tezligini nazorat qilish, suv darajasini vaqtincha ushlab turish va shahar hududiga zarar yetkazilishining oldini olishdir. Ular koʻpincha togʻ daryolari yaqinida, yuqori sel xavfi mavjud hududlarda quriladi va turli balandlik va kengliklarda boʻlishi mumkin.
- **Suv omborlari:** Suv omborlari sel suvlari uchun vaqtinchalik saqlovchi vazifasini oʻtaydi. Sel kelishi mumkin boʻlgan davrlarda omborlardagi suv darajasi kamaytirilib, qoʻshimcha suv sigʻimi uchun joy ajratiladi. Omborlar orqali shahar infratuzilmasiga tushayotgan suv miqdorini nazorat qilish mumkin.

2.2. Qayta oqim yoʻllari va yondosh kanallar

Qayta oqim yo‘llari yoki by-pass kanallari sel suvlari shaharga kirishining oldini olish uchun ishlatiladi. Bu kanallar daryo yoki boshqa suv havzalari yaqinida joylashgan shaharlarda qo‘llanadi. Qayta oqim yo‘llari katta daryolarga yoki xavfsiz hududlarga olib boriladi va suv oqimini tabiiy ravishda tartibga soladi. Qayta oqim kanallari bo‘lmagan hollarda esa daryo o‘zanlari kengaytirilib, ortiqcha suvning oqishini osonlashtirish uchun yer qoplamalari o‘zgartiriladi.

2.3. Qurilish to‘siqlari va muhofaza devorlari

Qurilish to‘siqlari shaharlarda sel suvining ichkariga kirishini oldini olish uchun ishlatiladi. Muhofaza devorlari yoki to‘siqlar shahar infratuzilmasi bo‘ylab yondosh joylarda quriladi va ular suvning chetdan oqib kirishini to‘sishga yordam beradi. Bunday to‘siqlar, asosan, yuqori sel xavfi mavjud bo‘lgan hududlarda o‘rnatiladi.

2.4. Tormozlovchi inshootlar

Tormozlovchi inshootlar suvning tezligini kamaytirishga xizmat qiladi. Bu inshootlar suv oqimi yuqori bo‘lgan hududlarda qurilib, sel suvlari shaharga yetib kelishidan avval oqim tezligini pasaytirishga yordam beradi. Suv tezligini sekinlashtirish orqali sel xavfini kamaytirish imkoniyati mavjud bo‘ladi.

3. Sel xavfini boshqarishda zamonaviy texnologiyalar

Sel xavfini nazorat qilish va gidrotexnik inshootlardan samarali foydalanish uchun zamonaviy texnologiyalardan foydalanish muhimdir. Bu texnologiyalar quyidagilardan iborat:

- **Sun’iy intellekt va ma’lumot tahlili:** Shahar infratuzilmasi va sel xavfi mavjud bo‘lgan hududlar haqidagi real vaqt ma’lumotlaridan foydalanib, xavfli hududlarni oldindan aniqlash va ogohlantirish imkoniyati mavjud. Sun’iy intellekt yordamida sel xavfi mavjud joylarda darhol ehtiyot choralari ko‘riladi.
- **Ob-havo va suv monitoringi tizimlari:** Meteorologik xizmatlar bilan hamkorlikda ishlaydigan avtomatlashtirilgan tizimlar orqali yog‘ingarchilik darajasi va daryo suv sathini kuzatish mumkin. Shuningdek, maxsus sensorlar suvning harakatlanishini kuzatib, sel kelishini oldindan ogohlantiradi.
- **Sun’iy yo‘ldosh monitoringi va masofaviy tahlil:** Sun’iy yo‘ldosh orqali olib boriladigan kuzatuvlar orqali shahar hududlarida sel xavfini masofadan nazorat qilish imkoniyati yaratilgan. Bu usul orqali suvning harakati, uning balandligi va kengligi doimiy ravishda kuzatilib boriladi.

4. Gidrotexnik inshootlarining iqtisodiy va ekologik tomonlari

Gidrotexnik inshootlarni qurishda va ulardan foydalanishda iqtisodiy samaradorlik va ekologik barqarorlikka katta e’tibor qaratiladi.

4.1. Iqtisodiy jihatlar

Gidrotexnik inshootlarning qurilishi va ulardan samarali foydalanish katta mablag‘ talab qiladi, lekin bu sarf-xarajatlar o‘zini oqlaydi. Sel xavfi bilan bog‘liq iqtisodiy zararlarni kamaytirish uchun infratuzilmaviy investitsiyalar alohida ahamiyatga ega. Shaharlarni sel xavfidan himoyalash orqali qishloq xo‘jaligi mahsulotlari, sanoat korxonalari, transport va aloqa tarmoqlarini saqlab qolish mumkin, bu esa uzoq muddatli iqtisodiy barqarorlikka xizmat qiladi.

4.2. Ekologik jihatlar

Gidrotexnik inshootlarning tabiiy muhitga ta'siri ham muhim masaladir. Masalan, to'g'onlar qurilishi natijasida suv oqimining tabiiy rejimi buzilishi mumkin. Buning oldini olish uchun ekologik monitoring o'tkaziladi, ya'ni tabiatga yetadigan zararlarni kamaytirish va muvozanatni saqlash choralari ko'riladi.

Xulosa va takliflar

Shaharlarni seldan himoya qilish uchun zamonaviy gidrotexnik inshootlar yaratish va ulardan foydalanish zarur. To'g'onlar, suv omborlari, qayta oqim yo'llari va muhofaza devorlarining samarali tizimlari orqali shahar infratuzilmasi va aholi xavfsizligini ta'minlash mumkin. Shu bilan birga, bu inshootlarni loyihalashda iqtisodiy va ekologik omillar ham hisobga olinishi lozim.

Kelajakda yuqori texnologiyalar asosida avtomatlashtirilgan tizimlardan foydalanish va sun'iy intellekt orqali sel xavfini kuzatish hamda oldini olish bo'yicha choralarni kengaytirish bu boradagi muhim yo'nalishlardan biri bo'lib qoladi.

Shu yo'sinda, mamlakatimizda ham zamonaviy gidrotexnik inshootlar qurilishi va ulardan foydalanish amaliyotini kengaytirish lozim, bu esa aholi xavfsizligini ta'minlashda mustahkam asos bo'lib xizmat qiladi.

Foydalanilgan adabiyotlar ro'yxati

1. Давлатов, С.Р., Хидровлична иншоотларни лойихалаш назарияси. Тошкент: "Фан", 2020. – Гидротехник иншоотларни лойиҳалашнинг назарий асослари ва қўлланма материаллари.
2. Воронов, М.А., Гидравлика ва гидротехника, Москва: Высшая школа, 2019. – Гидравлика ва гидротехник иншоотларнинг асосий принциплари ва амалий масалалари.
3. International Commission on Large Dams (ICOLD), World Register of Dams, Annual Report, 2023. – Глобал тўғонлар ва сел омборлари рўйхати, уларнинг қурилиши ва бошқарув статистикаси.
4. Национальный центр климатических данных, Статистический бюллетень по изменениям климата, 2022. – Климат ўзгаришлари, ёғингарчилик кўрсаткичлари ва уларнинг сел келтириб чиқариш эҳтимолига таъсири ҳақида ҳисоботлар.
5. Reeve, D.E., Chadwick, A.J., Fleming, C.A., Coastal and Estuarine Flood Defense: A Handbook for Engineers. London: Thomas Telford, 2021. – Сув ҳимояси технологиялари ва муҳандислик ечимлари бўйича ҳамда соҳил бўйи иншоотлари таҳлили.
6. UNDRR (United Nations Office for Disaster Risk Reduction), Global Assessment Report on Disaster Risk Reduction, 2021. – Табиий офатлар хавфини камайтириш бўйича умумжаҳон ҳисобот, селга қарши курашдаги энг илғор амалиётлар ва тажрибалар.
7. Kazandjiev, B., Hydraulic Structures: Analysis and Design, Berlin: Springer, 2020. – Гидротехник иншоотларни таҳлил қилиш ва лойиҳалаш бўйича илмий қўлланма.

8. World Meteorological Organization (WMO), Guidelines on Flood Risk Management, 2022. – Жаҳон метеорологик ташкилоти томонидан сел хавфини бошқариш йўналишидаги қўлланма.
9. Bentley, S., and Marshall, T., Flood Resilience and Urban Development, Journal of Hydrology, Vol. 17, Issue 3, 2023. – Шаҳар ривожланишида селдан ҳимоя тизимларининг ўрни ва уларни такомиллаштириш борасидаги тадқиқотлар.
10. U.S. Army Corps of Engineers, Hydrologic Engineering Requirements for Urban Flood Control, Washington D.C., 2021. – АҚШ Армия муҳандислари корпорацияси томонидан шаҳарлардаги селга қарши кураш тадбирларига оид қўлланма.

Kutlimuratov A. A.
Urganch davlat universiteti katta o'qituvchisi
O'zbekiston
Xo'jyazova D. Sh.
Urganch davlat universiteti talabasi
O'zbekiston

XORAZM VILOYATI TOPONIMIKASI TARKIBIDA KO'CHMA OYKONIMLARNING SHAKLLANISHI

Annotatsiya: *Xorazm viloyati geografik jixatdan o'ziga xos bo'lgan tabiiy sharoitga ega bo'lgan hudud hisoblanadi. Shundan kelib chiqib, ushbu maqolada Xorazm viloyati toponimlari tarkibida ko'chma oykonimlarning vujudga kelganligi tahlil qilingan.*
Kalit so'zlar*: toponim, geografik nomlar, geografik terminlar (topotermlar), gidronimlar, oykonimlar, ko'chma oykonimlar, etnonimlar, fitonimlar.*

Kutlimuratov A. A.
Senior lecturer, Urgench State University
Uzbekistan
Khojyazova D. Sh.
Urgench State University student
Uzbekistan

THE EMERGENCE OF PORTABLE SIGNS IN THE TOPONYMICS OF KHORAZM REGION

Abstract: *Khorezm region is a region with unique natural conditions from a geographical point of view. Based on this, the article analyzes the appearance of portable oikonyms in the toponymy of the Khorezm region*
Keywords*: toponym, geographical names, geographical terms (topoterms), hydronyms, oikonyms, portable oikonyms, ethnonyms, phytonyms.*

Kirish Bizga ma'lumki, Toponimikada o'rganiladigan geografik nomlarning eng katta tarmog'i *oykonimika*(yunoncha,"*oykos*"-uy, turar joy, makon) ya'ni: ma'muriy-hududiy birliklar, aholi yashash maskanlari va ularning qismlari(*shahar, qishloq, mahalla, guzar, ko'cha, ovul, qo'rg'on*) nomlarini o'rganuvchi soha hisoblanadi.

Oykonimlar tarkibiga shahar, qishloq, shaharcha, ovul, mahalla, guzar, ko'chalar kirib, joy nomlari orasida alohida ahamiyatga ega. Bu nomlar joyning tabiiy va iqtisodiy geografik sharoiti, aholining milliy-etnik tarkibi, kasb-hunari, tarixda yuz bergan muhim voqea va hodisalar haqida batafsil ma'lumot beradi. Shuningdek toponimlar tarkibida kishilarning ism-familiyasi bilan bog'liq bo'lgan oykonimlar *antropooykonimlar* deb, urug‘, qabila, elat, xalq, millat kabi etnik birliklar nomi bilan atalgan oykonimlarni *etnooykonimlar* deb atash qabul qilingan[5].

O‘zbek toponimikasining shakllanishi va taraqqiyotida H.Hasanov, S.Qoraev, Z.Do‘simov, T.Nafasov, T.Enazarov, B.O‘rinboev, N.Oxunov, Sh.Qodirova, T.Rahmatov, L.T.Karimova, Yo.Xo‘jamberdiev, J.Latipov, K.Seytniyazov, A.Otajanova, M.Mirakmalov, K.Xakimov, M.Tillaeva, F.Abdullaev, O.Madrahimov, A.Ishaev kabi olimlarning xizmatlari katta bo‘ldi.

Xorazm viloyati O‘zbekiston Respublikasining shimoliy g‘arbida joylashgan bo‘lib uning yer maydoni 6,3 ming km^2 ni tashkil etadi. Mamlakatning shimoli-g‘arbida joylashgan, qadimiy sug‘orish madaniyatiga ega bo‘lgan ko‘hna viloyatlardan biridir. Tarkibida 3 ta shahar (Urganch, Xiva, Pitnak); 11ta qishloq tumani (Hazorasp, Gurlan, Urganch, Xiva, Xonqa, Shovot, Qo‘shko‘pir, Bog‘ot, Yangiariq, Yangibozor, Tuproqqal’a); 58 shaharcha, 98 ta qishloqlardan tarkib topgan. Ma’muriy markazi – Urganch shahri.

Xorazm toponimlarining aksariyat ko‘pchiligi uzoq tarixdan beri mavjud bo‘lib, tabiiy sharoit, siyosiy o‘zgarishlar va turli tarixiy jarayonlar ta’sirida shakllangan.

Xorazm qadimdan sharq va g‘arbni, shimol va janubni tutashtiruvchi chorrahada joylashganligi hamda ko‘pgina xalqlar uchun doimo go‘zal va jannatmakon yurt timsolida ko‘rib, barcha podsholar bu makonga ega bo‘lishga va o‘ziga qo‘shib olishga intilganlar. Shuning uchun qadimdan Xorazmga ko‘chib kelib joylashgan juda ko‘plab xalqlarning avlodlarini etnooykonimlar ko‘rinishida ham uchratishimiz mumkin.

Darhaqiqat, O‘zbek xalqining asosini tashkil etgan etnik komponentlardan biri *o‘g‘uz* qabilalar guruhiga kirgan *Soyot, Bayot, Juvondir, Ovshar, Qinik, Bijanak* va boshqalar shuningdek, *qipchoq* qabilalariga kirgan *Kenagas, Nukus, Qatag‘on, Uyg‘ur, Mang‘it, Qangli, Qo‘ng‘irot, Nayman* kabi ko‘plab etnonimlar bilan ataluvchi joy nomlari uchraydi. Turkman xalqini etnik tarkibini tashkil etgan ayrim etnik guruhlardan *Chavdur, Yovmut, Ali-eli, Xizr-eli, Taka* va boshqa qabilalar ham Xorazm toponimiyasining bir qismini tashkil etadi[1]. Jumladan, Soyot(mahalla, Xiva tumani), Bayot(aholi punkti, Yangiariq tumani), Ovshar(qishloq,Hazorasp tumani), Ovsharbadoq(aholi punkti, Hazorasp tumani), Knik(aholi punkti, Xiva tumani), Kenegas(qishloq, Qo‘shko‘pir tumani), Qangli(shaharcha, Shovot tumani), Nayman(qishloq, Bog‘ot tumani) va boshqalarni misol qilish mumkin.

Abulg‘ozi Bahodirhonning xabar berishicha Xorazmshoh Takashxon *qangli* qabila boshliqlarining birining qizi Turkun(Turkon) Xotunga uylangan. Shundan so‘ng Xorazmga ko‘plab *qanglik*lar ko‘chib kelganlar[1].

Hozirgi kunda ham Xorazmda yashovchi aholi o‘zlarining urug‘ va qabilalarga bo‘linishlarini unutgan bo‘lsalarda ular etnik nomlar asosida vujudga kelgan toponimlar ko‘rinishida hududiy tarqalgan. Bu esa Xorazm aholisining urug‘-qabilaga bo‘linishi uzoq davrlardan beri saqlanib kelganligini ko‘rishimiz mumkin.

Shu bilan birga siyosiy jarayonlar natijasida qo‘shni hududlarni bosib olish orqali asirlar yoki qullarni, shu yerdagi shahar yoki qishloq aholisini ham butulay majburan ko‘chirib olib kelingan. Bunday harakatlar zamirida o‘z mamlakati aholi sonini, mudofaa tizimini yaxshilash, qishloq xo‘jalik ishlarini yanada rivojlantirish, qurilish va boshqa ishlarni takomillashtirishga qaratilgan edi.

Umuman olganda Xorazm nomining kelib chiqishi ham ko‘chish bilan bog‘liq holda shakllangan. Bu fikr bo‘yicha yagona to‘xtamga kelinmagan bo‘lsa ham, tadqiqotlar davom etmoqda. Xususan, bir guruh olimlar (S.P.Tolstov, Ya.P.G‘ulomov, I.M.Dyakonov, M.G. Vorobyova) xorazmliklar Amudaryoning quyi oqimidagi Xorazm vohasida yashab, janubiy Turkmanistongacha bo‘lgan hududda hukumronlik qilganlar deb hisoblasalar, yana birlari (V.M. Masson, I.V.Pyankov, B.F.G‘ofurov, B.I.Vaynberg, A.S Sagdullaev, L.S.Tolstova) xorazmliklar Tajan–Gerirud daryolari havzalarida yashashgan va keyinchalik qandaydir tazyiq ostida shimolga – hozirgi Xorazm hududiga ko‘chib kelganlar, deb ta’kidlaydilar. Shu bilan birga “Katta Xorazm” tarixiga oid yangi ma’lumotlarni professor B.I.Vaynberg(1932-2010 yy) o‘rgandi. U miloddan oldingi 674 yilga oid Asarhoddon yozuvlarida Ossuriya davlatiga qaram bo‘lgan sharqdagi eng uzoq o‘lka - Xoreana (Xorazm) haqida yozma ma’lumot borligini aniqladi. Demak Xoreana(Xarri yoki Xvarri qabilasining vatani) bu Xorazmliklarning oldingi yashagan joydagi nomi, ko‘chib kelgandan so‘ng hozirgi Xorazm nomi ko‘rinishiga o‘tgan degan xulosaga kelinadi.

Olim Xoreanadagi Koles–Mura daryosining tasviri Gerodotning Akes daryosi haqidagi ma’lumotlarga mos kelishi, shimoliy Eron hududida yashagan xorazmliklar assiriyaliklar tazyiqi ostida O‘rta Osiyoning janubiy viloyatlariga ko‘chishga majbur bo‘lganlar degan fikrni ilgari surdi[3].

Etnograf L.S.Tolstova xorazmliklarning yangi yerlarga ko‘chib kelish haqidagi ma’lumotlarni o‘zbek va qoraqalpoqlar orasidagi keng tarqalgan rivoyatlar bilan bog‘laganligini ko‘rishimiz mumkin. Abu Rayhon Beruniy ma’lumotlariga qaraganda milloddan avvalgi 1202 yilda Marv atroflarida yashagan xorazmliklar Amudaryo bo‘lariga ko‘chib kelganlaridan so‘ng, kayoniylar sulolasi vakili Siyovushning o‘g‘li Kayhusrov boshchiligida ilk davlatga asos solganliklarini yozib o‘tadi.

Amudaryo o‘z yo‘nalishini o‘zgartirib Orol dengizi tomon oqa boshlagandan so‘ng Gurganj suvsiz qoladi. Shundan so‘ng Xiva xoni Abulg‘ozi Bahodirxon1646 yilda Gurganj va Vazir shaharini va uning atroflaridagi tarqoq holda yashagan aholini ko‘chirib Amudaryoning janubiy qismida joylashtirgan hamda aholi o‘rnashgan hudud atrofini qal’a devori bilan mustahkamlab unga „Toza Urganch“, ya’ni „Yangi Urganch“ deb nom bergan. Shundan keyin qadimgi Gurganj shahrining nomi Ko‘hna Urganch bo‘lib, Yangi Urganch bilan Ko‘hna Urganch oralig‘i 170 km ni tashkil etadi. Suningdek, Urganch tumanida *Ko‘nayurt* aholi punkti borki u ham asli Ko‘hna Urganch shahri atrofidan ko‘chib kelgan aholining avlodlari bo‘lib, yashash joyini *Ko‘nayurt*(eski ona makon,yurt) deb nomlashgan.

O‘rta asrdagi *Vazir* shahri aholisi ham tabiiy sharoit tufayli yangi maskanga hozirgi Gurlan shahrchasidan 12 km shimoli-g‘arb tomonga ko‘chirtirildi. *Yangi Vazir* shahri XIX asrda aholisi ancha zich shahrlardan biri hisoblangan[2].

Xorazm toponimiyasida *eroniy* xalqlardan qolgan joy nomlari ham o‘z o‘rniga ega. Hozirda viloyatda *Qullar, Pirsiyan*, *Jamshid* deb ataluvchi xalqlarni uchratishimiz mumkin. Xorazmda eronlik xalqlarni *Pirsiyon* yoki *eroniylar* deb atashadi. Xiva xonligi qo‘shinlari 1826 yilda Xuroson atrofiga bostirib kirib *Oqdarband* qal’asini xarobaga aylantiradi, uning aholisini esa Xorazmning Qo‘shko‘pir tumaniga joylashtiradi va bu qishloq hozir ham shu nom bilan yuritiladi[1].

Chor Rossiyasining topshirig‘i bilan 1760-70 yillarda asli millati nemis bo‘lgan qirolicha Ekatirina II tomonidan Prussiyada yashagan nemis-mennonitlarni Volga, Ural, Sirdaryo daryolari quyi oqimi bo‘ylariga ko‘chirib keltiradi. O‘rta Osiyo bosib olinishi bilan, Turkiston gubernatori general Konstantin Petrovich fon-Kaufman asli millati nemis bo‘lganligi uchun 1873 yil 12 avgust Gandimyon shartnomasidan keyin, 1883-84 yillarda nemis-mennonitlarni qulay joyga Xiva xonligidagi Yangiariqning tinch va unumdor yerlariga ko‘chirib keltirgan. Bu joy *Oqmachit* deb yuritilib uning ma’nosi ajralib turishi uchun oq rangda, iqlim xususiyatidan kelib chiqib issiqlikni qaytaruvchi, hamda yorqin sof tinchliksevarlik belgisini anglatadi. Ularning oldingi makoni Qo‘qon xonligining Sirdaryoning quyi oqimidagi Oqmachit(1853 yilgacha, 1938 yildan Qizil O‘rda) bo‘lganligi uchun, keyingi manzil nomi ham shu shahar nomidan ko‘chirilgan bo‘lishi kerak.

Munis(“Munis” - taxallusi ostida Avazbiy o‘g‘li Shermuhammad Mirob(1778-1829yy) ning hikoya qilishicha, Yormish kanalining qurilishiga Anushoh hukumronligi davrida o‘ng qirg‘oqdagi Kat shahrining *“suvsiz qolganligi”* sabab bo‘lgan. Shuning uchun shahar aholisini suvga muhtojligini nazarga olib, 1681 yil chap qirg‘oqdan Yormish deb ataladigan kanalni qazish haqida buyruq bergan va u yerga Qiyot qal’asini ko‘chirib o‘tgan.

Muhammad Rahimxon 1810 yilda Yangiariq kanali etaklaridagi Oqmachit mavzeisiga suv o‘tkazish va bu joylarni obod qilish haqida buyruq bergan. Bu tadbirlarning hammasi Gurlan rayonidan ko‘chirilgan “qo‘zg‘olonchi” *uyg‘ur*larni joylashtirish maqsadida o‘tkazilgan edi. Muhammad Rahimxon jazo chorasi sifatida butun qabilani uch qismga bo‘lgan: ularning bir qismini Oqmachitning yangi o‘zlashtirilgan yerlarga, ikkinchisini Toshovuzga, uchinchisini Xivaning shimolidagi *Zax*(hozirgi Zeyyop) kanali bo‘yiga ko‘chirgan[2]. Hozirda *Uyg‘ur* viloyatning Yangibozor, Yangiariq, Qo‘shko‘pir, Urganch tumanlarida qishloq yoki mahalla nomlarida uchratish mumkin.

Xiva xoni Muhammad Rahimxon 1823-24 yillarda Buxoroga yurish qilib *Qoqushtuvon* qishlog‘i, *Poykent* shahri hamda *Xayrobod* qishloqlari aholisini

Xorazmga ko‘chirib kelgan. Hozirda *Xayrobod* Qo‘shko‘pir tumanida qishloqlardan birining nomidir.

Siyosiy jarayonlar natijasida Respublikamizning ko‘pgina hududlarida Xorazmdan ko‘chib borgan aholi o‘zlari bilan birga joy nomlarini ham olib borishgan. Jumladan, birgina Buxoro vohasida Urganch so‘zi bilan ko‘pgina qishloqlarni(Urganji, Urganj mahallasi, Urganjiylar, Urganji eli) uchratishimiz mumkin.

Xiva xonlari zulmidan ozor chekkan *urganchliklar* (Xorazm) Sirdaryo bo‘ylab yuqori tomon suzib, yillar davomida Farg‘ona vodiysigacha kelganlar va daryo bo‘ylarida o‘rnashib, o‘z qishloqlarini tashkil qilganlar. Bunday qishloq nomlari Sirdaryoga yaqin joylashgan. Farg‘ona, Namangan, Andijon, Buxoro, Jizzax viloyatlarida ham “Urganji”, “Urganjiyon”, “Urganji bog‘” nomida qishloqlar bor[4].

Shuningdek Turkiyada *Harezm*, Isroilda *Korazim, Chorazm* va boshqa joylarda shu kabi nomlarni uchratishimiz mumkin.

Uzoq davom etgan xar-xil jarayonlar natijasida Xorazm viloyati hududiga ko‘chib kelgan xalqlar shu yerdagi mahalliy aholi bilan o‘zaro aralashib ketib hozirgi zamonaviy shavalarga ega bo‘lgan xalq, urug‘ – qabilalarni shakllantirganlar.

Yuqoridagi ma’lumotlardan shunisi ayon bo‘ladiki qadimdan Xorazmga kuchib kelib joylashgan juda ko‘plab xalqlarning avlodlarini hozirda etnooykonimlar ko‘rinishida uchratishimiz mumkin. Shulardan kelib chiqib xalq, urug‘ - qabila nomlari bilan bog‘liq joy nomlari viloyat oykonimlari tarkibida jami toponimlarning 21% ni tashkil etadi.

Xulosa Geografik nomlar bugungi kundagi muayyan hududdagi mahalliy aholi tomonidan tarixiy rivojlanish jarayonida tabiiy ravishda shakllantirilgan, tegishli ob’yektlarga oid qimmatli tarixiy-madaniy ma’lumotlarni o‘zida saqlayotgan, ularning muhim tabiiy, ijtimoiy-iqtisodiy, etnomadaniy xususiyatlarini aks ettirgan, geografik nomlar hisoblanadi. Shuning uchun hududiy oykonimlarni geografik jixatdan ham tadqiq qilish ishlari Xorazm toponimikasini o‘rganishdagi dolzarb vazifalaridan biri desak mubolag‘a bo‘lmaydi.

Foydalangan adabiyotlar

1. Дўсимов З. “Хоразм топонимлари”. Т. “Фан”. 1985. 98-б

2 Ғуломов Яхё. Хоразмнинг суғорилиш тарихи. 1959. 294-б.

3. Махмудов М. “Катта Хоразм” илмий муаммосининг ўрганилиши тарихидан. Т. 2015 й.

4. Uluqov N. va boshq. O‘zbekiston joy nomlarining izohli lug‘ati. –Toshkent, “Donishmand ziyosi”, 2022. -640 b.

5. Hakimov Q.M., Mirakmalov M.T. Toponimika-Toshkent:«Tafakkur avlodi», 2020.

6. Kutlimuratov A.A. (2024). XORAZM TOPONIMIKASIDA TARKIBIDA GEOGRAFIK TERMINLARNING SHAKLLANISHI. Экономика и социум, (1 (116)), 252-257. doi: 10.5281/zenodo.10715972

7. Kutlimuratov A.A. (2024). XORAZM VILOYATI TOPONIMLARI TARKIBIDA OYKONIMLARNING SHAKLLANISHI. Hamkor Konferensiyalar, 1(3), 223–227.
8. A.A.Kutlimuratov, & T.T.Jumaniyazov (2023). Xorazm viloyati geografik joy nomlari tarkibida o'simliklarga bog'liq nomlar (fitonimlar). Science and Education, 4 (5), 1649-1653.
9. Monitoring land use and land cover (LULC) in the Khorezm oasis using the Esri Sentinel-2 Land Cover Explorer database. Rifat Boymurodov, Muzaffar Matchanov, Qudrat Tajiyev, Dilshodbek Amandurdiyev, Ali Mansourian, Abdullo Ashurov E3S Web of Conf. 590 04001 (2024) DOI: 10.1051/e3sconf/202459004001
10. Matchanov, Muzaffar & Boymurodov, Rifat. (2024). ANALYSIS OF THE INFLUENCE OF EROSION ON THE DESERTIFICATION PROCESS IN THE KHORAZM OASIS USING REMOTE SENSING DATA. 6. 46-51.
11. Anthropogenic transformation of oasis landscapes in Khorezm Province, Uzbekistan: A geoecological analysis. Abror Khaitbaev, Kuvondik Yarashev, Yunus Karimov, Maqsud Nazarov. E3S Web Conf. 497 02043 (2024). DOI: 10.1051/e3sconf/202449702043

Lutfullayev Sh.N.
Qarshi davlat universiteti, o`qituvchi

KO'KAT SABZAVOTLAR VA ULARNING SHIFOBAXSHLIGI

Annotasiya. *Maqolada ko'kat sabzavotlar organizmni zarur ozuqa moddalar, oziq-ovqat manbai, taomlarni to'yimligi, ko'kat sabzavotlar ko'plab turlarining ko'rinishi bayon etilgan.*
Kalit so'zlar: *ko'kat sabzavotlarning turlari, vitaminlar, minerallar, antioksidant, infektsiya.*

Lutfullayev Sh.N.
teacher
Karshi State University

GREEN VEGETABLES AND THEIR MEDICINAL BENEFITS

Abstract. *In the article, green vegetables are essential nutrients for the body, a source of nutrition, satiety of food, the appearance of many types of green vegetables.*
Keywords: *types of green vegetables, vitamins, minerals, antioxidant, infection.*

Mavzusining dolzarbligi. Bugungi kunda sog'lom ovqatlanish va yaxshi hayot tarzi odamlar uchun muhim ahamiyat kasb etmoqda. Tezkor oziq-ovqatlar, qandli ichimliklar va boshqa zararli mahsulotlar iste'molining ortishi sababli, ko'plab odamlar sog'liq muammolariga duch kelmoqda. Ushbu kontekstda ko'kat sabzavotlar ozuqaviy jihatdan boy bo'lib, ularga talab oshmoqda. Ko'kat sabzavotlar, vitaminlar, minerallar va antioksidantlarga boy bo'lib, yurak kasalliklari, qandli diabet, o'zgacha vazn va saraton kabi kasalliklar xavfini kamaytirishga yordam beradi.

Zarurati

1. **Sog'liqni Saqlash**: Ko'kat sabzavotlar organizmni zarur ozuqa moddalari bilan ta'minlaydi. Ular immunitetni kuchaytiradi, energiya darajasini oshiradi va sog'liqni saqlashga ko'maklashadi.
2. **Sog'lom Ovqatlanish Madaniyati**: Ko'kat sabzavotlar dietaga kiritilishi, oziq-ovqatga bo'lgan munosabatni o'zgartiradi. Ular ko'p xilma-xilligi bilan ovqat tayyorlashni qiziqarli qiladi.
3. **Ekologik Foyda**: Mahalliy ko'kat sabzavotlar ekish va iste'mol qilish, agrar ishlab chiqarishni rivojlantirish va ekologik barqarorlikni ta'minlashga yordam beradi.

4. **Xalqaro Salomatlik Tashkilotlari Takliflari**: Jahon sog'liqni saqlash tashkiloti va boshqa xalqaro tashkilotlar ko'kat sabzavotlar iste'molini oshirishni tavsiya qiladi, bu esa ularning ahamiyatini yanada oshiradi.
5. **Oziq-ovqat Xavfsizligi**: Ko'kat sabzavotlar tabiiy va kimyoviy qo'shimchalarsiz, sog'lom va xavfsiz oziq-ovqat manbai sifatida qabul qilinadi.

Ko'kat sabzavotlar – bu odamlar tomonidan keng qo'llaniladigan, turli xil vitaminlar, minerallar va antioksidantlarga boy bo'lgan oziq-ovqat mahsulotlaridir. Ular nafaqat ovqat tayyorlashda, balki sog'liqni saqlashda ham muhim ahamiyatga ega. Ushbu maqolada ko'kat sabzavotlarning shifobaxsh xususiyatlari va ularning inson organizmiga ta'siri ko'rib chiqiladi.

Ko'kat sabzavotlar turlari

Ko'kat sabzavotlarga ko'plab turli xil o'simliklar kiradi, jumladan:

1. Salat – odamlarning ovqatlariga qoshilgan eng keng tarqalgan ko'katlardan biri. U A, C vitaminlari va folatga boy.

2. Petrushka – yod va temir manbai bo'lib, qondagi temir miqdorini oshirishga yordam beradi.

3. Basil – antioksidant xususiyatlari bilan tanilgan, stressni kamaytiradi va immunitetni kuchaytiradi.

4. Spinach – temir, kaltsiy va A vitaminlariga boy, suyaklar salomatligi uchun foydali.

5. Kale – kislota va mineral moddalar manbai, xolesterin darajasini pasaytirishga yordam beradi.

Ko'kat sabzavotlarning sog'liq uchun foydalari

1. Immunitetni kuchaytiradi: Ko'kat sabzavotlar vitamin C va antioksidantlar bilan boy, bu esa organizmni infektsiyalarga qarshi kurashishda yordam beradi.

2. Yurak sog'lig'i: Ular xolesterin darajasini pasaytirishi va qon aylanishini yaxshilashi mumkin, bu yurak kasalliklari xavfini kamaytiradi.

3. Og'irlikni nazorat qilish: Ko'kat sabzavotlar kaloriya jihatidan kam va to'yimli, shuning uchun ularni iste'mol qilish vaznni saqlashda yordam beradi.

4. Qandli diabetga qarshi kurash: Ular glyukoza darajasini boshqarishga yordam beradigan tolaga boy.

5. Qizilo't va saraton kasalliklari xavfini kamaytiradi: Ko'kat sabzavotlar fitokimyoviy moddalarga boy, bu esa qizilo't va saraton kasalliklarining oldini olishga yordam beradi.

Xulosa qilib aytganda ko'kat sabzavotlar nafaqat taomlarning mazali va rang-barangligini oshiradi, balki sog'liq uchun ham ko'plab foydali xususiyatlarga ega. Ularning muntazam iste'moli organizmni zarur vitaminlar va minerallar bilan ta'minlab, turli kasalliklardan himoya qiladi. Shuning uchun, ko'kat sabzavotlarni oziq-ovqat ratsioniga kiritish, sog'lom turmush tarzini yuritish uchun muhim ahamiyatga ega.

Foydalanilgan adabiyotlar ro‘yxati

1. D. J. S. Robinson, "Herbs and Health: A Nutritional Perspective," Journal of Herbal Medicine, 2020.
2. K. L. Smith, "Nutritional Value of Leafy Greens," Nutrition Reviews, 2021.
3. M. Y. T. Lee, "Phytochemicals in Vegetables and their Role in Health," Journal of Nutritional Science, 2019.
4. R. A. F. Thompson, "The Impact of Diet on Heart Health," Cardiology Today, 2022.

Madaminova G.
English teacher of department
“Philology and Language teaching”
Institute of ISFT

THE IMPACT OF LINGUOPRAGMATICS ON INTERPERSONAL RELATIONSHIPS: MISUNDERSTANDINGS AND CONNECTION

Anotatsiya. *Lingvopragmatika tilning ijtimoiy kontekstlarda qanday ishlashini o’rganadi va uning shaxslararo munosabatlardagi ahamiyatini ko’rsatadi. Ushbu maqolada pragmatik tamoyillar aloqa dinamikasiga, jumladan, kontekst, nutq harakatlari va ijtimoiy me’yorlarga qanday ta’sir qilishini ko’rib chiqiladi. Ushbu elementlarni tushunib, odamlar o’zaro munosabatlarni kuchaytira oladilar, mustahkam aloqalarni rivojlantiradilar va nizolarni samaraliroq hal qiladilar.*

Kalit so’zlar*: Lingvopragmatika, pragmatika, shaxslararo muloqot, kontekst, nutq harakatlari, muzokaralar roli, suhbat dinamikasi, so'rovlar, buyruqlar, takliflar, umidsizlik, til, ziddiyat va boshqalar.*

Gulbahor M.
Kafedra ingliz tili o'qituvchisi
"Filologiya va tillarni o'qitish"
ISFT instituti

LINGVOPRAGMATIKANING SHAXSLARARO MUNOSABATLARGA TA'SIRI: TUSHUNMOVCHILIKLAR VA ALOQA

Annotation. *Lingvopragmatics studies how language processes in social contexts and shows its importance in interpersonal relationships. This article examines how pragmatic performances affect communication dynamics, context, discourse, and social norms. By understanding these things, people can strengthen relationships, develop stronger relationships, and resolve conflicts more effectively.*

Keywords: *Linguopragmatics, pragmatics, interpersonal communication, context, speech acts, negotiate role, conversational dynamics, requests, commands, suggestions, disappointment, language conflict and etc.*

Introduction. Language consistently develops in close connection with human life and social activity, and the continuity of life’s events remains unbroken. In interpersonal relationships, effective communication is essential for building understanding and rapport. The history of linguopragmatics offers an intriguing exploration of how humans have come to understand language, context, and meaning. From early philosophical inquiries to today’s interdisciplinary collaborations, the field has evolved, shedding light on the intricate dynamics of language in interaction. This article thoroughly reviews the theoretical developments, historical milestones, and practical applications of linguopragmatics. It highlights the contributions of key figures such as Erving Goffman, Paul Grice, J.L. Austin, and Dell Hymes, and examines how the field has expanded to encompass interdisciplinary efforts, digital communication, and sociocultural perspectives. By approaching language instruction, cross-cultural communication, and natural language processing from an interdisciplinary viewpoint, linguopragmatics provides valuable insights into human communication and its many expressions, celebrating the richness and diversity of linguistic practice. Linguopragmatics is an ever-evolving field, rooted in philosophy and extending into diverse interdisciplinary applications in today's digital world. It offers important insights into the intricate relationship between language, context, and meaning. As we embark on this exploration, we gain a deeper understanding of the complex web of human interactions and the essential role that language plays within it.

Main body. The early 20th century marked a significant shift in language study with the rise of structural linguistics. Scholars such as Leonard Bloomfield and Ferdinand de Saussure focused on the formal properties of language, analyzing its grammatical elements while paying limited attention to its pragmatic aspects. However, the structuralist framework laid a crucial foundation for the pragmatic shift in linguistics, enabling later research into language meaning and use. The study of language has covered a range of areas, from its structural elements to its practical use in daily interactions. Among these areas, linguopragmatics plays a significant role in examining the intricate relationship between language, context, and meaning. Structural linguistics emerged in the early twentieth century, marking a pivotal moment in the evolution of linguopragmatics. Scholars such as Leonard Bloomfield and Ferdinand de Saussure concentrated on the systematic structure of language, highlighting its organized nature. While structural linguistics primarily focused on language's formal characteristics, it also laid the groundwork for deeper exploration into the pragmatic dimensions of communication. Linguopragmatics, which examines language use in context, provides valuable insights into how individuals convey meaning, negotiate roles, and maintain social bonds. Linguopragmatics bridges the gap between linguistics and pragmatics, emphasizing how context influences the interpretation of language. The term "linguopragmatics" reflects the interplay between linguistic structures and pragmatic functions, making it essential for understanding real-life communication. Linguopragmatics bridges the gap between linguistics and pragmatics, emphasizing how context influences the interpretation of language. It examines how speakers use language to achieve specific social goals, considering factors such as culture, social norms, and conversational dynamics. This article examines how pragmatic factors, including context, speech acts, and politeness strategies, influence communication dynamics between individuals.

Understanding these elements can enhance relational communication and promote healthier interactions. Context encompasses the situational and cultural background that influences language use. In interpersonal relationships, understanding context is crucial for effective communication.

1. **Situational Context**: It refers to how the meaning of an utterance depends on the situation in which it is said.

   Utterance: ***"It's getting late."***

   Meaning in Different Situations:

a) **At a party:** A polite way of saying, *"Let's leave now."*
b) **During a date:** A subtle suggestion that the date should end.
c) **In a family setting:** A reminder to a child to go to bed.
d) **At work**: A hint to finish tasks quickly.

Recognizing the situational context helps individuals adjust their language to match the relational dynamics.

2. **Cultural Context**: Cultural norms dictate acceptable communication styles and can vary widely across different communities. Awareness of these differences is vital for avoiding misunderstandings. For instance, some cultures may prioritize direct communication, while others value indirectness, requiring speakers to adapt their language to foster understanding.

   Utterance: *"You're putting on weight."*

a) **In Western cultures**: This may be seen as a criticism or a rude comment.
b) **In some Asian cultures**: It might be perceived as a sign of concern or even a compliment, indicating prosperity and health.
c) **English Proverb:** *"The early bird catches the worm."*
Reflects a cultural value of punctuality and hard work.
d) **Uzbek Proverb**: *"Mehnat, mehnatning tagi — rohat."* (He who works hard will surely find comfort.)
Reflects a cultural emphasis on effort and perseverance.

3. **Relational Context**: The existing relationship between communicators shapes language choices. Close friends may use colloquial language and humor, while professional colleagues might adopt a more formal tone. Understanding the relational context allows individuals to navigate conversations more effectively, fostering stronger bonds.

   Utterance: "*Can you help me with this?*"

a) **To a close friend:** Direct and casual request, likely interpreted as informal.
b) **To a manager**: Likely phrased more politely, such as, *"Would it be possible for you to assist me with this?"*

Disagreement:

c) **With a boss:** *"I see your point, but may I suggest an alternative?"* (Cautious and respectful.)
d) **With a sibling:** "*You're totally wrong about this!"* (Direct and informal.)

Understanding the relationship helps avoid misunderstandings or unintentional offense. For example: Speaking too formally with a close friend might feel distant. Speaking too casually with a professor might seem disrespectful.

Speech Acts: The Functions of Language. Speech acts are communicative acts that perform functions beyond mere statements. They play a critical role in interpersonal relationships by shaping interactions.

1. **Expressive Speech Acts**: These convey emotions and feelings, such as gratitude, apologies, or sympathy. For example, expressing appreciation can strengthen bonds, while sincere apologies can repair trust in a relationship. The effectiveness of expressive acts often relies on the perceived authenticity of the speaker.
2. **Directive Speech Acts**: These involve requests, commands, or suggestions. The way directives are framed can influence their reception. Politeness strategies, such as using indirect requests (e.g., “Could you please help me?” instead of “Help me!”), can enhance cooperation and maintain positive relationships.
3. **Commissive Speech Acts**: These involve commitments or promises. The ability to keep promises fosters trust and reliability in relationships, while broken commitments can lead to disappointment and conflict.

Politeness and Social Norms in Communication. Politeness is a crucial component of effective communication in interpersonal relationships. It involves strategies that help manage social interactions and maintain harmony.

1. **Positive Politeness**: This strategy emphasizes shared identity and camaraderie. Compliments, expressions of affection, and shared experiences contribute to a sense of belonging and intimacy, enhancing relational bonds. **Example**: *“I’d love your help with this, if you have time!”* This shows appreciation and includes the listener in a positive way.
2. **Negative Politeness**: This approach focuses on minimizing imposition and respecting the autonomy of others. Strategies such as hedging (e.g., “I hope it’s okay to ask...”) can soften requests and prevent the listener from feeling pressured, maintaining a sense of balance in the relationship. Phrasing requests carefully (e.g., "I was wondering if you could...") can help preserve the listener’s face and maintain harmony in relationships.
3. **Cultural Variations in Politeness**: Different cultures have unique expectations regarding politeness, which can influence interpersonal communication. Understanding these variations is essential for navigating cross-cultural relationships effectively and avoiding potential pitfalls.

The Role of Linguopragmatics in Conflict Resolution. Linguopragmatics offers valuable tools for managing conflicts in interpersonal relationships. By applying pragmatic principles, individuals can navigate disagreements more constructively.

1. **Understanding Implicature**: Recognizing implied meanings in communication can help clarify misunderstandings. For instance, if one

partner expresses frustration about a particular behavior, the other can inquire about the underlying concerns rather than becoming defensive, facilitating a more open dialogue.

2. **Revising Speech Acts**: In conflict situations, adjusting speech acts can help de-escalate tensions. For example, reframing accusations as requests (e.g., "I would appreciate it if you could...") can promote cooperation and mutual understanding.
3. **Utilizing Active Listening**: Practicing active listening—showing genuine interest in the other person's perspective—can foster empathy and understanding, helping to resolve conflicts more effectively.

Pragmatic inference involves understanding meaning based on contextual clues, which include things like tone, body language, and previous conversation. If a speaker's intended meaning is not clear, listeners must rely on these clues to infer meaning. However, if the listener's interpretation of these clues is different from the speaker's intention, misunderstandings can occur.

Example: In English, when someone says "*Could you pass the salt?"* it's a request. However, the listener might mistakenly think it's a question about the listener's ability to pass the salt, not realizing it's a polite request

Conclusion. Pragmatics is the study of how context influences the way language is used and understood. It goes beyond the literal meaning of words to consider the speaker's intention, the listener's interpretation, and the situational context. Linguopragmatics provides essential insights into the complexities of interpersonal communication. By understanding the role of context, speech acts, and politeness strategies, individuals can enhance their relational communication skills, fostering deeper connections and navigating conflicts with greater ease. As we become more attuned to the pragmatic dimensions of language, we can cultivate healthier, more meaningful relationships in our personal and professional lives. Pragmatics significantly impacts communication, and misunderstandings often arise when pragmatic norms or contextual clues are misinterpreted. Understanding the role of context—whether it's situational, cultural, or relational—helps mitigate these misunderstandings. By being aware of cultural differences, politeness strategies, implicature, and conversational maxims, individuals can reduce the likelihood of miscommunication and foster clearer interactions.

References

1. Brown, P., & Levinson, S. C. (1987). *Politeness: Some Universals in Language Usage*. Cambridge University Press.

2. Esenova, K. (2017). Pragmalinguistic studies in linguistics. Editions du JIPTO/Academie Internationale CONCORDE. 3. Goffman, E. (2023). The presentation of self in everyday life. In Social theory re-wired (pp. 450-459). Routledge.

3. Grice, H. P. (1975). "Logic and Conversation." In *Speech Acts*, 41–58. Academic Press.

4. Holmes, J. (1995). *Women, Men and Politeness*. Longman.

5. Kuchumov, B. (2018). Pragmatics of the Uzbek Language.
6. Levinson, S. C. (2012). The Handbook of Pragmatics. Blackwell Publishing.
7. Suleymanov, A. (2006). Social and Cultural Contexts of Language Use in Uzbekistan.
8. Searle, J. R. (1969). *Speech Acts: An Essay in the Philosophy of Language*. Cambridge University Press.
9. Tannen, D. (1990). *You Just Don't Understand: Women and Men in Conversation*. William Morrow.
10. Yule, G. (2010). The Study of Language (4th ed.). Cambridge University Press.

Mamajanov B.S.
Doctor of Medical Sciences
Associate Professor
Department of Traumatology, Orthopedics, and Neurosurgery
Andijan State Medical Institute. Andizhan.
Qodirov D.R.
Assistant
department of surgical diseases, Central Asian Medical Institute. Fergana.
Eshboyev E.A. – PhD, Associate Professor
Republican Pathoanatomical Center of the Ministry of Health of the Republic of Uzbekistan. Tashkent.

DIAGNOSTIC ASPECTS OF RECURRENT LUMBAR DISC HERNIATIONS

Annotation. This research analyzes the specific diagnostic features of recurrent *lumbar disc herniation. The study focuses on assessing the role of clinical, imaging, and laboratory parameters in predicting recurrence likelihood. It highlights the clinical signs of recurrent disc herniation, visualization capabilities using MRI and CT, and the importance of modern diagnostic methods for monitoring inflammatory processes. This work contributes to improving patient quality of life and optimizing treatment strategies by establishing accurate diagnostics for recurrent herniation.*

Keywords: *recurrent disc herniation, diagnostics, magnetic resonance imaging, computer tomography, low back pain, inflammation, laboratory examination, surgery, disability.*

Relevance of the topic – Lumbar disc herniation disease is widespread worldwide and causes pain in the back and legs [1-2]. Surgical treatment of this disease is widely used [1,2]. However, there is a possibility of recurrence of hernia even after surgical intervention [2,3]. The average rate of recurrence is 5-15% [4,2]. Recurrent disc herniation is one of the main causes of spine pain and disability [6,5-1]. In addition, pain in the lumbar region of the spine and in the legs occurs due to compression of the nerve root as a result of spinal canal stenosis or cauda equina syndrome [8,11,12,13,14]. Clinical guidelines recommend a history and physical examination to rule out lumbar disc herniation (including recurrent disc herniation) [6,7,8]. However, the above two methods are not enough to diagnose the disease [8,9,10]. Diagnostic imaging methods can also be used before operations to determine this condition [15]. Diagnostic imaging can be performed by magnetic resonance imaging (MRT), computed tomography (CT). The widespread use of these effective and relatively safe tests in medicine has dramatically reduced the need for X-rays and myelography. Currently, the MRI examination method is less harmful to the body through ionizing radiation and has the ability to see especially soft tissues [13,16].

The purpose of the study. The purpose of this study is to choose and implement an adequate examination method in recurrent lumbar disc herniation.

Research methods and materials. This retrospective study was conducted from January 2024 to August 2024 on 185 patients who underwent spinal disc herniation surgery at the neurosurgery department of Andijan State Medical Institute clinics. Clinical and anamnestic data of patients with recurrent lumbar disc herniation were analyzed. Magnetic resonance imaging (MRI) or computed tomography (CT) was recommended in postoperative patients with persistent or recurrent leg pain. Medical indicators and MRI, CT images of all patients were evaluated.

Research results and their evaluation. The obtained results were as follows: complaints, anamnesis, and clinical neurological examinations of all patients raised doubts about the diagnosis of disc herniation. Then, magnetic resonance imaging (MRI) or computed tomography (CT) was recommended to the patients. Among them, 23 (12.4%) had a recurrence, 162 (87.6%) had a primary disc herniation.

Summary. Patients' complaints, medical history, clinical neurological and physical examinations play an important role in the diagnosis of herniated lumbar vertebrae (including primary disc herniation). However, for preoperative diagnosis and selection of surgical tactics, computed tomography (MRT) or computed tomography (CT) examinations are the gold standard.

Used literature

1. Guo J, Li G, Ji X, Wu X, Zhang G, Zhou C, Ma X. Clinical and Radiological Risk Factors of Early Recurrent Lumbar Disc Herniation at Six Months or Less: A Clinical Retrospective Analysis in One Medical Center. Pain Physician. 2022Oct;25(7):E1039-E1045. PMID: 36288589.
2. Huang W, Han Z, Liu J, Yu L, Yu X. Risk Factors for Recurrent Lumbar Disc Herniation: A Systematic Review and Meta-Analysis. Medicine (Baltimore). 2016 Jan;95(2):e2378. doi: 10.1097/MD.0000000000002378. PMID: 26765413; PMCID: PMC4718239.
3. McGirt MJ, Ambrossi GL, Datoo G, et al. Recurrent disc herniation and long-term back pain after primary lumbar discectomy: review of outcomes reported for limited versus aggressive disc removal. Neurosurgery. 2009; 64: 338–344 discussion 344–335.
4. Swartz KR, Trost GR. Recurrent lumbar disc herniation. Neurosurg Focus. 2003;15:E10.
5. Shimia M, Babaei-Ghazani A, Sadat BE, et al. Risk factors of recurrent lumbar disc herniation. Asian J Neurosurg. 2013;8:93–96.
6. Corniola MV, Tessitore E, Schaller K, Gautschi OP. Hernie discal lombaire--diagnosis et prise en charge [Lumbar disc herniation--diagnosis and treatment]. Rev Med Suisse. 2014 Dec 10;10(454):2376-82. French. PMID: 25632633.

7. Kreiner DS, Hwang SW, Easa JE, et al. An evidence-based clinical guideline for the diagnosis and treatment of lumbar disc herniation with radiculopathy. Spine J. 2014;14:180–91.
8. Kim JH, van Rijn RM, van Tulder MW, Koes BW, de Boer MR, Ginai AZ, Ostelo RWGJ, van der Windt DAMW, Verhagen AP. Diagnostic accuracy of diagnostic imaging for lumbar disc herniation in adults with low back pain or sciatica is unknown; a systematic review. Chiropr Man Therap. 2018 Aug 21; 26:37.
9. Verwoerd AJ, Peul WC, Willemsen SP, et al. Diagnostic accuracy of history taking to assess lumbosacral nerve root compression. Spine J. 2014;14:2028–37. 6.
10. Van der Windt DA, Simons E, Riphagen II, Ammendolia C, Verhagen AP, Laslett M, Devillé W, Deyo RA, Bouter LM, de vet HC, Aertgeerts B. Physical examination for lumbar radiculopathy due to disc herniation in patients with low-back pain: a systematic review. Cochrane Database Syst Rev. 2010; 2:CD007431.
11. Lurie J, Tomkins-Lane C. Management of lumbar spinal stenosis. BMJ. 2016; 352:h6234.
12. Deyo RA, Rainville J, Kent DL. What can the history and physical examination tell us about low back pain? JAMA. 1992;268:760–5.
13. Jarvik JG, Deyo RA. Diagnostic evaluation of low back pain with emphasis on imaging. Ann Intern Med. 2002;137:586–97.
14. De Schepper EI, Koes BW, Veldhuizen EF, Oei EH, Bierma-Zeinstra SM, Luijsterburg PA. Prevalence of spinal pathology in patients presenting for lumbar MRI as referred from general practice. Fam Pract. 2016;33:51–6.
15. Takashima H, Takebayashi T, Yoshimoto M, Terashima Y, Ida K, Yamashita T. Efficacy of diffusion-weighted magnetic resonance imaging in diagnosing spinal root disorders in lumbar disc herniation. Spine (Phila Pa 1976). 2013; 38:E998–E1002.
16. Wassenaar M, van Rijn RM, van Tulder MW, et al. Magnetic resonance imaging for diagnosing lumbar spinal pathology in adult patients with low back pain or sciatica: a diagnostic systematic review. Eur Spine J. 2012;21:220–7.

Mamasaliyev S.
Assistant
Tashkent University of architecture and civil engineering

THE PROCESS OF ORGANISING EDUCATIONAL ACTIVITIES OF STUDENTS AND MASTERING PERSONAL AND PROFESSIONAL KNOWLEDGE

Abstract. *This article discusses the process of organizing the educational activities of higher education students and mastering personal and professional knowledge.*

Keywords *pedagogical process, educational process, modelling principle, mobility principle, polytechnic principle, didactic project, academic project, need arousal, emotions, thought phenomena, creative activity, stochastic character, design object, personal professional knowledge, education level, effective learning, memorization, creative approach, educational principles, efficiency criterion.*

Arming young people with knowledge, skills, and abilities, evaluating and checking knowledge in the process of developing their abilities and talents is of great importance in education. Evaluation helps to determine how effective the methods used in the educational system are, and the level of students' mastery. Of course, the effectiveness of the educational system also depends on the level of training of pedagogical personnel. First of all, a teacher must love and respect his profession, have great interest and affection for the student, and be able to feel his great responsibility towards society. A teacher should be able to determine and take into account the level of knowledge and upbringing of each student, be able to correctly select, analyze and summarize educational materials, be able to perfectly know the methods, tools and forms of education necessary for pedagogical skills, be demanding towards the student, use them appropriately depending on the pedagogical situation. should be able to receive, analyze their activities and draw conclusions.

The main learning activity of learners is the acquisition of knowledge, which includes the following components: receiving, thinking, mastering and applying learning materials. These components are interrelated and used sequentially in the educational process to form a whole educational process.

1. Education of the recipient study material acceptance to do

Study material acceptance to do study of the process the most important is part of Study material good acceptance to be done study work release in the activity the role of a solid foundation plays

2. Study material efficient of mastering internal conditions .

In order to effectively master the learning material, the inner need of the learner should be first of all. Internal learning is stored in memory from answering until the exam and is forgotten after answering. The success of learning also depends on the performance of the learner. If the learner is interested in the given materials and works on himself, he can reach the peak of mastery.

Mastery internal from the facts again one being given the material education receiver by is understanding. Because education receiver the subject, if he doesn't understand, how much own on do not work, previous topics with depends otherwise, of the subject appropriation happened, won't be and very shallow will be

3. Acceptance of external factors.

Download the study material of doing main factors study of the material to the content depends will be His difficulty, training in the material-technical materials used clearly and to abstraction, to practice depending on looking difference does

4. Remember to stay

The most important component of learning material is to remember the new material and be able to apply it theoretically and practically whenever you want. When the learner actively works with the educational material, he remembers it well and uses it effectively. The main effectiveness of memorization depends on the willpower of the learner.

5. Knowledge in application skill and qualifications formation

As we know, the ability to apply knowledge during practical activities shows the level of knowledge acquisition. Knowing how to apply theoretical knowledge in practice, that is, doing homework on the basis of the knowledge acquired during laboratory work, is independent acquisition of knowledge. In this process, knowledge expands and becomes perfected and becomes deeply acquired knowledge.

It is also important that learners conduct independent work on themselves in organizing educational activities. Increasing personal knowledge is considered a special type of education, and the process of self-education is more the responsibility of the learner. The socio-psychological conditions in this process are as follows:

- High personal professional qualification of the learner.
- The level of knowledge of specialists increases the competitiveness of labor.
- Modern technologies and the activities of specialists cause unemployment and require retraining of the unemployed in a new type of specialization.
- The development of the world economy leads to the improvement of the knowledge of specialist personnel.

Professional of education efficiency criterion. Main efficiency criteria specialty includes :

- qualified in action independence feeling
- work safety action done without technical requirements perform
- work in release time and norms perform

- professional in action thinking and self-control by doing to go
- work to culture strictly action to do
- work to the activity's creative approach
- done work for responsibility feeling to do etc enters

Summary. In this chapter, the idea is expressed that it is important to equip young students with knowledge, skills, and abilities, to evaluate and check knowledge in the process of developing their abilities and talents, how effective the methods used in the educational system are, and how effective the methods used in the educational system are, and how well students can learn. Of course, information is given on the fact that the effectiveness of the educational system depends on the level of training of pedagogic personnel. A pedagogue should be able to determine and take into account the level of knowledge and education of each student, be able to choose the right educational materials, have a perfect knowledge of the educational methods, tools and forms necessary for pedagogical skills, be demanding towards the student, be able to use them appropriately depending on the pedagogical situation, analyze his own work. should be able to receive and draw conclusions. Principles of education - the direction of learning and teaching processes aimed at the realization of the goals and tasks of universal education consists of a set of basic laws and rules of acquisition of scientific knowledge, knowledge and skills by students. From this point of view, opinions on the principles of education and its types are stated.

The essence of the process of vocational education and its structure, the principles of vocational education, the design of the pedagogical process, the general algorithm of pedagogical planning, the process of organising the educational activities of learners, the acquisition of personal professional knowledge in vocational education, the criteria of the effectiveness of vocational education, etc.

REFERENCES USED:

1. Nurimov R.I. Sovershenstvovanie takticheskikh deistviy futbolistov vysokoy qualificatsii. Ucheb posobie, T., 2000 . -254 s.

2. Mel Ziddinov R.A. Motor activity of football players, how to show the first level of special physical fitness. FAN-SPORTGA scientific theoretical magazine. Issue 6 of 2020 . B. [13.00.00 #16]

3. Mel Ziddinov R.A. Pedagogical testing of the level of special physical fitness of football players . "PEDAGOGIKMAHORAT" Scientific-theoretical and methodical magazine, issue 4 (August 2020) . Pages 231-233 . [13.00.00 #23] Rajabov S. et al. Analysis of imaginary, general-imaginary and digital-imaginary rules //Science and Education. - 2024. - T. 5. – no. 5. - S. 262-268.

4. Rajabov S. ANALYSIS OF IMAGINARY, GENERAL-IMAGINARY AND DIGITAL-IMAGINARY RULES //Digital economy and information technologies. - 2024. - T. 4. – no. 1. – S. 113-119.

5. Abdullaev M. ORGANIZATION OF WASTE PROCESSING IN SOLVING ENVIRONMENTAL PROBLEMS IN UZBEKISTAN //Nordic_Press. - 2024. - T. 1. – no. 0001.
6. Kabilov A. et al. ANALYSIS OF ASSOCIATIVE RULES AND MARKET BASKETS //Digital economy and information technologies. - 2023. - T. 3. – no. 3. - S. 115-120.
7. Rajabov SB et al. Social mining and its development stages //Science and Education. - 2023. - T. 4. – no. 4. – S. 1342-1345.
8. Oybek oglu ON, Urinovich KA, Bakhtiyorovich RS USE OF DIGITAL TECHNOLOGIES IN IMPLEMENTATION OF TAXES AND OTHER MANDATORY CHARGES IN DIGITAL ECONOMY //Archiv nauchnyx issledovaniy. - 2022. - T. 5. – no. 5.
9. Ziyadullayevich SA, Mirzaliev SM, Bakhtiyorovich RS IMPROVING THE PROGRESSES OF WASTE PRODUCTS PROCESSING THE AUTOMATED MANAGEMENT SYSTEM //Galaxy International Interdisciplinary Research Journal. - 2022. - T. 10. – no. 5. - S. 372-381.
10. Mirzarakhimova A., Abdulakhatov M. Analysis of Healthcare Services in the Digital Economy //Proceedings of the 7th International Conference on Future Networks and Distributed Systems. - 2023. - S. 410-414.
11. Abdulakhatov MM, Avlokulova SS TECHNOLOGY OF SEARCH ORGANIZATION IN VIRTUAL E-SHOPS WITH IMAGE RECOGNITION //Archiv nauchnyx issledovaniy. - 2022. - T. 2. – no. 1.
12. Kobilov A., Abdulakhatov M., Jaloliddinova M. PECULIARITIES OF THE USE OF ARTIFICIAL INTELLIGENCE IN THE EDUCATIONAL PROCESS //Digital economy and information technologies. - 2021. - T. 1. – no. 3. - S. 32-37.
13. Nigmanov AU ANALYSIS OF INCREASING ENERGY EFFICIENCY IN CHINESE INDUSTRIAL NETWORKS // XXI Century: Science and Education Issues (XXI Century: Voprosy nauki i obrazovaniya). - 2024. - T. 1. – S. 146-162.
14. Nigmanov A. U. i dr. MAIN DIRECTIONS OF IMPLEMENTATION OF INVESTMENT ACTIVITY IN FREE ECONOMIC ZONES // GEOGRAPHY: NATURE I OBSHCHEESTVO. - 2020. - T. 1. – no. 2.
15. Bobojonov JBO Prospective trend of investment policy of the PRC //Science and Education. - 2024. - T. 5. – no. 10. – S. 203-209.

Maqsudov U.Q., Doctor of Philosophy (PhD)
in Pedagogical Sciences
Associate Professor
of FarDu Department of Pedagogy
Sobirova M. R.
Pedogogy and Physiology faculty magister
FerSu

IMPROVING THE SOLVING OF PRACTICAL PROBLEMS IN PRIMARY CLASS MATHEMATICS LESSONS BASED ON AN INNOVATIVE APPROACH

Annotation: *this article examines innovative approaches to improving the solution of issues of a practical nature in elementary school mathematics lessons. The author provides opportunities to enhance students ' mathematical skills, develop logical thinking and creative approaches through the use of modern techniques such as technology, game-based education, and group work. The article also emphasizes the importance of taking into account the life experiences of students in the process of solving practical issues. It has been shown that by implementing innovative techniques, the learning process can be made more interesting and effective.*

Keywords: *innovative approach, elementary sin, mathematical education, applied issues, technologies, game-based education, group work, creative approach, logical thinking, learning process.*

INNOVATSION YONDASHUV ASOSIDA BOSHLANG‘ICH SINF MATEMATIKA DARSLARIDA AMALIY XARAKTERDAGI MASALALARNI YECHISHNI TAKOMILLASHTIRISH

Annotatsiya: *Ushbu maqolada boshlang‘ich sinf matematika darslarida amaliy xarakterdagi masalalarni yechishni takomillashtirish uchun innovatsion yondashuvlar ko‘rib chiqilgan. Muallif, texnologiyalar, o‘yin asosidagi ta’lim va guruh ishlari kabi zamonaviy usullarni qo‘llash orqali o‘quvchilarning matematik ko‘nikmalarini oshirish, mantiqiy fikrlash va ijodiy yondashuvlarini rivojlantirish imkoniyatlarini taqdim etadi. Maqola, shuningdek, amaliy masalalarni yechish jarayonida o‘quvchilarning hayotiy tajribalarini hisobga olish muhimligini ta’kidlaydi. Innovatsion metodlarni tatbiq etish orqali o‘quv jarayonini yanada qiziqarli va samarali qilish mumkinligi ko‘rsatilgan.*

Kalit so‘zlar: *innovatsion yondashuv, boshlang‘ich sin, matematik ta’lim, amaliy masalalar, texnologiyalar, o‘yin asosidagi ta’lim, guruh ishlari, kreativ yondashuv, mantiqiy fikrlash, o‘quv jarayoni.*

KIRISH

Boshlang'ich ta'limda matematik masalalarni yechish, o'quvchilarning nazariy bilimlarini amaliy ko'nikmalarga aylantirishda muhim rol o'ynaydi. Amaliy xarakterdagi masalalar, o'quvchilarni hayotiy vaziyatlarga tayyorlash, mantiqiy fikrlash va muammolarni hal qilish qobiliyatini rivojlantirishga yordam beradi. Innovatsion yondashuvlar, bu jarayonni yanada samarali va qiziqarli qilish imkonini beradi.

Innovatsion yondashuvlar

1. **Texnologiyalardan foydalanish**
   - *interaktiv darslar:* Interaktiv taqdimotlar va onlayn resurslar orqali o'quvchilarga masalalarni yechish jarayonini ko'rsatish. Misol uchun, Google Classroom yoki Khan Academy kabi platformalardan foydalanish.
   - *mobil ilovalar:* Matematik masalalarni yechishda yordam beradigan mobil ilovalar (masalan, Photomath) yordamida o'quvchilar mustaqil ishlash imkoniyatiga ega bo'lishadi.
2. **O'yin Asosidagi Ta'lim**
   - *matematik o'yinlar:* O'yinlarni (masalan, matematik jumboqlar, kvizlar) dars jarayoniga kiritish orqali o'quvchilarning qiziqishini oshirish. Bu, o'rganish jarayonini ko'proq qiziqarli qiladi.
   - *simulatsiyalar:* Amaliy masalalarni yechish jarayonida virtual simulyatsiyalar orqali o'quvchilarga real vaziyatlar yaratish.
3. **Guruh ishlari va hamkorlik**
   - *guruh loyihalari*: O'quvchilarni kichik guruhlarga bo'lib, birgalikda masalalarni yechishga undash. Bu, jamoada ishlash ko'nikmalarini rivojlantirishga yordam beradi.
   - *fikr almashish*: O'quvchilar o'z yechimlari haqida fikr almashish va muhokama qilishlari uchun vaqt ajratish.
4. **Kreativ Yondashuvlar**
   - *ijodiy masalalar*: O'quvchilarga ijodiy masalalar berish, masalan, o'z hayotidan misol keltirish orqali masalani yechishni qiziqarli qilish.
   - *krossvordlar va jumboqlar*: O'quvchilarga matematik tushunchalarni o'z ichiga olgan krossvordlar yoki jumboqlar taqdim etish.

Amaliy Masalalarni Yechish

Amaliy xarakterdagi masalalar o'quvchilarning kundalik hayoti bilan bog'liq bo'lishi muhim. Ularni quyidagi kategoriyalarga bo'lish mumkin:

1. **Kundalik Hayot Masalalari**:
   - Do'konda xarid qilishda narxlarni hisoblash.
   - Oila byudjetini rejalashtirish.
2. **Sport va O'yin Masalalari**:
   - O'yinlarda ballarni hisoblash.
   - Sport musobaqalaridagi natijalarni taqqoslash.
3. **Tabiat va Atrof-Muhit Masalalari**:
   - O'simliklarning o'sishi va o'sish jarayonini hisoblash.

- Atrof-muhit muammolari haqida masalalar, masalan, suvni tejash.

Amaliy Mashqlar

O‘quvchilarga amaliy masalalarni yechish uchun quyidagi mashqlarni berish mumkin:

1. **Kundalik Hayotga Doir Masalalar**:
   - "Agar sen 3 ta apelsin sotib olsang, 1 ta apelsin narxi 500 so‘m bo‘lsa, qancha pul to‘laysan?"
   - "Bir do‘konda 4 ta o‘yinchoq 12000 so‘m. 10 ta o‘yinchoq qancha turadi?"
2. **Kreativ Masalalar**:
   - "O‘zingizning to‘g‘oningizdagi eng sevimli o‘yiningiz haqida hikoya qiling. O‘yin narxini hisoblang va uning uchun qancha vaqt sarfladingiz?"
   - "Siz 1000 so‘mga 5 ta shirinlik sotib oldingiz. Har bir shirinlik narxini hisoblang."

Xulosa: Innovatsion yondashuvlar asosida amaliy xarakterdagi masalalarni yechishni takomillashtirish, boshlang‘ich sinf o‘quvchilarining matematik ko‘nikmalarini rivojlantirishda muhim ahamiyatga ega. Bu jarayon, nafaqat matematik bilimlarni oshirish, balki o‘quvchilarning mantiqiy fikrlash, ijodkorlik va jamoada ishlash ko‘nikmalarini ham rivojlantiradi. Innovatsiyalarni ta’limga tatbiq etish, o‘quv jarayonini samarali va qiziqarli qilishga yordam beradi, shuningdek, o‘quvchilarni kelajakdagi muammolarni hal qilishga tayyorlaydi.

FOYDALANILGAN ADABIYOTLAR:

1. Khusainova, D. Sh. (2020). "Matematik ta'limda innovatsion yondashuvlar." O‘zbekiston Respublikasi Ta’lim Vazirligi Ma’lumotlari.
2. Jumaniyazova, N. M. (2021). "Amaliy masalalar yordamida o‘quvchilarning matematik ko‘nikmalarini rivojlantirish." Pedagogika jurnali, 3(2), 45-50.
3. Abduraxmonov, B. A. (2022). "Boshlang‘ich ta’limda innovatsion metodlarni qo‘llash." Ta’lim va Innovatsiyalar jurnali, 4(1), 77-82.
4. Ismoilov, R. S. (2023). "O‘yin asosida ta’limning samaradorligi." Ta’lim va Ijtimoiy Fanlar jurnali, 5(3), 99-104.
5. Murodov, T. A. (2019). "Matematika darslarida interaktiv usullarni qo‘llash." Ta’limni rivojlantirish jurnali, 2(4), 12-16.

Mahammadjonov T. A.
assistant of the department of biological chemistry
Andijan State Medical Institute
Andijan, Uzbekistan

REGISTRATION AND EVALUATION OF STUDENT LEARNING

***Annotation**: The article provides information on how to control student learning and how to assess students' knowledge.*
***Keywords**: control of students' knowledge, control methods, oral control, written control, tests, quizzes, exams.*

Monitoring student learning is a key part of the learning process. His task is to determine to what extent the goal of teaching has been reached. Because control of students ’knowledge in high school has a teaching nature, control methods are closely related to other teaching methods.

The functions of teaching, upbringing and development are also performed during the control of students' knowledge. The importance of teaching is that the student will have the opportunity to constantly improve their knowledge and skills. The educational importance of controlling students ’knowledge is enormous. Regular examinations teach the student to work systematically, to apply the acquired knowledge and skills in practice.

Students develop responsibility, purposefulness, self-discipline, overcoming difficulties and other spiritual qualities. In the control of students 'knowledge, special attention is paid to the importance of their development. Students' thinking ability, analysis, synthesis. comparisons, generalizations, clarity entries are also controlled separately.

Forms of monitoring chemistry learning outcomes vary. Depending on the organization of this control — individual, frontal, group, and differentiated, or executed — it can be verbal, written, experimental.

There are also types of control in didactics that depend on the didactic function: before teaching a topic. During the course, quarterly or semi-annually, at the end of the year

Control methods.

1. Verbal Control and Self-Control Methods;

a) individual request; b) frontal interrogation; c) oral records; g) oral examination; d) programmed request; e) verbal self-control.

2. Methods of written control and self-control:

a) written control; b) written expenses; c) written examination; g) programmed written work; d) self-monitoring in writing.

3. Practical-laboratory control and self-control methods:

a) control and laboratory work; b) control using EXM; c) solving experimental problems; g) self-monitoring with the help of practical and laboratory work.

Questioning is the main form of taking into account students 'mastery. A system of specially selected questions indicates that the teacher is following the students in a systematic way.

Material from previous and non-previous lessons will also be requested. Such feedback allows the learner to deepen and expand their knowledge. In order to save time, a "short question" is conducted. They are pre-recorded on special cards.

Control written work.

Control writing is an economical means of taking into account students' knowledge, which allows them to check the mastery not only of individual students, but also of the whole class at the same time.

The “one-pass written assignment” lasts 10 to 15 minutes - this control can be included in the diary.

Judgments about the quality of educational work are made based on students' mastery. Three forms of student learning are used: daily time-by-time and final forms.

All three form a holistic system of accounting for school learning. The final step in taking chemistry into account from time to time is for some teachers to characterize each student and the whole class. On the basis of such a record, a general conclusion is made about the annual mastery of students.

After a topic is covered, or at the end of the term, a written checklist on that topic is conducted throughout the course. This work is structured in several variants (2, 3, 4, etc.) to ensure that the students' control work is done independently. The ease and difficulty of the questions should be approximately the same. Checking and evaluating how the work is done plays a big role in terms of education. Based on the teacher's analysis of the most common mistakes, the teacher not only evaluates the students' answers, but also draws appropriate conclusions to further improve the teaching of chemistry.

Not only theoretical knowledge, but also the ability to use chemical language, graphics, quantitative calculations, but also the ability to experiment - to use the most commonly used equipment, to perform the most important chemical operations, to use a chemical experiment in testing students' learning and skills. there is also the task of developing skills.

At the end of the quarter and at the end of the year, the most important experimental skills of students are checked and evaluated. This also plays a big role in terms of education. Experimental problem solving can be used to test skills.

The test can be used to monitor the knowledge of high school students. Usually the test is held outside of class time and students are divided into two or three groups. The teacher prepares the questions and issues in advance and gives them to the students. Students who master the lessons well, respond frequently, can be exempted from the test to reward them.

Maturity Certificate Exam.

The purpose of the maturity test is to test the depth of students' knowledge, their level of ability to think independently, their ability to connect knowledge with life, theory with practice. What the reader should know:

a) have a concrete idea of substances and their changes

b) know the basic concepts and laws of chemistry and explain them in concrete material

c) knowledge of the history of the most important discoveries and inventions, issues related to the life and scientific activity of chemists

g) be able to use chemical language

d) be able to do simple experimental work, solve quantitative problems.

The term test is derived from English and when translated into Uzbek means to check, research, test. The test is a short, standard, and usually time-limited test. Test questions are created to conduct such new and convenient tests. Each question has five answers marked with the letters A, B, C, D, E, and one of them is correct. The questions are structured on the principle of “choosing the right one out of many” and “from simple to complex” and based on a rigorous school curriculum.

Some teachers may have planned to take the exam based on two theoretical questions, the third of which is a test. However, based on such an approach, it is not possible to fully assess the level of student mastery. The teacher must carefully choose one of the two methods in agreement with the students.

It is a good idea to make a punch card out of thicker paper of the same size to keep track of the students' answers.

This means that a punch card must be prepared in advance for the class. Students mark their correct answers on these punch cards.

To calculate the correct answer, you need to take a punch card, mark the correct answers in the form of a cross circle, and prepare a "template" by cutting them out with scissors. The template should be the same size as the reader punch card and fall on top of it. Determining the correct answer A “template” is placed on top of the three punch cards, so many crosses appear on the template.

In schools equipped with a personal computer, test runs can be conducted using machines. To do this, the options of test tasks, their correct answers, assessment criteria are entered into the machine memory, and it is enough to pass the "test" of the student.

Qualitative indicators of mastering.

Assessment of mastery is an important tool for improving the quality of student work. Students' mastery of chemistry is measured by three indicators: a) the volume of knowledge and practical training; b) quality of education and training; c) forms of identification of knowledge and learning.

The quality of knowledge is characterized by concreteness, comprehensibility, systematicity, accuracy, thoroughness.

The form of knowledge and learning identification is also important in characterizing students ’mastery.

It is very predictable that students will be put into mastering chemistry; depending on the specific circumstances, they may be deepened and clarified; the teacher may increase or decrease these grades somewhat in order to motivate students to do better. For example, the reader to the oral answer:

a) knows the material with full answers to the questions;

b) clearly knows the definition and expression of chemical concepts;

c) be able to apply their knowledge in solving practical problems;

g) consistently describe the material;

d) answers the main and additional questions independently, such student is given a grade of "5".

If a reader:

a) is well prepared for practical work and follows the instructions clearly;

b) understands and performs all experiments consciously;

c) accurately perform all chemical experiments and obtain accurate results from the whole work;

g) if he is able to observe correctly, draw the right conclusions, perform experiments independently, the practical work of such a student is given a grade of "5".

If a reader:

a) gives correct answers to all questions in the written work;

b) questions related to concrete and theoretical materials responds perfectly and clearly;

c) narrates consistently and completely competently, he the student's written work is rated "5".

Monitoring the results of students' acquisition of knowledge, skills and abilities is of didactic importance in the learning process. Its purpose is to compare the actual learning outcomes with the learning objectives. Control is carried out in different forms, types and methods, and different tasks are included in the means of control.

References:

1. I.N.Borisov. Methods of teaching chemistry. T. Teacher. 1966, 139-141, 218-219.

2. G.M.Chernobelskaya. Basic methods of teaching chemistry. M. Prosveshenis. 1987, 119-121, 132-133, 136-137.

3. N.A.Kadygrob. Methods of chemical preparation. Course lecture. Izd.Mosk.universiteta. 1979, 34-36.

4. Obhaya metodika obucheniya ximii. Pod red. L.A.Tsvetova. M. Enlightenment. 1981, 72-74. 1982, 56.

5. T.V.Cheremuxina. Individual work with students in chemistry. T. Teacher. 1989, 6-8

Mahammadjonov T. A.
assistant of the department of biological chemistry
Andijan State Medical Institute
Andijan, Uzbekistan

MODERN PEDAGOGICAL TECHNOLOGIES IN TEACHING BIOLOGY

Abstract*: This article examines modern educational technologies in teaching biology.*
Keywords*: teaching, teaching, biology, modern technologies, innovative technologies, computer technologies.*

The word “technology” seems to have taken root quite firmly in the pedagogical vocabulary. This new word “technology” made its way into pedagogy from the exact sciences and technology. What is “new technology of metal processing” or “new technology of information dissemination” is more or less clear. But it was difficult to understand what the “new pedagogical technology” is and how it differs from the program, from the methodology, from the pedagogical system. It is believed that terminological confusion is a common occurrence in theoretical pedagogy. Therefore, practicing teachers choose not only the program and methodology that they use in their work, but also pedagogical technology.

A program is, first of all, a document that defines the tasks of upbringing and the content of a child's education, and technology is a toolkit with which these tasks are solved. That is, the program answers the questions “what to do?” and “why do?”, and technology - to the question “how to do?” You can only achieve good learning success by increasing interest in your subject. To do this, I use modern pedagogical technologies in the classroom, including information and communication technologies. Information technology of education is a pedagogical technology that uses special methods, software and hardware to work with information. Like all methods, methodological techniques, teaching aids fulfill the trinity of didactic functions, which, in principle, remain unchanged in any subject teaching and perform triune functions: teaching, development, education within the framework of subject activity, taking into account the use of digital educational resources (CER) and information and communication technology (ICT) methodologies.

Learning functions: assimilation of knowledge (about facts, concepts, biological and planetary processes, laws, biological theories, methods of activity);improving the quality of knowledge, consolidating previously acquired knowledge, mastering the quality control system of knowledge (depth, strength, consistency), including the use of distance learning techniques; mastering the methods of natural science in the subject activity of a biology teacher using the

CRC, ICT; the formation of practical skills when working with natural and virtual objects.

Developmental functions: development of the entire system of cognitive processes: attention, perception, representation, imagination, thinking, memory, speech; development of analytical and synthetic methods of thinking using ICT; development of creative abilities based on the CRC. Educational functions: the formation of a natural-scientific worldview and a natural-scientific style of thinking, the ability to algorithmize one's own activity; the formation of socially valuable motives for learning (in particular, interest in learning); the formation of socially positive elements of behavior; education of strong-willed and moral qualities of the individual. The use of IT in biology lessons can improve the quality of teaching the subject; reflect the essential aspects of various objects, visibly embodying the principle of visibility; bring to the fore the most important (in terms of educational goals and objectives) characteristics of the studied objects and natural phenomena.

Teaching biology at school implies the constant accompaniment of the course with a demonstration experiment. However, in a modern school, experimental work on a subject is often difficult due to a lack of study time, lack of modern material and technical equipment. And even if the laboratory of the office is fully equipped with the required instruments and materials, a real experiment requires much more time both for preparation and implementation, and for analysis of the results of work. At the same time, due to its specificity, a real experiment often does not realize its main purpose - to serve as a source of knowledge.

Many biological processes are complex. Children with imaginative thinking find it difficult to learn abstract generalizations, without a picture they are not able to understand the process, to study the phenomenon. The development of their abstract thinking occurs through images. Multimedia animation models make it possible to form a complete picture of the biological process in the student's mind, interactive models make it possible to independently “design” the process, correct their mistakes, and self-study. One of the advantages of using multimedia technology in teaching is to improve the quality of education due to the novelty of activities, interest in working with a computer. The use of a computer in the classroom has become a new method of organizing active and meaningful work of students, making the classes more visual and interesting. Information technologies allow: build an open education system that provides each student with his own learning path; change the organization of the learning process of students, forming their systemic thinking; rationally organize the cognitive activity of schoolchildren in the course of the educational process;

use computers to individualize the educational process and turn to fundamentally new cognitive means; to study phenomena and processes in the micro- and macroworld, within complex technical and biological systems, based on the use of computer graphics and modeling; represent, on a scale convenient for study, various physical, chemical, biological processes that actually occur at a very high or low speed.

Unlike conventional technical teaching aids, ICTs allow not only to saturate the student with a large number of ready-made, strictly selected appropriately organized knowledge, but also to develop the intellectual, creative abilities of students, their ability to independently acquire new knowledge, and work with various sources of information. In lessons, electives and after school hours, I use electronic textbooks, encyclopedias, etc. They help to solve the following didactic tasks: master the basic knowledge of the subject; systematize the acquired knowledge; develop skills of independent work with educational material using a computer; develop self-control skills; to form motivation for learning in general and for individual subjects in particular; to provide educational and methodological assistance to students in independent work on educational material; prepare the student for the exam, along the way developing, and sometimes forming a number of competencies in him.

ICT technologies are applied at different stages of the lesson: when explaining new material (color drawings and photos, slideshows, video clips, 3D drawings and models, short animations, plot animations, interactive models, interactive drawings, supporting material) as an interactive illustration displayed using a multimedia projector on the screen (currently this is relevant due to the fact that the teacher does not always have tables and diagrams);in case of independent study of educational material by students in the classroom during the performance of a computer experiment according to the conditions specified by the teacher (in the form of worksheets or computer testing), as a result of which a conclusion on the topic under study is obtained; when organizing research activities in the form of laboratory work in combination with computer and real experiments. It should be noted that when using a computer, a student gets much more opportunities for independent planning of experiments, their implementation and analysis of the results in comparison with real laboratory work; when repeating, reinforcing (tasks with a choice of answer, tasks with the need to enter a numerical or verbal answer from the keyboard, thematic sets of tasks, tasks using photos, videos and animations, tasks with a response to the answer, interactive tasks, auxiliary material) and knowledge control (thematic sets of test items with automatic verification, control and diagnostic tests) at the levels of recognition, understanding and application. When students perform virtual laboratory work and experiments at these stages of the lesson, students' motivation increases - they see how the acquired knowledge can be useful in real life; home experiments can be performed by the student on the worksheet with the appropriate adaptation and if there is a study disk for this course at home. The use of interactive models in lessons is of great importance. They allow the student to see processes in a simplified form, to imagine schemes of a particular process or phenomenon. When planning lessons, it is necessary to find the optimal combination of training programs with other (traditional) teaching aids.

References:

1. Разумная, Е. В. Использование современных педагогических технологий на уроках биологии / Е. В. Разумная. — Текст : непосредственный // Теория и практика образования в современном мире : материалы I Междунар. науч. конф. (г. Санкт-Петербург, февраль 2012 г.). — Т. 1. — Санкт-Петербург : Реноме, 2012. — С. 215-217.

2. Борис С.И., Ханнаннов Н.К. Возможности использования российских электронных изданий на уроках биологии/ Газета «Биология», № 6, 2005 год, с. 18-25. Издательский дом «Первое сентября» .

Mirzaev A. A.
Senior Lecturer
Ferghana Polytechnic Institute "Social Sciences and Sports"

THE FORMATION OF SUFI SCHOOLS IN ISLAMIC PHILOSOPHY

Annotation: *This article examines the fact that in the cultural foundations of the development of Sufi-mystical teachings, a significant part of the spiritual heritage and sacred values of the peoples is made up of Islamic spirituality and national traditions and customs. It is noted that an important part of our Islamic heritage is represented by Sufi teachings and values, which are a mystical heritage. The article also highlights the stages of development of Sufi ideas in Islamic philosophy, analyzes the division of the issue under study into stages and considers the significance of such an approach.*
Key words*: civilization, perfect man, Quran, hadith, tafsir, sufism, tariqat, khanaka, holiness, prophecies, dervish and ascetic life, sufism*

I. Introduction

Today,”an in-depth study, thoughtful realization and widespread popularization of the works of thinkers of the Islamic world, their invaluable contribution to the development of world civilization as a whole " [1] is evaluated as one of the urgent tasks. In this process, the spread of the mysticism doctrine that arose in the Middle East to Uzbekistan, Europe, Asia, Africa, the influence of scientists in these regions engaged in Oriental Studies, islamology, mysticism on mysticism, on the study and promotion of the philosophical heritage of mysticism is growing.

Literature analysis and methodology.

It is known that the leading direction of Eastern philosophy is aimed at purifying the human soul, soul, giving rise to the qualities of a perfect humanity in it, humanizing social relations on this basis. Thoughts that the fleeting world, not career, but spiritual wealth, moral purity, honesty, dishonesty are an important condition for a person to become a person, caused the formation, widespread spread of mysticism in the East. Turkish mysticism scholar Selchuk Eraydin, in his work" mysticism and sects", promotes that mysticism is primarily a social phenomenon, and therefore also its formality and meaningfulness. That is, mysticism is, on the one hand, a combination of the mental and mental capacity of a person, and on the other hand, a manifestation of the social need, problems and pain of society[2].

On the cultural basis of the development of Sufi-Iranian teachings, Islamic spirituality and national traditions-udums form a large part of the spiritual heritage and sacred values of peoples. And the sources of religious values are embodied in the Quran Karim, hadisi sharif, Tafsir, Sharia ahkom. A significant part of our Islamic heritage is the teachings and values of the Sufi, an Iranian heritage.

The concept of time is a relative concept from the attention of differences in its development under the influence of external and internal factors in different spaces. That is, when in some regions the second stage of the development of mysticism is passed, in some regions the first stage of Khali will be ongoing.

Although the roots of origin go back to the 7th century, by the middle of the 8th century mysticism began to form initially as an act of asceticism. At first, the Hermits were beholden to ishq and Irfan, even if they were people who firmly held the piety. In them, they did not have such sensations as philosophical observation, striving for spiritual moral perfection, valiousness, showing caroms[3]. A prominent feature in ascetics during this period was finding the approval of God, that is, the main idea in their prayers, in the worlds of tarki, and in their way of living as a whole was to please God, thereby getting rid of the sufferings of hell and reaching paradise. Mysticism had not yet been penetrated by the doctrine of mystical love towards God and the unity of being (Vahdat ul-vujud) [4].

Hassan Komil Yılmaz gave the following classification, considering the ideological commonalities of the ascetic schools of this period and giving a ratio to the place to which they belong:

1. Medina School of asceticism. The main ideas are sunna, Hadith.
2. Basra School of asceticism. The main ideas are risk, meta, love.
3. Kufa School of asceticism. The main idea is Sufism.
4. Khorasan School of asceticism. The main idea is risk.

From the middle of the 9th century, a system based on murid-Murshid traditions was formed on Sufi criteria, and zikr peoples began to gather around the Sufi order. This played an important role in the formation of later Sufi organizations. Each of these Sufi schools systematized its own mystical teachings, gradually leading to the formation of separate directions.

According to the research of the English mystic scholar Reynolds Nicholson, the Sufi movement existed even in the pre-Islamic period. Forms an economically difficult life and an unhealthy lifestyle - darwishness and ascetic lifestyle. As a result of the later formation of Islam and its spread to a wider region, such a movement was systematized, theoretically polished and regulated [5]. While the period of the initial formation of the doctrine of mysticism dates back to the early Islamic period, the period of full formation as a holistic doctrine was formed and decided on the Zamir of socio-political, spiritual, religious-Iranian ideas and teachings that existed until the 13th century. During this period, the development of mysticism as a holistic doctrine, formed by the influence of patriotism, Buddhism, ancient Greek philosophy and religious ideas in Christianity, became a necessity to harmonize with Islamic teachings and ideas. That is, on the basis of Islamic teaching, mysticism formed and regulated its own creeds and became the doctrine of a holistic system in the 9th-10th centuries[6].

In addition to its Islamic teachings, Central Asia is characterized by the presence of various religions, sects and currents in the area. According to historian Maqdisi, the Shosh, ILO, Taroz, Bukhara, Tus, Nimo, Abiward, Isfaroyin, Marv, Herat, and Seystan also emphasized the presence of a sect of Shofe'ism, as well as foreignness in Seystan and Herat, mostazilism in Nishopur, Shiism, carromism, kadarism in parts of Khorasan, jahmism in Termiz, sects, and groups that followed currents. It is mentioned that Maqdisiy had the honaqah of the carromians in Khuttalon, Marv, Samarkand and Fergana. Also, "Ahsan at-taqosim “states that there were communities of yaxudi, Christian and Zoroastrians in Movarounnahr and Huroson, while” Hudud al-Olam" cites that these areas were inhabited by adherents of Buddhism, monism. While Movarounnahr and Khurosan record the existence of communities of Jews, Christians, and Zoroastrians, “Hudud al-Olam” mentions that the eastern regions of Khurosan were inhabited by adherents of Buddhism, while Soghd was inhabited by adherents of monism. We can see the influence of these religions and creeds on the development of mysticism and philosophical teachings in two aspects. The first aspect of the ascetic movement developed ultimately to oppose their philosophy and ideas in order to protect their religion and creeds. Currents that claim to be from Islamic foundations, such as those influenced by MU'tazilites, can occur in Islam, and important currents of the body are formed. The introduction of Al-Kindiy, Ibn Rushd, Al-Maarriy, Farabi, Ibn Sina, Umar Hayyom to the representatives of the doctrine of the possible mukin. The body has possible causal connections, the existence of which does not come from anything else, but from its own essence. Such a view, on the other hand, opens a wide path to the prosperity of science, allowing us to explain natural phenomena on the basis of their independent internal causes. The ideological struggles between the MU'tazilites and the Mutakallim resulted in the formation of the word Abu Homid Al-Ghazzali and the rise of Islamic philosophy. While Abu Homid Ghazzali was initially inclined towards Sufi views, he later created his own word based on criticism of their teaching. He does, however, base mysticism in theory, unwillingly. Therefore, his entire Islamic world values very strongly, which caused an incomparable share of the contribution to the science of mysticism.

Secondly, there are views that they may have been influenced by some of their mystical views. According to researchers, mysticism arose as a special manifestation of Eastern philosophy, which was formed under the influence of religious-philosophical ideas about the relationship of being and being, as well as Aristotelian philosophy. There are teachings in other religions and cultures similar to the teachings of mysticism. These include the ideas of Brahmanism formed in the Indian land, the words of Hermes in Egypt, the views of Pythagoras, Socrates and Plato in the Greek culture of the ancient world, Kabbalism in Judaism and mysticism in Christianity. They also show the issues of harmonizing human spiritual power, the implementation of hyperbolic bonding, and ways to convey a person to spiritual perfection[7]. In this sense, the coherence of these ideas with the doctrine of mysticism is evident. We can also observe the apparent elements of other religions and creeds in Sufism. For example, Knish reports that Shaqiq, who mentored my wife Asamm, entered the zuhd path after meeting Balkhi's Buddhist monk[8]. Schimmel, on the other hand, drew attention to the similarities in Islamic and Buddhist verse that spread in these regions. It also mentions that Sufis have come under criticism because of their experience of Buddhist asceticism and because of some Sufi practices of monism[9]. Furthermore, the participation of the Sufi order from The Ghazi (e.g. Shaqiq Balkhi, Hotim Asamm, Abu Turob Nahshabi) in the struggle against the gentile peoples leads to the fact that they themselves are confronted with experiences of other religions and beliefs.

An analysis of the historical and cultural foundations of the development of mystical teachings showed that in the formation and maturation of the philosophy of mysticism and the doctrine of mysticism, the sects and their traditions that were formed here were important[10]. According to the research of the Turkish Mystic Altintash Hayrani, the mystical ideas of Central Asia led to the heights of Islamic philosophy. The formation of mysticism-philosophical views here was also based on the high level of religious worldview of the peoples of the region and the high level of cultural life[11].

The service of Ghazzali, Abdulqadir Gilani (Jilani) was great in bringing mysticism closer to the consistent Islamic doctrine, which was later recognized as an official doctrine. They put forward ideas that mysticism could see, comprehend, feel the power of the creator in the world, in everything, event and process, and thus acquire Sacred Science. Similar points are expressed by the Turkish Mystic Kamil Yılmaz:

- since mysticism is a science that is studied in practice, it is studied in the presence of a teacher who is called murshid or Sheikh;
- mysticism is the science of being felt and lived and understood through experience;
- the subject of the science of mysticism is enlightenment;
- mysticism is not a biblical science. (In the sense of not the science you learn by reading from a book);
– he is a mad superior science;
- in addition to the visible world with the eyes, mysticism also argues against the unseen world;
- mysticism is entered through the so-called sect[12].

The above definitions of the scientist raise some questions as well as showing that mysticism is large in scale and level. What is actually meant when mysticism-philosophical teachings are said? It will also be advisable to find answers to the questions of what teachings can be included in mysticism-philosophical teachings and in what way they can be classified. The concept of mysticism-philosophical is not just a phrase that means a common feature in one direction. This phrase covers the analysis and methodology of the problem again, referring to the study of the universe and certain issues in man, nature and society within the framework of philosophy and mysticism. The concept of mysticism-philosophy is said to be the disappearance of clear boundaries between the two and the gradual harmonization. For example, contradictions between MU'tazilies and thinkers in Islamic philosophy, or disputes about the importance of the body, the teachings on the basis of which are called mysticism-philosophical teachings. Even thinkers who have been engaged in research, within the framework of these teachings, can be classified as allomas of a mystical-philosophical orientation.

The ontological and gnoseological views of the hermits (ahl az-zuhd) were based on the AT-tanzih rule. At-tanzihga (Arabic. – "purification") according to which God cannot be given any description and definition, since within what he creates he has no equal to himself. From this rule, sophists conclude that God is transcendent in relation to the material world, so it is impossible to know him (rationally) by means of reason. Hence, God is the limit of rational cognition, beyond the scope of reason, and as a result of no mental, intellectual attempts, this limit cannot be crossed, for this, it is necessary to make it easier to approach the God, a spiritual experience, a world of consciousness (zuhd). If the ascetic left the material world completely, both spiritually and physically, it was inevitable that he would be able to reach God, but this is impossible. Such logic leads mysticism to an ontologically dead end. To solve this problem, Sufis recognize God's transcendence towards this world, as well as his immanence towards the material world. This new direction, which arose within the framework of mysticism, gives rise to the conclusion of the unity, uniqueness of the material world and absolute being (God), and the need to explain the connections (relationships) between them. In the course of the development of mysticism, this direction leads to the ontological problem of the unity of God and the universe, as well as to the re-realization by Sufi thinkers such as Sahl at-Tustari, al-Junayd and Ibn Arabi of the infinite and eternal absolute (god's) being and the “colliding place” of the finite material world being, the In solving this problem, the Sufis relied on the following ontological basis: different levels of being (the divine world and the world of things) do not react to each other strictly hierarchical subordination, that is, in the phenomena and phenomena of the material world, the divine essence is not manifested, but the divine world and the world of things are located side by side and In the early Sufi views, the “divine realm – the world of man – things” forms a visual ontological landscape.

The Sufi way of life (abstinence, hunger tolerance, patience, etc.k.) being not true to any religious, mysticism acquires an esoteric (“closed”) character. This aspect brings mysticism closer to the Ismailia current. Mysticism also carried out the TA'wil tradition, a symbolic-allegorical interpretation of the Quran, in search of its botanic, “hidden” meanings, typical of the Ismaili current. These later attempts serve as a philosophical justification for Sufi practice and way of life.

Another important element of mysticism was the mastery of the theory and practice of mysticism under the guidance of spiritual teachers (shayh, pir, murshids), and without such guidance the disciple (murid) could harm his own mind and health. After the death of major sheikhs in Sufism, raising them to the rank of Saints was a painting, the tombs of which were converted into shrines. The concept of” Saints “also later takes its place in the formation of” philosophical", doctrinal mysticism.

By the 10th-11th centuries, a Sufi way of life and a worldview spread among Muslims, the number of adherents of mysticism increases. At this time, the science of Sufism (ilm at-Sufism) is formed and Sufi “manuals” such as “Kitab al-luma” by as-Sarroj at-Tusiy, “Kitab at-TA'arruf” by al-Kalabazi, “Risalat al-malamatiya” by as-Sulami, “Adab as-suxba” are written. As a result of the work of these authors, a system of mystical knowledge is created and stages of the path to God, the spiritual states and feelings of the ascetic, mystical terms related to the practice of Sufism (“space”, “hol”, “sect”, “fano”, “baqo”, etc.k.) will be developed.

It should be noted that it was the ascetics who laid the foundation for the monistic philosophy (Ibn Arabi's on the unity and oneness of being, i.e. the doctrine of Wahdat al-wujud) that was formed within the later formed mysticism of ahl-az-zuhd. But at the same time the early Sufis could not justify the idea that God was both transcendent and immanent in relation to the material world at the same time. The consequence of this is the Qur'anic verse “U (God) – the exact truth (al-haq al-mubin)” (Quran, 24:25) which Sufis have attempted to base in their mystical worldviews.

Conclusion

In conclusion, the peculiarity of the spiritual and practical activities of the early Sufi is that in addition to the implementation of practical tasks (moral maturity and piety directed towards the implementation of the tarki world, zuhd), it also includes the tasks of solving theoretical problems (uniting with the God without leaving his ontological position as a physical being). These tasks are also penetrated by the epistemological strategy of reaching God, knowing him, that is, creating the doctrine of enlightenment. The basis of this strategy lies not in the juxtaposition of the divine universe and the world of things, as we have already noted, but rather in the ontological vision that they dictate each other. God appears at the same time and disappears, manifested in the things of the material world. Therefore, gnoseological visions are formed that ascetic activity can be reached in a certain spiritual-psychological mood, to divine reality through inexpressible sensations.

Literature used.

1. Sh.Mirziyoyev. Continuing our path to national development with determination, we will take it to a new level. - Tashkent: "Uzbekistan", 2017. – B.35.
2. Eraydın Selçük. Tyesyevvuf ve tarıkatlar. – Istanbul, Marmara üniversitesi Ilahıyat fakültesi vakfı yayınları. 1994. –S. 25.
3. Komilov N. Mysticism. - Tashkent, Movarounnahr, Uzbekistan, 2009. – B. 9-10, 14.
4. Nuritdinov M. From the history of medieval eastern philosophical thought. - Tashkent, Tashkent State Institute of Oriental Studies, Brock Class service, 2015. – B. 160.
5. Reynold A. Nıcholson. İslam süfileri(The mystıcs of ıslam). –Ankara, Kültür bakanlığı, 1978. –S. 58-60

6. Bartels Ye.S. Sufizm i sufiyskaya literatura. – Moskva, Nauka, 1965. – S. 39.
7. Eraydın Selçük. Tyesyevvuf ve tarıkatlar. – Istanbul, Marmara üniversitesi Ilahıyat fakültesi vakfı yayınları. 1994. – –S. 45.
8. Кныш А.Д. Мусульманский мистицизм. Краткая история / Пер. с англ. М.Г.Романов. – СПб.: Диля, 2004. – С. 39.
9. Shimmel A. Mir islamskogo mistisizma / Per. s angl. N.I. Prigarinoy, A.S.Rapport, 2-ye izd., ispr. i dop. – M.: OOO «Sadra», 2012. – S. 18.
10. Ebu'I-Ala Afifi. Tasavvuf, İslam'da manevi devrim (Tercümeİbrahim Kaçar, Murat Sülün). – Istanbul, Basın yayın LTD, 1996. – S. 36.
11. Altıntaş Hayranı. Tasavvuf tarıhı. – Ankara, Ankara üniversitesi ilahiyat fakültesi yayınları,1986. –S. 69.
12. Хасан Камиль Йылмаз. Тасаввуф и тарикаты. – Москва, «Издательская группа «САД», 2007. – С. 22
13. Насыров И. Р. Онтологические и гносеологические основания исламского мистицизма (генезис и эволюция).- Автореф. дисс. …д.ф.н.- М.,2007.-Б. 9.

Mirzoyeva I. E.
BuxDU, O‘zbekiston
Asadullaev A.N.
BuxDU, O‘zbekiston

QUYIMOZOR SUV OMBORI VA UNING ATROFIDAGI EKOLOGIK HOLATNING ATROF-MUHITGA TA’SIRI

***Annotatsiya**: Ushbu maqolada atrof-muhitni tabiiy-antropogen omillar ta’sirida ifloslanishi, jamiyat rivojlangan sari insonning tabiatga ta’sirining ortib borishi, Quyimozor suv ombori atrofi va uning ekologik holati, tabiiy hamda antropogen omillar ta’sirida atrof-muhitning o‘zgarishi hamda bu oqibatlarni oldini olishga oid tavsiyalar bayon etilgan.*

***Kalit so‘zlar:** Landshaft, antropogen, suv ombor, sayyoraviy, global, biosfera, to‘g‘on, hovuz, handaq, komponent, ekologik holat, tuproq, antropogen ifloslanish.*

Mirzoyeva I.E.
BukhDU, Uzbekistan
Asadullaev A.N.
BukhDU, Uzbekistan

DESCRIPTION OF THE KUYIMAZAR RESERVOIR AND ITS SURROUNDING ECOLOGICAL STATE ENVIRONMENT TO

***Annotation:** this article outlines recommendations for pollution of the environment under the influence of natural-anthropogenic factors, increasing the impact of man on nature with the development of society, Kuyimazar reservoir and its environmental condition, changes in the environment under the influence of natural and anthropogenic factors and their prevention.*

***Key words: l**andscape, anthropogenic, reservoir, Planet, global, biosphere, dam, basin, trench, component, ecological state, soil, anthropogenic pollution.*

Atrof-muhitni hozirgi zamon ekologik muhofazasi bosqichi, insonning tabiatga ta’siri umumsayyoraviy masshtabga yetgan. XX asr o‘rtalaridan boshlangan bu bosqichning asosiy vazifasi ekologik tizimlarni muhofaza qilish, ularning o‘z-o‘zini tiklash qobiliyatini ta’minlash va biosferadagi muvozanatni saqlashdir. Bunda tabiatdan oqilona foydalanish hal qiluvchi ahamiyat kasb etadi.

Inson xo‘jalik faoliyati bilan bog‘liq barcha ifloslanishlarni ba’zan antropogen ifloslanish, deb ataladi. Antropogen ifloslanish tabiat komponentlari buyicha: suvning ifloslanishi, havo yoki tuproqning, yana shuningdek, landshaftlarning ifloslanishi kabi guruhlardan iborat. Antropogen ifloslanish davomiyligiga ko‘ra: vaqtinchalik va doimiy; tarqalish ko‘lamiga ko‘ra:

sayyoraviy (global), hududiy (regional) va mahalliy (lokal) guruhlarga ajratiladi.[1]

Kishilik jamiyati va tabiat bir butun hisoblanadi. Jamiyat rivojlangan sari insonning tabiatga ta’siri ortib boradi. Tabiiy omillar bilan antropogen omillar o‘zaro uyg‘unlashib tabiiy landshaftlarning o‘rniga antropogen landshaftlar vujudga keladi. O‘zgartirilgan tabiiy muhit, landshaftlarga inson aralashib turmasa, ular o‘z tabiiy holatiga qaytishga moyil bo‘ladi. Insonning tabiatdan foydalanishi zaruriy ehtiyoj, inson tabiatdan qancha ko‘p foydalansa, tabiatda shuncha ko‘p o‘zgarishlar ro‘y beradi.[2]

O‘zbekistonning qurg‘oqchil kontinental iqlimli cho‘l, chala cho‘l va tog‘ oldi dashtlari keng tarqalgan sharoitda suv muammosi hamisha eng jiddiy muammo bo‘lib kelgan. So‘nggi yarim asrda yangi-yangi cho‘l massivlarining dehqonchilik uchun o‘zlashtirilishi, mavjud ekin maydonlarining muttasil kengayishi, yangi-yangi suv omborlari va kanallar qurilishi bilan oqar suvlar tobora taqchilligining vujudga kelishi hamda ifloslanishi ko‘plab jiddiy iqtisodiy-ijtimoiy va geoekologik muammolarni keltirib chiqardi. Xususan, yer osti suvlarini muhofaza qilishda jiddiy muammolar vujudga keldi.

Har bir hudud o‘ziga xos tabiiy xususiyatiga ega. Inson o‘z hayoti davomida tabiatdan foydalanishda mazkur hududning tabiiy imkoniyatlarini hisobga olgan holda, ya’ni tabiat bilan uyg‘un yashashga, uning imkoniyatlaridan samarali foydalanishga intiladi. Ana shunday joylardan biri Quyi Zarafshon tabiiy geografik okrugiga tegishli joy – Quyimozor suv ombori. Suv ombori Navoiy viloyati Qiziltepa tumani hududida joylashgan bo‘lib, tuman markazidan 23 km, Buxoro shahridan 32 km uzoqlikda joylashgan. Suv omborida yig‘ilgan suv Buxoro, Kogon, Muborak shaharlarini ichimlik suvi bilan, Buxoro neftni qayta ishlash zovodi, Muborak gazni qayta ishlash zavodilarini texnik suv bilan hamda Buxoro viloyatining Vobkent, Peshku, Romitan, Kogon, Buxoro va Jondor tumanlarining sug‘oriladigan ekin yerlarini sug‘orish uchun sarflanadi.[3]

Quyimozor suv omborining texnik parametlari

1-jadval

1	Suv ombori hajmi	W=320 mln.m^3
2	foydali hajmi	W=240 mln.m^3
3	o‘lik hajmi	80 mln.m^3
4	qirg‘oq bo‘ylab uzunligi	22 km
5	Suv sathining yuzasi	18 km.kv
6	To‘g‘on uzunligi	172 m
7	To‘g‘on balandligi	24 m
8	Dambaning ustki belgisi (otmetka)	217,63 m

***jadval. Buxoro viloyati Amu-Buxoro irrigatsiya tizimlari havza boshqarmasi ma’lumotlari asosida muallif tomonidan tuzilgan.**

Quyimozor, Amu-Buxoro kanali kesib o‘tgan bo‘lib, hududni suv bilan ta’minlaydi.Kanal ta’sirida yerosti suvlarining yer betiga chiqib, katta maydonlarda tuproqning sho‘rlanishiga sabab bo‘lgan. Bu yerda eng katta tarqalgan tuproq tipi sho‘rxok va sho‘rtob tuproqlaridir. Ularning qatlamlar bo‘yicha tabaqalanishi juda kuchsiz ifodalangan. Tuproqlarning qalinligi hudud bo‘ylab bir tekisda taqsimlanmagan chunki ularning qalin yoki yupqa bo‘lishi bevosita joyning mikrorelyef shakllari bilan chambarchas bog‘liq. Quyimozor platosidagi shag‘al koni mavjud. Qum-shag‘alni qurilish ashyosi sifatida, qasib olish maqsadida Xojkab tepaligi etagida 1966-yildan buyon qum-shag‘al zavodi ishlab turibdi. Zavod ixtiyoriga 670 gektarli qum-shag‘alli maydon ajratilgan. Qazish ishlari tufayli hozirgi kunda 130 gektar maydonda kon sanoati relyefi hosil bo‘lgan. Chuqurligi 3-4 metr keladigan ko‘lmakli hovuz-xandaklar, tartibsiz yotgan sho‘rlangan tuproq uyumlari oy-relyefini eslatadi.(1-rasm) Shunday holatni Quyimozor temir yo‘l stansiyasi oldida ko‘rish mumkin. Buxoro vohasi chegarasida joylashgan bu texnogen landshaft 20 gektardan ortiq maydonni egallaydi. Yilning issiq va quruq davrida bunday maydonlar deflyatsiya o‘chog‘i bo‘libgina qolmasdan, qon so‘ruvchi hasharotlarning ko‘payish maskani hamdir. Bunday yerlarni agrotexnik va biologik rekultivatsiya qilish kechiktirib bo‘lmaydigan vazifadir.

1-rasm.Quyimozor suv ombori va uning ta‘siridagi botqoqli-sho‘rtoblar

Ayrim pastqam joylarda taqir, sho‘rtob va sho‘rxok tuproqlar ham uchraydi. Barcha tuproq tiplari nihoyatda chirindiga kambag‘al.Sho‘rxok landshaftlardan samarali foydalanish maqsadida Quyimozor kanali bo‘yida, ayniqsa, Xojkab sho‘rxokligida tuz, balchiq sanatoriyasini tashkil etish maqsadga muvofiqdir. Birinchidan, bu shahar aholisiga nisbatan qulay masofada joylashgan. Ikkinchidan, tuz-balchiq terapiya xalqqa ma’lum bo‘lgan an’anaviy davolash usullaridan biri bo‘lib, juda foydali hisoblanadi.

Xulosa qilib, shuni ta’kidlash kerakki, fan-texnika inqilobi tabiiy resurslardan oqilona foydalanish va atrof-muhitni yaxshilash bo‘yicha insoniyat uchun juda katta imkoniyat tug‘dirdi. Biroq, ayni vaqtda u ko‘pincha tabiiy muhitning ancha ifloslanishiga va tabiiy sharoitning yomonlashuviga ham olib keldi. Atrof-muhitning ifloslanishi bu tabiatga zararli moddalar va birikmalarning chiqarib tashlanishidan iborat bo‘lib, bu hodisa havo, tuproq-grunt va suvning fizik, kimyo va biologik xususiyatlarining ko‘ngilsiz o‘zgarishlariga olib keladi. Bu hol tabiiyki, kelajakda o‘simliklar, hayvonlar va odam hayotiga, sanoat va qishloq xo‘jaligi ishlab chiqarishiga, tabiiy resurslarning holatiga tobora ko‘proq salbiy ta’sir ko‘rsatishi mumkin. Kelgusida Quyimozor suv omborlari va ularga yondosh bo‘lgan landshaftlarning tabiiy resurslaridan samarali foydalanish, ularni asrab - avaylash uchun quyidagi tadbirlarni amalga oshirish joiz:

- Quyimozor – To‘dako‘l suv omborlariga yondosh yerlarda mavjud bo‘lgan yalang, tashlandiq chag‘il konlarining ayrim qismlari hozirgi davrda chiqindi – axlatxonalarga aylantirilgan.Bu yerlarni rekultivatsiya, ya’ni fitomelioratsiya qilish zarur.Buning uchun qora saksovul, shuvoq, ili astragili kabi gipofitlardan foydalanish maqsadga muvofiq.
- Asosan ichimlik suv manbai sifatida foydalanib kelinayotgan Quyimozor suv omborini muhofaza qilish choralarini takomillashtirish zarur.

Shunday qilib, hozirgi vaqtda tabiatni ifloslanishdan muhofaza qilish undan oqilona foydalanishni tashkil qilish eng muhim va dolzarb vazifalardan biridir.

Foydalanilgan adabiyotlar ro‘yxati

1.Rafiqov A.A., Sharipov Sh.M. Geoekologiya (O‘quv qo‘llanma). Toshkent, 2014, -101 b.
2. Тўхтаев А.С. Экология. –Т.: “Ўқитувчи”, 1998. -Б. 155-160.
3. Ҳикматов Ф.Ҳ., Сирлибоева З.С., Айтбаев Д.П. Кўллар ва сув омборлар географияси, гидрологик хусусиятлари.-Т. “Университет”, 2000.

Mukhammedova N.J.
Associate Professor
Navoi State Pedagogical Institute
Rakhimboyeva I.A.
Student
of Navoi State Pedagogical Institute

ABU RAYHAN BERUNI'S CONTRIBUTION TO THE DEVELOPMENT OF THE SCIENCE OF GEOGRAPHY

Annotation: *This article reflects the contribution of Abu Raykhan Beruni to the science of geography, as well as a review of his works. This justifies the fact that the formation of the science of geography goes back to ancient times.*
Key words: *thinker, Nandi, India, Mahmoud Ghaznavi, Ptolemy, China, Tibet*

Just as the roots of the currently existing sciences go back to the distant past, the origin of the science of geography dates back to ancient antiquity, that is, to the 5th century BC, while some advancements in science date back to the Middle Ages. Just as the geography of antiquity cannot be imagined without Aristotle and Claudius Ptolemy, it is difficult to study the geography of the Middle Ages without Abu Rayhan Beruni. Beruni worked tirelessly for science, and as a result of his work, he is considered the author of more than 150 works. Among these works, the number of works on geography is 12. In the rest of his works, concepts and information related to geography are scattered. In particular, in the field of geography, Beruni summarizes the information available in the scientific literature and further enriches it with the information collected by his contemporaries, tourists and merchants. Most of the geographical information left by the scientist is the first source in the literature of the East to cover the issues of this or that science. The thinker's information about the northern countries, the Baltic and the White Sea, which were not well known at that time, and the information about places in Siberia "where it is winter when we have summer" are especially interesting. Beruni also described the countries adjacent to China and Tibet more fully and accurately than his predecessors. His hypothesis, which contradicted Ptolemy's, justified the fact that the southern side of the Atlantic and Indian oceans were connected to each other. The thinker assumed that there was a strait between the continents of Asia and Africa, and that the southern side of the globe was land.

For example, Beruni is considered to be the first globe discoverer in the East, but also in the whole world. In addition, the scientist clearly stated several times in his works that he firmly believed in the sphericity of the earth and provided evidence proving the sphericity of the earth. Beruni - "the main reason why the sun is not visible at night is not because it moves away from the earth, but because of its roundness, it is not visible to us. When some nations see the sun rise, other nations see the sun above them at the same time. If the earth were not round, it would not be surrounded by areas of different latitudes, day and night would not be different in summer and winter, they would not change as they do now. - put forward the ideas.

When the scientist was living in India, an incident happened when he was climbing a high mountain near the city of Nandi. When he first decided to climb the mountain and went to the foot of the mountain, he had no intention in his heart. For some reason only one thing, a lonely tree standing on the far horizon, attracted his attention. After climbing 200 steps up the mountain, he stopped to catch his breath, stopped and involuntarily looked at the tree. The tree standing on the horizon had reached the foot of the mountain, and the horizon had receded into the distance. This event was not new for Beruni. When he was brought to Ghazna by the order of Mahmud Ghaznavi, he built an observatory in Ghazni and practiced astrology there. Even when he observed the celestial movements and compiled a star chart, the idea of the shape of the globe did not leave his mind. p times had passed. But, while watching the opening of new horizons as you climb higher and higher, it turns out that this land, which is bounded by the sky of the circle of gyre, is not as flat as everyone thinks. Beruni was engaged in various measurements here for up to a week. First, he climbs the horizon visible at the foot of the mountain, then slowly climbs the mountain, while climbing, he measures the range of horizons opened at every hundred steps, and then multiply the obtained numbers by the height of the mountain to get determines the angle l. The most important discovery was the determination of the straight line joining the center to any point on the globe, which enabled him to solve the problem that most troubled him, namely, to prove numerically that the globe is round and not flat.

Also, the thinker - "The earth is generally round, but some of its places are rough, because the mountains are protruding, the depressions are deep; however, its shape is spherical, and the height of the mountains is very small compared to the whole earth. Have you ever seen a round object, a cubit or two cubits in diameter, with little indented marks on its surface, and the mountains and depressions are equally insignificant compared to the whole earth. If the earth did not have such undulations, everything would be covered with water, and nothing would be visible. However, water has weight like the earth" - put forward the hypothesis.

The scientist tried not only to clearly imagine the earth, but also to make its shape. In this regard, he consults with his first disciple, Abu Nasr ibn Iraq. When Ibn Iraq asked Abu Rayhan Beruni what books he had read that would help him to make a picture of the globe, he replied that the scholar Ptolemy's book "Geography" and Jaykhani's "Book of Roads". I learned the names of cities and the distance between them by asking people who visited and saw these places. I checked what they said by comparing each other, and Beruni gave the teacher several notebooks, each page full of tables, numbers and notes. The teacher carefully flipped through the notebook and said: - "It is enough to make half a ball."

This specific information can be reflected in it. "If the size of the half-sphere to be made is larger, it will be easier to mark the places on it," he said.

According to the scientist's biography, between 994 and 995, he made a globe of the Northern Hemisphere in Khorezm. It is a relief globe, estimated to be 5 meters in diameter (scale 1:2,500,000). Abu Rayhan Beruni wrote about the globe he made in "Geodesia". It was found that Beruni was 22 years old when he made the globe. The scientist calculated the gravity of the earth thousands of years ago with great accuracy. One of the most popular American magazines "Science" reported about this. Article "Did Central Asians Discover America in the Middle Ages?" published under the title "Beruni discovered 1023 different ways of determining the radius of the globe. His calculations showed that the coast of the Indian Ocean is 6339.6 km. This was slightly different from the distance of 6378.1 kilometers at the true equator. Until the 15th century, such accurate measurements were not yet implemented in Europe. He determined more than 600 geographical coordinates based on his observations. The scientist measures the width of the city of Bukhara as 390201. The current latitude of Bukhara is 390201. Information about other objects and points also varies with the same error.

Beruni calculated the size of the earth's surface and measured the length of the Meridian arc to be 10-111.6 kilometers (currently 111.1). Beruni performs these measurements with the Farsang unit. Beruni's methods were later forgotten. Only in Europe, in the 15th century, his measuring works were rediscovered.

In his work entitled "Projection of constellations and countries", the scientist also gave a number of scientific and practical recommendations about cartographic projections. Modern scientists note that some of his projections have not lost their practical significance to this day. The scientist is also known as the inventor of the Pinkometer, which determines the density of liquids. Using the apparatus, Beruni determined the density of 18 elements and substances. In his manuscripts, he included scientific and practical ideas about the difference between the speed of sound and the speed of light.

Beruni wrote the work "Relics of Ancient Peoples" in his chronicle in 1000 when he lived in Gurgon. In this work, first of all, the reader has a clear idea about night and day. In addition, the addresses of the Moon, a lot of mineralogical, phrenological and historical information, names of tribes and places are written. In one of the Eastern sources, the work is given a high rating, and it is said that the author of this work "gathered and commented on elegant issues similar to scattered durs from the books of previous scholars."

Beruni was always in conversation with the scientists of his time, or else he communicated through Makrub. Beruni corresponded with Ibn Sina during his stay in Urganch. Abu Rayhan's correspondence with Bukhara scholar Ibn Sina has reached us in the form of a book. Their conversation was in the form of questions and answers, in which the two scientists debated such issues as space, heat distribution, expansion of objects in heat and freezing in water, reflection and refraction of light. From the content of the question and answer, it is stated that

Beruni opposed the conclusions made by Aristotle through observation and experience, and Ibn Sina defended Aristotle. The work is about the answers of Abu Ali ibn Sina to 18 questions written by Beruni, all of them are related to Aristotle's books “On the Sky” (ten questions) and "Physics" (eight questions).

Reducing water salinity. If a few pieces of well-dried wax are thrown into salt-water wells, the salinity of the water can be reduced. Even the experimenters said: “If you make a thin vessel out of wax and throw it into the sea water, if it does not come out into your mouth, the water that seeps into it will definitely be sweet.”

In his work on mineralogy, the scientist described the geographical distribution of mineral deposits, the properties of minerals, and their names. Fanda was the first to try to determine the specific gravity of minerals, and he used pure gold as a standard for its determination. Academician H.Abdullayev described, “Beruni is the theoretician and founder of the sciences of geology and mineralogy”.

Beruni is the scientist who first tried to study the geological features of some regions of Central Asia, including the Amudarya valley, from scientific and theoretical aspects. His conclusions about the geological past of the Amudarya valley and the formation of the Aral Sea are considered one of the most successful geological analyzes of that time. The scientist relies on the theory that "Seas turn into land, and lands turn into seas." Conclusions about the formation of outer mineral deposits, the importance of rock erosion, weathering of rocks, etc., are of great scientific importance. He put forward a theory explaining that the appearance and disappearance of mountains is based on natural factors.

In conclusion, Abu Rayhan Beruni shows the precise coordinates of countries, seas and islands located in seven climates in his geographical studies. At the same time, it develops the most perfect map of the world. He examines the earth into seven climates in his work "Tahdid al-Amokin li tas'ih dasht al masokin" and gives a lot of valuable information about distant regions. The scientist explains that one year is 365 days, 6 hours, 10 minutes, and 8 seconds. Today, one year is 365 days 6 hours 9 minutes 6 seconds. This proves that the scientific-theoretical and practical research conducted and researched by the scientist has been proven.

REFERENCES:

1. Hasanov H. Jahongashta sayyoh olimlar. T.: 1981 b-94
2. Qayumov A. Abu Rayhon Beruniy Abu Ali ibn Sino. T.: 1987. b-9
3. Ro‘ziyeva Z. Uyg‘onish Abu Rayhon Beruniy “Anorbooks” nashriyoti T.: 2023

Mukhtarov N. M.
Assistant-professor
of the department in Tashkent University
of Information Technologies named
after Muhammad al-Khwarezmi Fergana branch
Mamurjonova M. M.
Student
of Tashkent University
of Information Technologies named
after Muhammad al-Khwarezmi Fergana branch

THE ECONOMIC IMPACT OF PANDEMICS, LESSONS FROM COVID-19

Abstract. *The COVID-19 pandemic has been a defining event of the modern era, not only as a global health crisis but as a profound disruptor of economic systems worldwide. The economic ramifications extended far beyond initial projections, affecting both macroeconomic stability and individual livelihoods. This article investigates the multifaceted economic impacts of the COVID-19 pandemic, focusing on key areas such as employment, global supply chains, government intervention, and the acceleration of digital transformation. Drawing on data from international organizations and case studies, the article identifies critical lessons for policymakers and economists to mitigate future pandemics' economic consequences. Ultimately, COVID-19 has underscored the importance of economic resilience, adaptability, and robust policy frameworks in times of global crisis.*

Keywords: *COVID-19, economic resilience, pandemics, global supply chains, digital transformation, labor markets, fiscal policy, economic crisis, economic recovery.*

Introduction. Pandemics are not new to human history, but the scale and interconnectedness of modern economies make their impacts far-reaching and complex. The COVID-19 pandemic, which first emerged in late 2019, quickly escalated into a global crisis, affecting almost every sector of the world economy. From the initial shockwaves felt in financial markets to the long-term restructuring of supply chains and labor markets, the economic footprint of COVID-19 continues to shape the global landscape. The pandemic has revealed significant vulnerabilities in global economic systems, such as over-reliance on specific industries, fragile supply chains, and unequal access to digital infrastructure. Governments worldwide responded with unprecedented fiscal stimulus and monetary interventions, yet the recovery remains uneven, particularly for developing economies. This article explores the economic impacts of the pandemic, analyzing both immediate consequences and long-term structural shifts.

The ultimate goal is to understand how the global economy can better prepare for future pandemics and other large-scale disruptions. The economic impact of pandemics has been a subject of academic inquiry for more than a century, with past studies focusing primarily on the short-term disruptions to labor markets and public health systems. Earlier pandemics, such as the 1918 Spanish Flu and the 2003 SARS outbreak, were significant but often limited in their global economic reach due to the relatively lower levels of global connectivity. Studies like those of Bloom et al. (2005) emphasized how pandemics typically lead to sharp declines in labor supply and productivity, particularly in non-essential sectors. However, the COVID-19 pandemic has redefined many of the assumptions made in earlier literature, given its widespread and simultaneous impact on multiple sectors, countries, and industries.

Literature review. Global Connectivity and Supply Chains. Recent studies have highlighted the unique characteristics of this pandemic in today's globally interconnected economy. Baldwin and Tomiura explored how global trade networks, already strained by rising geopolitical tensions and protectionism, were further disrupted by COVID-19. The pandemic magnified the vulnerabilities of just-in-time production and global supply chains, particularly in industries heavily dependent on international manufacturing hubs like China. The shift from localized disruptions (as seen in the SARS outbreak) to global, multi-regional supply chain breakdowns forced companies to rethink production strategies, with some opting for "reshoring" or diversifying their supply bases.[2]

Sectoral Disparities and Digitalization. Another important aspect of the pandemic's economic impact is the uneven recovery across industries. Studies by Coibion and Barrer pointed to the disproportionately negative effects on service-oriented sectors, such as hospitality, tourism, and retail, which rely heavily on in-person interactions. In contrast, sectors like technology, healthcare, and e-commerce experienced rapid growth, driven by the acceleration of digital transformation. Brynjolfsson and McAfee argue that the pandemic hastened the adoption of automation and artificial intelligence (AI), which could have long-lasting implications for labor markets, particularly for low-skill workers who may find themselves displaced by technology. Similarly, the rapid shift to remote work has reshaped labor market dynamics, raising questions about the sustainability of traditional office-based employment models.[4]

Fiscal and Monetary Responses.The role of government intervention during the pandemic has also been thoroughly examined in recent literature. According to Blanchard and Pisani-Ferry, the fiscal response to COVID-19 dwarfed that of past economic crises, such as the 2008 financial collapse. Governments around the world implemented large-scale fiscal stimulus packages, including direct cash transfers, unemployment benefits, and loan guarantees, to cushion the economic blow. While these interventions helped prevent a deeper recession, they have also raised concerns about rising public debt, inflationary pressures, and the long-term sustainability of such policies. Studies by Gourinchas suggest that while these policies were effective in the short term, they may leave economies vulnerable to future shocks if not carefully managed.[11]

Economic Inequality and Vulnerable Populations. The literature also highlights the exacerbation of pre-existing inequalities due to the pandemic. According to Noy, the economic fallout from COVID-19 disproportionately affected low-income workers, women, and minority groups, who were more likely to be employed in sectors heavily impacted by lockdowns. The pandemic also highlighted stark differences in access to healthcare and digital infrastructure, particularly in developing countries. Studies by Sumner estimated that the pandemic could push an additional 88 to 115 million people into extreme poverty, reversing years of progress in poverty reduction.[7]

Global Cooperation and Policy Coordination. Finally, the literature underscores the importance of global cooperation in managing both the health and economic dimensions of pandemics. Studies by Pisani-Ferry and Tooze argue that the fragmented international response to COVID-19 revealed the need for more coordinated economic policies, particularly in areas such as global vaccine distribution, trade, and financial stability. The uneven distribution of vaccines, for example, has contributed to a two-speed recovery, with advanced economies rebounding faster than developing ones. Pisani-Ferry suggests that future pandemics will require a more robust framework for global cooperation, emphasizing the role of international institutions like the World Health Organization (WHO) and the International Monetary Fund (IMF) in facilitating coordinated responses.[9]

Result. Study overview. Global Connectivity and Supply Chains.

The COVID-19 pandemic significantly disrupted global trade and supply chains, further exposing the vulnerabilities of just-in-time production systems. Companies, particularly those dependent on international manufacturing hubs like China, faced difficulties in sourcing inputs, which impacted production timelines and led to rising costs. Baldwin and Tomiura (2020) noted the scale of disruption was much greater than in previous pandemics like SARS, owing to the interconnectedness of today's global economy. The global nature of the supply chain disruption forced firms to rethink their production strategies, with some moving toward "reshoring" or diversifying their supply bases.

Quantification of Supply Chain Disruption:The supply chain disruption formula links the percentage change in supply chain efficiency to GDP loss:

$\Delta GDP=\alpha\times\Delta SC$

Where: ΔGDP = Percentage change in global GDP due to supply chain disruption,

ΔSC = Percentage change in supply chain efficiency,

α = Elasticity of GDP to supply chain disruption (typically α = -0.5).

Assuming a 10% drop in supply chain efficiency during COVID-19:

$\Delta GDP=-0.5\times(-10\%)=5\%$

Thus, a **10%** drop in supply chain efficiency resulted in a **5%** global GDP reduction. According to the **World Bank**, global GDP in 2020 was estimated at **$84.5 trillion**, implying an economic loss of approximately:

$\Delta GDP = 5\% \times 84.5 \text{ trillion} \approx 4.225 \text{ trillion USD}$.

The **WTO** reported that **global trade volume** dropped by **5.3%** in 2020, reinforcing the magnitude of disruptions in cross-border commerce.

Sectoral Disparities and Digitalization.The pandemic had uneven effects across industries. Sectors dependent on in-person services, such as hospitality, tourism, and retail, experienced severe downturns, while technology, healthcare, and e-commerce saw rapid growth. The acceleration of digital transformation and automation was a crucial factor, as highlighted by Brynjolfsson and McAfee (2020).

Sectoral Growth Calculation**:**

$$\text{Growth Rate} = \frac{\text{Final Value} - \text{Initial Value}}{\text{Initial Value}} \times 100$$

For example, global e-commerce sales grew from **$2.3 trillion** in 2019 to **$2.9 trillion** in 2020:

$$\text{Growth Rate} = \frac{2.9-2.3}{2.3} \times 100 \approx 27.6\%$$

This indicates a 27.6% increase in global e-commerce sales in 2020, reflecting a dramatic shift toward online shopping during the pandemic.

Automation Adoption: The pandemic accelerated the adoption of automation, with U.S. spending on AI growing by 40% in 2020. This shift suggests a longer-term trend where routine jobs may be displaced by machines, which could increase challenges for low-skill workers.

Fiscal and Monetary Responses.Governments around the world implemented significant fiscal stimulus packages to mitigate the economic impact of the pandemic. According to Blanchard and Pisani-Ferry (2021), the fiscal response was unprecedented compared to previous crises, such as the 2008 financial collapse.

Fiscal Stimulus Calculation**:**

$$\mathbf{Fiscal\ Stimulus\ Ratio} = \frac{\mathbf{Total\ Fiscal\ Stimulus}}{\mathbf{GDP}} \times \mathbf{100}$$

For example, the **U.S. fiscal stimulus** in 2020 was **$2.2 trillion**, and the U.S. GDP was approximately **$21.4 trillion:**

$$\text{Fiscal Stimulus Ratio} = \frac{2.2 \text{ trillion}}{21.4 \text{ trillion}} \times 100 \approx 10.3\%$$

Globally, **$12 trillion** in fiscal stimulus was injected into economies in 2020, representing about **15% of global GDP**.

Monetary Policy: Central banks, such as the U.S. Federal Reserve, lowered interest rates to historically low levels, with rates ranging from **0.0% to 0.25%,**

while the European Central Bank maintained negative rates. These measures provided liquidity and credit to businesses and households during the crisis.

Economic Inequality and Vulnerable Populations.The pandemic disproportionately affected vulnerable populations. Noy et al. (2021) observed that low-income workers, women, and minority groups were particularly affected, as many were employed in sectors severely impacted by lockdowns. Furthermore, the pandemic exposed disparities in access to healthcare and digital infrastructure, particularly in developing countries.

Poverty Rate Increase Formula:

$$\text{Poverty Rate Increase} = \frac{\text{New Poverty Rate} - \text{Old Poverty Rate}}{\text{Old Poverty Rate}} \times 100$$

According to Sumner et al. (2020), the pandemic pushed between 88 and 115 million people into extreme poverty, reversing years of progress. Assuming the pre-pandemic global poverty rate was 9% and the new rate rose to 10.5%:

$$\text{Poverty Rate Increase} = \frac{10.5 - 9}{9} \times 100 \approx 16.7\%$$

Thus, the pandemic resulted in a **16.7% increase** in the global poverty rate, highlighting how vulnerable populations in developing countries were disproportionately affected.

Global Cooperation and Policy Coordination. The pandemic underscored the need for enhanced global cooperation, especially in vaccine distribution. Pisani-Ferry and Tooze (2021) emphasized that the uneven international response revealed the importance of more coordinated global economic and health policies.

Vaccine Distribution Formula:

$$\text{Vaccine Coverage Ratio} = \frac{\text{Vaccines Distributed to Low} - \text{Income Countries}}{\text{Vaccines Distributed to High} - \text{Income Countries}} \times 100$$

In 2021, about 80% of vaccine doses were administered to high-income countries, while only 20% went to low-income countries:

$$\mathbf{Vaccine\ Coverage\ Ratio} = \frac{\mathbf{20\%}}{\mathbf{80\%}} \times \mathbf{100} = \mathbf{25\%}$$

This indicates that only 25% of global vaccine doses were distributed to low-income countries, contributing to a slower recovery in these regions compared to wealthier nations.

Discussion. The economic consequences of the COVID-19 pandemic are still unfolding, but several important lessons have emerged from the data and analysis. One of the most pressing revelations is the vulnerability of global supply chains. While efficiency and cost-reduction strategies like just-in-time production dominated pre-pandemic business models, the disruptions caused by lockdowns, factory shutdowns, and transportation bottlenecks exposed significant risks. Companies are now rethinking these models, potentially shifting toward reshoring or diversifying suppliers to mitigate future risks. This shift could have long-term implications for global trade dynamics and the localization of production, particularly in industries that are heavily reliant on global supply chains, such as electronics and automotive manufacturing.

The sectoral disparities brought on by the pandemic also raise critical questions for policymakers and business leaders. While digital transformation has allowed technology, healthcare, and e-commerce to thrive, industries that rely on in-person interactions, such as hospitality and tourism, may experience prolonged recovery times. This unevenness underscores the need for targeted economic support, particularly for sectors still grappling with the long-term effects of COVID-19 restrictions. Furthermore, the acceleration of automation and AI adoption, while boosting productivity, raises concerns about the displacement of low-skill workers, which could exacerbate existing inequalities unless accompanied by workforce retraining and reskilling initiatives.

The unprecedented fiscal and monetary interventions by governments and central banks during the pandemic successfully staved off a deeper recession. However, the long-term consequences of these measures are still uncertain. Rising public debt and the potential for inflationary pressures present a complex challenge for policymakers as they balance short-term recovery needs with long-term fiscal sustainability. This situation calls for careful management of debt levels and inflation risks to avoid destabilizing the post-pandemic recovery.

Economic inequality, already a pressing global issue before the pandemic, has been further exacerbated by COVID-19. The disproportionate impact on low-income workers, women, and minority groups, particularly in developing economies, highlights the urgent need for policies that address these disparities. Enhancing access to healthcare, digital infrastructure, and social safety nets in vulnerable populations is essential for a more inclusive recovery. Additionally, the pandemic's reversal of progress in poverty reduction is a sobering reminder of how quickly gains in economic development can be lost without adequate resilience-building measures.

Global cooperation, or the lack thereof, has been another key theme of the COVID-19 experience. The unequal distribution of vaccines and the disjointed international economic response revealed the fragility of global governance in times of crisis. Future pandemics will likely require more robust frameworks for global coordination, not just in public health but also in economic policy. Strengthening international institutions and ensuring more equitable access to vaccines, resources, and financial support will be critical to a faster and more uniform global recovery.

Conclusion. The COVID-19 pandemic has offered important lessons for the future, particularly in terms of economic resilience and adaptability. The pandemic exposed vulnerabilities in supply chains, labor markets, and economic planning, while also highlighting the importance of digital infrastructure in maintaining economic stability. Policymakers must prioritize building more resilient economies that can withstand global shocks, whether they come in the form of pandemics, financial crises, or environmental disasters.

Governments should also focus on reducing economic inequality, as the pandemic disproportionately affected lower-income populations and small businesses. Fiscal and monetary policy must strike a balance between short-term recovery efforts and long-term sustainability, particularly as rising public debt becomes a concern for many nations. In the future, global cooperation will be key in managing such crises, as pandemics do not respect national borders, and their economic impacts are deeply interconnected.

List of references

1. Barro, R. J., Ursúa, J. F., & Weng, J. (2020). *The coronavirus and the great influenza pandemic: Lessons from the "Spanish flu" for the coronavirus's potential effects on mortality and economic activity*. NBER Working Paper.

2. Baldwin, R., & Tomiura, E. (2020). *Thinking ahead about the trade impact of COVID-19*. In R. Baldwin & B. W. D. S. (Eds.), *Economics in the Time of COVID-19* (pp. XX–XX). CEPR Press. https://cepr.org/content/economics-time-covid-19.

3. Bloom, D. E., & Canning, D. (2005). Epidemics and economics: Policy responses to SARS. *Brookings Papers on Economic Activity*, 2005

4. Coibion, O., Gorodnichenko, Y., & Weber, M. (2020). *The cost of the COVID-19 crisis: Lockdowns, macroeconomic expectations, and consumer behavior.* . NBER Working Paper.

5. International Monetary Fund (IMF). (2021). *World economic outlook: Managing divergent recoveries*. IMF Publications.

6. International Labour Organization (ILO). (2021). *ILO Monitor: COVID-19 and the world of work*. https://www.ilo.org/global/topics/coronavirus/lang--en/index.htm

7. Noy, I., Ferrarini, B., & Park, D. (2021). *Pandemics and the global economy: Lessons from COVID-19* (ADB Economics Working Paper Series).

8. United Nations. (2021). *COVID-19 and e-commerce: A global review*. UNCTAD. https://unctad.org/webflyer/covid-19-and-e-commerce-global-review

9. World Bank. (2021). *Global economic prospects, June 2021*. World Bank Publications. https://www.worldbank.org/en/publication/global-economic-prospects

10. World Trade Organization (WTO). (2020). *Trade statistics and outlook: Trade shows signs of rebound from COVID-19, recovery still uncertain*. https://www.wto.org/english/res_e/reser_e/ersd202003_e.htm

11. Blanchard, O., & Pisani-Ferry, J. (2021). *The economic consequences of the COVID-19 pandemic*. Peterson Institute for International Economics. https://www.piie.com/publications/policy-briefs/economic-consequences-covid-19-pandemic

12. Furman, J. (2021). *The long-term impact of fiscal stimulus on inflation and debt*. The Hamilton Project. https://www.hamiltonproject.org/papers/long-term-impact-fiscal-stimulus-inflation-and-debt

13. Bonadio, B., Huo, Z., & Levchenko, A. A. (2020). *Global supply chains in the pandemic era: The case of COVID-19*. Journal of International Economics, 133, 1-15. https://doi.org/10.1016/j.jinteco.2020.103396
14. Noy, I., & Yu, J. (2021). *How COVID-19 Exacerbated Inequality in Developing Countries: Evidence from Low-Income Economies*. Development Policy Review, 39(2), 232-252. https://doi.org/10.1111/dpr.12544
15. Sumner, A., Hoy, C., & Ortiz-Juarez, E. (2020). *Estimates of the impact of COVID-19 on global poverty*. World Development, 135, 105078. https://doi.org/10.1016/j.worlddev.2020.105078

Murodov M.X.
Siddiqov B.X.
Namangan muhandislik-qurilish instituti
O'zbekiston

FOTOELEKTRIK MODULLARNING KAM YORITILGANLIK SHAROITI VA SOCHILGAN NURLANISHLARDA ISHLASH SAMARADORLIGINI O ‘RGANISH VA UNING QUVVATINI ONLAYN KALKULYATORDAN FOYDALANIB HISOBLASH

Anatatsiya. *Quyosh modullarining maxsus texnik xususiyatlarida STC (Standart Test Condition – Standart sinov sharoitlari) ostidagi parametrlari ko‘rsatiladi. Haqiqiy ish sharoitlari amalda STC dan sezilarli darajada farq qilishi mumkin. Odatda quyosh panellari 1000 W/m² dan past yorug‘likda ishlaydi va ob-havo doim ham ochiq bo‘lmasligi, ya’ni kam bulutli yoki to‘liq bulutli bo‘lishi mumkin. Har xil turdagi yoki turli ishlab chiqaruvchilarning bir xil turdagi quyosh modullari ham real ish sharoitlarida turlicha ishlaydi.*

Kalit so‘zlar: *Quyosh, standart sinov sharoitlari, standart modul, yuqori harorat, bulutli havo.*

Murodov M.X.
Siddiqov B.X.
Namangan Institute of Engineering and Construction
Uzbekistan

STUDYING THE PERFORMANCE EFFICIENCY OF PHOTOELECTRIC MODULES IN LOW LIGHT CONDITIONS AND SCATTERED RADIATION AND CALCULATING ITS POWER USING AN ONLINE CALCULATOR

Abstruct. The parameters under STC (Standard Test Condition) are indicated in the special technical specifications of solar modules. Actual operating conditions may differ significantly from STC in practice. Usually solar panels operate at less than 1000 W/m² and the weather may not always be clear, i.e. partly cloudy or completely cloudy. Even solar modules of different types or different manufacturers of the same type will perform differently in real-world operating conditions.

Keywords: Sun, standard test conditions, standard module, high temperature, cloudy weather.

Quyosh panellarining samaradorligini baholashda biz uchun muhim bo‘lgan asosiy parametr – bu ma’lum vaqt oralig‘ida (kun, hafta, oy, yil) ishlab chiqarilgan energiya miqdori.

Qaysi modullar kam yoritilganlikda ko‘proq quvvat ishlab chiqaradi? Modullarning asosiy turlarini – monokristal, polikristal, yupqa plyonkali amorf kremniy, monokristal PERC modullarini ko‘rib chiqaylik. Bular hozirgi vaqtda fotoelektrik batareyalar bozoridagi asosiy modullardir [1].

Standart modullar uchun bulutli ob-havoda qaysi modul – monokristalli yoki polikristalli ko‘proq energiya ishlab chiqarishini aniq aytish mumkin emas. Bularning barchasi ishlab chiqaruvchining sifat ko‘rsatkichlariga bog‘liq. Faqat yuqori brendli modullar turli xil ish sharoitlarida maksimal energiya ishlab chiqishni kafolatlaydi. Standart parametrlar uchun mustaqil laboratoriyalar tomonidan sinovdan o‘tgan modullar ro‘yxatida ishlab chiqaruvchi yoki brend mavjudligini tekshirib ko‘rish foydadan holi emas [2]. Arzon modullar akslantirmaydigan, yaltiroqlikka qarshi qoplamasiz shisha qoplama bilan ishlab chiqariladi. Ular zavodda sinovdan o‘tkazilganda, nurlanish modullar tekisligiga tik (perpendikulyar) nurlangan sharoitda yorliqda qayd etilgan parametrlarni beradi. Ammo quyosh nurlarining tushish burchagi element yuzasiga perpendikulyar holatdan chetlanshi bilanoq, quyosh nurining katta qismi bunday sifatsiz oynada akslanib ketadi. Bundan tashqari, bunday modullar sochilgan nurlanishlarda juda ham yomon ishlaydi. Natijada, bunday modul taniqli brend yoki ishlab chiqaruvchi tomonidan tayyorlangan, bir xil nominal quvvatga ega bo‘lgan boshqa modul bilan solishtirganda energiya hosil qilishi bo‘yicha samaradorligi 2 barobar kam bo‘lishi mumkin, lekin uning sifati uchun mas'ul bo‘lgan.

Deraza oynasi ortida joylashgan quyosh batareyalari

Quyosh panellari shisha oynalar orqasiga – balkonga, verandaga va hokazolarga o‘rnatilsa, energiya hosil qilish qanchalik kamayishi haqida ham savollar mavjud. Ko‘pgina aholi, asosan yozgi dala hovli egalari tashqariga o‘rnatilgan quyosh batareyasiga bo‘ladigan tashqi mexanik ta’sirlardan yoki ularni o‘g‘irlanishidan xavotir olishadi. Shuning uchun ba’zilar quyosh panellarini ko‘zga tashlanmaydigan qilib ham o‘rnatishadi [3].

Quyosh panellari uchun shaffofligi yuqori bo‘lgan maxsus selektiv oynalardan foydalanadi, bu shisha tarkibidagi metal miqdorini kamaytirish orqali erishiladi, ammo bu ham quyosh paneli quvvatini bir necha foizga kamaytiradi. 1.1-jadvaldan ko‘rinib turibdiki, bir qavatli deraza oynasi quyosh panellaring energiya ishlab chiqarish qobiliyatini 9% ga, ikki qavatli oynalar esa 16% ga kamaytiradi. Bu ko‘rsatkich oynalar sirti ideal toza bo‘lgan va quyosh nurlari ularga perpendikulyar ravishda tushayotgan sharoitda o‘rinlidir. Real holatda, oynalar chang yoki iflos bo‘lib, bu ularning shaffofligini yanada pasaytiradi. Quyosh nurlari 90º dan boshqa burchak ostida tushganda, har bir oynaning old va orqa yuzalarida akslantiruvchi ko‘zgular paydo bo‘ladi, bu ham quyosh nurlarini fotoelektrik moduldan to‘sib qo‘yishi mumkin. Shuning uchun quyosh panellarini deraza oynalari orqasida o‘rnatishni tavsiya etilmaydi (1-rasm).

1-rasm. Deraza ortidagi va tashqarida joylashgan quyosh batareyalari.

Quyosh batareyalari va kollektorlarining qishdagi ish samaradorligi

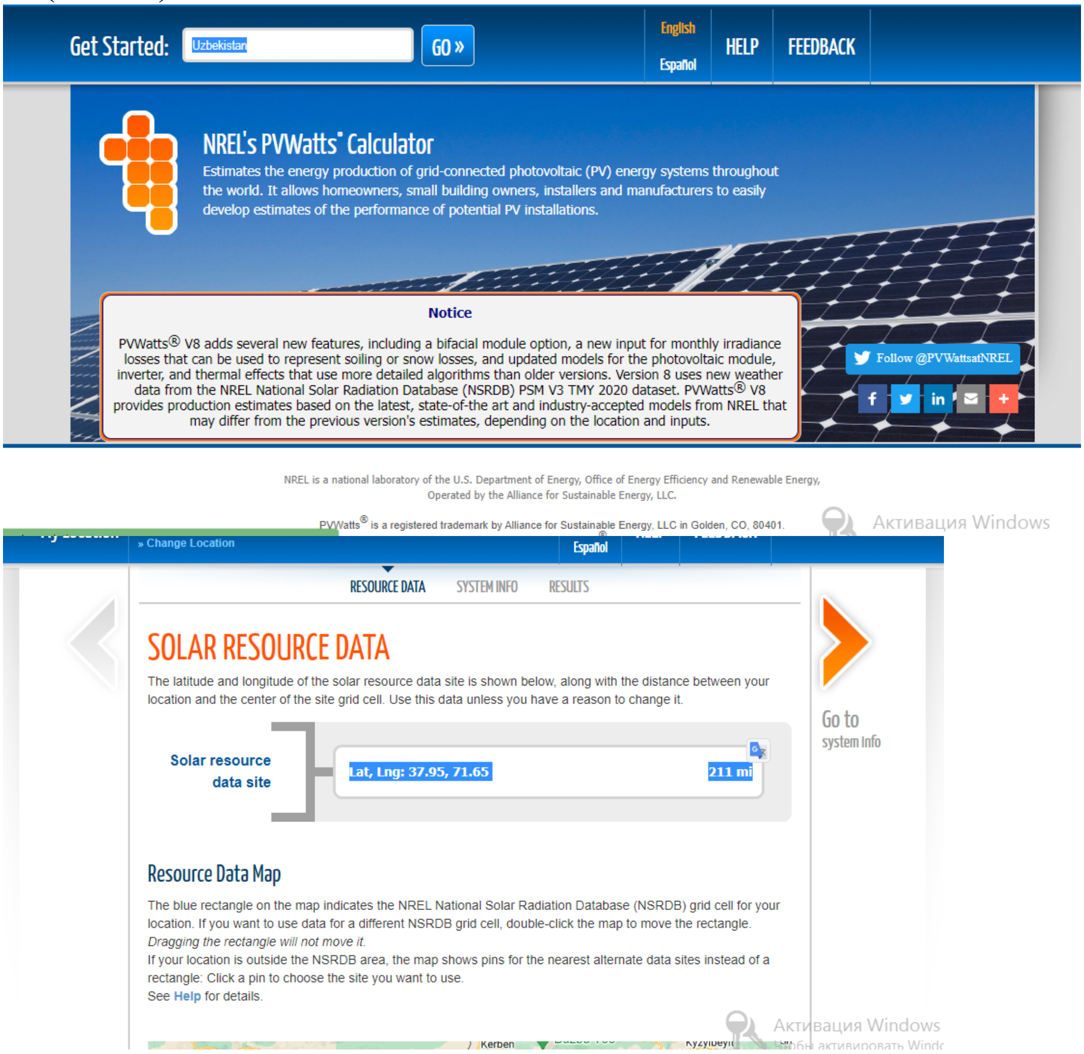
- Fotoelektrik modullarga yoruglik kerak, issiqlik emas
- Quyosh kollektorlari qishda qanday ishlaydi?
- Quyosh panellarini qishki mavsumdagi ish rejimini maqbullashtirish mumkinmi?

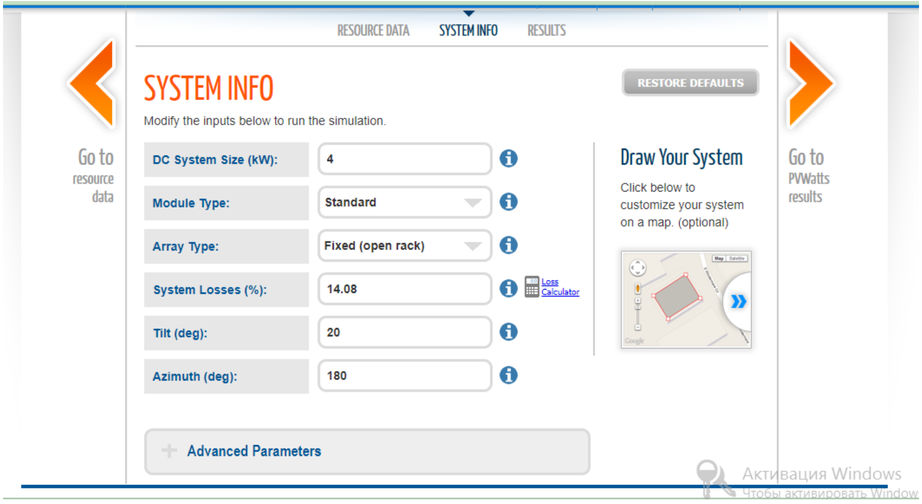
Quyosh panellari undan foydalanuvchilar uyining ajoyib qismi bo‘lishi mumkin. Ular, albatta, uzoq muddat pulni tejaydi va energiya uchun to‘lovlarini doimiy ravishda kamaytiradi. Ma’lumki, quyosh panellari quyosh energiyasini elektr energiyasiga aylantiradi, lekin qishda quyoshli kunlar kam bo‘ladi, shuning uchun tabiiy ravishda savol tug‘iladi: qishda quyosh panellari yoki kollektorlari qancha energiya ishlab chiqaradi?

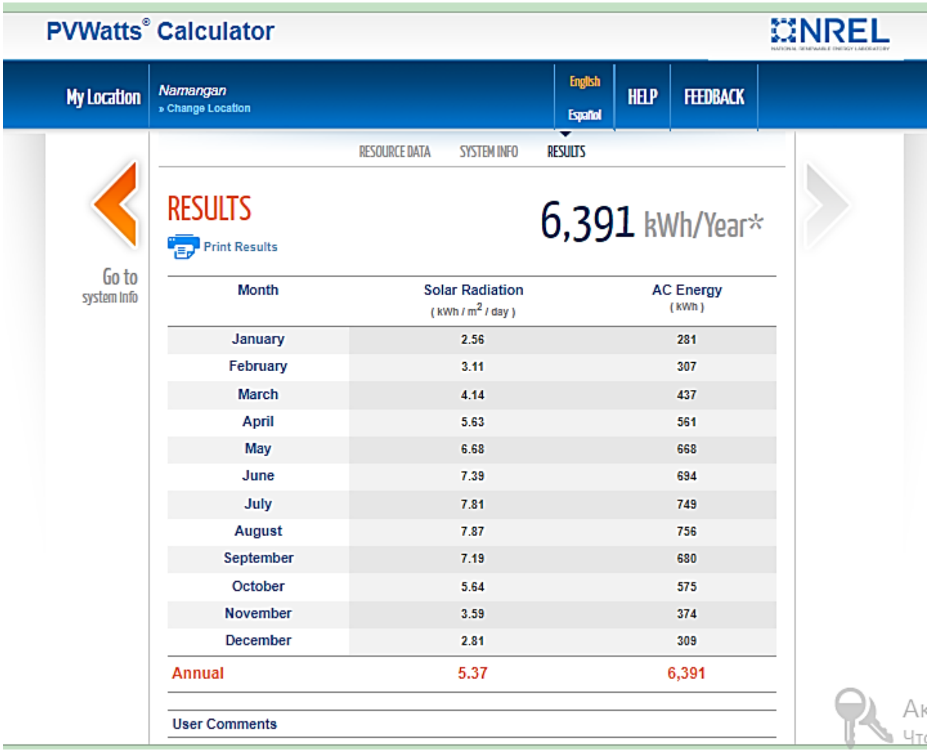
Shuni bilish kerakki, fotoelektrik modullar va quyosh issiqlk kollektorlariga past haroratlarning ta’siri turlicha.

Ko‘pchilik quyosh panellari issiq quyoshli kunlarda sovuq quyoshli kunlarga nisbatan ko‘proq energiya ishlab chiqaradi deb o‘ylashadi. Aslida esa unday emas. Quyosh panellari elektr energiyasini ishlab chiqarish uchun yorug‘lik zarur, yuqori harorat esa ularning samaradorligini pasaytiradi. Shuning uchun yorqin quyosh va past harorat quyosh panellari uchun ideal sharoitdir. Albatta, bulutli ob-havo sharoitida panellar odatdagidan kamroq energiya hosil qiladi, lekin umuman olganda, to‘g‘ri hisoblangan tizimda batareyani kun davomida zaryad qilish uchun yetarli elektr quvvati hosil bo‘lmaydigan holatlar kamdan-kam uchraydi. Ammo quyoshli sovuq havoda batareyalar juda samarali ishlaydi.

Hisob-kitoblar shuni ko‘rsatadiki, janubga yo‘naltirilgan va iyun va iyul oylarida taxminan 300 kW·soat elektr energiyasi ishlab chiqaradigan tizim dekabr va yanvar oylarida taxminan 60-75 kW·soat elektr energiyasi ishlab chiqaradi, ya’ni yozdagiga nisbatan taxminan 4-5 marta kamroq. Bu quvvat esa faqat quyosh panellari sirti qordan tozalangan sharoitda hosil bo‘ladi. Agar ularning siti qor bilan qoplangan bo‘lsa, quyosh paneli umuman elektr energiyasini ishlab chiqarmaydi. Quyosh fotoelektrik tizimining turli o‘g‘ish burchaklarida energiya ishlab chiqarishni aniqroq baholash uchun NREL (The National Renewable Energy Laboratory) veb-saytidagi *PVWatts kalkulyatori*dan (https://pvwatts.nrel.gov/pvwatts.php) foydalanish va ma’lumotlarni yuklab olish mumkin (2-rasm).







Month	Solar Radiation (kWh / m² / day)	AC Energy (kWh)
January	2.56	281
February	3.11	307
March	4.14	437
April	5.63	561
May	6.68	668
June	7.39	694
July	7.81	749
August	7.87	756
September	7.19	680
October	5.64	575
November	3.59	374
December	2.81	309
Annual	5.37	6,391

2-rasm. PVWatts online kalkulyatoridan foydalanish bo‘yicha qisqacha yo‘riqnoma.

Kalkulyator modullarning ifloslanishi, ularning isishi, simlardagi yo‘qotishlar, invertor va boshqalar tufayli yo‘qotishlarni hisobga olgan holda energiya ishlab chiqarishni hisoblab chiqadi [4,5].

Yuqoridagi 1.8-rasmda online kalkulyator orqali 4 kW quvvatga ega quyosh elektr stantsiyasi uchun Namangan viloyati misolida hisoblash keltirilgan.

Demak, quyosh qanchalik gorizontga nisbatan past bo‘lsa, fotoelektrik modular sirtiga shunchalik kam energiya tushadi, chunki quyosh nurlari atmosferaning qalin qatlamidan o‘tishi kerak. Qishda quyosh har doim pastda bo‘ladi va kunlar qisqaroq bo‘ladi, shuning uchun undan yozga qaraganda kamroq energiya olishinmiz mumkin. Qish mavsumida quyosh panellarining qiyalik burchagi qiymati juda muhimdir. Ko‘pincha butun yil uchun universal burchak o‘rnatiladi. Qiyalik burchagi quyosh panellarining samaradorligiga ta’sirini o‘rganish uchun turli geografik kengliklarda maksimal energiya ishlab chiqarish uchun quyosh panellari o‘rnatishning optimal burchagini aniqlash bo‘yicha bilimlarni o‘rganish kerak bo‘ladi.

Qishda quyosh panellarining unumdorligi mintaqaga qarab 2 dan 8 martagacha pasayishi mumkin, janubga qanchalik yaqin bo‘lsa, unumdorlik shunchalik yuqori bo‘ladi. Shuning uchun, batareyalarning maydoni qanchalik katta bo‘lsa, ular shunchalik ko‘p energiya to‘plashlari mumkin. Agar yozda muzlatgich, kompyuter va uy yoritgichining ishlashi 1 kW energiya talab qilsa (bu har biri 250 W li 4 panel), qishda ishonchliligi uchun 2 kW quvvatga ega bo‘lish yaxshiroqdir.

Foydalanilgan adabiyotlar

1. Муродов М. Х., Муродов Б. Х. У. Фотоэлектрическая станция с автоматическим управлением мощностью 20 кВт для учебного заведения //Science Time. – 2015. – №. 12 (24). – С. 543-547.
2. Турсунов МН, Дадамухамедов С, Муродов М, Якубова МС. Кремниевые солнечные элементы с тонкими фронтальными диффузионными слоями. Гелиотехника. 2003(2):20-5.
3. Habibullayevich M. M., Nabijon o’gli M. R., Rustamjon o’g’li A. M. QUYOSH ENERGETIK QURILMASI SAMARADORLIGINI OSHIRISH UCHUN KOMBINATSIYALASHGAN TERMOFOTOELEKTRIK QURILMA //Conferencea. – 2022. – С. 371-375.
4. Murodov, Muzaffar, Murodjon Nabiev, and Mohamad Amir Hababa. "Calculation of the thermal balance of the photocell during operation and removal of heat." *E3S Web of Conferences*. Vol. 434. EDP Sciences, 2023.
5. https://pvwatts.nrel.gov/pvwatts.php

Nabikhujaeva N.T., PhD
Lecturer
Jizzakh Polytechnic Institute
Jizzakh, Uzbekistan

WIDE –COVERAGE CHISEL CULTIVATOR FOR PRE-SOWING SOIL PREPARATION

Abstract: *This article analyzes the positioning and technological processes of the working elements of a wide-coverage chisel cultivator. The chisel cultivator is designed as a mounted structure, consisting of central and side sections. Hydraulic cylinders enable the transition from working to transport positions. The working elements are arranged in a staggered two-row configuration on the frame: the sweep width of the first row is reduced, while the second row's sweep width matches that of the ChKU-4 chisel cultivator. Both working elements are set to operate at the same working depth. This setup allows for energy savings and efficient resource use.*

The findings contribute to research aimed at improving soil processing efficiency, advancing agricultural machinery, and optimizing production processes. Based on experimental results, the fourth variant of working elements is recommended for highly effective soil processing. This chisel cultivator is expected to meet agrotechnical requirements and reduce energy intensity. The scientific conclusions and recommendations presented in this article are essential for modernizing technical processes in agriculture.

Keywords: *Wide-coverage chisel cultivator, sweep blade, right side section, left side section, wing opening angle, sweep width.*

Introduction In agricultural production, it is essential to introduce modern technologies to improve efficiency and enhance soil processing procedures. This article provides information on the new design and technological processes of wide-coverage chisel cultivators. The wide-coverage chisel cultivator, with its central and side sections, reflects innovative approaches in agricultural machinery.

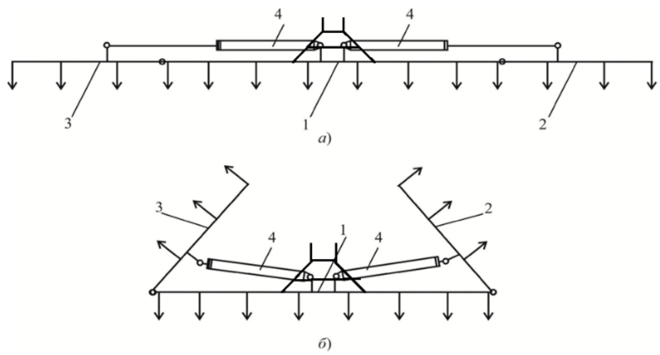
The features of this device, including the ability to transition from working to transport mode through hydraulic cylinders, and the staggered arrangement of working elements on the frame, play a critical role in efficient and economical soil processing. The working elements in the first row aid in soil loosening, while the second-row elements further expand the loosened zones created by the initial pass.

This article also analyzes approaches aimed at reducing energy consumption in the chisel cultivator's operation, assessing its efficiency in agricultural use. The research results support the implementation of new technologies, helping to conserve resources and optimize production in agriculture.

The wide-coverage chisel cultivator is constructed as a mounted structure, consisting of a central section (1) and two side sections (right 2 and left 3) (Figure

1). The side sections are connected to the central section by longitudinal hinges and can be shifted from working to transport mode and vice versa using hydraulic cylinders (4).

The working elements of the wide-coverage chisel cultivator are arranged in a staggered two-row configuration on the frame. Smaller-width sweeps are installed in the first row, while larger-width sweeps are used in the second row. For the chisel cultivator, the sweep width of the ChKU-4 chisel cultivator is set at 26 cm, and the sweep width of the working elements in the first row is set at 14 cm. The only difference between these elements is in sweep width; other parameters remain the same.



1 - central section; 2 - right side section; 3 - left side section; 4 - hydraulic cylinder.

1-Figure. Diagrams of the wide-coverage chisel cultivator in working (a) and transport (b) modes.

The technological process of the developed chisel cultivator proceeds as follows: the first-row working elements affect the intact soil, creating side-loosened zones for the second-row elements to operate in open-cutting conditions.

The second-row working elements then act on the clods surrounded by the loosened zones (created by the first-row elements), deforming these clods toward the loosened zones. As a result, energy consumption is reduced. [1].

Methodology The angles of the working organs are determined based on the following expression, which ensures that their resistance to pulling is low and the quality of soil clodding is high. [2]:

$$\alpha_{o'} = \arcsin\left\{\left\{\sqrt{\sin^2(\varphi_1+\varphi_2)+\left[2+\frac{1}{2}\cos(\varphi_1+\varphi_2)\right]\left[1+\cos(\varphi_1+\varphi_2)\right]}-\right.\right.$$

$$\left.\left.-\sin^2(\varphi_1+\varphi_2)\right\}:\left[2+\frac{1}{2}\cos(\varphi_1+\varphi_2)\right]\right\}, \quad (1)$$

Here, φ_1 and φ_2 are the angles of external and internal friction of the soil, respectively, in degrees. By accepting φ_1= 30-35° and φ_2 = 40-45°, the calculations conducted based on expression (1) show that the clodding angles of the working organs should be in the range of 24-29°.

The opening angle of the wings of the working organs is determined according to the following expression, which ensures that they fracture the soil while consuming minimal energy during the working process. [3]:

$$2\gamma_{\check{y}} = 2arctg\frac{\sqrt{9tg^2\varphi_1 + 8} - 3tg\varphi_1}{2}. \qquad (2)$$

By substituting the known values of φ_1 (30-35°) into this expression, it becomes clear that the opening angle of the working organs' wings should be in the range of 71-77°. Therefore, for the working organs to clod the soil while consuming minimal energy, their clodding angle should be in the range of 24-29°, and their opening angle should be in the range of 71-77°.

The width of the traces of working bodies a_k, their coverage widths b_1, b_2 and the longitudinal distance L between them are the parameters determining their location in the frame.

We take the width of the traces of working bodies as 200-225 mm based on previous studies [1].

The coverage widths of the working bodies, first of all we determine the coverage width of the working bodies located in the second row of the chisel-cultivator. Taking into account that they work in open cutting conditions, we use the following condition [1]:

$$b_2 < \frac{2h\cos(\gamma_{o'} + \varphi_1)}{\cos\varphi_1 \cos\frac{1}{2}(\alpha_{o'} + \varphi_1 + \varphi_2)}, \qquad (3)$$

Here, h - is the working depth, in meters. When condition (3) is fulfilled, it ensures that the working organs operate in a fully open cutting condition, allowing for the soil to be broken down horizontally under the influence of their wings. This leads to the complete loosening of the treated layer and a reduction in energy consumption [1].

Taking $h=0.2$ m, putting the above values of $\gamma_{o'}$, φ_1, $\alpha_{o'}$ and φ_2 in (3), we determine that the coverage width of the working bodies located in the second row can be at most 32 cm. Based on the results obtained above ($\alpha_{o'}$=24-29°, $\gamma_{o'}$=71-77°) for installation in the second row of a comprehensive chisel-cultivator, the coverage width of the CHKU-4 chisel-cultivator is 26 cm, the grinding angle is 30° and the wings we can accept an arrow-shaped claw with an opening angle of 75°.

We determine the coverage width of the working bodies installed in the first row of a comprehensive chisel-cutivator, provided that the distance between them and the working bodies located in the second row is completely softened according to the following expression:

$$b_1 \geq 2a_k - b_2. \qquad (4)$$

If we add the values of a_k and b_2 determined above to this expression, it follows that the coverage width of the working bodies located in the first row should be at least 140 mm.

We determine the longitudinal distance between the working bodies by the following expression, based on the condition that soil, weeds and plant residues do not get stuck between them:

$$L \geq l + \frac{1}{2}\kappa_y b_2 tg\left(\gamma_{\check{y}} + \varphi_1\right), \tag{5}$$

where l is the length of the working body installed in the first row, m;

k_y is a coefficient that takes into account the accumulation of soil, plant residues and weeds in front of the working bodies installed in the second row.

At the values of $l=20$ cm, k_y=2, b_2=26 sm, γ_o=37° and φ_1=30°, according to the expression (5) the longitudinal distance between the working bodies of the chisel-cultivator is at least 81.2 cm came out

We determine the coverage width of the chisel-cultivator according to the following expression [4]:

$$B \leq \chi \frac{R_N}{R_T^c}, \tag{6}$$

where χ– is the coefficient of use of the traction power of the tractor;

R_N –is the tractor's nominal pulling power, N;

R_T^c – resistance of the chisel-cultivator to traction, corresponding to one meter coverage width, N/m.

The traction resistance of the chisel-cultivator is mainly formed by the traction resistance of its working bodies. Therefore, its relative resistance to gravity can be found with sufficient accuracy according to the following expression:

$$R_T^c = \frac{R_1 + R_2}{2a_k}. \tag{7}$$

Taking into account expression (7), expression (10) takes the following form:

$$B \leq 2\chi \frac{R_N a_\kappa}{R_1 + R_2}. \tag{10}$$

Taking χ =0,9 and putting the values of a_k, R_1 and R_2 determined above in the expression (10), the coverage width of the chisel-cultivator for aggregation with CLAAS AXION-850 and NewHolland T7060 tractors (R_N = 40 kN) is greater with 6 m, and for "Magnum 8940", MX-255 tractors (R_N = 50 kN) it should be 7,5 m was determined.

Knowing the coverage width of the chisel-cultivator and the transverse distance between the working bodies, we determine the total ny installed on it and the number of working bodies installed on its first (n_1) and second (n_2) rows:

$$n_y = \frac{B}{a_\kappa} + 1; \tag{11}$$

$$n_1 = \frac{B}{2a_к} + 1 \tag{12}$$

and

$$n_2 = \frac{B}{2a_к}. \tag{13}$$

(The values of B and a_k, as determined above, indicate that up to 39 working tools should be installed on the chisel cultivator, with 20 on the first row and 19 on the second row.

a) *b*)

Figure 2. Views of the experimental model of the wide-coverage chisel cultivator in transport (a) and working (b) positions

Results

Experiments on studying the types and arrangement schemes of working tools on the frame were conducted in the following five variants:

Variant 1. The working tools were arranged in three rows on the frame of the implement in a staggered pattern, as in the CHK-3.0 chisel cultivator, with loosening shovels installed in a stepped configuration across all rows (Figure 3a).

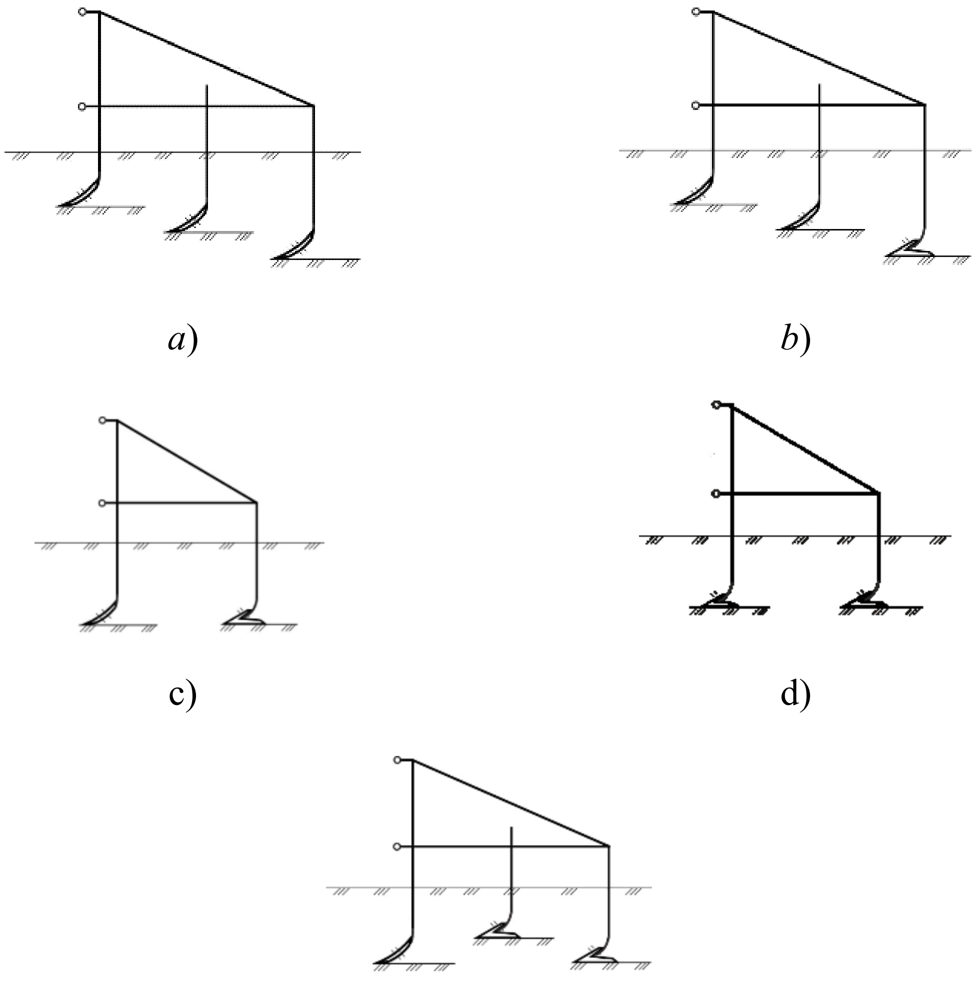
Variant 2. The working tools were arranged in three rows on the frame in a staggered pattern. Loosening shovels were installed in a stepped configuration on the first and second rows, while chisel-point shovels were installed on the third row (Figure 3b).

Variant 3. The working tools were arranged in two rows on the frame in a staggered pattern. Loosening shovels were installed on the first row, and chisel-point shovels, set at the same working depth, were installed on the second row (Figure 3c).

Variant 4. The working tools were arranged in two rows on the frame in a staggered pattern. The first row featured chisel-point shovels from the CHKU-4 chisel cultivator with a reduced working width of up to 140 mm, while the second row had chisel-point shovels with an unchanged working width of 260 mm, both set at the same working depth (Figure 3d).

Variant 5. The working tools were arranged in three rows on the frame. The tools on the first and second rows were arranged in a staggered pattern, while those on the second and third rows were arranged in-line and in a stepped configuration. Loosening shovels were installed on the first row, and chisel-point shovels were installed on the second and third rows (Figure 3e).

In all variants, the longitudinal distance between working tools is 80 cm within a single row the transverse distance between the positioned working tools was set at 40 cm.



a) *b*) c) d) e)

a, b, c, d, e - option 1, 2, 3, 4 and 5 working bodies, respectively

Figure 3. Types of work bodies and layout schemes

The experiments were conducted at operating speeds of 6 and 8 km/h.

Discussion

The results of the experiments are presented in Table 1. The following points can be noted:

- the working depth in the first and second variants was less than the designated 20 cm. The main reason for this is that, due to the staggered and stepped arrangement of the working tools in these variants, unloosened ridges (irregularities) form at the base of the tilled layer, which reduces the working depth;
- in variants 3, 4, and 5, the working depth matched the designated depth;

- the soil fragmentation quality met the requirements in all variants except the first, with over 80% of particles in the tilled layer being smaller than 50 mm;
- in the first variant, the percentage of particles smaller than 50 mm was 76.6%;
- the height of surface irregularities in the tilled layer was within the required limits, remaining below 10 cm in all variants;
- the height of irregularities at the base of the tilled layer met agronomic standards in all variants except the first, where it remained below 4 cm;

-the specific draft resistance was lowest in the fourth variant and highest in the fifth variant. For the other variants, this indicator ranged from 5.49–5.96 kN/m at a speed of 6 km/h and 5.81–6.28 kN/m at a speed of 8 km/h;

- increasing the speed from 6 km/h to 8 km/h improved soil fragmentation quality, reduced the height of surface and sub-surface irregularities in the tilled layer, and increased the specific draft resistance.

Table 1

Effect of the Type and Arrangement Scheme of Working Tools on the Frame of the Wide-Coverage Chisel Cultivator on Its Agronomic and Energy Performance

Variants of the Type and Arrangement Schemes of Working Tools on the Frame of the Wide-Coverage Chisel Cultivator	Working depth and its mean square deviation, cm.		The amount of size (mm) fractions, %			The height of irregularities formed on the surface of the tilled layer, cm	The height of irregularities formed at the bottom of the tilled layer, cm	Specific draft resistance, kN/m
	M_{ur}	$\pm\sigma$	>100	100-50	<50			
V=6 km/h								
1-variant	16,40	1,61	8,52	14,88	76,60	3,7	5,5	5,75
2-variant	18,10	1,56	6,55	12,61	80,84	4,5	3,9	5,96
3-variant	19,66	1,22	6,03	12,62	81,35	4,2	3,6	5,49

4-variant	20,47	1,21	5,71	12,28	82,01	4,4	3,1	5,28
5-variant	20,93	1,25	4,70	10,55	84,75	4,6	3,7	6,23
V=8 km/h								
1-variant	16,46	1,57	8,56	13,38	78,06	3,4	4,6	5,94
2-variant	18,67	1,39	4,98	12,43	82,59	4,1	3,1	6,28
3-variant	19,26	1,26	6,12	10,45	83,43	3,8	3,2	5,81
4-variant	20,33	1,16	5,13	11,84	83,03	3,8	2,5	5,61
5-variant	20,60	1,21	4,25	10,28	85,47	4,2	3,0	6,73

Conclusion

In this study, the types and arrangement schemes of the working tools on the frame of a wide-coverage chisel cultivator were examined. Based on the results of the experiments, the efficiency and working depth of various variants were analyzed.

As highlighted above, the fourth variant of working tools was selected for installation on the wide-coverage chisel cultivator. In this configuration, the working tools are arranged in two staggered rows on the frame: the first row is equipped with chisel-point shovels with a reduced working width of up to 140 mm, while the second row has chisel-point shovels with an unchanged working width of 260 mm, both set to the same working depth.

Based on the results, it is recommended to adopt the fourth variant of working tools arranged in a staggered pattern on the frame of the wide-coverage chisel cultivator. This approach enables effective soil tillage and achieves outcomes that meet agronomic requirements. The findings from this study are expected to be useful for improving agricultural machinery and optimizing production processes.

References

1. Tukhtaquziev A., Usarov M., Nabikhujaeva N. Wide-Coverage Chisel Cultivators for High-Powered Tractors // Science, Education, and Modernized Energy- and Resource-Saving Technologies and Technical Means Ensuring Economic Sectors: Problems, Solutions, Prospects - National Scientific-Technical Conference. – Jizzakh, 2016. – pp. 225-228.

2. Nabikhujaeva N. Development and Parameter Justification of a Wide-Coverage Chisel Cultivator: PhD Dissertation. – Yangiyul, 2023. – 151 pages.

3. Mansurov M., Nabikhujaeva N. Justification of the Working Width of a Wide-Coverage Chisel Cultivator // Innovations in Mechanical Engineering, Energy-Saving Technologies, and Efficiency Improvement in Resource Use: Proceedings of the International Scientific-Practical Conference. – Namangan NMTI, 2021. –

pp. 189-193.
4. Sineokov G.N., Panov I.M. Theory and Calculation of Soil-Processing Machines. – Moscow: Mashinostroenie, 1977. – 328 pages.

Nigmanov A.
associate professor
Department of Economics and Business Management
International Nordic University
ORCID: 0000-0002-2722-6902

ASSESSMENT OF ENERGY CONSUMPTION IN INDUSTRIAL NETWORKS OF THE REPUBLIC OF UZBEKISTAN

Abstract:*This article industry in enterprises again recoverable energy spending assessment, electricity energy economy in provision problems, them eliminate reach processes and energy resources efficient use such as in directions take went studies, Uzbekistan Republic of industry in networks energy spending assessment according to Economy network and in the fields energy consumption spending correlational, regression analysis is effective until 2035 economic growth in providing near ten annually industry in networks energy spending reduce on the surface suggestions work developed*

Keywords: *industry, energy consumption, electricity energy, alternative energy, evaluation.*

Introduction

The energy sector is the economy's energy with provide, produced release, and vehicle movement for necessary energy work release and in distribution directly or indirectly participation which of companies complicated and mutually connected network own into received wide and inclusive is a field.

The reasonable use of energy resources is a daily issue, so the current task is to be calculated. Energy resources was of demand more and more increased going today's during this matter is more becoming relevant is going Today's in the day energy of thrift state policy level that it has been raised that's it in the direction near years inside acceptance done and being done decree , decision and one row normative documents in the example to see can Including , "Uzbekistan until 2030 To the " green " economy of the Republic to pass directed reforms efficiency increase according to measures on ”[1] President decision acceptance done To him according to the industry in the field energy efficiency by at least 20 percent raise , gross internal product to the unit right coming energy spending volume by 30 percent reduce such as sure tasks set given In this respect , in the industry clean energy based on product work release through developed countries standards adaptation opportunity have to be and export potential increase , energy thrifty modern technologies and innovations come in to come acceleration through energy spending reduce , world in the economy face giving green to energy transition in processes active participation reach , green energy sources to build at the expense of of industry new directions app in the sense of a work places create directions studies take to go important importance occupation is enough

To the topic about literature analysis

To date, a number of studies have been carried out in the areas of assessment of renewable energy consumption in industrial enterprises, problems in ensuring energy efficiency, processes of their elimination, and efficient use of energy resources.

In modern conditions, the stable and independent position of the country is influenced not by the wealth of natural resources or large-scale production, but by the high level of innovative indicators. There are also many studies on the effective use of non-traditional energy sources (solar, hydro, geothermal, biomass energy, wind energy) in saving energy resources. Renewable energy is a key component of sustainable development [2].

New energy developments and sources in turn create jobs and export opportunities in growing markets. There are various strategies for promoting emerging energy technologies. A number of factors can influence the choice of strategy, such as available resources, the state of networks, the innovation system, etc. In order to strengthen local industrial enterprises that can ultimately contribute to global exports, the development of domestic markets has also been prioritized [3].

In the studies of IK Sharapova [4], economic efficiency was calculated based on the use of renewable energy sources in the automobile industry. SV Podkovalnikov, MA Polomoshina [5] conducted studies on the evaluation of the efficiency of integration of alternative energy sources into the power supply system of an industrial enterprise.

Most of the researches conducted in Uzbekistan on this problem are devoted to technological problems, in which the main focus is on the identification of alternative energy sources and researches on their technological solutions.

In the research carried out by A. Imamov and others [6], the creation and implementation of standards for the use and consumption of alternative energy, the development of a national program for energy saving in economic sectors and social objects, new devices, equipment and spare parts related to non-traditional energy proposals for creation and production are given.

ZFFakhriddinova, XXRejapovlar [7] Sources of production of renewable electricity in Uzbekistan and the level of their use are analyzed.

In general, in Uzbekistan, there are not enough scientific studies devoted to the scientific-methodical and practical issues of creating organizational and economic mechanisms for the use of energy sources and energy consumption assessment in industrial enterprises.

Analysis and results

A set of processes aimed at efficient (rational), that is, rational use of energy resources is the primary definition of energy efficiency. Achieving the desired result at the expense of less energy consumption for the energy supply of buildings or production processes is also an indicator of efficiency.

The economy and industry of Uzbekistan is a country with dynamic growth indicators. Along with industry, agriculture, transport and construction are also developing in it. But it is important that the development of the country's economy causes an increase in energy consumption.

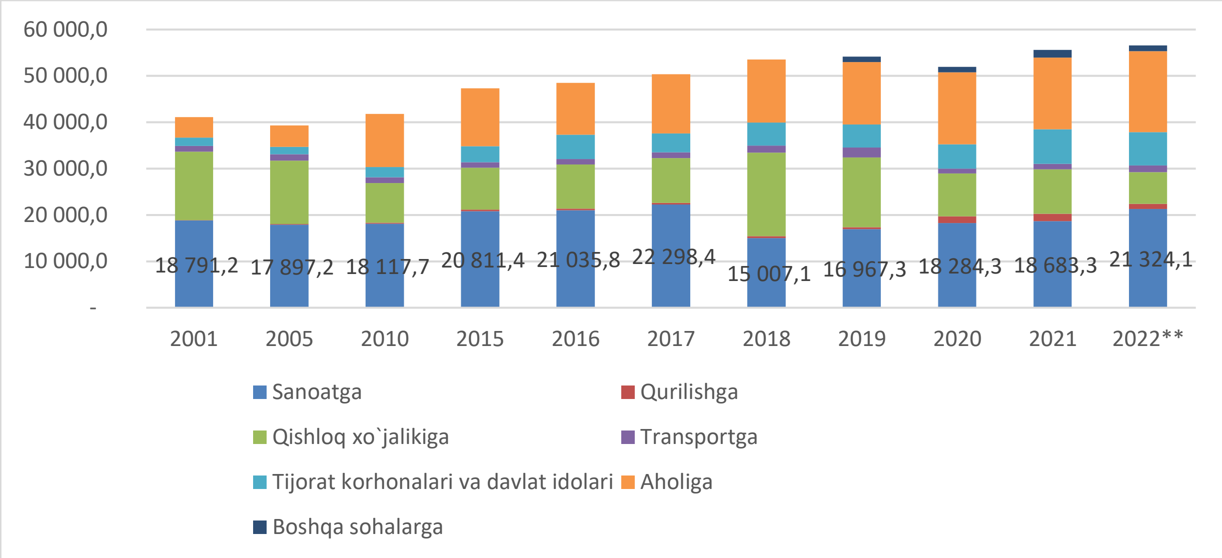


Figure 1. Energy consumption [53]in sectors and sectors of the economy

Based on the data of Figure 1, when analyzing the consumption of energy in sectors and sectors of the economy, it can be seen that the highest indicators of energy consumption correspond to industry, agriculture and population consumption. possible For example, in 2022, the electricity consumption of industrial enterprises was 21,324.1 million kWh. Between 2001 and 2022, this figure fluctuated between 15,000 and 23,000 million kWh.

As industrial enterprises have a high rate of electricity consumption in the country, it is appropriate to use alternative options for reducing energy consumption in this sector.

In particular, during the study, the dependence of the indicators of electricity produced by solar power plants (million kWh) and electricity supply per capita (thousand kWh) on the GDP was analyzed (Table 1)

[53] Uzbekistan Republic President in the presence of Statistics agency information based on the author by made up

Table 1

Indicators of Uzbekistan's GDP, electricity produced by solar power plants (million kWh) and electricity supply per capita (thousand kWh) in 2015-2022[54]

	2015	2016	2017	2018	2019	2020	2021	2022
Gross domestic product	221 350.9	255 421.9	317 476.4	426 641.0	532 712.5	605 514.9	738 425.2	888 341.7
Electricity produced by solar power plants (million kWh)	0.003	0.3	0.7	0.2	0.1	0.03	49.0	435.8
Electricity supply per capita (thousand kWh)	**1.8**	**1.8**	**1.9**	**1.9**	**1.9**	**2.0**	**2.1**	**2.1**

Multiple R (Multiple R): This is a correlation coefficient that measures the strength of the linear relationship between the dependent variable and the independent variables together.

This value is useful for understanding the overall fit of the regression model to the data. The closer this value is to 1, the better the model explains the variation in the dependent variable.

R-squared (R-squared): It is a coefficient of determination that shows the proportion of variance in the dependent variable that can be explained by the independent variables.

In other words, slightly more than half of the variability of the dependent data can be explained by the model, which means that the model has moderate explanatory power. An R-squared value of 1 means that the model explains all of the variability around the mean of the response data, while a value of 0 means that the model explains none of the variability.

Adjusted R-squared (Normirovannyy R-squared): This adjusts the R-squared value based on the number of predictors in the model relative to the number of data points. A negative value here indicates that the model may be filled with too many unnecessary predictors.

Standard Error (Standartnaya oshibka): It measures the average distance that the observed values fall from the regression line.

[54] Uzbekistan Republic President in the presence of Statistics agency information based on the author by made up

Table 2

Correlation analysis results[55]

VIVOD ITOGOV								
Regression statistics								
Mnozhestvenny R	0.96725885							
R-squared	0.935589683							
Normalized R-squared	0.909825556							
Standartnaya oshibka	71422,88029							
Nabludeniya	8							
Dispersion analysis								
	df	*SS*	*MS*	*F*	*Significantly F*			
Regression	2	3.7E+1	1.85E+1	36.3136	0.00105			
Ostatok	5	2.55E+1	5.1E+0					
Itogo	7	3.96E+1						
	Coefficient	*Standartnaya oshibka*	*t-statistics*	*P-Znachenie*	*Nizhnie 95%*	*Verxnie 95%*	*Nizhny 95.0%*	*Verxnie 95.0%*
Y-peresechenie	-2743669,576	553844.7	-4.95386	0.004271	-4167373	-1319966	-4167373	-1319966,481
Peremennaya X 1	311,1455313	225.7942	1.378005	0.226678	-269,277	891,568	-269,277	891.568037
Peremennaya X 2	1663482,774	289900	5.738126	0.002252	918271	2408695	918271	2408694,525

Observations (Nblyudenia): The number of data points used in the regression analysis.

Coefficients: These are the values that multiply the predictor values in the regression equation.

Standard Error of Coefficients: This measures the average amount by which the coefficient estimate differs from the true mean of our response variable.

t-Statistics and P-values: These are used to determine the statistical significance of each coefficient in the model.

Confidence Intervals (Nijnie 95%, Verxnie 95%): These intervals give us the range of values that can contain the true value of the coefficient with a certain level of confidence, usually 95%.

[55] Information based on the author development

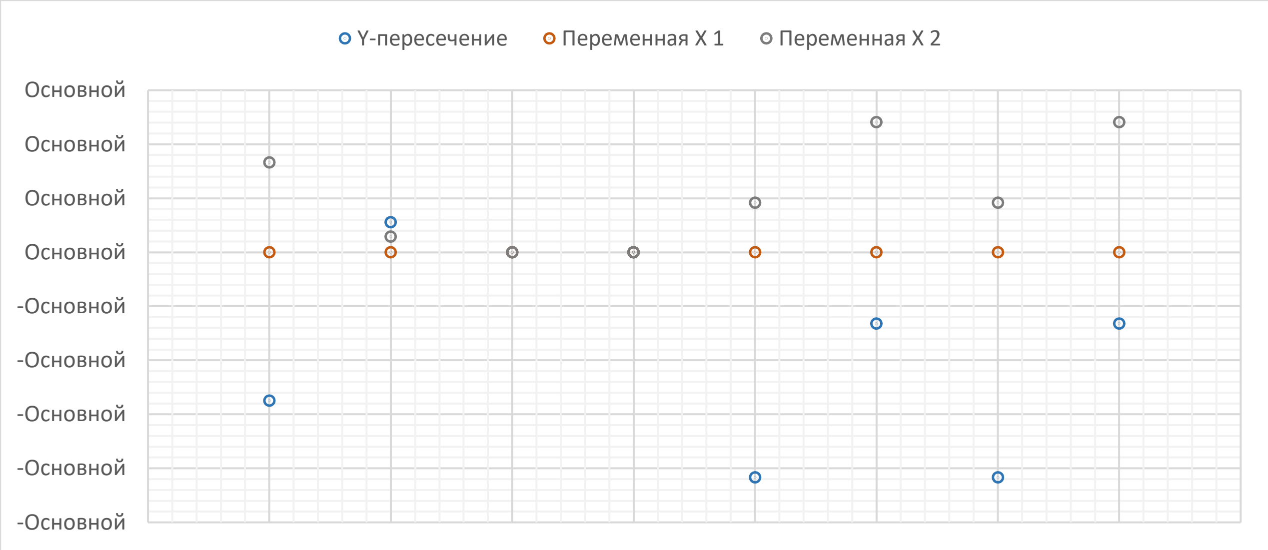


Figure 2. Location of the regression[56]

The results of the correlation analysis had the following values:

Multiple R (Mnojestvennyy R): 0.96725885. This value is very close to 1, indicating a very strong positive relationship between the dependent and independent variables.

R-squared (R-squared): 0.935589683. About 93.56% of the variance in the dependent variable can be explained by the independent variables in the model. This is considered very high and indicates a good fit of the model to the data.

Corrected R-squared (Normirovannyy R-squared): 0.909825556. Even after adjusting for the number of variables, about 90.98% of the variance is explained, which is still very high and confirms that the independent variables are relevant predictors.

Standard error (Standartnaya oshibka): 71422.88029. This value provides an estimate of the standard deviation of the regression residuals, and it is relatively low compared to the coefficients, indicating that the predictions are very accurate.

Observations (New Zealand): 8. The number of data points on which this model is based.

For regression coefficients:

The intercept (Y-peresechenie) has a large negative coefficient with a statistically significant p-value (0.004270696), indicating that it is a meaningful contributor to the model.

The variable X1 (Peremennaya X 1) has a coefficient of 311.1455313, but with a p-value of 0.226677757, it is not statistically significant at conventional levels (eg 0.05), which would not be a useful predictor in the context of this model shows that it is possible. .

Variable X2 (Peremennaya X 2) has a very large positive coefficient and a highly significant p-value (0.002252106), indicating that it is a strong and significant predictor in the model.

[56] Information based on the author development

The F-statistic (36.31365786) and its significance (0.001052904) further confirm the overall significance of the regression model, indicating that the model fits the data.

From the analysis, we can see that the share of primary energy means for the economy will remain relevant in our industries in the near future. Therefore, it is not for nothing that conducting an energy audit in energy management in order to increase the efficiency of reducing energy consumption is becoming a serious issue.

of the Cabinet of Ministers of the Republic of Uzbekistan dated August 7, 2006 VM-164 - " Conducting energy audits and expertise of consumers of fuel and energy resources " [57], the following are mandatory procedures for energy audits: I can see as one of the few mechanisms that contribute to the efficiency of spending:

- design of new and reconstructed objects, technologies and equipment;
- presence of consumers of fuel and energy resources (EE) with annual total consumption of more than 2,000 tons of standard fuel or more than 1,000 tons of motor fuel.

of the President of the Republic of Uzbekistan dated August 22, 2019 No. PQ-4422 " On increasing the energy efficiency of economic sectors and the social sphere, introducing energy-saving technologies and developing renewable energy sources " is in accordance with the Ministry of Energy energoaudit was assigned as the responsible body. Also, in order to reduce energy consumption in all aspects of the economy, especially in the industrial sector, quotas were set for the training of specialists in higher education institutions in the fields of "renewable energy sources", "energy efficiency" and "energy audit". . The second issue is that by January 1, 2023, all energy-consuming enterprises and organizations with a business connection were expected to introduce an energy management system compliant with the international ISO 50001 standard.

2021, 95 companies have the ISO 50001 international certificate, this standardization system is included in the national certification system, and OzDSt is registered under the ISO 50001 number. Due to the high cost of international certification, the costs of obtaining the ISO 50001 standard certificate within the framework of Uzbekistan's state program are fully covered by the state.

2006, in order to reduce energy consumption in industrial sectors, an energy audit has been conducted every five years. In 2020-2022, energy audits of 285 industrial sectors were carried out, and these processes are carried out continuously according to the list approved by the Government of Uzbekistan. This, in turn, increases the effectiveness of measures to reduce energy consumption in industrial sectors.

Summary

Another mechanism for reducing energy consumption in industrial sectors is the Decree of the President of the Republic of Uzbekistan dated July 10 , 2020

[57] Fuel and energy resources consumers energy from the inspection and from expertise transfer // https://lex.uz/docs/-1038881

PQ-4779 " On increasing the energy efficiency of the economy and reducing the dependence of economic sectors on fuel and energy products by attracting available resources " q we can see the decision on additional measures , the energy set for the years 2020-2023 is that the implementation of mandatory savings planning is determined. It is important to note that the indicators are calculated by economic sectors and within three years the activities of the sectors are included in the centralized planning. But they have an indicative nature, and unfortunately there is no accountability mechanism in Uzbekistan for failure to meet the above indicators, which reduces the effectiveness of measures aimed at increasing the efficiency of energy consumption.

Also, in order to ensure effective economic growth of Uzbekistan until 2035 , we may have the opportunity to reduce energy consumption in industrial sectors in the next decade by solving the following situations, namely:

reduction of greenhouse gas emissions per unit of gross work output;

reducing energy consumption in industries by one and a half, two times;

increasing the renewable energy sources step by step, especially considering the efficiency of nuclear energy in addition to solar and wind energy;

increase the energy efficiency of industrial sectors to at least a quarter of the current efficiency.

Used literature

1. Rajabov S. et al. Tasavvurli, umumiy-tasavvurli va raqamli-tasavvurli qoidalarni tahlil //Science and Education. – 2024. – T. 5. – №. 5. – C. 262-268.

2. Rajabov S. TASAVVURLI, UMUMIY-TASAVVURLI VA RAQAMLI-TASAVVURLI QOIDALARNI TAHLILI //Raqamli iqtisodiyot va axborot texnologiyalari. – 2024. – T. 4. – №. 1. – C. 113-119.

3. Абдуллаев M. ORGANIZATION OF WASTE PROCESSING IN SOLVING ENVIRONMENTAL PROBLEMS IN UZBEKISTAN //Nordic_Press. – 2024. – T. 1. – №. 0001.

4. Qobilov A. et al. ASSOTSIATIV QOIDALAR VA BOZOR SAVATLARINING TAHLILI //Raqamli iqtisodiyot va axborot texnologiyalari. – 2023. – T. 3. – №. 3. – C. 115-120.

5. Rajabov S. B. et al. Social mining and it is development stages //Science and Education. – 2023. – T. 4. – №. 4. – C. 1342-1345.

6. Oybek o‘g’li O. N., Urinovich K. A., Baxtiyorovich R. S. RAQAMLI IQTISODIYOT SHAROITIDA SOLIQLAR VA BOSHQA MAJBURIY TOLOVLARNI AMALGA OSHIRISHDA RAQAMLI TEXNOLOGIYALARDAN FOYDALANISH //Архив научных исследований. – 2022. – T. 5. – №. 5.

7. Ziyadullayevich S. A., Mirzaliev S. M., Bakhtiyorovich R. S. IMPROVING THE PROGRESSES OF WASTE PRODUCTS PROCESSING THE AUTOMATED MANAGEMENT SYSTEM //Galaxy International Interdisciplinary Research Journal. – 2022. – T. 10. – №. 5. – C. 372-381.

8. Mirzarakhimova A., Abdulakhatov M. Analysis of Healthcare Services in the Digital Economy //Proceedings of the 7th International Conference on Future Networks and Distributed Systems. – 2023. – С. 410-414.
9. Abdulakhatov M. M., Avlokulova S. S. TECHNOLOGY OF SEARCH ORGANIZATION IN VIRTUAL E-SHOPS WITH IMAGE RECOGNITION //Архив научных исследований. – 2022. – Т. 2. – №. 1.
10. Kobilov A., Abdulakhatov M., Jaloliddinova M. PECULIARITIES OF THE USE OF ARTIFICIAL INTELLIGENCE IN THE EDUCATIONAL PROCESS //Raqamli iqtisodiyot va axborot texnologiyalari. – 2021. – Т. 1. – №. 3. – С. 32-37.
11. Nigmanov A. U. XITOY SANOAT TARMOQLARIDA ENERGIYA SAMARADORLIGINI OSHIRISH TAHLILI //XXI Asr: Fan va ta'lim masalalari (XXI Век: Вопросы науки и образования). – 2024. – Т. 1. – С. 146-162.
12. Нигманов А. У. и др. ERKIN IQTISODIY ZONALARDA INVESTITSIYA FAOLIYATINI AMALGA OSHIRISHNING ASOSIY YONALISHLARI //ГЕОГРАФИЯ: ПРИРОДА И ОБЩЕСТВО. – 2020. – Т. 1. – №. 2.
13. Bobojonov J. B. O. XXR investitsion siyosatining istiqboldagi tendensiyasi //Science and Education. – 2024. – Т. 5. – №. 10. – С. 203-209.
14. Нигманов А. УЗБЕКСКО-КИТАЙСКОЕ ЭНЕРГЕТИЧЕСКОЕ СОТРУДНИЧЕСТВО //Sharq ma'shali/Восточный факел. – 2022. – Т. 14. – №. 1. – С. 127-135.
15. Sofoyeva F. JDK, JRE va JVM. Dasturlash muhitini tayyorlash //Nordic_Press. – 2024. – Т. 3. – №. 0003.

Nigmatova M.M.
Associate Professor
Bukhara State Pedagogical Institute

REASONS FOR PERSONALITY CHANGES IN MODERN PRESCHOOL CHILDREN

Abstract: *This article addresses a pressing issue: the development of children's personalities in today's world. It outlines the characteristics of the modern "difficult" environment and the associated risks to healthy personality development. Additionally, it proposes strategies to mitigate these negative influences by fostering supportive conditions for children's personal growth.*

Keywords: *personality, personal transformations, risks of personal development, social context.*

The modern world is in a state of constant change, making it essential to understand its structure and development trends, especially regarding its impact on younger generations. Identifying risks to personal development and devising appropriate educational strategies to support children are critical tasks for educators today.

In the 21st century, the world has transformed into a complex system driven by various economic, political, and social processes, including advancements in technology, societal informatization, cultural revolutions, and globalization. This complexity demands a new kind of individual—one equipped with a diverse set of values, ideas, and competencies necessary for navigating contemporary challenges.

The rapid changes in society create significant issues that erode social connections and moral principles, leading to increased intolerance and aggression, which ultimately harm individual development. The decline of social values such as a passion for learning, culture, and work is evident. Vulnerable populations, particularly children, require special attention and support during these tumultuous times.

While modern conditions provide new opportunities and technologies, they also introduce various risks that can adversely affect children's personal growth. Risks include disruptions in communication, issues in the value and emotional spheres, and strained parent-child relationships. Heightened societal tensions, conflict, and negative media portrayals contribute to rising anxiety and aggression among children, distorting their moral frameworks and leading to unacceptable behaviors.

Additionally, the crisis within family structures—marked by an increase in single-parent households, divorce, and domestic strife—further complicates children's social development. These conditions can result in social maladjustment and an increase in juvenile delinquency. When families fail to fulfill their roles in socialization, children may turn to antisocial or extremist groups for guidance, exacerbating their struggles.

Education also faces significant challenges, including a lack of clear strategies and a focus on service delivery rather than meaningful educational engagement. This results in a spontaneous learning environment that fails to nurture children's motivation and curiosity.

The rise of digital technology poses additional risks to personal development. Many children, referred to as the "digital generation," navigate the online world largely without adult supervision, which can lead to further personal transformations.

A survey conducted among parents of preschoolers at MADOU "Kindergarten No. 473 of Chelyabinsk" explored how much time children spend on digital devices and the impact of media on their emotional well-being. The results indicated that many preschoolers spend over four to five hours a day on smartphones, tablets, and computers, largely engaging with cartoons and online videos. However, only 40% of parents actively tried to limit this screen time.

Parents reported that excessive use of digital devices negatively affects children's emotional states, increasing anxiety and irritability. When attempts were made to reduce screen time, many children reacted negatively, exhibiting signs of distress.

The survey highlighted a lack of parental engagement and established family traditions, with many parents preferring that their children occupy themselves to avoid distractions. This results in diminished communication skills and emotional connections between parents and children. Consequently, preschool children displayed several personality issues, including:

a) Communication difficulties stemming from an inability to engage effectively in personal interactions, including within their families.

Literature

1. Нигматова М. М., Умарова Г. У. Влияние информационного пространства на развитие познавательных творческих способностей дошкольников //Academy. – 2020. – №. 12 (63). – С. 67-69.

2. Kuldoshev R. et al. Mathematical statistical analysis of attainment levels of primary left handed students based on pearson's conformity criteria //E3S Web of Conferences. – EDP Sciences, 2023. – Т. 371. – С. 05069.

3.Nigmatova M. KOMPYUTER O'YINLARINING MAKTABGACHA YOSHDAGI BOLALAR HISSIY INTELEKTIGA TA'SIRI //ЦЕНТР НАУЧНЫХ ПУБЛИКАЦИЙ (buxdu. uz). – 2022. – Т. 22. – №. 22.

4. Nigmatova M. RAQAMLI O‘YINLAR BOLALARNI O‘QITISH USULI SIFATIDA //ЦЕНТР НАУЧНЫХ ПУБЛИКАЦИЙ (buxdu. uz). – 2021. – Т. 3. – №. 3.

5.Nigmatova Mavjuda Mahmudovna. (2021). Reasons for Personal Change of Modern Preschool Children. Middle European Scientific Bulletin, 10(1). https://doi.org/10.47494/mesb.2021.10.359.

Normatov S.
Geografiya kafedrasi o'qituvchisi
Shahrisabz davlat pedagogika instituti
Xudoyorov L.
Geografiya kafedrasi o'qituvchisi
Abduxalilova O.
Geografiya va iqtisodiy bilim asoslari yo'nalishi 2-bosqich talabasi

JAHON SHAHARLARI EKOLOGIYASIGA QUYILADIGAN TALABLAR

ANNOTSIYA: *Hozirgi vaqtda dunyodagi urbanizatsiya darajasining oshishi shaharlar ekologik barqarorligiga katta ta'sir ko'rsatmoqda. Maqolada jahonda va O'zbekistonda shahar ekologiyasiga taalluqli statistik ma'lumotlar tahlili keltiriladi, shuningdek, bu muammolarni hal qilishga qaratilgan innovatsion va amaliy yechimlar taklif etiladi.*

Kalit so'zlar: *Shahar ekologiyasi, urbanizatsiya, ifloslanish, ekologik barqarorlik, amaliy yechimlar.*

Shahar ekologiyasi shaharlar va atrof-muhit o'rtasidagi o'zaro aloqalarni o'rganadigan soha bo'lib, u shaharlardagi tabiiy resurslar, infratuzilma va aholi turmush tarzi o'rtasidagi muvozanatni saqlashga qaratilgan. Shahar ekologiyasi, asosan, aholi zichligi va sanoat faoliyati tufayli paydo bo'ladigan ekologik muammolarni hal qilishga qaratilgan. Hozirgi kunda shaharlarda ko'plab ekologik muammolar ko'zga tashlanadi. Quyida asosiy ekologik muammolar keltirilgan:

1. Havoning ifloslanishi: Shaharlar sanoat, avtomobil transporti va qurilish faoliyati tufayli ko'p miqdorda zaharli gazlar chiqaradi. Bu havoning ifloslanishiga olib keladi va aholi salomatligiga zarar yetkazadi.

2. Suv resurslarining ifloslanishi: Kanalizatsiya tizimlarining yetarli darajada bo'lmasligi, kimyoviy chiqindilar va sanoat chiqindilari suv havzalari va yerosti suvlarini ifloslantiradi.

3. Baland tovushlar bilan ifloslanish: Yirik shaharlar avtomobillar, qurilish texnikasi va sanoat faoliyati tufayli yuqori darajadagi shovqin bilan yuzma-yuz keladi. Bu esa insonlarning ruhiy holatiga va umumiy salomatligiga salbiy ta'sir ko'rsatadi.

4. Chiqindilarni boshqarish muammolari: Shaharlar ko'plab maishiy, qurilish va sanoat chiqindilarini ishlab chiqaradi. Qattiq chiqindilarni to'g'ri boshqarishning yo'qligi chiqindilarni yig'ish, saqlash va yo'q qilish bilan bog'liq ekologik muammolarga sabab bo'ladi.

5. Yashil hududlarning kamayishi: Aholi punktlarining kengayishi va qurilish ishlari tufayli yashil hududlar qisqarib bormoqda, bu esa shaharlarning ekologik muvozanatiga zarar keltiradi.

6. Iqlim o'zgarishi: Shaharlardagi ortiqcha energiya sarfi va issiqxona gazlarining ko'payishi global iqlim o'zgarishiga hissa qo'shadi.

Jahon sog‘liqni saqlash tashkiloti (WHO) ma’lumotlariga ko‘ra, har yili havo ifloslanishi tufayli 7 millionga yaqin odam vafot etadi. Jahonda 2019-yilda shaharlar aholisining 55 foizdan ko‘prog‘i havo ifloslanishining xavfli darajasi ta’sirida yashagan[58]. Bundan ko’rinib turibdiki, ekologiya muammolari qishloqlardan ko’ra shaharlarda ko’proq uchraydi. Xususan, Osiyo va Afrika mamlakatlari shaharlarida havo sifatining keskin yomonlashuvi kuzatilmoqda. Masalan, Hindistonning Dehli shahrida havoning PM 2.5 zarralari bilan ifloslanishi jahon miqyosidagi eng yuqori ko‘rsatkichlardan biridir. Transport va sanoat ifloslanishi jahonda katta muammoga aylangan. 2022-yilda Jahon Banki ma’lumotiga ko‘ra, sanoat sektori global CO_2 chiqindilarining 32 foizini tashkil etgan[59]. Bundan tashqari, suv va tuproq resurslarining ifloslanishi ham global ekologik xavflar orasida joy olgan.

O‘zbekistonning yirik shaharlarida, xususan, Toshkent, Samarqand va Farg‘ona kabi hududlarda havo va suv ifloslanishining jiddiy ko‘rsatkichlari qayd etilgan. 2023-yilda O‘zbekiston Respublikasi Davlat statistika qo‘mitasining ma’lumotlariga ko‘ra, Toshkentda yil davomida havo ifloslanishining PM 2.5 miqdori me’yordan 2,5 barobar oshib ketgan. O‘zbekistonda sanoat korxonalarining ifloslanishi va transportdan chiqayotgan gazlarning ko‘payishi shahar ekologiyasiga jiddiy ta’sir ko‘rsatmoqda[60]. Ayniqsa, transport vositalari 40 foizdan ortiq havo ifloslanishini ta’minlaydi. Shuningdek, suv resurslarining ifloslanishi ham muammolardan biri bo‘lib qolmoqda. Sirdaryo va Amudaryo havzalarida sanoat va maishiy chiqindilar tufayli suv sifati pasaymoqda, bu esa aholining salomatligiga salbiy ta'sir ko‘rsatmoqda.

Yuqoridagi statistik ma’lumotlarga tayangan holda, shaharlar ekologiyasi bilan bog’liq yuzaga kelgan muammolar har bir shaharlashgan davlatda bor deya olamiz. Bu muammolarga yechim sifatida quyidagilarni tavsiya qila olishimiz mumkin.

1.Ifloslanishni kamaytirish uchun transport va sanoatga oid choralar

Shahar ekologiyasini yaxshilash uchun ekologik toza transport vositalariga o‘tish zarur. Jahon tajribasida elektr transport vositalari va jamoat transportini kengaytirish bilan bog‘liq muvaffaqiyatli loyihalar mavjud. Masalan, Norvegiya va Niderlandiya elektr transport vositalari bo‘yicha global yetakchilar hisoblanadi.

O‘zbekistonda ham ekologik toza transport turlariga o‘tish uchun ko‘plab investitsiya loyihalari amalga oshirilmoqda.

2. **O‘rmonzorlashtirish va yashil hududlar kengaytirish**

Atmosfera havosini tozalashning eng samarali yo‘llaridan biri bu o‘rmonzorlashtirishdir. Jahon miqyosida, ayniqsa, Xitoy va Braziliya

58 Jahon sog‘liqni saqlash tashkiloti (WHO) – "Global Pollution Report", 2023

59 Jahon Banki – "Global CO2 Emissions and Pollution Data", 2022.

60 O‘zbekiston Respublikasi Davlat statistika qo‘mitasi – "2023-yil ekologik ko‘rsatkichlar".

o‘rmonzorlashtirish bo‘yicha katta qadamlar tashlamoqda. O‘zbekistonda ham 2020-yilda "Yashil makon" tashabbusi doirasida 1 milliondan ortiq daraxt ekildi. Bu kabi loyihalarni kengaytirish shahar havo sifati va aholining sog‘lig‘iga ijobiy ta’sir ko‘rsatadi[61].

3. **Suv resurslarini muhofaza qilish va tozalash**

Suv ifloslanishini oldini olish uchun sanoat korxonalariga qo‘shimcha filtrlash tizimlarini joriy qilish lozim. Jahonda Singapur suv resurslarini tozalash va qayta ishlash bo‘yicha yetakchi mamlakatlardan biri hisoblanadi. O‘zbekistonda ham sanoat chiqindilarini kamaytirish va suv resurslarini himoya qilish choralari ko‘rilmoqda, biroq bu borada yanada qat’iy siyosatlar ishlab chiqilishi lozim. Xulosa o’rnida aytaolamanki, shahar ekologiyasi bugungi kunda dolzarb muammolardan biri bo‘lib, bu masala nafaqat ekologik, balki iqtisodiy va ijtimoiy omillar bilan ham chambarchas bog‘liqdir. Jahon tajribasi shuni ko‘rsatadiki, ekologik toza texnologiyalarga o‘tish va yashil hududlarni kengaytirish orqali bu muammolarni samarali hal qilish mumkin. O‘zbekistonda esa shaharlar ekologiyasini yaxshilash uchun innovatsion yechimlar va milliy darajadagi hamkorliklar talab etiladi.

FOYDALANILGAN ADABIYOTLAR RO’YXATI

1. Jahon sog‘liqni saqlash tashkiloti (WHO) – "Global Pollution Report", 2023.
2. O‘zbekiston Respublikasi Davlat statistika qo‘mitasi – "2023-yil ekologik ko‘rsatkichlar".
3. Jahon Banki – "Global CO_2 Emissions and Pollution Data", 2022.
4. "Yashil makon" loyihasi hisobotlari, O‘zbekiston, 2020.

61 "Yashil makon" loyihasi hisobotlari, O‘zbekiston, 2020.

Nurmatova N.N.
Department of Social and Humanitarian Sciences
Andijan State Medical Institute

THE IMPORTANCE OF INCREASING THE POLITICAL AND CULTURAL THINKING OF STUDENTS OF HIGHER EDUCATION

Abstract*: This article discusses the relevance of increasing the political and cultural thinking of higher education students. It is important to increase the political and cultural literacy of higher education students in the comprehensive development of society, especially in active participation in democratic processes. In the article, special attention is paid to the analysis of the importance of developing students' political and cultural knowledge for society, the role of educational institutions in the formation of modern worldview and personality. Each youth serves to strengthen the knowledge and skills related to the political-legal system and cultural values, and to increase their social and spiritual activity. The article also discusses the directions of developing political and cultural thinking of students through innovative methods and new pedagogical methods in the educational system.*

Key words*: Higher education, political thinking, cultural thinking, youth, democracy, educational system, pedagogical methods, social activity, knowledge and skills, personality development, democratic processes.*

The urgency of increasing the political and cultural thinking of students of higher education is one of the most important issues in our society, which is becoming more complex day by day. Well-educated and active political and social persons, young people with comprehensively developed cultural and moral values serve as the main factor in shaping the development of society and its socio-political environment. In today's globalized and rapidly changing world, for the sustainable development of society, young people, especially students of higher education, should have not only scientific knowledge, but also political and cultural outlook.

Understanding the political-legal system and cultural values, active participation in solving the problems of today, making reliable decisions in democratic processes will help to increase the social activity of young people. Also, educational institutions assume an important task and responsibility in forming the personal, social and political outlook of students. Institutions of higher education should set a strategic direction aimed not only at imparting knowledge in science and technology, but also at developing political and cultural thinking of students.

Increasing students' political and cultural thinking serves to form their sense of social responsibility, their attitude to democratic rights and freedoms. As a result, young people, in turn, will have the necessary knowledge and skills to react to social and political processes in society and participate in them. The goal is not only to provide students with modern knowledge, but also to improve their moral and political culture. This will eventually become the foundation of society's stability, its economic and social development.

It is necessary to clearly determine the place of each person in society and to enable active participation in democratic processes, to combine political and cultural knowledge in the education and training system. Institutions of higher education, namely universities and institutes, should feel the responsibility to develop sound pedagogical methods, innovative methods and modern curricula in the direction of increasing the political and cultural literacy of young people.

Also, today, young people, especially students of higher education, actively participate in the political and cultural life of society in various directions. They participate in various political, social and cultural measures and contribute to the social development of the country. In this case, students' knowledge of critical thinking and youth rights will be the main helper in their deeper education and orientation towards active democracy.

From this point of view, the policy of higher education institutions is of great importance in increasing the political and cultural thinking of students. Of course, they should not only provide knowledge in the field of science and technology, but also provide students with the skills they need in life, that is, life knowledge. In this, the importance of educational programs and development of pedagogical processes is undeniable.

In the future, the political and cultural development of students of higher education institutions will make a great contribution to the establishment of democratic values in our society and strengthening of national unity.

The urgency of increasing the political and cultural thinking of higher education students is important for the sustainable development of society, active participation in democratic processes, and solving social problems. In the modern world, young people, especially students of higher education institutions, need not only scientific knowledge, but also political and cultural knowledge. They should have political and cultural thinking in order to be able to actively participate in the democratic life and spiritual-educational processes of the society.

It is very important for higher education institutions to increase the political and cultural literacy of young people. This process is aimed not only at increasing their political and legal knowledge, but also at forming their attitude towards social responsibility, personal values and social stability. Educational institutions should not only provide knowledge about modern science and technology, but should also take a great responsibility to form moral, cultural and political outlook of students.

It also helps to maintain social stability in the society by developing the political and cultural thinking of young people, increasing their critical thinking skills and strengthening their activity in the defense of democracy. In order for the enthusiasm of the new generation in democratic processes and the national commonwealth, to become a well-rounded person, it is necessary for higher education institutions to strive to create a healthy and strong educational system in all respects.

If higher education students have a political and cultural mindset, they will be able to contribute to the social, political and cultural life of society, come up with advanced ideas and propose solutions to global problems. At the same time, it is important for students to come up with new approaches and directions to solve various social problems in society.

In the future, higher education institutions will serve as important steps for stability and new steps in society by increasing the political and cultural thinking of students, increasing their social activity and expanding democratic values. This lays the foundation for long-term and sustainable development of the society. In this regard, the higher education system should introduce innovative pedagogical methods and prepare students for successful activity in the political, social and cultural spheres.

References:

1. Смирнов, М. А. (2001). Информационная среда и развитие общества. *Информационное общество*, (5), 50-54.
2. Секерин, В. Д., Горохова, А. Е., Лаптева, Д. Я., & Калинкина, Т. М. (2013). Научно-техническая информация как фактор развития общества. *Известия Московского государственного технического университета МАМИ*, *5*(1 (15)), 136-142.
3. Худайкулова, Д. З. (2019). МЕТОДЫ ФОРМИРОВАНИЯ ДЕТСКОГО МИРОВОЗЗРЕНИЯ. *Экономика и социум*, (11 (66)), 739-742.
4. Zokirovna, H. D. (2019). PEDAGOGICAL-PSYCHOLOGICAL FEATURES OF THE MANIFESTATION OF CREATIVE ABILITIES IN PRESCHOOLERS. *European Journal of Research and Reflection in Educational Sciences Vol*, *7*(12).
5. Khudoyqulova, D. (2022). THE BASIC PRINCIPLES OF THE FORMATION OF CREATIVE THINKING IN THE PROCESS OF PREPARING PRESCHOOL CHILDREN FOR SCHOOL. *Galaxy International Interdisciplinary Research Journal*, *10*(4), 736-742.

Nurmatova N.N.
Department of Social and Humanitarian Sciences
Andijan State Medical Institute

THE ROLE OF SCIENCE IN THE SOCIO-POLITICAL AND CULTURAL DEVELOPMENT OF SOCIETY

Abstract: *This article analyzes the role of science in the social, political and cultural development of society. It has been shown how science has a great influence on the development of society, economic growth, and the solution of cultural and social problems. According to the data, science contributes to the promotion of economic growth, social equality and the development of democratic processes through innovation, new technologies and scientific developments. In addition, science plays an important role in the preservation and development of cultural heritage. The data will more clearly and reliably show the importance of science for sustainable development in society.*
Key words: *Science, social development, political development, cultural development, innovations, technologies, economic growth, education, democratic processes, social problems, cultural heritage.*

Science plays an important role in the development of every society. Its development causes not only economic growth, but also a number of important changes in the social, political and cultural spheres. Scientific developments and technologies have an important influence on the socio-political and cultural development of the society, their development serves as the main factor in ensuring the stable development of the society. Therefore, the role of science is felt in all areas of society.

Spiritual values play a decisive role in the social life of society. Their development and change affects general education and moral standards in society. For example, democratic and human rights values guide the political processes of the society and provide an opportunity to ensure social justice and equality. Also, spiritual values are important for the sustainable development of the society, because they form the basis for mutual relations, respect and harmony among the members of the society.

Attitude to education and knowledge is the main factor in shaping the development of society. If the importance of education in the cultural system increases, social and economic development will also accelerate. High attention to education and knowledge in society, development of thinking and creative abilities of new generations has a positive effect on innovative and technological development of society. Open-mindedness and a pleasant attitude to accepting new knowledge help to strengthen social stability in society.

Science has become the main source of social development, allowing the introduction of new technologies and knowledge to improve the condition of society. New knowledge of science is important not only in research and research, but also in solving social problems. For example, scientific research in the field of medicine helps to maintain and improve people's health, and research in ecology helps to protect the environment. This, in turn, serves to reduce social problems in society.

The role of science in relation to political processes is of particular importance. Scientific knowledge plays an important role in increasing the political literacy of citizens, protecting their legal and liberties, and developing democracy. Science also provides government leaders with the analysis and information they need to make better decisions. For example, states can direct their economic policy during economic and social research, develop new laws based on scientific research.

The role of science in cultural development is incomparable. The development of science causes the emergence of new ideas and thoughts in cultural articles, art, and literature. Scientific research in the field of education and introduction of knowledge to the society, expansion of cultural relations, development of new laws, and creation of a scientific basis for the development of cultural tourism in countries are of great importance. Through the results of science, people can better understand their cultural heritage, history and future.

Science, of course, plays an important role in economic development. New technologies, scientific developments and innovative solutions drive economic growth. Modern scientific research creates new opportunities for solving problems in various areas of economic activity. Also, science helps to increase competition in economic processes, to make production more efficient, and to strengthen export potential. People's attention to science and innovation is an important condition for ensuring economic growth.

The influence of science in society is primarily carried out through the education system. The application of science gives young people modern knowledge and skills, making them active participants in social and economic life. The introduction of scientific developments and new technologies, scientific approaches to the field for education in local and international educational institutions serves the sustainable development of society. The development of education also helps to accumulate such knowledge, which has an impact on economic and cultural development.

The role of science in solving social problems in society is complex and multifaceted. Scientific research is the source of social reform and defining the main directions for problem solving. For example, scientific research related to social equality, labor rights, education or health not only helps to improve the situation in society, but is also important in finding coherent solutions to social problems.

Science is a decisive factor in the social, political and cultural development of society, and its results help to ensure the development and stability of society. The development of science serves to introduce innovations in every sphere of society, to find solutions to problems and to influence the quality of life of people. At the same time, scientific work is an important basis for updating state policy, educational system and cultural life. The role of science for the sustainable development of society is incomparable.

Science is the main and decisive factor in the social, political and cultural development of society. It, in turn, stimulates economic growth through new technologies, innovations and scientific developments, helps to find solutions to social problems and plays an important role in cultural development. The development of science in society serves to strengthen the educational system, increase political literacy and strengthen cultural values. In addition, science is an important tool in adapting society to modern problems and solving them through innovative ideas, which paves the way for sustainable development. Also, the advanced results of science create the basis of new opportunities and decisions in every sphere of society. Therefore, the importance of science for the development of society is incomparable.

References:

1. Abduraxmonovna, K. D. (2022). Methods of Improving the Reflective Abilities of Preschool Children. *European Journal of Life Safety and Stability (2660-9630)*, *17*, 148-153.
2. Abdurakhmonovna, K. D. (2021). Role of Innovative Activities in Formation of Creative Thinking of Children in Organization of Preschool Education. *Pindus Journal of Culture, Literature, and ELT*, *1*(12), 118-122.
3. Voxobjonovna, X. S., & Abduraxmonovna, X. D. Formation of Skills of Artistic Creativity in Preschool Children. *International Journal on Integrated Education*, *3*(12), 484-486.
4. Zokirovna, X. D. (2021). A Modern Approach to the Organization of Art Activities for Preschool Children. *International Journal of Culture and Modernity*, *11*, 331-336.
5. Худайкулова, Д. З. (2019). МЕТОДЫ ФОРМИРОВАНИЯ ДЕТСКОГО МИРОВОЗЗРЕНИЯ. *Экономика и социум*, (11 (66)), 739-742.
6. Zokirovna, H. D. (2019). PEDAGOGICAL-PSYCHOLOGICAL FEATURES OF THE MANIFESTATION OF CREATIVE ABILITIES IN PRESCHOOLERS. *European Journal of Research and Reflection in Educational Sciences Vol*, *7*(12).
7. Khudoyqulova, D. (2022). THE BASIC PRINCIPLES OF THE FORMATION OF CREATIVE THINKING IN THE PROCESS OF PREPARING PRESCHOOL CHILDREN FOR SCHOOL. *Galaxy International Interdisciplinary Research Journal*, *10*(4), 736-742.
8. Xudaykulova, D. (2024). BOLALARNING MUSTAQIL BADIIY FOALIYATLARIGA RAHBARLIK QILISH METODLARI. *Farg'ona davlat universiteti*, (3), 194-194.

Oblakulov Kh.A.
Associate Professor
of the Department of
Geography and Basics of Economic Knowledge
Navoi State University
Kuzieva M.Sh.
Master's student

NATURAL AND MECHANICAL MOVEMENT OF THE POPULATION OF NAVOY REGION

Annotatsiya: *Birth, death, mechanical movement of the population are the processes that determine the demographic situation and development of the population of the regions. This article analyzes the birth, death, mechanical movement and demographic situation of the population of Navoi region.*
Keywords: *Population birth, death, mechanical movement, age and sex composition.*

Social protection of the population of the regions depends primarily on its demographic status, reconstruction and migration. Because this issue is related not only to the number of the population, but also to its age and sex composition. In particular, the growth of the number of children will be high in regions with high birth rates. In such cases, social protection of the population is primarily focused on children and mothers with children. If the birth rate and natural increase of the population are not high, the process of "aging" of the population will occur. According to Polish demographer E. Rosset•, the level of "old age" of the population of a certain country or region is determined by the share of pensioners in it (the minimum figure is 12%). Therefore, there are more elderly people in the considered areas, and therefore, they require social protection. This problem is solved within the social policy of the country.

Navoi region is considered one of the regions that require a full scientific study of demographic processes, which, in turn, as we explained above, differs sharply from other regions of Uzbekistan in terms of a number of indicators.

It is worth saying that the rate of natural increase of the population is high among the rural population, but it also differs in the regional districts. For example, natural increase per 1000 people in 2023 will be 18.5 per thousand in Kyziltepa district, 19.1 in Navbahor district, 20.3 in Nurota district, 22.2 in Khatirchi district, 12.5 in Tomdi district (Figure 1).

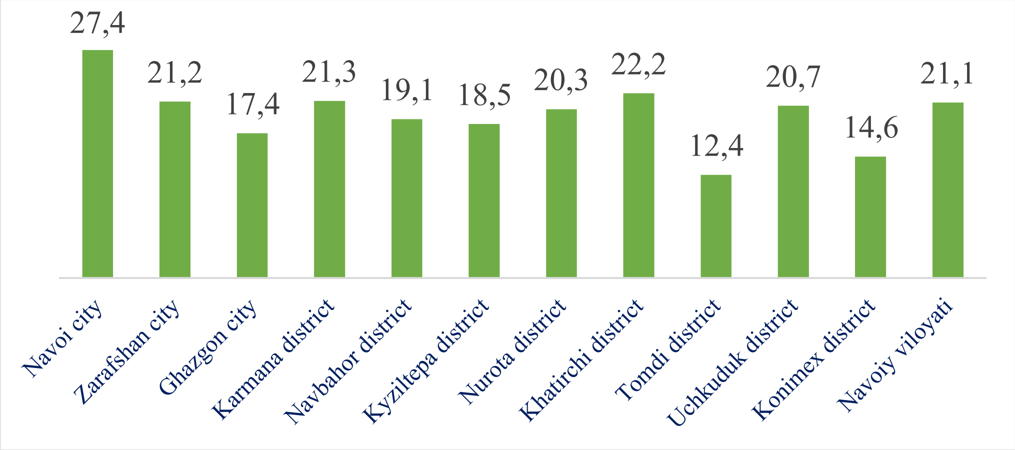


Figure 1. Changes in the general coefficient of natural reproduction of the population of Navoi region (per mille)

Another aspect of existing differences in the rate of natural reproduction between districts is the national and age composition of their population, differences in the socio-economic situation at the district level. Also, the characteristics of the demographic development of rural areas depend on their historical formation, the structure and specialization of the branches of the economy.

If we compare the territorial differences in the rate of natural reproduction of the population of Navoi region with the average indicator of the region, it is appropriate to study it by dividing it into the following groups:

1. Districts with a high rate of natural reproduction: Navoi and Zarafshan, Nurota, Uchkuduq, Khatirchi, Karmana (20.3% -27.4);

2. Districts with an average indicator: Konimekh, Kyziltepa, Navbahor, Karmana districts and (15.0-20.0%);

3. Tomdi district, where the indicator is lower than average (12.4-15.0%).

The birth rate in districts with a high natural rate of Navoi region is slightly different from others, they are distinguished by the level of economic development, specialization, industrialization, and the level of providing cultural and household services to the population is somewhat lower [2].

The birth rate in 2023 according to the total birth rate in the regions of the region is 19.2‰ in Ghazgon, 19.3‰ in Konimekh, 16.4‰ in Tomdi, and 23.9‰ in Zarafshan. average, a higher than average level was observed in Uchkuduq 24‰ district [4]. Similar indicators were observed in Qiziltepa and Navbahor districts of 22.2‰ and average birth rate of 23‰, Karmana 25.8‰, Nurota 24.7‰ and Khatirchi 25.7‰ districts and Navoi 25, 4‰ has a higher than average birth rate (Figure 2).

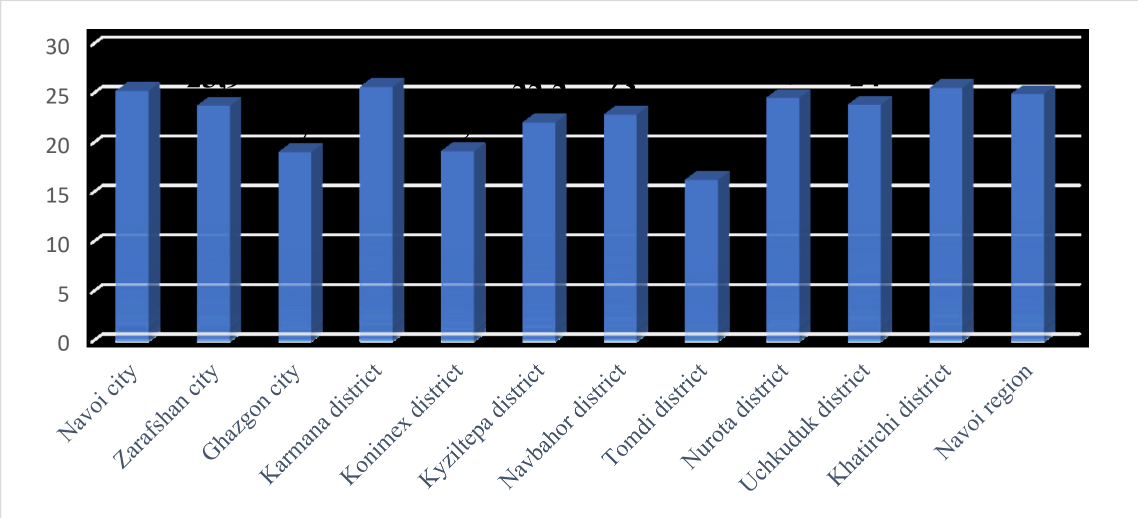


Figure 2. Birth rates of Navoi region, per thousand

As can be seen from the above, the birth rate in the cities of the region is lower than in the villages. The well-known Uzbek demographer M. Borieva writes that "the difference in the birth rate of the urban and rural population in Uzbekistan depends primarily on the ethnic composition of the population" [1]. Therefore, the difference in the number of births in urban and rural settlements of the Navoi region is evident in the ethnic structure of the population, the index by age groups, and the employment of women in social production and the level of education [3].

Another leading factor of the demographic situation is the death of the population. Socio-economic conditions have a decisive influence on all processes of population regeneration, including death. This is closely related to the level of material and spiritual development of the population, lifestyle, health and the role of medical services provided to them.

It is known that in the early 1990s, the death rate of the population in the republic was relatively high, reaching 6.2-6.3 people in 1991-95, but it decreased significantly in the following years. In particular, the average death rate in our country in 2022 is equal to 5 per thousand, the highest rate of which is observed in the city of Tashkent and the lowest rate in the Kashkadarya region.

The total death rate of the population in the region varies in different years, and it differs significantly between cities and villages. At the same time, there are clear differences between districts in this regard. For example, in Chunonchi, Uchquduq, Kyziltepa, Navbahor, Khatirchi, and Tomdi districts, the death rate corresponds to 3.3-4 per thousand, while in Konimekh, Nurota, Karmana districts, this rate is slightly higher, it is 4.5 is equal to -4.7 per thousand (Figure 3).

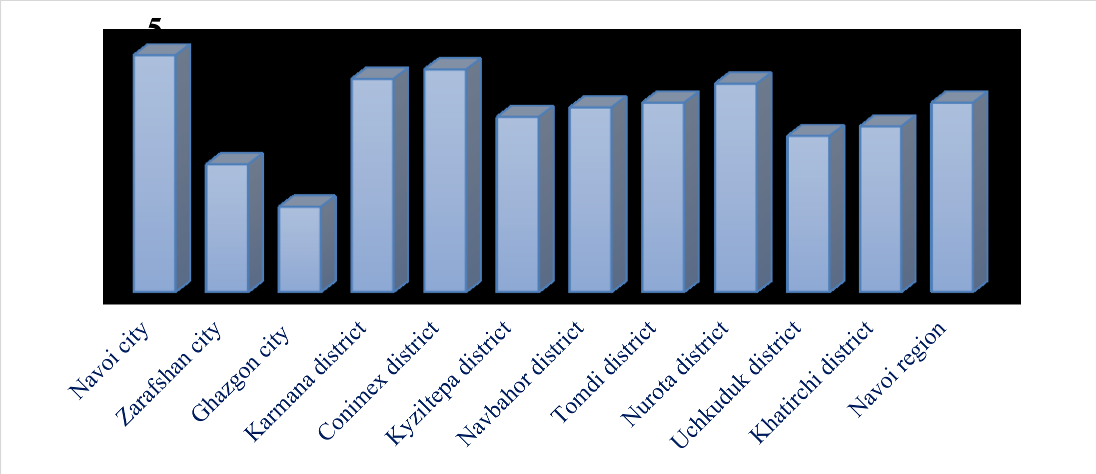


Figure 3 Death rates of Navoi region, per thousand

The amount of infant mortality in the process of death of the population of Navoi region requires a separate study. After all, it should not be forgotten that the increase in the number of babies and the death rate among them leads to an increase in the death rate in the general population.

In 2020, among the total number of deaths, the number of deaths of children under one year of age was 9.5 per thousand births. By developing motherhood and childhood protection work in the province, increasing attention to their health, the reduction of child mortality was achieved.

The main cause of children's death is mainly infectious and parasitic diseases, respiratory tract and lung colds, low hemoglobin in the blood, and malnutrition. Observations show that the majority of deaths of children under one year of age occur in urban areas. For example, in 2022, 32 percent of infant deaths occurred in rural areas, and 68 percent occurred in urban areas.

Child mortality is high in the cities of Navoi, Zarafshan, Navbahor, Tomdi, and Konimekh districts. Despite this, in recent years there have been very alarming situations in the population of the city as a result of the deterioration of the ecological situation. Mortality among children continues to increase due to anemia, acute kidney failure, and various chronic diseases in women of childbearing age.

If we compare the general indicator of population death with the data of 20 years ago, we can see that it has decreased to a certain extent. This situation is explained by the changes in some demographic processes among the population, as well as the increase in the level of medical literacy.

List of used literature

1. Boriyeva M.R., Yoldosheva M.A. Demographic problems, study guide. Tashkent, 2003-56 p
2. Kalonov B.H., Mukhammedova N.J., Buranov Yo.R. Peculiarities of the demographic indicators of the Navoi region// Information of the Geographical Society of Uzbekistan, volume 46. Tashkent, 2015.-85-87.

3. Oblakulov H.A. Lifestyle of the population of Navoi region and its socio-economic geographical features. - Horoscope. science. doc. diss-T.: UzMU, 2021. - 120 p.
4. Soliev A.S. Economic and social geography of Uzbekistan. -T., 2014. – 360 p.

Odilov N.E.
is an English teacher of
Shakhrisabz military- akademik lyceum
"Temurbeklar maktabi" in Kashkadarya region

WAYS OF TEACHING ENGLISH LANGUAGE AT VARIOUS PROFICIENCY LEVELS

Abstract*: This article offers illustrations and instances highlighting the significance of acquiring English language skills. It also delivers a concise summary of the challenges associated with learning English in teenagers and grown-ups. Additionally, it includes details about three successful approaches to mastering the English language.*

Key words*: consistency, mobility, selectivity, associativity, intelligence, the ability to distinguish, challenges of teaching multi-level classrooms, provide multiple levels of each activity, encourage group work.*

Odilov N.E.
ingliz tili o'qituvchisi
Shahrisabz harbiy-akademik litseyi
Qashqadaryo viloyatidagi "Temurbeklar maktabi"

INGLIZ TILINI TURLI BILISH DARAJALARIDA O'QITISH YO'LLARI.

Annotatsiya*: Ushbu maqolada ingliz tili ko'nikmalarini egallashning ahamiyatini ko'rsatadigan rasmlar va misollar keltirilgan. Shuningdek, u o'smirlar va kattalardagi ingliz tilini o'rganish bilan bog'liq qiyinchiliklarning qisqacha tavsifini taqdim etadi. Bundan tashqari, u ingliz tilini o'zlashtirishning uchta muvaffaqiyatli yondashuvi haqida tafsilotlarni o'z ichiga oladi.*

Kalit so'zlar*: izchillik, harakatchanlik, selektivlik, assotsiativlik, aql, farqlash qobiliyati, ko'p bosqichli sinflarni o'qitishdagi qiyinchiliklar, har bir faoliyatning bir nechta darajasini ta'minlash, guruh ishini rag'batlantirish*

Like all languages, individuals learning English are categorized into different proficiency levels. At present, the language proficiency levels recognized by the EU are A1, A2, B1, B2, C1, and C2. Each level of English learner necessitates a tailored teaching approach. Even when using a specific textbook or workbook, there are always opportunities to enhance an assignment to provide a challenge for students who require it. Here, we present detailed information about three approaches for teaching English to learners across all proficiency levels.

In the realm of teaching English, the issue of fostering creative skills in adolescents is increasingly pertinent. In today's educational landscape, particularly in secondary schools, this represents a significant scholarly concern with historical, ethno-cultural, and socio-pedagogical implications.

Nurturing students' creative abilities is reliant upon synthesizing the experiences gained from incorporating English lessons into the educational and vocational training framework. Viewing the study of English, its historical evolution, folk culture, and daily life as prerequisites not only directs students' efforts towards language acquisition but also facilitates the cultivation of students' creative capabilities using specific subject matter.

The formation of creative abilities in adolescents develops creative thinking and especially components based on such things:

Analytical components - respectively, presumptive and logical thinking - consistency, mobility, selectivity, associativity, intelligence, the ability to distinguish, etc.;

Emotional components (emotional - imaginative thinking): brightness of images, emotional assessment of events, facts, phenomena, etc.

Creative components (visual-effective thinking): rational solutions, nonstandard (individuality, manifestation of individuality, getting rid of stereotypes), the ability to anticipate the result, the desire to synthesize the best knowledge and skills in the activity, the ability to choose the most optimal solution from possible options and justify the right choice.

Analyzing the lessons of me and my colleagues, I came to the conclusion that the development of the creative abilities of vampires in English lessons will be more effective if I focus on the following conditions.

the need for professional skills,

teacher qualifications;

high material and technical base of the school and good interaction of methodological and socio-pedagogical services.

the presence of a favorable psychological microclimate in the school;

reliable relationships; classes are held on a regular basis, and competent, scientifically based management of children's creative activities is carried out;

the process of formation of creative abilities is directly related to education, knowledge and practical activities;

pedagogical techniques, forms and methods of teaching English language suitable for individual age characteristics and psychophysiological capabilities of ospirins, communication with children through play;

the use of a system of educational and creative tasks of personal and social significance of different levels of complexity, aimed at the individuality of the student, his level of training;

rejection of forms and methods of administrative and team work;

the formation and development of positive personality traits (creativity, emotional mood, artistic taste, diligence, love of the Motherland, love of the native language and other languages, respect for oneself and others, etc.), including carried out on the basis of learning English. language.

use of extracurricular activities.

The teacher should guide the students, promote the development of their creative abilities in each lesson. Only in the process of purposeful work will it be possible to form certain qualities and achieve interest in the occupation.The variety of didactic works creates a variety of purposeful relationships among students, the time spent on independent work increases. The acquisition of knowledge, skills and abilities in independent work teaches students to creative work, develops creative thinking, creates initial conditions for their application in the system of professional activity, improves oral and written speech skills, prefers the expression of thoughts, feelings and emotions, and also has the ability to think. The more different tasks are used, the more effective the result will be.

I would single out the following forms of work for the development of creative skills:

workshops,

the use of songs and poems;

homework,

daily maintenance,

use of computer programs,

defense of theses and projects,

business games, conferences;

work with a text, dialogue, or monologue constructed in an unusual way.

The directions of students' creative activity are most clearly manifested in their hobbies. They make something from natural and other metals, love literature, keep diaries, take photos, collect collections, communicate with nature, correspond with foreign friends, look for unusual things from ordinary and everyday things, etc. Such hobbies can be used to increase cognitive activity. the activity of students in foreign language lessons. At the request of the teacher, children bring photos, postcards, letters, items from their collections to the lessons, which will enliven communication in a foreign language, this communication will be more meaningful, intimate and interesting for its participants. The task of the teacher is to deeply study and know the hobbies of schoolchildren, use them for creative selfexpression of students in the classroom.

Challenges of Teaching Multi-Level Classrooms

In a community-based ESL program, not only can teachers have students with varying levels of English proficiency, but they will likely have students with different levels of literacy in their first language and a wide range of experience with formal education. Many of my students had only completed the equivalent of elementary school in their home countries, while some had completed high school or even college. So, while some students struggled to learn the English alphabet in the beginning, others seemed to be nearly fluent. However, many of my students fell somewhere in the middle.

Figuring out how to plan for such a diverse classroom can be daunting. When I first started I had almost no experience in lesson planning and felt as if I was planning multiple lessons for each class. In this kind of classroom, it can be a struggle to give each level the attention they need. When this happens, students may lose interest if they feel that the material is either too challenging or not challenging enough, which can lead to problems with student retention. All of this can quickly lead to burnout for teachers as well.

2. Provide multiple levels of each activity.

Even if you‘re teaching from a specific book or workbook, there are always ways to expand an assignment to challenge the students who need it.

Beginner

Start any assignment with the lowest level student in mind. If your class includes a few students who don‘t know any English, then make sure your assignment starts at a beginner level so that they can learn the basics.

Perhaps your book has a lesson on basic conversation. This is useful information that every English speaker must know. They have to know ―hello‖ and ―goodbye‖ before they can discuss business negotiations! Don‘t skip these basics just because some students will be bored; instead, expand these basics for those at a higher level.

Intermediate

After covering the basics, make the assignment a bit more difficult for students at the next level. Any student who already knows basic conversation can do something more challenging than the original assignment.

Teach them a few colloquialisms to complement the basics. Have them write down at least 3 ways of saying any basic conversational term. For example, ―How are you?‖ can also be ―How‘s it going?‖ or ―What‘s up?‖ or ―What‘s going on?‖ or ―What‘s new?‖ To motivate students, you can even offer extra credit to those who complete the more difficult assignment.

Advanced

To challenge this group, you can make the assignment even harder. If they already know basic conversation and colloquialisms, have them write a conversational script for a certain scenario that you will give them. For example, you could have two advanced students write a script that shows business colleagues greeting one another and making small talk outside of work. This will challenge them and teach them a specific conversational tone.

You could even have them perform the skit for you to practice their pronunciation! By taking one assignment and adding onto it, you can ensure that the basics are taught and more advanced students are appropriately challenged.

3. Encourage group work.

Group work can provide a great opportunity for students of different levels to learn from each other (Treko 2013). Once I had gotten to know my students and had an idea of their English skills, it was often helpful to break off into leveled groups for some assignments. Each group was then able to work toward different goals, whether it was a reading activity, book work, or speaking practice. To encourage a sense of community in the classroom, we would reunite as a class to present each group‘s work whenever it was practical and seemed like it would benefit others in the class.

Sometimes, rather than grouping students by their skill level, it can also be helpful for teachers to mix levels within a group. The smaller group setting may encourage students who are normally reserved to be more involved in the activity and ask for help from their higher-level classmates if needed. This sort of grouping lends itself well to games as well as writing and performing dialogues, giving each student a chance to use their English skills to reach a common goal and learn from their classmates in the process.

Reference:

1. Huang, J. (2000). "Integration of academic content learning and academic literacy skills development of L2 students: A case study of an ESL science class". In Shanahan, Timothy; Rodríguez-Brown, Flora V. (eds.). The 49th yearbook of the National Reading Conference. Chicago: National Reading Conference. p. 403.
2. Verplaetse, Lorrie Stoops (Autumn 1998). "How Content Teachers Interact with English Language Learners". TESOL Journal. 7 (5): 24–28.
3. English express. 7 Simple Ways to Learn English Effectively

Olimjonov S. A.
Trainee-teacher
of the Andijan Institute of Agriculture and AgroTechnology
Jo'rayeva Sh. A.
Trainee-teacher
of the Andijan Institute of Agriculture and AgroTechnology

SELECTION OF HIGH PERFORMANCE GENOTYPES OF LINE 27, LINE 28 SELECTION SYSTEMS IN TERMS OF EGG LAYING INTENSITY ON THE 1ST DAY

Annotation. *This article examines the egg-laying intensity of Liniya 27 and Liniya 28 selection systems based on research conducted in 2022-2023. Using large silk-producing breeds from Uzbekistan, the study observed the egg-laying process of female butterflies. Results indicated that Liniya 27 laid 501.5 eggs and Liniya 28 laid 590.0 eggs on the first day, with intensities of 88.9% and 90.6%, respectively. Variation coefficients were 15.6% for Liniya 27 and 13.8% for Liniya 28, confirming genetic diversity. Selected genotypes are expected to enhance egg-laying in future generations, highlighting the importance of these findings for selection processes.*

Keywords. *Egg-laying intensity, Selection systems, Liniya 27,Liniya 28,Genetic diversity, Breeding moths, Autbred crosses,Uzbekistan silk breeds.*

In this scientific work, the new promising Line 27, Line 28 selection systems and the large-cocoon Gozal and Marvarid breeds, which are laid on the 1st day and 2-3 days, are separated, that is, the 1st fraction and the 2nd fraction was planned to receive. During the spring worm feeding season, the brood cocoons selected from the families of the Line 27 and Line 28 systems were separated into sexes and interfamilial outbred hybridization was carried out.

After mating and separation of each crossbred butterfly for 2 hours, the female butterflies were placed in a parchment isolation bag with system, breed number, geneology of crossbred families and I-fraction number written on it. Exactly 24 hours later, the female butterfly was placed in the II-fraction bag to collect the eggs of the second fraction, that is, the eggs of the next 2-3 days. Eggs of 2 different fractions were taken from all the butterflies that were bred in this order, and they were hung in a special room for the aestivation period in July-August. During the aestivation period, the air temperature in the room was 25-260C and the relative humidity was 60%. Starting from the first 10 days of August, each egg laid was subjected to a microscopic examination to determine whether it was free of nosematosis and nuclear polyhedrosis. In order to study the signs of egg-laying intensity of female butterflies on the first day from a genetic point of view, we determined the main parameters of the eggs laid by butterflies on the first and 2-3 days. Table 3.2.1 lists the main reproductive parameters of the eggs obtained in the first and second fractions.

Table 3.2.1

The number of eggs in the first and second fractions of the Line 27 and Line 28 selection systems

Years	The number of eggs laid					
	Eggs laid on day 1 X ±S x , piece	C_v, %	Eggs laid on 2-3 days X ±S x , piece	C_v, %	Predominance of 1-day eggs, pcs	Reliability of difference (Pd)
Liniya 27						
2022	464±5,2	13,62	91±3,4	49,70	373	0,999
2023	539±3,9	15,74	59±2,7	61,25	480	0,999
Average	**501,5**		**75**		**426,5**	**-**
LINIYA 28						
2022	563±5,0	13,54	68±3,7	65,91	495	0,999
2023	617±9,2	15,07	58±4,1	59,53	559	0,999
Average	**590,0**		**63,0**		**527,0**	**-**

From the data in Table 3.2.1, we can see that the system and breeds differ sharply in terms of the number of eggs laid on the 1st day. If we compare the number of eggs in I-fraction and II-fraction, this indicator is according to the 3-year averages, respectively

501.5 in line 27; 75.0 units, 590.0 on Line 28; It was 63.0 units. The superiority of I-fraction indicators over II-fraction indicators was 426.5 units in Line 27 and 527.0 units in Line 28. Fraq's level of reliability is high (Pd= 0.999). It is important to study the variability of this sign in the correct organization of selection and breeding work and in the selection of genotypes of female butterflies that lay the maximum number of eggs on the 1st day. Therefore, based on the figures given above, we determined the intensity of egg-laying in the first day and its variability in two different selection systems and two different breed populations (Table 3.2.2).

Table 3.2.2

Variability of egg-laying intensity on the 1st day

Years	The total number of eggs in the barn is X ±S x, pcs	The number of eggs in the fraction X ±S x , pcs	Egg-laying intensity on the 1st day X ±S x , %	The coefficient of variation of egg-laying intensity on the 1st day (Cv, %)
liniya27				
2022	566±3,8	464± 5,2	87,7±0,77	14,5
2023	598±4,5	539± 3,9	90,1±0,45	17,2
Average	**582,0**	**501,5**	**88,9**	**15,9**
Compared to 2022, abs. in the indicator (R)	**32,0**	**75,0**	**2,4**	-
Liniya 28				
2022	631±4,0	563± 5,0	89,8±0,51	9,64
2023	675±4,8	617± 9,2	91,4±0,47	16,5
Average	**645,7**	**581,3**	**90,6**	**13,8**
Compared to 2022, abs. in the indicator (R)	**44,0**	**54,0**	**1,6**	-

Analyzing the indicator of egg-laying intensity on day 1 of the systems and breeds in Table 3.2.2, it can be seen that this indicator was 88.9% in Line 27 and 90.6% in Line 28. That is, it was found that the female butterflies of the systems lay a very large part of their total eggs in the first day.

One of the main goals of the scientific work is to carry out selection work on the feature of maximum egg-laying of female butterflies on the 1st day, and for this, there should be variability in the population of selection systems according to this feature. That is, diversity in the population is the basis for breeding. Therefore, we performed a complete analysis of the egg-laying of breeding systems and breeds, and calculated the coefficient of variation of female butterflies on the intensity of egg-laying on the 1st day. Based on three-year results, this indicator is Cv=15.6% in systems and breeds, respectively; Cv=13.8%; and Cv=15.2%; Cv=16.4%. These determined coefficients of variation indicate that there is diversity in breeding systems and breeding populations, and that it is possible to increase the number of eggs laid by female butterflies in the first day through breeding and selection.

As a confirmation of our above opinion, as a result of the selection of genotypes that showed the maximum egg-laying intensity on the first day for this character, the intensity of egg-laying on the first day in the third and second generations was 5.7 abs % in the Line 27 system, 1 in the Line 28 system, An increase of 3 abs % was achieved.

Used literature.

1. Tut ipak qurti selleksiyasida kapalaklarning reproduktiv belgilari asosida tanlashning ilmiy asoslari”. Magistrlik dissertatsiyasi. Olimjonov.S.A. Andijon.2021-2023.
2. BIRINCHI SUTKADA VA KEYINGI SUTKALARDA QO‘YILGAN TUXUM FRAKSIYALARINI REPRODUKTIV, HAYOTCHANLIK VA MAHSULDORLIK BELGILARI BO‘YICHA QIYOSIY BAHOLASH”. “So’ngi ilmiy tadqiqotlar nazariyasi”. Respublika ilmiy-uslubiy jurnali. 7-JILD 10-SON. O’zbekiston. 2024.

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Oripova L. N.
the senior teacher
of the Karshi engineering-economics institute
Karshi city, Republic of Uzbekistan.

ASSESSMENT OF THE EFFECTIVENESS OF VORTEX USE MASS TRANSFER EQUIPMENT AT SHURTAN GAS CHEMICAL COMPLEX

Abstract: *In the process of gas processing, mass transfer and mass transfer efficiency can be increased by creating optimal column regimes and effective column action mechanisms. In the absorption process, gas and absorbent are mainly affected in nozzle columns.*

Keywords: *absorber, Reynolds number, reactor, column, turbulent.*

There are many different types of apparatus for organizing mass transfer processes in liquid-gas and solid-liquid systems [1]. The most common are column apparatuses of packed or plate design.

Recently, vortex mass transfer apparatuses have found wide application. Methods have been developed for stabilizing and obtaining stable gas-liquid and pseudo-liquefied (gas - dispersed solid phase) vortex layers in the vortex chamber of a vortex centrifugal multiphase reactor, which have a dense, ordered "quasi-crystalline" structure and are characterized by uniform jet flow around each particle with high Reynolds numbers and increased gas flow loads [2,3].

A mass-exchange apparatus design is known, the body of which is equipped with a second tangential slit for introducing the gas phase under a rotating liquid layer. The second slit is separated from the first by a partition and is located closer to the tangent, coinciding with the direction of phase introduction [4]. Such a design allows intensifying the mass-exchange process. The apparatus consists of a vertical cylindrical body with a tangential slit for introducing liquid, partitions separating them, a settling tank with pipes for removing the phases. The principle of operation of the apparatus is as follows: through the tangential slit of liquid introduction, a liquid phase is fed, forming a rotating layer, under which a gas phase is introduced from the second slit at a high speed (50-100 m/s).

The gas flow passes to the center of the housing through the liquid layer, turning it into a gas-liquid emulsion. In this case, the contact surface of the phases increases significantly, as a result of which the exchange processes are intensified.

Also known is a design of a mass exchange apparatus comprising a vertical cylindrical body, a distribution grid with distribution elements made in the form of truncated cones with the lower base down, a plate forming a gas chamber with the distribution grid and the body of the apparatus, in which conical injection-twisting devices are installed, made of hollow curved blades forming gaps between themselves, stunned from below, and communicating from above with the liquid level on the distribution grid through an opening, and forming a Venturi profile with the distribution elements [5]. The absorber has pipes for introducing liquid and gas, respectively.

In the proposed design of the absorber, due to the use of a swirling straight flow in the distribution zone, it is possible to create a highly turbulent gas-liquid flow with a continuously renewed phase contact surface.

Fig. 1 shows a graph of the dependence of the gas phase flow rate on the absorption of CO_2 by water in a vortex apparatus in the form of a function y=f(w).

Analysis of the graph shows that in all cases of using a vortex flow for the gas phase, the process of absorption of CO_2 increases, and with an increase in the value of the gas velocity, the absorption increases accordingly.

With a water velocity of $w_в$=0.3 m/s for gas with a velocity of 3 m/s, the concentration of carbon dioxide after absorption will be y=0.029 kg/m^3, with $w_в$=1.1 m/s the value y=0.017 kg/m^3, in the case of an increase in water velocity to $w_в$=2.05 m/s – y=0.0026 kg/m^3, i.e. with an increase in water velocity from 0.3 to 2.05 m/s the absorption intensity will increase by 11 times.

In case of gas velocity growth up to 5 m/s, the bubbling of gas-liquid flow will increase, i.e. vortex motion leads to growth of phase contact due to decrease of droplet sizes, as a result of which absorption of carbon dioxide by water increases. Thus, at water velocity $w_в$=0.3 m/s, concentration of carbon dioxide will be y=0.025 kg/m^3, at $w_в$=1.1 m/s value y=0.01 kg/m^3, and already at water velocity wв=1.55 m/s maximum absorption is achieved, i.e. y=0.0026 kg/m^3.

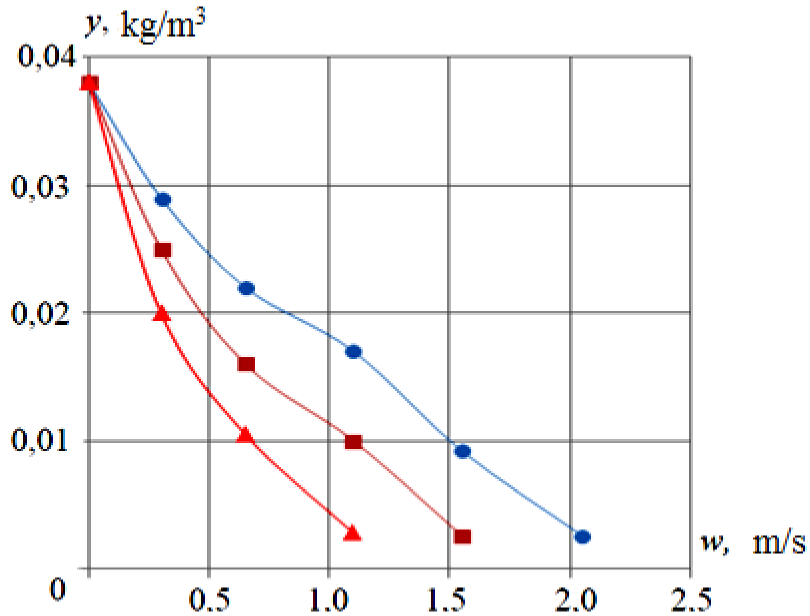

Fig. 1. The influence of the gas phase flow rate on the absorption of CO_2 by water in a vortex apparatus.

● – 2 m/s ; ■ – 5 m/s; ▲ – 8 m/s.

Analyzing the graph for a vortex absorber with a gas velocity of 8 m/s, all other things being equal, it can be seen that the absorption intensity, compared to a gas velocity of 3 m/s, increases by more than 6 times, namely, the maximum absorption of CO_2 is achieved at $w_в$=1.1 m/s, and compared to a gas velocity of 5 m/s, it increases by 3.5 times.

Advantages and benefits of vortex mass transfer devices: in a vortex fluidized bed, homogeneous fluidization is achieved at high gas flow rates with Reynolds numbers up to 5000 with a jet flow around each particle, which allows for processes to be carried out without the formation of stagnant zones, uniformly and with high efficiency in terms of heat and mass transfer; in a vortex gas-liquid layer, a high specific phase contact surface (5-10 m^2/l) is achieved with a high rate of its renewal and with high efficiency in terms of heat and mass transfer. In this case, there is no need to use packing that increases the phase contact surface. The reactor has small dimensions and high efficiency; the possibility of combining mixing and separation processes; low hydrodynamic resistance ($1\text{-}3\cdot10^3$ Pa), high gas throughput; simplicity of theoretical analysis and calculation of the main operating parameters of vortex multiphase layers; the ability to work with three-phase (gas-dispersed solid phase-liquid) vortex layers.

Based on the developed methods, multiphase reactors can be developed for carrying out specific chemical processes.

Literature

1. Yusupbekov N.R., Nurmuhamedov H.S., Zokirov S.G. Kimyoviy texnologiya asosiy jarayon va qurilmalari. – Toshkent, Fan va texnologiyalar, 2015. – 848 b.

2. Rakhimov, G. B., & Sayfiyev, E. K. (2024). Research of the process of producing alcohols based on by-products obtained in the fischer-tropsch synthesis. *Sanoatda raqamli texnologiyalar*, *2*(03).

3. Raximov, G. A. B. (2024). Qobiq-quvurlardan foydalangan holda issiqlik almashinish uskunasining samaradorligini oshirish uchun konstruksiyani takomillashtirish. *Sanoatda raqamli texnologiyalar*, *2*(03).

4. Rakhimov, G. (2023). Qobiq quvurli issiqlik almashinish qurilmalaridagi issiqlik almashinish samaradorligini gidrodinamik parametlariga ta'sirini o 'rganish. *Innovatsion texnologiyalar*, *51*(03), 77-86.

5. Rakhimov, G., Kuybokarov, O., & Karshiyev, M. (2024). Research of the catalytic properties of a catalyst selected for the production of high-molecular weight liquid synthetic hydrocarbons from synthesis gas. In *E3S Web of Conferences* (Vol. 498, p. 01008). EDP Sciences.

6. Raximov, G. (2023). Qobiq quvurli issiqlik almashinish qurilmasini konstrusiyasini o 'zgartirish orqali issiqlik almashinish samaradorligini oshirish. *Sanoatda raqamli texnologiyalar/Цифровые технологии в промышленности*, *1*(2), 172-179.

7. Rakhimov, G. (2023). Qobiq quvurli issiqlik almashinish qurilmalaridagi issiqlik almashinish samaradorligini gidrodinamik parametlariga ta'sirini o 'rganish. *Innovatsion texnologiyalar*, *51*(03), 77-86.

8. Rakhimov, G. B. (2023). Development of anti-detonation additive. *Экономика и социум*, (12 (115)-1), 604-607.

9. Murtazaev, F. I. (2023). Galogenlarni ajratib olishda ishlatiladigan sorbentlar sintezi. *Sanoatda raqamli texnologiyalar/Цифровые технологии в промышленности*, *1*(1), 127-131.

10. Rakhimov, G. B. (2023). Increasing the efficiency of the gas refining process through the recovery of alkanolamines. *Journal of Fundamental and Applied Research Vol*, *3*(3), 20230018.

11. GB, R. (2022). corrosion protection of heat exchangers used on the device for amine cleaning of regeneration gases "Shurtan oil and gas production department". *German International Journal of Modern Science/Deutsche Internationale Zeitschrift für Zeitgenössische Wissenschaft*, (32).

12. Ganisher, R. (2023). Increasing the efficiency of heat exchange by changing the construction of a shell and tube heat exchanger. *Universum: технические науки*, (5-8 (110)), 21-24.

Payonov L.M.
Karshi Engineering-Economics Institute of the ***graduate student***
Karshi city, Republic of Uzbekistan.
Rakhimov G. B. associate professor, Ph.D.
Karshi Economics Institute ***of the***
Republic of Uzbekistan, Kashkadarya region
https://orcid.org/0009-0004-1970-1541
Oripova L. N.
the senior teacher
of the Karshi engineering-economics institute
Karshi city, Republic of Uzbekistan.
Hamidov D. R.
Associate professor
of the Karshi engineering-economics institute
Karshi city, Republic of Uzbekistan.

DEVELOPMENT OF A COLUMN WITH AN OPTIMAL CONSTRUCTION TO INCREASE THE EFFICIENCY OF CLEANING NATURAL GAS FROM SOUR COMPONENTS BY ABSORPTION METHOD OF MUBARAK GAS PROCESSING PLANT LLC

Abstract: *Mubarak gas processing plant is one of the largest gas processing plants in Central Asia. The raw materials at the plant are high- and low-sulfur gases, which are cleaned of sour components by the absorption method. This process is carried out in a plate absorption column, using methyldiethanolamine as an absorbent. Sieve and trapezoidal plates are used in the column. At present, gas processing plants mainly use tubular absorption columns for cleaning gases from acidic components. This article presents the results of an experiment on the purification of high-sulfur gases at the Mubarak gas processing plant using a 40% solution of methyldianolamine in a laboratory column with different types of tubular absorption. By comparing the results obtained from these experiments, it was possible to determine the optimal nozzle type for the process and the optimal hydrodynamic parameters of the process.*

Key words: *absorber, nozzle, plate, emulsification regime, sour gas.*

Energy, transport, electricity, communication, radio are the modern world economy. The increase in human population in the world from year to year also sharply increases the demand for their energy sources. Until now, people in the world have been meeting their needs by developing new types of non-renewable and renewable energy sources.

Oil and gas are renewable energy sources, but they take centuries or even longer to regenerate. Nowadays, oil and gas are mainly used as raw materials in industry and internal combustion engines, and as raw materials in oil and gas chemical enterprises. Currently, electric cars are being produced in developed countries. However, due to the fact that the engines of electric cars are not as advanced as the internal combustion engine, even in developed countries, vehicles with an internal combustion engine are the main part. Oil and gas have been one of the main sources of energy in the world for more than a century. Therefore, taking into account that oil and gas are the main fuel of internal combustion engines and important raw materials in the oil and gas chemical industry, it is important to use this resource wisely until the alternative energy that replaces oil and gas energy is created in the near future, and to save oil and gas resources to the next generation. leaving a legacy is one of the most pressing problems of today. For this reason, it is important to improve the technologies and equipment designs used in hydrocarbon processing enterprises and to produce high-quality oil and gas products that meet international standards and improve environmental performance.

Absorber columns with plates and nozzles are mainly used to purify gas from acidic components in the absorption method.

In technology, of course, there are more absorption devices, which makes it difficult to choose the most reasonable absorber for each specific situation. Process conditions and requirements for absorbers vary significantly in different industries, so it is not possible to recommend a single absorber that is best for all situations. Basically, the most suitable device for a given process is the one with the highest technical and economic performance. At the same time, the costs for 1 ton of product (for the absorption process - the cost of processing 1 m3 of gas) should be the lowest. To begin technical and economic calculations, you must first select the most types of devices that can successfully solve this specific problem.

There are the following methods of cleaning natural gas from sour components:

Absorption - cleaning of sour gases contained in natural gas over the entire surface using a liquid absorbent (alkanolamines).

Adsorption - purification of acidic components in the gas tank by absorption in the porous part with the help of solid absorbing substances (zeolites, silica gels or activated aluminum).

Chemical method – Hygroscopic salts are usually metal chlorides ($CaCl_2$, etc.).

Most of the natural gas sour components installed in gas processing plants in the world are based on the first two methods.

The advantages and disadvantages of the absorption and adsorption method of natural gas from sour components are as follows:

Advantages of the absorption method for cleaning natural gas from sour components:

Absorption method of cleaning sour components of natural gas is high even when the amount of sour gases in the gas (above 1%) is high;

The ability to separate sour gases when natural gas is purified from sour components by the absorption method;

Disadvantages of the absorption method for cleaning natural gas from sour components:

The process of regeneration of saturated absorbent when cleaning natural gas from acidic components by absorption method is complicated (requires a lot of equipment);

After the natural gas is purified from sour components by the absorption method, the natural gas must be dried.

Advantages of the absorption method for cleaning natural gas from sour components:

When natural gas is purified from acidic components by the adsorption method, the drying process goes together. That is, it does not need to go through the drying process when it is cleaned in the adsorption process;

The regeneration process is simple.

Disadvantages of the absorption method for cleaning natural gas from sour components:

When the amount of sour gas in natural gas is high (more than 1%), the efficiency of purification by adsorption method is low;

The regeneration process is carried out using hot gas. In this case, the regeneration gas is sent to a torch or cleaned by absorption method;

At the Mubarak gas processing plant, the absorption method is used to purify the raw gas due to the high content of sulfur gas. The absorber column is of the plate type and is fitted with a cylindrical plate. Table 1 lists the main technological parameters and design values of the absorber column used at the Mubarak gas processing plant.

Gas consumption m^3/h	Concentration of H_2S in %	CO_2 concentration %	Absorbent consumption on m^3/l MDEA	Absorber diameter, m	Absorber height, m	Number of plates
250000	4,5-5	3,30	0, 76	3,20	27,8	24-32

The efficiency of cleaning gases from acidic components in this column is 81-86%. The main disadvantages of the plate absorption column are the small surface area and mechanical particle clogging of the holes of the plates, which increases the hydraulic resistance of the plates. It is possible to increase the efficiency of cleaning by replacing the internal contact device of this column with a nozzle. The process of purification of raw gas from the Mubarak gas processing plant was carried out in the laboratory tube absorber. The results obtained for the laboratory device are presented in Table 2.

Table 2

Results obtained during purification in a laboratory absorber device

Enter		Exit	
Flow	$\%_{mas}$	Flow	$\%_{mas}$
Including raw gas		Including refined natural gas	
Methane	86,2	Methane	85,8
Ethan	4,5	Ethan	4,3
Propane	2,1	Propane	2,0
Bhutan	0,8	Bhutan	0,75
Carbon dioxide	0,9	Carbon dioxide	0,0065
Hydrogen sulfide	5,5	Hydrogen sulfide	0,048
		loss	7,0955
Total:	**100**	**Total:**	**100**

In the Mubarak gas processing plant, the gas purification efficiency in the plate absorption column is 93.6%. It was determined that the efficiency of gas purification in the tube absorber in the laboratory device is 99.127%. Due to the size of the meeting surface, the efficiency of separation of phases in the tubular absorber is high. In the process of cleaning gas from sour components at the Mubarak gas processing plant, it was found that the efficiency of cleaning increases by 5.527% by using a tubular absorber.

Used literature

1. Hurmamatov A.M., Raximov G‘.B., Shonazarov E.B. Qobiq quvurli issiqlik almashinish qurilmasini tadqiq qilish va xomashyoni fizik-kimyoviy xossalarini o‘rganish. Ijodkor o‘qituvchi. Ilmiy uslubiy jurnal. 12-son. Toshkent–2021. –299-303 b.
2. Yusupbekov N.R., Nurmuhamedov H.S., Zokirov S.G. Kimyoviy texnologiya asosiy jarayon va qurilmalari. - Toshkent, O`qituvchi, 2003. - 557 b.
3. **Khurmamatov A.M., G.B.Rakhimov,** Murtazayev F.I. Intensifications of heat exchange processes in pipe heat exchangers/ AIP Conference Proceedings **2432**, 050021 (2022); https://doi.org/10.1063/5.0096336 Published Online: 16 June 2022.
4. Khurmamatov A.M, Rakhimov G.B, Sayfullaev T.K. Improving the efficiency of heat exchange by improving the design of the shell tubular heat exchanger/ XX Международная научно-практическая конференция «Problems of science and practice, tasks and ways to solve them» (Online) Varshava, Polsha. May 2022.-p. -722-724.
5. Ҳурмаматов А.М.,Рахимов Ғ.Б. Повышение эффективности теплообмена путем совершенствования конструкции трубного теплообменного аппарата/ XXI International Scientific and Practical Conference «Actual priorities of modern science, education and practice». (Online) Parij, Frence. May 2022. -p. -854-854.

6. Ҳурмаматов А.М., Рахимов Ғ.Б.**Calculation of heat transfer and heat transfer in a pipe apparatus in heating gas condensate**// Scientific and technical journalof Namangan institute of engineering and technology. -Наманган,VOL 6 - Issue (1) 2021.-p. - 187-191. (05.00.00, №33).
7. Ҳурмаматов А.М., Рахимов Ғ.Б., Муртазаев Ф.И. Интенсификации процессов теплообменав трубчатых теплообменниках// Международный научный журнал «Universum: технические науки». - Москва, 2021.- № 11 (92). - С. 11-15. (02.00.00; №1).
8. Ҳурмаматов А.М., Рахимов Ғ.Б. Расчет гидравлического сопротивления при плавномрасширении и сужении горизонтальной трубы//Международный научный журнал «Технологии нефти и газа». - Москва, 2021. - №6(137). - С. 62-64. (05.00.00; №80).
9. Hurmamatov A.M., Raximov G‘.B., Do‘stov H.B., Panoev Ye.R. Regeneratsiya gazlarini nordon komponentlardan absorbsiya usuli orqali tozalash texnologiyasida qo‘llaniladigan qobiq quvurli issiqlik almashinish qurilmasining ish samaradorligini oshirish// Fan va texnologiyalar tarraqiyoti. - Buxro, 2021. - №4. - 48-58 b. (05.00.00; №24).\
10. Rakhimov, G. (2023). Qobiq quvurli issiqlik almashinish qurilmalaridagi issiqlik almashinish samaradorligini gidrodinamik parametlariga ta’sirini o‘rganish. Innovatsion texnologiyalar, 51(03), 77-86.
11. Control Technologies for Hazardous Air Pollutants, Office of Research and Development, U.S. Environmental Protection Agency, Research Triangle Par,, North Carolina, Publication No. EPA 625/6-91-014.
12. Z.Salimov. Neft va gazni qayta ishlash jarayonlari va uskuna-lari. – T.: «Aloqachi», 2010, 508 bet.
13. Murtazaev, F. I., & Raximov, G. B. (2023). Synthesis of sorbents used in the separation of halogens. Sanoatda raqamli texnologiyalar, 1(01).
14. Treybal, Robert E., *Mass Transfer Operations* (Third edition), McGraw-Hill Book Company, New York, 1980.

Qodirjonova M. A.
Farg`ona davlat universiteti
Pedagogika tarixi va nazariyasi yõnalishi 1-kurs magistranti
Tojiboyeva O. M.
Farg`ona davlat universiteti
Pedagogika tarixi va nazariyasi yõnalishi 1-kurs magistranti

OLIY TA'LIM JARAYONIDA TANQIDIY FIKRLASHNI RIVOJLANTIRISH TEXNOLOGIOYALARI

Annotatsiya: *Maqolada oliy ta'lim jarayonida tanqidiy fikrlashni rivojlantirishga qaratilgan texnologiyalar muhokama qilinadi. O'zbekiston va MDH mamlakatlari olimlarining tadqiqotlariga tayangan holda tanqidiy fikrlashni shakllantirishda qo'llaniladigan innovatsion metodlar va interfaol usullar ko'rib chiqiladi. Ushbu texnologiyalar ta'lim jarayonida talabalar tanqidiy fikrlash qobiliyatini oshirishga xizmat qiladi.*

Kalit so'zlar: *Tanqidiy fikrlash, oliy ta'lim, interfaol metodlar, muammoli ta'lim, keys-stadi, innovatsion texnologiyalar.*

Kadirjonova M. A.
Master
of Fergana State University
Tojiboyeva O. M.
Master
of Fergana State University

TECHNOLOGIES FOR DEVELOPING CRITICAL THINKING IN THE PROCESS OF HIGHER EDUCATION

Abstract: *The article discusses technologies aimed at developing critical thinking in the process of higher education. Based on the research of scientists of Uzbekistan and the CIS countries, innovative methods and interactive methods used in the formation of critical thinking are considered. These technologies serve to increase students' ability to think critically in the educational process.*

Key words: *Critical thinking, higher education, interactive methods, problem-based learning, case-study, innovative technologies*

KIRISH

Bugungi kunda oliy ta'lim tizimining asosiy maqsadi zamonaviy bilimlarga ega, tanqidiy fikrlay oladigan mutaxassislar tayyorlashdir. Tanqidiy fikrlash – muhokama qilinayotgan masala bo'yicha o'z pozitsiyasini egallash va uni asoslash qobiliyatini, suhbatdoshni tinglash, dalillarni sinchkovlik bilan ko'rib chiqish va ularning mantig'ini tahlil qilish qobiliyatini ta'minlaydigan fikrlash; nafaqat axborotni o’zlashtirish, balki uni tanqidiy baholash, tushunish va qabul qilish qobiliyati. Bu nima qilish va nimaga ishonish haqida qiyin qarorlar qabul qilish uchun aqlli, muvozanatli yondashuv. Tanqidiy fikrlash ma’lum miqdordagi ishonchsizlikni, umume’tirof etilgan haqiqatlarga shubhani o’z ichiga oladi. Tanqidiy fikrlash – bu qiziquvchanlik va tadqiqot usullaridan foydalanish. Pedagogika va psixologiyaning vazifasi mustaqil fikrlaydigan va harakat qila oladigan shunday shaxsni tarbiyalashdan iborat bo’lib, bu shaxsning jamiyat hayotida faol ishtirok etishini nazarda tutadi. O‘zbekiston Respublikasi Prezidentining 2023-yilgi "Ta’lim sifatini oshirish va yoshlarning tanqidiy fikrlash qobiliyatini rivojlantirish to‘g‘risida" farmoni [1] oliy ta’lim muassasalarida tanqidiy fikrlashni rivojlantirishga qaratilgan yangi yondashuvlarni talab qiladi. Talabalarning mustaqil fikrlash ko‘nikmalarini oshirish, ta'lim jarayonida o‘z faoliyatini boshqarish imkoniyatini berish hamda ilmiy va amaliy muammolarni hal etishda tanqidiy fikrlashni rivojlantirish muhim ahamiyatga ega.

Ushbu maqola oliy ta'lim muassasalarida tanqidiy fikrlash rivojlantirish texnologiyalari, shu orqali ta'lim jarayonini samarali tashkil etishga yordam berishni maqsad qilib qo'yadi.

Tanqidiy fikrlash va uning oliy ta’limdagi o‘rni

Tanqidiy fikrlash o‘quvchilarning o‘z fikrlarini mustaqil ifoda eta olishlari va turli muammolarga nisbatan yondashuvlarini kengaytirishga imkon beradi. S. Qodirov va M. To‘laganov tanqidiy fikrlashni o‘quv jarayonida rivojlantirish usullarini o‘rganib, interfaol metodlarning samaradorligini ta’kidlaganlar [2, 3]. Tanqidiy fikrlash o‘quvchilarni tahlil qilish, dalillarni o‘rganish va asosli xulosalar chiqarishga o‘rgatadi.

Tanqidiy fikrlashni rivojlantirishda qo‘llaniladigan texnologiyalar

Tanqidiy fikrlashni shakllantirish texnologiyasi bilimlarni izlash va mustaqil o’zlashtirishga urg’u berish, talabalarning oldingi tajribasi va bilimlaridan faol foydalanish, o’zaro munosabatlarning barcha darajalarida o’z nuqtai nazarini, o’z pozitsiyasini ifodalashni, fikr almashishni rag’batlantirish, xulosalar, hukmlar, pozitsiyalarni asoslash uchun sharoit yaratish, yangi bilim va tajribani sinab ko’rish va qo’llashga urinishlarni rag’batlantirish kabi xususiyatlarni qamrab oladi.

.Oliy ta’lim jarayonida tanqidiy fikrlashni rivojlantirish uchun quyidagi texnologiyalar muvaffaqiyatli qo‘llanilmoqda:

1. Interfaol metodlar: Bu usullar talabalarning muloqotga kirishishi, hamkorlikda ishlashi va o‘z fikrlarini himoya qilishini rag‘batlantiradi. S. Qodirovning tadqiqotlari shuni ko‘rsatadiki, interfaol darslar talabalarning tanqidiy fikrlash qobiliyatini sezilarli darajada oshiradi [2].

2. Muammoli ta’lim texnologiyalari: Muammoli ta’lim jarayonida talabalarga turli murakkab vaziyatlar taqdim etilib, ularni mustaqil yechishga undaydi. Rossiyalik olimlar L. Vygotskiy va I. A. Zimnyaya muammoli ta’limni tanqidiy fikrlashni rivojlantirishning samarali vositasi sifatida ta’kidlaganlar [4].

3. Keys-stadi: Keys-stadi usuli talabalarga real hayotiy holatlar asosida tahliliy fikrlash imkoniyatini beradi. E. Ivanovaning tadqiqotlariga ko‘ra, ushbu metod talabalarning mustaqil fikr yuritish qobiliyatini kuchaytiradi [5].

4. Debat va munozaralar: Talabalarni o‘z pozitsiyalarini himoya qilish, tahlil qilish va qarama-qarshi fikrlarni tinglashga o‘rgatadi. A. Leontyevning faoliyat nazariyasiga ko‘ra, debatlar tanqidiy fikrlashni rivojlantirishda muhim rol o‘ynaydi [6].

5. Tahliliy yozuv va refleksiya: Talabalar o‘z fikrlarini yozma shaklda tahlil qilishi va o‘zlarining xulosalarini mustahkamlashi uchun qo‘llaniladi. Bu usul talabaning tahliliy qobiliyatini rivojlantiradi.

O‘zbekiston va MDH olimlarining oliy ta’lim talabalarida tanqidiy fikrlashni oshirish texnologiyalariga oida qarashlari turlicha va barcha qarashlar umumiy tarzda talabalar tanqidiy hulosalar qila olishlari, erkin fikrlash qobiliyatlarining rivojlanishida interfaol metodlar alohida ahamiyatga ega ekanligi batafsil bayon etilgan.

S. Qodirov oliy ta’limda tanqidiy fikrlashni rivojlantirishning asosiy metodlaridan biri sifatida interfaol usullarga e’tibor qaratadi [2]. M.To‘laganov tanqidiy fikrlashni rivojlantirishning psixologik jihatlarini tadqiq qilib, unga metodik yondashuvlarni ishlab chiqqan [3]. L. Vygotskiy muammoli ta’lim texnologiyalarining ahamiyatini ta’kidlab, bu metod talabalarni o‘ylashga va tahlil qilishga undashini aytgan [4]. E. Ivanova keys-stadining ta’limdagi rolini tahlil qilib, uning real vaziyatlarda qo‘llanilishini chuqur yoritgan [5]. Tanqidiy fikrlash masalasi bo'yicha o'zbek va chet el olimlarining ko'plab ilmiy tadqiqotlari mavjud. Masalan, Nosirov G'. tomonidan olib borilgan tadqiqotlarda, tanqidiy fikrlash ko‘nikmalarini rivojlantirish uchun interfaol usullar va muammoli vaziyatlardan foydalanish kerakligi ta'kidlanadi (8). Uning fikricha, bunday yondashuv talabalarning o'z fikrlarini mustaqil ravishda shakllantirishga yordam beradi.

Tanqidiy fikrlashni rivojlantirish texnologiyalari oliy ta’limda quyidagi afzalliklarni beradi:

Mustaqil va ijodiy fikrlash qobiliyatini oshiradi;

O‘quv jarayonining samaradorligini oshiradi;

Talabalarni turli vaziyatlarda tezkor va analitik fikrlashga tayyorlaydi.

X. Karimov esa tanqidiy fikrlash ko'nikmalarini shakllantirishda muammoli vazifalar va amaliyotning ahamiyatini ta'kidlaydi. U, talabalar murakkab muammolarni hal etish orqali tanqidiy fikrlash qobiliyatlarini rivojlantirishlarini aniqlagan (9).

Ushbu maqolada tanqidiy fikrlash ko'nikmalarini rivojlantirishning metodologiyasi quyidagi yo‘nalishlar orqali amalga oshirildi:

1. Nazariy tahlil – Tanqidiy fikrlash ko‘nikmalarini rivojlantirishga qaratilgan ilmiy manbalar va tadqiqotlar o‘rganildi.

2. Kuzatishlar va eksperimentlar – Oliy ta'lim muassasalarida interfaol o'qitish usullari va muammoli vazifalar orqali talabalar tanqidiy fikrlash ko‘nikmalarini qanday rivojlantirish mumkinligi kuzatildi.

3. Anketalar va so‘rovlar – Talabalarning tanqidiy fikrlash darajasini baholash uchun so‘rovnomalar o‘tkazildi va ularning natijalari tahlil qilindi.

Tadqiqot natijalari shuni ko'rsatdiki, tanqidiy fikrlash ko'nikmalarini shakllantirishda o‘qituvchilar talabalar bilan faol muloqot qilishlari, ularni ilmiy munozaralarda qatnashishga undashlari zarur. O‘zbekiston Respublikasi Prezidentining farmonida ta'lim tizimini takomillashtirishda talabalar o‘rtasida tanqidiy fikrlash ko‘nikmalarini rivojlantirishga qaratilgan tadbirlarni amalga oshirish zarurligi ko‘rsatib o‘tilgan. (1) Shuningdek, zamonaviy ta'lim texnologiyalaridan foydalanish ham talabalarning tanqidiy fikrlash ko‘nikmalarini rivojlantirishda katta ahamiyatga ega.

Talabalarning tanqidiy fikrlash ko‘nikmalarini rivojlantirishda o'zbek va chet el olimlarining tajribasidan foydalanish, zamonaviy pedagogik yondashuvlarni qo'llash va yangi metodlardan foydalanish muhimdir. Bu jarayonda interfaol ta'lim texnologiyalaridan foydalanish, murakkab muammolarni hal qilishda talabalarni rag'batlantirish, ularning mustaqil fikrlarini rivojlantirish kerak.

XULOSA

Oliy ta’limda tanqidiy fikrlashni rivojlantirish talabalar uchun faqat akademik yutuqlarni emas, balki ularning amaliy hayotda muhim qarorlar qabul qilish qobiliyatlarini ham oshirishga yordam beradi. Tanqidiy fikrlashni rivojlantirish uchun qo‘llaniladigan interfaol metodlar, muammoli ta’lim texnologiyalari va keys-stadi kabi texnologiyalar ta’lim jarayonini yanada samarali qilishda katta ahamiyatga ega. Ushbu texnologiyalar talabalarning o‘z fikrlarini mustaqil ifoda eta olishlari, analitik yondashuvlarni shakllantirishlari va muloqot ko‘nikmalarini rivojlantirishlariga xizmat qiladi.

O‘zbekiston Respublikasi Prezidentining ta’lim sifati va yoshlarning tanqidiy fikrlash qobiliyatini rivojlantirishga oid farmoni bu boradagi sa’y-harakatlarni jadallashtirish zaruratini ko‘rsatadi. Shu sababli oliy ta’lim muassasalarida innovatsion yondashuvlarni keng qo‘llash, darslarni yanada qiziqarli va tahliliy qiladigan metodlarni joriy etish talab etiladi. Bu jarayonda O‘zbekiston va MDH mamlakatlari olimlarining tadqiqotlari ko‘p yillik tajribalarni o‘zida mujassam etgan holda, tanqidiy fikrlashni rivojlantirishdagi muhim yutuqlarni ko‘rsatadi. Masalan, S. Qodirov va M. To‘laganovning interfaol metodlar bo‘yicha olib borgan izlanishlari, Vygotskiy va Leontyevning faoliyat nazariyasiga asoslangan yondashuvlari bu boradagi metodik ishlanmalar uchun zamin yaratadi.

Tanqidiy fikrlashni rivojlantirish texnologiyalari oliy ta’limda nafaqat o‘quv jarayonining samaradorligini oshiradi, balki kelajak avlodning mustaqil fikrlash, ijodiy yondashuv va o‘z fikrini asoslab berish kabi qobiliyatlarini shakllantiradi. Bu esa jamiyatning har tomonlama rivojlanishi uchun muhim omil hisoblanadi. Shu sababli, tanqidiy fikrlash ko‘nikmalarini rivojlantirish ta’lim tizimida ustuvor yo‘nalish bo‘lib qolishi lozim.

FOYDALANILGAN ADABIYOTLAR:

1. O‘zbekiston Respublikasi Prezidenti. (2023). Ta’lim sifatini oshirish va yoshlarning tanqidiy fikrlash qobiliyatini rivojlantirish to‘g‘risida farmon. https://lex.uz
2. Qodirov, S. (2021). Oliy ta’limda tanqidiy fikrlashni rivojlantirishning asosiy metodlari. Pedagogika va psixologiya jurnali, 10(2), 15-18.
3. To‘laganov, M. (2020). Tanqidiy fikrlashning psixologik jihatlari. Toshkent: Ilmiy Nashr.
4. Vygotskiy, L. S. (1986). Psixologik rivojlanishning sotsiokultur yondashuvi. Moskva: Psixologiya nashriyoti.
5. Ivanova, E. (2019). Keys-stadi metodikasi va uning ta’limdagi roli. Oliy ta’lim jarayonida innovatsiyalar jurnali, 8(3), 22-25.
6. Leontyev, A. A. (1977). Faoliyat va shaxs rivojlanishi. Moskva: Nauka.
7. Zimnyaya, I. A. (1988). O‘quv jarayonida muammoli ta’lim metodlari. Pedagogik texnologiyalar jurnali, 6(4), 12-15.
8. Nosirov, G‘. (2020). Tanqidiy fikrlashni rivojlantirishning pedagogik asoslari. Ta’lim tizimi ilmiy-amaliy jurnali, 7(3), 45-52.
9. Karimov, X. (2019). Talabalarda tanqidiy fikrlash ko‘nikmalarini shakllantirishning metodik yondashuvlari. O‘zbek pedagogik tadqiqotlar jurnali, 12(1), 33-40.

Qo'ldoshev S.O., PHD
Buxoro davlat universiteti mustaqil izlanuvchisi
Orcid: 0009-0005-2406-904X

KICHIK BIZNESNI TASHKIL QILISH VA BOSHQARISH ASOSLARI

Anotatsiya: *Ushbu maqolada Kichik biznesni tashkil qilish va boshqarish asoslari, shakllari hamda kichik beznis tushunchalari yoritib berilgan hamda kichik beznisni foydali tomonlari va uning dunyoda tutgan o'rni aytib o'tilgan.*

Kalit so'zlar: *Kichik biznes, Biznes, tadbirkorlik, savdo-sotiq, Kichik biznesni tashkil qilish, Kichik biznes tushunchasi, kompaniya*

Qo'ldoshev S. O., PHD
Independent researcher
of Bukhara State University
Orcid: 0009-0005-2406-904X

BASICS OF SMALL BUSINESS ORGANIZATION AND MANAGEMENT

Anotatsiya: *This article explains the basics, forms and concepts of small business organization and management, and also mentions the benefits of small business and its role in the world.*

Key words: *Small business, Business, entrepreneurship, trade, Small business organization, Concept of small business, company*

"Biznes" ingliz business yani tadbirkorlik yoxud boshqacha so'z bilan aytganda insonning daromad olishga qaratilgan faoliyatidir. Biznes bozor iqtisodiyotining hamma qatnashchilari orasidagi aloqalarni qamrab oladi va faqat tadbirkorlarni emas, balki ishchilarning, davlat tizimi xodimlarining ham harakatlarini qamrab oladi. biznes so'zining tijorat, savdo-sotiq sinonimlari ham mavjud.

Chet ellek faylasuf olimlarining o'quv darsliklarida biznesga mukammal ta'rif beradilar. AQShlik professorlar S. Rozenblat, R. Bonnington va B. Nidlslar tayyorlagan «Biznes konsepsiyasi» darsligida: «Biznes nima?» degan savolga ular: Biznes - bu ish yuritish tizimidir, bu insonlarga zarur bo'lgan tovarlarni yaratishdir. Bu esa bizni qanday qay tarzda hayot kechirishimiz kabi javoblarni bergan. Shunday ekan, biznes - bu puldan pul topish, lekin albatta insonlarga zarur bo'lgan tovarlarni ishlab chiqarish yoki xizmat ko'rsatish orqali puldan pul qilishdir. Biznesning formulasi oddiy, ya'ni P-P. Lekin bu oddiy formula mazmunida murakkab hayot jarayoni yotadi. Biznes - bu avvalo ishlab chiqarishni tashkil etish, iqtisodiy faoliyat va munosabatlar, hayotni o'zi, so'ngra esa pul ishlash demakdir.

Kichik biznes sub’ektlari bozor iqtisodiyotini shakllantirishning asosiy yo‘nalishlaridan biri bo‘lib hisoblanadi.

Kichik biznes tushunchasi kompaniya, xususiy korporatsiya yoki yakka tartibdagi tadbirkor ko‘rinishida tasniflanadi, u xususiy korporatsiya va oddiy biznesga nisbatan kamroq xodimlar va kam miqdordagi daromadga ega. "Kichik" ta'rifi - mamlakat ko’magiga murojaat qilish va yengilliklarga ega bo’lgan soliq siyosiy faoliyatiga ega bo'lish nuqtai nazaridan farq qilinadi.

Oxirgi yillarda kichik beznis atamasidan ko'proq foydalanila boshlandi. Kichik korxonalar (qisqacha. SMEs, Малые и средние предприятия yani kichik va o'rta korxonalar) faoliyat yo’nalishlari qonun doirasida belgilangan doiradan oshmaydigan tijoriy tashkilotlari hisoblanadi.

Ma’lumki, 2010-yilning 7 dekabr kuni 0‘zbekiston Respublikasi Konstitusiyasi qabul qilingan kunning 18 yilligiga bag‘ishlangan tantanali yig‘ilishida 0‘zbekiston Respublikasi Prezidenti I.A.Karimov «Mamlakatimizni modernizatsiya qilish yo‘lini izchil davom ettirish - taraqqiyotimizning muhim omilidir» mavzusida ma’ruza qildi. 2011-yil mamlakatimizda «Kichik biznes va xususiy tadbirkorlik yili» deb e’lon qilindi. Davlatimiz rahbari tomonidan «Kichik biznes va xususiy tadbirkorlik yili» bo'yicha qabul qilingan davlat dasturida quyidagi asosiy ustuvor yo‘nalishlarga alohida e’tibor qaratish zarurligi ko‘rsatib o‘tildi.

Kichik beznisni tashkil qilish uchun avvalam bor tadbirkorlik korxonalarini tuziladi. Tadbirkorlik korxonalarini tashkil qilish, ularning xizmat ko‘rsatishi, ularni tashkil etish va faoliyatini yakunlashning umumiy iqtisodiy-ijtimoiy hamda huquqiy asoslari O‘zbekiston Respublikasining «O‘zbekiston Respublikasidagi korxonalar to‘g‘risida»gi qonuni asosida tartibga solinadi. Tadbirkorlik faoliyatini tashkil etish qoidalari. Korxonaning ustaviga asosan tartibga solinadi. Tashkilot boshqaruv tizimi, shtatlari va shaklini mustaqil ravishda belgilaydi, Tasischi korxonani to’g’ridan to’g’ri yoki vakolat bergan korxonalar orqali boshqaradi. Tasischi yoki korxonani yuritish huquqi yoxud u huquqni bergan tashkilotlar o’sha huquqlarni tashkilot kengashiga yoki tashkilot ustavida nazarda tutilgan hamda tasischi va tashkilot jamoasi manfaatlarini ifoda etadigan boshqa korxonaga topshirishi mumkin. Korxona managerini tayinlash va ozod etish kompaniya tasischisining huquqi, shuningdek o‘zlari tomonidan vakil etib belgilangan korxonalar orqali yoki ushbu tashkilotni idora etish huquqi berilgan korxona kengashi orqali amalga oshiradilar.

Korxonani tugatish va qayta tashkil etish (birlashtirish, qo‘shish, bo‘lib yuborish, ajratish, qaytadan tuzish), korxona mol-mulki egasining yoki shunday korxonalarni tuzishga vakolati bo‘lgan idoralar qaroriga binoan yoxud sud yoki hakamlik sudining qaroriga binoan amalga oshiriladi. Singan korxonalarni tugatish qonun hujjatlari bilan tartibga solinadi. Korxona davlat ro‘yxati reestridan chiqarib yuborilgan paytdan boshlab qayta tashkil etilgan yoki tugatilgan hisoblanadi. Korxonani qayta tashkil etish va tugatish davomida ishdan bo‘shatilayotgan xodimlarga me’yoriy hujjatlarda belgilanganga muvofiq ularning huquqlari va manfaatlariga rioya etilishiga kafolatlar beriladi. Korxona boshqa korxona bilan qo‘shilgan taqdirda mazkur korxonalarning har biriga taalluqli barcha mulkiy huquqlar va majburiyatlar qo‘shilish natijasida vujudga kelgan korxonaga o‘tadi. Bunda uning barcha mulkiy huquqlari va majburiyatlari qo‘shib olgan korxonaga o‘tadi. Korxona bo‘lib yuborilgan taqdirda qaytadan tashkil etilgan korxonaning mulkiy huquqlari va majburiyatlari ana shu natijasida vujudga kelgan yangi korxonalarga bo‘lib yuborish hujjatlari (balansi)ga muvofiq tegishli qismlarda o‘tadi. Agar korxonadan bitta yoki bir nechta yangi korxonani ajratib chiqarilsa, qaytadan tashkil etilgan korxonaning mulkiy huquqlari va majburiyatlari bo‘lib yuborish hujjatlari (balansi) ga muvofiq tegishli qismlarda ularning har biriga o‘tkaziladi.

Jahonnining ko’plab rivojlangan mamlakatlarida kichik beznis korxonalari davlat miqyosida yuqori ko’rsatgichlarni ko’rsatgan holda mamlakat YIM ning asosiy qismini ishlab chiqaradi. Bunga misol qilib quydagilarni keltirishimiz mumkin :

Amerika qo’shma shtatlarida kichik korxonalar umumiy korxonalar sonining 91,6 foizini, Fransiyada – 98,4 foizini, Yaponiyada esa 77 foizini tashkil etadi. AQShda sanoat mahsulotlari hajmining 36,6 foizi, Fransiyada – 38,8 foizi, Yaponiyada esa 35,4 foizi kichik korxonalar hissasiga to‘g‘ri keladi.

AQSH da har yili o‘rtacha 200 mingga yaqin tadbirkor o‘zining yangi korxonasini ochadi. Ularning 3\2 qismi 20 ming dollardan kam mablag’ evaziga o‘z faoliyatlarini boshlaydilar. Ularning qariyib 75% o‘z korxonalarida xaftasiga 50 soat ishlaydilar, 25% esa 70 soat bazida esa undan ham ortiq mehnat qiladilar. Qariyib 2/3 qism yangi tadbirkorlar yangi korxonalar hisoblanadilar, ya’ni ular amalda ishlayotgan firmalarni sotib olmay, yangidan o‘zlari biznesni boshlaydilar.

Xulosa:

Kichik biznesni tashkil qilish va boshqarish asoslari bo‘yicha xulosalar quyidagicha ifodalandi: birinchidan kichik beznis nafaqat yurtimizda balki butun dunyoda iqtisodiyotning asosiy bo‘g‘inni bo‘lganligi bois kichik beznisni tashkil qilishda tadbirkorlarga keng imkoniyatlar berish hamda soliq yengilliklari berilishi zarur.

Ikkinchidan Kichik biznesni tashkil qilish va boshqarish uchun davlat organlari tomonidan tadbirkorlarni muntazam ravishda qo‘llab qo‘vvatlanishi zarur.

Foydalanilgan adabiyotlar:

1Лушников О. Е. О состоянии и перспективах малого и среднего бизнеса в странах ЦВЕ. (12 декабря 2011). Дата обращения: 20 июля 2018. 20 июля 2018 года.

2 11. A. Karimov. «Mamlakatimizni modemizatsiya qilish yo'lini izchil davom cttirish — tara q q iy o tim iz n in g m u h im om ilidir». 0 ‘zbekiston R espublikasi Konstitutsiyasi qabul qilingan kunning 18 yilligiga b ag'ishlangan tantanali yig'ilishidagi m a ’ruzasidan. / / Xalq so‘zi, 2010 8 dekabr.

3 Кичик тадбиркорлик менежменти 2-кисм: Укув амалий кулланма. Б.Ю.Ходиев, А.Самадов,М.С. Юсупов ва бошкалар. — Т.: ЕХ ТЕМПУС дастури “Матодор-2000” лойи\аси, 2004.
4 Kichik biznes boshqarish. O’quv qo’llanma –Samaraqand: FAN BULOG”I nashriyot Musayev Bekjin Shukurullayevuch - 2021 4b
5 Kichik biznes boshqarish. Q.J.Mirzayev Samarqand 2008 5b

Rakhimova Kh.A.
Assistant
of the Department of FJSTI
folk medicine and pharmacology

A HEALTHY LIFESTYLE IS A GUARANTEE OF LONG

ANNOTATION: *Mankind has always thought about one problem: how to live long? Even two thousand years ago, the great Lucretius commented on this issue in his works, including his book «On Nature». So what is the reason why people cannot live long? What is the point of getting old? First of all, it should be said that life takes everything in its own way. Human aging is also based on certain laws. In addition, according to scientists, old age encourages the development of a number of diseases. People who have reached the same age die more often from atherosclerosis, cancer, diabetes, arterial hypertension, heart ischemia. In order to understand the mechanism of occurrence of these diseases, it is necessary to determine the connection between aging and age pathology (diseases in the organs, changes in the body's life activity with increasing age). It is possible that there will be several appearances.*

KEYWORDS: *Medicine, Nature, Health, Diseases, Hepatitis*

INTRODICTION:

According to official data, the number of people who have passed the age of 100 in our country is more than eight thousand. What is the secret of the long life of these people who lived in the time of the Second World War, hunger, famine and destruction? It is clear from the conversations with such luminaries that they managed to reach such great young people thanks to their work. Their life is full of constant physical activity. Such people are always in motion, which, according to medical representatives, strengthens and trains the body and increases immunity. Hippocrates, the father of medicine, said that physical training and circulation in the fresh air play an important role in longevity. He believes that old age begins at the age of 70. Pythagoras said that aging covers the last 20 years of a person's life, from the age of 60 to 80. Others explain aging as a probabilistic process and say that it is caused by many internal and external factors affecting the body. In my opinion, genetic change is not aging, but a metabolic process related to the breakdown of the body. Life is based on this law. It can happen differently in each organism. For example, a mouse has been found to live for 2 years, and an elephant for 100 years. One conclusion can be drawn from this: there is no room for saying when aging begins. It develops along with the fertilization of germ cells.The fact is that in nature some creatures can live for 300 years or even a thousand years. But… why not a person? No matter how much people care about regular exercise, constant health, no matter how much dedication they show in this way, it is absolutely impossible to be in perfect health all the time. A person cannot consider himself to be «healthy» in all respects, he cannot simply say, «I have no disease». Duty. No matter how many medicines increase, the quality of medical institutions, the level of doctors, and medical equipment improve, if a person does not care about his health, the expected result cannot be achieved. The priceless wealth for a person is health. Is health. Its preservation is entrusted to each of us. That is why it is one of the most important things to take care of one's health. Our wise people did not say «health is the wealth of the region» for nothing. An intelligent person should appreciate his life. Discovering the secret of long life is one of the important problems of the present time. A lot of exemplary work is being done in this direction. Thanks to the tireless research of our scientists, effective methods of combating diseases, especially infectious diseases, have been developed. People's living conditions have changed, their social situation has improved. However, surprisingly, human life expectancy has not increased biologically for several thousand years.Our researchers now consider this age to be around 90. What about actually? After all, there are people living longer in the world than this! It is true that Uzbekistan is leading among the countries of Central Asia in terms of life expectancy. This was stated in the Global Burden of Disease study published by «Lancet». According to the study, Uzbekistan leads in Central Asia in terms of average life expectancy.

LITERATURE REVIEW AND METHODOLOGY:

According to scientists, a healthy lifestyle is based on following six basic conditions, - said N. Sagdullayeva. – The first of them is proper nutrition, choosing and eating daily food based on the physiological and biological requirements of the body.

Proper nutrition should be organized in such a way that it does not burden the human body with its physical, chemical and biological properties, but on the contrary, it is quickly and easily digested and provides the body with necessary nutrients.

Materials and methods:

The average life expectancy in Uzbekistan is 73.8 years

In Tajikistan, this indicator is 73.7 years

In Kazakhstan, this indicator is 72.4 years

In Kyrgyzstan, this indicator is 70.9 years

In Turkmenistan, this figure is 70.4 years

The countries with the longest life expectancy in the world are:

Hong Kong 84.3 years

Japan 83.8 years

Italy 83.5 years

According to statistical data, the Mediterranean diet reduces the risk of early death in people over 65 years old. This conclusion was based on the results of research conducted by scientists from the University of Barcelona in Spain. Scientists followed the lifestyle of 642 volunteers over 65 years of age for 20 years. To evaluate the nutrition of the participants, the researchers measured the amount of polyphenols, selenium, vitamin B12, fatty acids and other substances in the urine and blood. During the study, 425 participants died. 139 of them died of cardiovascular disease, 89 of them died of cancer. In addition, participants who strictly adhered to the Mediterranean diet had a lower risk of death from all causes. Had given information. However, at the time, these opinions were based mainly on reports. This time, its benefits were evaluated objectively. Moreover, it is no secret to anyone that our health directly depends on how we eat. Do you know which food products are more useful? What should you eat regularly to stay healthy and fresh for many years? The ten healthiest foods in the world that are guaranteed to keep you fresh, long and healthy include: apples, beans, salmon, broccoli, pomegranate juice, yogurt, garlic, eggs, berries and nuts. There is nothing that is more important than health for every person, there is nothing that is more important than health. Therefore, people do not spare effort, money and time to avoid diseases, protect and strengthen their health. This cannot be achieved by various methods of treatment, sports and physical education exercises, by consuming various healing blessings created by God, by frequent visits to doctors and healers, and receiving advice and recommendations from them. The entire creation of body parts is one of the blessings of God. As in everything, people always need Allah Almighty to recover faster from illness and seek healing for their ailments. Allah the Exalted says: «O people! You need Allah. And Allah is indeed Ghani (Necessary) and Hamid (Praiseworthy)». These are not in vain. Life is sweet, living healthy is even sweeter. For a happy marriage, a person needs health first of all. It is narrated that when the Prophet's uncle Abbas (may God bless him and grant him peace) asked the Messenger of God (peace and blessings of Allah be upon him) to teach him how to pray, the Prophet said: «Ask for forgiveness and health from Allah. Because, they said, « He has not given anyone a better blessing than disaster after firm faith. » Health is the health of our body, abundance of sustenance and safety from various dangers. But the value of health, wealth and well-being is often known after they rise from the middle. At the right time, we cannot do good deeds and perfect our prayers without reaching the value of our health. When wealth comes, instead of being thankful for it, we ride the horse of arrogance and conceit. As the Prophet (peace be upon him) said: «There are two great blessings that many people are deceived about. They are: health and free time. It is also emphasized in many hadiths that every person should be concerned about the health of his body parts. Only goes back to one essence. God Almighty tests His servants from time to time, and some for life, with various diseases, disabilities or lack of organs. He especially gives pain and sickness, pain and illness to His beloved servants. The Messenger of Allah (peace be upon him) said: « Whoever Allah wills good for, He gives him calamity. » In another narration: «Whatever illness, hardship, anxiety, sorrow and pain befalls a believer, even if a thorn enters him, surely Allah will erase his sins because of it (narrations of Imam Bukhari and Imam Muslim). From these narrations we have It is clear that the diseases that we suffer are not absolutely harmful, but beneficial to us. Because due to illness, a Muslim remembers that he is a weak and helpless slave, that he needs God's grace at every moment. He prays to God for healing and relief. He is patient. As a result, he achieves many good things. Therefore, it is appropriate for people suffering from a disease to consider it as a test and a blessing from Allah without being offended or angry. By following the rules of hygiene, you can protect your family from many diseases and prevent them. Observing the rules of hygiene will protect your family from diarrhea (intestinal) or gastrointestinal diseases, by preventing the entry of all kinds of dirty and bad microbes into the body. Hygiene prevents the transmission of influenza, hepatitis and other infectious diseases from one person to another by eliminating disease-causing germs. Clean hands are important for health If you wash your hands often, you can avoid getting sick by swallowing germs that fall from your hands into your mouth.

DISCUSSION:

The main principles of a healthy lifestyle:

• Proper nutrition: Eat a variety of foods throughout the day, including fruits and vegetables, grains, protein sources (meat, fish, eggs), and dairy products.

Limit the consumption of sugar, fat and salt.

Reduce the consumption of fast food and sweets.

Drink plenty of water.

• Physical activity:

Do at least 30 minutes of activity every day (walking, running, swimming, cycling, dancing).

Reducing a sedentary lifestyle (sitting a lot, spending a lot of time at the computer).

Making exercise comfortable and fun for you.

• Adequate sleep:

Sleep 7-8 hours every night.

Sleeping in a calm and peaceful environment.

Set sleep mode.

• Stress management:

Identifying factors that cause stress and eliminating them.

Learning easy and effective stress management techniques (meditation, yoga, listening to music, walking in nature).

Focusing on positive aspects of life by putting yourself in positive emotions.

• Giving up bad habits:

Complete cessation of smoking.

Avoiding excessive alcohol consumption.

Abstinence from drug use.

RESULTS:

It is important to wash your hands and your children when they are dirty, especially if:

• Before cooking.

• Before eating or feeding the child.

• After defecating.

• After cleaning or bathing a child who has made a mess. Clean drinking water is important for health. You should drink clean, boiled water. Never drink water directly from a tap, stream or river, such water contains a lot of germs that can make you sick. Always boil water for 15-20 minutes to kill germs before drinking. Drinking boiled water is dangerous for health. Clean and fresh food is important for health. It is advisable to store food in a cool place such as a refrigerator. Food stored in a cool place stays intact for a longer time. Also cover food and protect against flies it is necessary. You should drink clean, boiled water. Flies fly from one place to another and carry all kinds of dirty things, spreading many dangerous diseases. When they land on trash or dirt, they stick it to their feet, and then when they land on our food, they leave the trash and dirt there. Flies land on food and contaminate it, which can cause diseases such as diarrhea (intestinal). Wash all fruits and vegetables in clean, boiled water before eating them, even if you plan to cook them. Everything should be washed before eating, even fruits cut from the tree. Cook the meat well. Eating undercooked meat, fish or poultry is bad for your health and can make you very ill.There should be no undercooked or bloody spots in the meat. Keep food away from pets such as dogs and cats. Eating food contaminated by animals is harmful to health. Keeping the house clean is important for health Teach your children to use the toilet or potty and always empty the potty into the toilet. If your yard is free of trash and debris, there will be fewer pests and rodents, and your children will be less likely to come into contact with them. Keep your house clean. Flies and midges carry dirt on their feet. Mice and rats carry diseases that can be transmitted to humans. Cover your food well. You will protect them from such pests. Remember, cleanliness can protect your family from diseases: • Wash your hands often with soap. • Boil water for 15-20 minutes before drinking. • Wash fruits and vegetables before eating. • Keep leftovers covered in a cool place. Physiological and biological processes in the body become more active if a person engages more in physical exercises, sports games, and body-training procedures in everyday life. As a result, the mood improves and the ability to work increases. Undoubtedly, this is important in promoting health. Organizing the agenda and work based on the biological regime. In the universe, natural phenomena are repeated based on a certain order. In particular, the rising and setting of the sun at a certain time every day, and the annual repetition of the seasons are proof that all actions in nature are subject to a certain order. And man is no exception. For example, activity in the human body increases during the day and decreases at night. Therefore, the working day and rest time should be properly planned. Abstaining from harmful habits such as alcoholism, smoking, drug addiction. There is no need to emphasize that these diseases are harmful to health and marriage. After all, it has often been observed in life that such people turn into weak people who are indifferent to life, live for the day, and do not think about their health and future. Cleanliness, observance of mediocrity, attitude to the environment. In the course of daily life, a person has a certain influence on the environment. For example, it is very natural to produce waste from the food that is necessary for our life.

As you know, the environment is polluted due to waste disposal: water, soil and air have negative health effects. That is why strict observance of cleanliness should become a habit in our daily life.

CONCLUSION:

In conclusion, to live a long life, pray to Allah for long life and follow a healthy lifestyle.A healthy lifestyle is the key not only to protect against diseases, but also to increase the quality of life, to feel active and happy. If you want to live a long and healthy life, adopting a healthy lifestyle is in your hands. It is the best gift for your body and soul! This is not just a set of rules, but an attitude towards life, taking care of yourself and your future.

REFERENCES:

1. https://univdatos.com/uz/aniq-ovetlanish-bozori/
2. https://toitumine.ee/ru/kak-pravilno-pitatsya
3. Л.П. Матвеев Теория и методика физической культуры: учебник для институтов физической культуры. М.: Физкультура и спорт, 1991.-543 с.
4. Сидоров А. А., Прохорова М. В., Синюхин Б. Д. Педагогика: Учеб. Для студ., асп., преп. И тренеров по дисц. «Физ. Культура» - М.: «Терра – Спорт»,2000.-272 с., ил.
5. Мавропуло О.С. Переосмысление сущности физической культуры как ценности жизнедеятельности человека // Гуманитарные и социально-экономические науки. 2007, № 2.-С. 77-80.
6. Артемьева, Т. Система Амосова/ Т.Артемьева// Будь здоров-2011-С. 32-39
7. Валенский, М.Ф. Физическая культура и здоровый образ жизни студента/ М.Я. Виленский, Кронус. 68 с.
8. Воронова, Е.А. Здоровый образ жизни в современной школе/Е.А. Воронова. – Ростов н/Д : Феникс, 2014.- 89 с.
9. Назарова, Е.Н. Основы здорового образа жизни/Е.Н. Назарова, Ю.Д.Жилов. – М. :Академия, 2013.- 45 с.
10. Полтанцева, Н.В. Приобщаем дошкольников к здоровому образу жизни/ Н.В Полтавцева.- М. : Сфера, 2012.- 90 с.

Rashidov N.N.
Fergana State University
1st year graduate in pedagogical theory and history
Rafikova D.Q., p.f.h.d. PhD
teacher

COMPETENT DEVELOPMENT OF WORKING WITH INFORMATION COMMUNICATION TECHNOLOGIES IN THE MODULAR-CREDIT SYSTEM OF STUDENTS

Annotation: *in this article, the integration of the module-credit system with ICT serves to develop in students the ability to open up to technological innovation, work with data, collaborate remotely and independently enrich their knowledge using digital tools.*

Keywords: *module-Credit, Technology, Electronic Library, digital tools, mobile applications, information, MS Excel, SPSS, Slack, applications,platforms, artificial intelligence.*

Rashidov N.N.
Farg'ona davlat universiteti
Pedagogika nazaryasi va tarixi 1-kurs magistranti
Rafikova D. Q., p.f.h.d.PhD
katta o`qituvchisi

TALABALARNING MODUL-KREDIT TIZIMIDA AXBOROT KOMMUNIKATSION TEXNALOGIYALAR BILAN ISHLASH KOMPETENTLI RIVOJLANTIRISH

Annotatsiya: *Ushbu maqolamda Modul-kredit tizimining AKT bilan integratsiyasi talabalarda texnologik innovatsiyalarga ochiqlik, ma'lumotlar bilan ishlash, masofaviy hamkorlik qilish va raqamli vositalar yordamida o'z bilimlarini mustaqil boyitish qobiliyatlarini rivojlantirishga xizmat qiladi.*

Kalit so'zlar: *modul-kredit, texnologiya, elektron kutubxona, raqamli vositalar, mobil ilovalar, axborot, MS Excel, SPSS, Slack, dasturlar, platformalar,sun'iy intellekt.*

" Modul-kredit tizimi talabalarga malakalarini bosqichma bosqich egallash imkonini beradi. Bu o'quv dasturlarini moslashuvchan va samarali qiladi va shu orqali ta'lim sifatini oshiradi." ***-Vladimir Glukhov.***

KIRISH

Modul-kredit tizimi talabalar bilimini baholash va o'quv jarayonini boshqarishda muhim ahamiyatga ega. Bu tizimda axborot-kommunikatsiya texnologiyalari (AKT) bilan ishlash kompetentligini rivojlantirish o'quv jarayonining ajralmas qismi bo‘lib, quyidagi jihatlarni o‘z ichiga oladi. Xorijiy tajribada modul-kredit tizimi va axborot-kommunikatsiya texnologiyalari (AKT) bilan ishlash kompetentliklarini rivojlantirishda qator ilg‘or tajribalar mavjud. Quyida ayrim mamlakatlardagi tajribalar bilan tanishish mumkin.

ASOSIY QISM

AKT vositalaridan samarali foydalanish: Talabalar o‘quv jarayonida turli axborot texnologiyalaridan foydalanishni o‘rganishadi. Masalan, elektron kutubxonalar, ma’lumotlar bazalari, onlayn o‘qitish platformalari (LMS), va taqdimot dasturlaridan foydalanish.

Raqamli savodxonlikni oshirish: Raqamli vositalarni, dasturiy ta’minotlarni va mobil ilovalarni samarali boshqarish talabalarning raqamli madaniyatini shakllantirishga yordam beradi. Mustaqil o'qish va tadqiqot ko'nikmalari: talaba o'z-o'zini rivojlantira olishi. Vaqtni samarali boshqarish: o'quv vaqti va vazifalarni o'z vaqtida bajarish ko'nikmalarini rivojlantirish. Tanqidiy fikrlash va muammolarni hal qilish: murakkab masalalarni o'zlashtirish va kreativ yondashish qobiliyatlari. Ta'lim jarayonida foydalaniladigan amaliy usullar haqida gapiriladi Bu kelajakdagi kasbiy faoliyatlarida muhim hisoblanadi.

AKT bilan bog‘liq topshiriqlar: Modul-kredit tizimida har bir modul yoki fan bo‘yicha talabalarga berilgan topshiriqlarni bajarish jarayonida axborot texnologiyalaridan foydalanish majburiy bo‘lishi mumkin. Bu orqali talabalar ma'lumotlar bilan ishlash ko'nikmalarini rivojlantiradi.

Masofaviy ta'lim imkoniyatlari: Modul-kredit tizimi masofaviy ta'lim bilan birga o‘tishi mumkin. Bu esa AKT vositalari yordamida bilim olish, mustaqil ishlash va natijalarni elektron shaklda baholash ko‘nikmalarini o‘stiradi.

Ma'lumotlarni tahlil qilish va ishlash ko'nikmalarini rivojlantirish: AKT talabalarga katta hajmdagi ma'lumotlarni to‘plash, tahlil qilish va izohlash imkonini beradi. Ma'lumotlar tahlili dasturlari, masalan, MS Excel, SPSS yoki Python kabi dasturlar yordamida talabalar ilmiy va amaliy izlanishlar olib borishadi. Bu ular uchun kelajakda tadqiqot olib borishda muhim ahamiyatga ega

Loyihalar va guruh ishlari: Modul-kredit tizimida talabalar ko‘pincha guruhlarda ishlashadi, bu jarayonda axborot texnologiyalarining hamkorlikka mo‘ljallangan vositalaridan foydalanishadi. Google Docs, Microsoft Teams, Slack kabi platformalar orqali talabalar masofadan turib hamkorlikda ishlashni o‘rganadilar. Bu esa zamonaviy ish bozorida talab qilinadigan jamoaviy va masofaviy ishlash ko‘nikmalarini shakllantiradi.

Onlayn resurslardan foydalanish: AKT vositalaridan foydalangan holda talabalarning ochiq manbalardan bilim olishlari, masalan, Coursera, edX, Khan Academy kabi platformalar orqali qo'shimcha darslar olishlari imkoniyati kengayadi. Bu ularga o‘qituvchilar taqdim etgan materiallarni mustaqil chuqurlashtirishga imkon beradi.

Axborot xavfsizligi va etikasi: AKT bilan ishlashda talabalarga kiberxavfsizlik qoidalarini o‘rgatish ham muhimdir. Talabalar shaxsiy ma’lumotlarni himoya qilish, xavfsiz axborot almashish va texnologiyalarni etik jihatdan ishlatish bo‘yicha tushunchalarga ega bo‘lishadi. Bu ularni nafaqat o‘qish jarayonida, balki kelgusidagi ish faoliyatida ham texnologiyalarni xavfsiz boshqarishga tayyorlaydi.

Raqamli innovatsiyalar va texnologik o‘zgarishlarga moslashuvchanlik: Modul-kredit tizimida ta'lim olish jarayonida talabalar tez o‘zgarib borayotgan texnologik yangiliklarga moslashish ko‘nikmalarini o‘stiradilar. Bu ularga yangi texnologiyalar va dasturlar bilan tez tanishib, ularni o‘z kasbiy faoliyatlarida qo‘llash imkonini beradi.

NATIJA TALABLARI:

Axborot texnologiyalaridan mustaqil foydalanish ko’nikmalariga ega bo’ladi

Ma’lumotlarini qidirish, tahlil qilish va ishlatish qobilyatini oshirish.

Raqamli manbalardan to’g’ri foydalanishni o’rganadilar, bu esa ta’lim sifatini oshiradi.

Xulosa: Modul-kredit tizimining AKT bilan integratsiyasi talabalarda texnologik innovatsiyalarga ochiqlik, ma'lumotlar bilan ishlash, masofaviy hamkorlik qilish va raqamli vositalar yordamida o‘z bilimlarini mustaqil boyitish qobiliyatlarini rivojlantirishga xizmat qiladi. Xulosa qilib aytganda, xorijiy tajribada modul-kredit tizimi axborot texnologiyalari bilan chuqur integratsiyalangan bo‘lib, bu talabalarni zamonaviy texnologik dunyoga tayyorlashda muhim omil hisoblanadi. Bu jarayonlar o‘z ichiga masofaviy ta'lim, AKT vositalari orqali guruhli va mustaqil ishlash, ma'lumotlar tahlili va raqamli savodxonlikni keng joriy etishni oladi.

ADABIYOTLAR RO’YXATI:

1. Semenov, A. L. (2017). Modernizing Education Systems with Modular Credit Approaches. Moscow: Russian Educational Publishing. Rossiya ta'lim tizimida modul-kredit tizimining qo'llanilishi va uning samaradorligi haqida.
2. Kolb, D. A. (1984). Experiential Learning: Experience as the Source of Learning and Development. Prentice Hall. Tajribaviy ta'lim nazariyasini yoritib beradi; modul-kredit tizimi asosida o'qitishda foydalaniladigan asosiy nazariyalardan biri.
3. Glukhov, V. V. (2018). Adaptive Learning in Higher Education: Modular Credit System. Russian Journal of Education and Psychology, 10(2), 45–54.1. Biggs, J. & Tang, C. (2011). "Teaching for Quality Learning at University." – Ushbu kitobda modul-kredit tizimi asosida talabalarning o‘zlashtirish jarayonini qanday tashkil qilish kerakligi, baholash va ta'lim sifati muhokama qilinadi.
4. Qayumov, A. (2021). Oliy ta’limda kredit-modul tizimi: Joriy etish va amalga oshirish tajribasi. Toshkent: “O‘zbekiston Milliy Universiteti nashriyoti”.
Ushbu kitobda O‘zbekiston oliy ta’lim tizimida kredit-modul tizimini joriy etish tajribalari, metodik yondashuvlar va amaliyotlari haqida batafsil ma’lumot berilgan.
5. Saidov, M., & Raxmatov, N. (2020). Kredit-modul tizimining o‘zbek ta’limidagi o‘rni va afzalliklari. O‘zbekiston Ta’lim Jurnali, 12(3), 45–52.

Maqolada kredit-modul tizimining o‘zbek ta’lim tizimidagi afzalliklari, uning samaradorligi va qo‘llanilishi haqida yoritilgan.
6. Xodjayev, I. (2019). Ta’limda modul tizimining o‘ziga xosligi va unga oid metodik tavsiyalar. Toshkent: Pedagogika universiteti nashriyoti.
O‘zbek ta’lim tizimida modul tizimining o‘ziga xos xususiyatlari va unga oid metodik tavsiyalarni o‘z ichiga olgan kitob

Rasuleva M. R.
Aliyeva N. M.
Senior Lecturer
of the Department of Computer Science
Tashkent University of Applied Sciences.

INFORMATION SYSTEMS: HUMAN-MACHINE RELATIONSHIPS IN THE PRODUCTION ENVIRONMENT

Annotation: *This article explores the dynamics of human-machine relationships in the production environment, focusing on the role of information systems in enhancing efficiency, productivity, and collaboration. It highlights key aspects such as automation, data-driven decision-making, and the balance between human control and machine automation. The article also emphasizes the need for continuous training to adapt to technological advancements, while addressing safety and ethical concerns associated with increased automation. By integrating human expertise with machine capabilities, production environments can achieve optimized performance and sustainable growth.*

Keywords: *Human-machine relationships, information systems, production environment, automation, data-driven decision-making, collaboration, worker safety, ethical considerations, technological adaptation, efficiency.*

Introduction: In today's rapidly evolving industrial landscape, the integration of information systems with production environments has transformed human-machine relationships. These relationships are now a cornerstone of modern manufacturing and service industries. Machines, robots, and artificial intelligence (AI) have taken over many repetitive and precision-based tasks, allowing humans to focus on problem-solving, decision-making, and system optimization. The partnership between humans and machines, facilitated by sophisticated information systems, not only improves productivity but also enhances the quality, safety, and flexibility of production processes.

1. The role of information systems in the production environment.

Information systems (IS) play a pivotal role in managing and optimizing human-machine interactions in production settings. By gathering, processing, and analyzing data from various machines and sensors, IS enable real-time decision-making and coordination between humans and machines. This real-time data allows for better resource allocation, predictive maintenance, and more efficient scheduling of tasks.

Key areas of is in production:

Data Collection and Analysis: Information systems collect vast amounts of data from machines, production lines, and human inputs. This data is processed using analytics tools, helping managers make data-driven decisions that can reduce downtime and improve efficiency.

Automation and monitoring: Through automation, machines can perform tasks without continuous human oversight. IS help monitor these tasks, ensuring that machines operate within defined parameters and alerting humans when anomalies occur. Human-machine interfaces (HMI): Advanced interfaces allow humans to interact with machines in more intuitive ways. Touchscreens, voice commands, and other HMIs make it easier for operators to control machines, adjust settings, and receive feedback from production processes.

2. Human-machine collaboration: A Symbiotic relationship.

Human-machine collaboration has evolved from manual operation of machines to sophisticated interactions where machines complement human abilities. This collaboration is not merely about machines replacing humans but about enhancing the capabilities of both. Automation and human labor. Automation has long been a feature of production environments, especially in industries such as automotive manufacturing, electronics, and textiles. For example, in the automotive industry, robots handle tasks such as welding and assembly, tasks that require precision and speed. According to the International Federation of Robotics (IFR), as of 2022, there are over 3.5 million industrial robots operating in factories globally, representing a 10% increase from the previous year.

While automation has replaced many manual tasks, it has not eliminated the need for human labor. Instead, it has shifted the focus of human workers toward higher-level tasks such as system monitoring, maintenance, and problem-solving. Studies by McKinsey & Company suggest that while 30% of manual tasks in production can be automated, 70% of tasks still require human input, particularly in areas like quality control, innovation, and troubleshooting.

The role of human expertise. Machines and information systems excel at performing repetitive tasks and processing large amounts of data. However, they lack the creativity, judgment, and intuition that humans bring to the table. This is where human expertise becomes invaluable. Humans are able to interpret data in ways that machines cannot, using their experience and insight to make decisions that go beyond the numbers. For instance, in chemical manufacturing, humans are responsible for adjusting machine settings based on environmental factors or customer demands, which machines cannot anticipate without human intervention. In this case, the machine provides the data, but it's the human who makes the final adjustment based on that data.

3. Data-driven decision-making in production. The collection of real-time data is central to optimizing production environments. Information systems allow for data-driven decision-making, reducing errors, predicting machine failures, and ensuring the smooth operation of production lines. Real-time monitoring and predictive maintenance. In modern production environments, information systems monitor machines and production lines in real-time. They gather data on temperature, pressure, speed, and other critical factors. This data is analyzed to predict when machines are likely to fail, allowing for maintenance to be scheduled before breakdowns occur. According to a report from Deloitte, predictive

maintenance reduces downtime by 30% and lowers maintenance costs by 20%. For instance, General Electric (GE) has implemented predictive maintenance across its production lines, saving the company millions of dollars annually in reduced machine downtime and repair costs. Big data and machine learning. Big data analytics and machine learning have further transformed the way information systems support production environments. Machines can now learn from past data and improve their performance over time. In a report by IBM, it was found that companies using machine learning in their production processes experience a 15% improvement in productivity and a 20% reduction in material waste. For example, Siemens has implemented machine learning algorithms in its factories to optimize production processes and reduce energy consumption. The system analyzes thousands of variables in real-time and makes adjustments to optimize efficiency.

4. Challenges and ethical considerations. While the integration of information systems and machines in production environments has brought about many benefits, it has also introduced challenges and ethical considerations. One of the major concerns is the impact of automation on jobs. As machines take over more tasks, there is a fear that human workers will be displaced. The future of work. Automation has already changed the nature of work in production environments. According to a report by the World Economic Forum, by 2025, machines are expected to perform more than 50% of all work tasks in some industries, up from 29% in 2020. While this may lead to job displacement in certain sectors, it is also expected to create new jobs in areas such as machine maintenance, data analysis, and system management.

Ethical use of ai and automation. The use of AI in production environments raises ethical questions regarding transparency, accountability, and bias. Machines are often seen as impartial, but the algorithms that drive them can reflect the biases of their human creators. For example, in automated hiring processes, AI systems have been shown to exhibit bias in favor of certain demographics over others.

In production, there are concerns about the transparency of AI decision-making. If a machine makes a critical error, who is held accountable—the machine, the human operator, or the system designer? These ethical dilemmas must be addressed as AI becomes more prevalent in production environments.

5. Improving safety through human-machine collaboration. Safety is one of the primary concerns in production environments, especially where heavy machinery and hazardous materials are involved. Information systems play a critical role in enhancing safety by monitoring production processes, identifying potential hazards, and alerting human operators before accidents occur.

Safety statistics. According to the Occupational Safety and Health Administration (OSHA), machine-related accidents account for 8% of all workplace injuries in the U.S. production sector. However, the introduction of information systems that monitor machines and production lines has reduced the number of accidents by 15% in the last decade. Automated systems can shut down machines if unsafe conditions are detected, preventing accidents before they occur.

Wearable technology for worker safety. Wearable technology, such as smart helmets and vests, is another area where information systems are improving safety in production environments. These devices monitor the health and safety of workers in real-time, alerting supervisors if a worker is exposed to hazardous conditions or suffers a medical emergency. In a study by Frost & Sullivan, it was reported that wearable technology in production environments can reduce workplace injuries by 25%, making production lines safer for human workers.

6. Future trends in human-machine relationships. The future of human-machine relationships in production environments will likely be defined by greater integration of AI, robotics, and information systems. As technology advances, humans and machines will work even more closely together, each enhancing the capabilities of the other.

Collaborative robots (cobots). One emerging trend is the rise of collaborative robots, or "cobots," which are designed to work alongside humans in production environments. Unlike traditional industrial robots, cobots are smaller, more flexible, and can safely operate in close proximity to human workers.

According to the IFR, cobots are expected to represent 34% of all industrial robot sales by 2025. These robots are already being used in industries such as automotive manufacturing, electronics, and pharmaceuticals, where they assist human workers with tasks that require precision and strength.

AI-powered decision-making. In the future, AI-powered information systems will play a larger role in decision-making processes. These systems will be able to analyze complex data sets and make recommendations to human operators in real-time. This will allow production environments to become more adaptive, responding to changes in demand, supply chain disruptions, or equipment failures more effectively.

Conclusion

The relationship between humans and machines in production environments is evolving rapidly, thanks to advances in information systems. This collaboration has resulted in significant improvements in productivity, efficiency, and safety. However, it has also introduced new challenges, such as job displacement and ethical concerns around AI and automation.

As technology continues to advance, the role of humans in production environments will shift toward higher-level tasks that require creativity, judgment, and decision-making. Machines will handle the repetitive, data-driven tasks, while humans will oversee, manage, and optimize the systems. By working together, humans and machines can create a more efficient, productive, and safe production environment for the future.

References:

1. International Federation of Robotics (IFR). (2022). World Robotics Report 2022: Industrial Robots.
2. McKinsey & Company. (2020). The Future of Work in Manufacturing: Automation, AI, and Robotics.

3. Deloitte. (2021). Predictive Maintenance: Improving Reliability and Reducing Downtime.
4. IBM. (2020). AI and Machine Learning in Manufacturing: Enhancing Efficiency and Productivity.
5. World Economic Forum. (2020). The Future of Jobs Report 2020.

Rasulov A.N.
Associate Professor
of the Department of Management
Doctor of Philosophy in Pedagogical Sciences (PhD)
Chirchik State Pedagogical University

THE SIGNIFICANCE AND ROLE OF ORGANIZING AND CONDUCTING THE EDUCATIONAL PROCESS

Abstract. *This article discusses the importance, role, and conditions of organizing and conducting the educational process, and offers recommendations.*
Key words and phrases: *education, upbringing, technology, innovation, economy, social environment, stewardship, progress, honesty, integrity, pedagogy, nationalism, pedagogical innovations, hard work, ethics, the educational process, patriotism, the innovation process, and ethics.*

Today, the progress of science and education is defined as the basis for the well-being of society's members. A close acquaintance with the educational system of the world's leading countries, innovations in the field of education, educational literature, pedagogical skills of teachers, specificity, goals and strategies of educational technologies, exchange of experience serve as a criterion for creating a quality educational environment.

The Third Renaissance requires reforms and innovations to achieve a high ranking among developed countries in social, economic, spiritual, moral and cultural fields. The world community needs to learn from the experiences of countries with high socio-economic status, adapt and test the learned experiences to national conditions, and use national and international intellectual resources as an opportunity to achieve innovations that will reform the life of society. "First of all, the development of education and upbringing, the adoption of a healthy lifestyle, the development of science and innovation should serve as the main pillars of our national idea. Creating a modern school based on the idea that the new Uzbekistan "begins from the school doorstep, from the education system" and developing a national education system that can meet international standards is becoming more and more important today.

The development of technology, the growth of science, the effectiveness of training, the interdependence of education and upbringing, the growth of production and services, the competitiveness of the health care sector determine the modern state strategies. The experience of developed countries has made it clear that the progress of society depends on the students who are educated and educated today.

"We must educate free, well-adjusted people who know their rights, rely on their strengths and capabilities, approach events independently, and at the same time build their personal interests in harmony with the interests of the country and the people".

A student today can take on responsibility and accountability for tomorrow based on the education, knowledge, literacy, and upbringing that he or she has received. The result of the education received in the educational institution can be considered the ability of the trainee to find his place in social life, to become self-employed through the chosen field and profession, and to become a specialist who can independently find positive solutions to existing problems in the development of society. Measures to improve the system of continuous education and upbringing are also related to the reconstruction of the system in a democratic and humanitarian direction. Because the ideas and principles of humanitarianism are inextricably linked with the national idea, embodying the material and spiritual well-being of man, free, independent, creative activity, the highest and most advanced human qualities of human interaction, friendship, harmony, solidarity and caring for each other. The manifestation of humanitarianism is the highest human qualities such as justice, honesty, purity, honesty, hard work, patriotism, decency, conscience, faith, hospitality, humility, respect for dignity, shame and chastity, love of peace, nobility, putting the interests of the nation above one's own interests. And that, of course, puts the need to humanize the continuing education system on the agenda. This need expresses itself in the guidelines for the introduction of the ideas and recommendations put forward on this issue into the educational system, the content of social and human sciences.

From the soil of modern Uzbekistan have emerged many great thinkers and scholars who have made a significant contribution to the development of world civilization and are recognized on a global scale. The rich heritage of our ancestors continues to fascinate people all over the world with its great importance and scientific value. One of the most important tasks of our time is the careful study of the valuable jewels of the history of our country and the formation of mature people using the examples of this heritage. Today's task is to use the treasure of ancestors who left an indelible legacy in the education of a perfect person. In fact, the heritage of our ancestors is our identity, our spirituality, our origin. Take a look at the work of pioneers who codified the problems of education, the problems of perfection, and the problems of human development. The problem of educating young people to become fully-fledged human beings is the main theme of the study of the creative, pedagogical, literary, and intellectual life of people.

Imam al-Bukhari is the most powerful of the Hadith. He has more than 20 books, both large and small, which are listed in the "Al-jome as-saḥiḥ ". In his works, Imam al-Bukhari reflects on morality and urges people to respect their parents, to fulfill their duties to them. In their view of human qualities, insanity is a deadly disease. It makes people speak the truth and forget their promises. He points out three characteristics of a loyal person: lying, breaking promises, and betraying trust. He considers the strength of a person not in physical aggressiveness, but in controlling himself when ignorant.His works reflect universal moral values such as the harmony of the family environment, peace, health and well-being of family members, respect for the young, respect for the elderly ... In the Hadiths of al-Termizi, there are many hadiths that call people to be brothers, to join the community in faith, to friendship and unity. All Muslims are brothers. They should never think of doing harm to each other. Whoever helps his Muslim brother, Allah will help him in the Hereafter. Whoever relieves the need of his ruler will be relieved by God. There is a saying that goes, "There are two things that most people don't appreciate: silence and leisure". Another great scholar, Muhammad ibn Musa Khorazmi, emphasized the importance of personal observation in education.

He considered superficial knowledge to be partial knowledge, and logical knowledge to be true knowledge. Khorezmi made an important contribution to the theory of knowledge. He believed that science and education were the primary means of bringing humanity to intellectual development. And Abu Nasr Farabi outlined the seven essential qualities of a person who can respond to the demands of society and serve that society. The philosopher believes that the highest quality of a human being is the attainment of happiness. Happiness, they say, is only achieved through the accumulation of useful knowledge. Because the highest level of human happiness is the process of learning. Almost all social qualities of a person are shaped and developed by the influence of the external social environment. Therefore, the goal-oriented education and upbringing and the free choice of the pupil play a crucial role in the formation of human qualities, says Farabi.

In the teachings of the nationalist scholar Abu Rayhon Beruni, he tells his students to guard their hearts against evil, against things that cannot be felt by the human being, against traditions, envy, greed, and lust. He believed that ignorance was the root cause of all evil. It emphasizes the role of curiosity, interest, and social environment in learning. He uses vain pride as a metaphor for virtue, saying in Reminiscences of the Ancients: "Pride is really the pursuit of virtue and high office, the acquisition of knowledge and wisdom, and the escape from existing notions beyond possibility". Whoever is found to have these qualities, the judgement will be to his advantage, and whoever is not found to have them, the judgement will be to his detriment. In the development of human intelligence, three things are important. It's the heritage, the social environment, and the correct education that is present in the current enlightenment, which also respects science. In the poet's opinion, the most important factors of human development are the acquisition of a lot of knowledge and high morality. Like many other thinkers, Ibn Sina expressed his vision of the perfect human being in a philosophical, sociological way. Let's look at the science of what it means to be a complete person. Abu Ali ibn Sina calls for the acquisition of knowledge, which is the first step to maturity. And the reason is that science breaks the laws of nature and society and passes them on to future generations. To achieve this goal, he says, one must not be afraid of the challenges one faces.

“Most people aren't afraid of trouble. The most feared of men is the one who fails to show maturity.” Because a man of knowledge is brave, not afraid of death, but striving to know the truth, he said, continuing his thought. Ibn Sina suggests that the environment that surrounds a person's attractiveness plays an important role in the formation of a person, and that this environment not only affects a person's awareness of the world of attractiveness, but also affects the composition of positive or negative aspects in his behavior. She also believes that, it's important to be cautious in raising children, to keep them away from bad social environments. No matter what works of Ibn Sina on education and morality, we are convinced that these works still have a great importance in the education of our advanced generations, in making them wise, knowledgeable and strong, capable of responding to the demands of the time. In the teachings of the great thinker, Yusuf Hosse Hajib, human perfection and development were not considered at all.

Within pedagogy, the terms education, upbringing (physical and spiritual) are used in a narrower sense than described above. It's called education. It's an activity that aims to form students' perceptions of the world and social life. Education is based on a scientific worldview and the idea of accepted ideals, standards, and healthy relationships among members of society. Education in the pedagogical sense is the process by which moral attitudes, political, physical qualities, as well as psychological characteristics, behavioral reactions and habits are formed, thanks to which an individual can adapt to society and become an active participant in it. At the same time, for pedagogy, upbringing, education (physical, spiritual, moral) implies the result of some work. First of all, specific tasks are defined, and after a while, they are evaluated for their success. For pedagogy, not only education is important, but also self-education. It refers to the activity of creating positive qualities in oneself and destroying negative ones. It is known from the centuries-old observations of society that self-education is the main condition for the development of the personality, its perfection. Education is the process of imparting knowledge, acquiring skills and abilities, the main means of preparing a person for life, for work. In the process of education, knowledge is assimilated and education is implemented. Education refers to the concept of teaching in a narrow sense. But it's not just the process of learning in different educational institutions, but it's also the process of learning in the family, in production, and so on. The educational process includes:

a) acquisition of information about the properties of the world necessary for the successful organization of a particular type of experiment and practical activity (the product of this process is knowledge);

(b) development of methods and tools that create these types of activities (the product of this process is skills);

v) to master the methods of using the information provided for selecting and controlling the correct path and method according to the intended purpose and the given problem (the product of this process is the skill).

All human actions, which are directed by a conscious purpose in acquiring certain knowledge, skills and qualifications, are related to education. The essence, purpose and content of education are determined by the cultural progress of society, the development of science and technology, the level of implementation of production technologies, etc. Depending on social relations, the demand and need for general education, the professional training of the individual, the ideas about education, the essence, purpose, content, forms of organization, methods and means of implementation of education change and improve in different periods (stages) of human society. Education, by its very nature, is the result of the collaborative activities of those involved in the process. In the process of education, a person's worldview, abilities, and qualities change.

The purpose of education is determined by the progress, development, direction, content of social relations of the society. The main goal of education organized in the Republic of Uzbekistan today is to educate and develop a well-developed person. The main goal of our national model of training is to train well-developed individuals and professionals with intellectual potential, capable of ensuring the modern development of Uzbekistan in international standards, independent thinking, thinking, qualified, knowledgeable professionals, and at the same time, the inner qualities of the person have matured.

One of the main factors that make this possible is the educational process. The goal of education is to produce a well-rounded generation. This is a two-way process that requires organization and leadership, as well as activism on the part of the learner. The educator is the leader in this process. Because he understands the general goals and essence of social education, is well aware of the system of tasks being implemented in pursuit of the goal, selects and applies educational forms, methods and tools in a scientific way. Human personality is formed and developed by the influence of a multitude of factors: objective and subjective, natural and social, internal and external, dependent and not dependent on the consciousness of people. Therefore, the human being is not a passive entity that merely reflects external influences. He is the subject of his own personal formation and development.

Education is a pedagogical process organized for the purposeful improvement of the personality, which allows a systematic and systematic influence on the personality of the student.

Education is a practical pedagogical process aimed at the formation of certain physical, mental, moral, spiritual qualities in a person; a set of measures taken to ensure that a person has the necessary senses for living in society [6].

Therefore, education is a social phenomenon, the most ancient and eternal spiritual value that ensures the formation of a person as a person. Education is a part of humanity, without which neither the individual nor the human society can function. Because education is a value that ensures the existence of a person and society, and it is passed on from generation to generation.

The purpose of discipline is to develop a person's spiritual faculties. The transformation of worldview, belief, virtue, beauty, goodness, common sense and skills into personality qualities is achieved through education.

Experiments show that by following the above recommendations, it is possible to achieve educational and educational effectiveness in the organization of the educational and educational process.

References:

1. “Yoshlarni ma’naviy-axloqiy va jismoniy barkamol etib tarbiyalash, ularga ta’lim-tarbiya berish tizimini sifat jihatidan yangi bosqichga ko‘tarish chora-tadbirlari to‘g‘risida O‘zbekiston Respublikasi Prezidentining Qarori. PQ-3907. 14.08.2018 y.

2. J.E.Usarov, L.G.Babaxodjayeva, G.N.Sharipova, N,J,Eshnayev Pedagogik kompetentlik Toshkent Malik print co- 2021 yi.

3. Po‘latov Sh.P. Ta’lim menejmenti yoxud ta’lim muassasasini ilmiy-metodik boshqarishga innovatsion yondashuv./ T.: “Yosh kuch”.2022 y.

4. Rasulov A.N. Umumiy o‘rta ta’lim maktablarida zamonaviy ta’lim klassteri sharoitida iqtisodiyot bilim asoslari fani o‘qitishning zarurligi. //“Xalq ta’limi” 2022 - №2. -Б. 10-12.

5. Rasulov A.N. Zamonaviy ta’lim klassteri sharoitida iqtisodiyot bilim asoslari fanini o‘qitish metodikasini takomillashtirish. //Муғаллим ҳәм узликсиз билимлендириў Илмий-методикалық журнал. Некис, 2022 - №2/1.-Б. 65-68.

Raxmonova G.Sh.
Buxoro davlat pedagogika instituti
Umumiy pedagogika kafedrasi o'qituvchisi
https://orcid.org/0000-0002-7202-0129

SHAXS KAMOLOTIDA TARBIYANING O'RNI VA AHAMIYATI

Annotatsiya. *Ushbu maqolada tarbiya shaxsni ijtimoiy hayotga tayyorlovchi, ijtimoiy tajribaga suyangan holda olib boriluvchi jarayon ekanligi, shaxs kamolotida tarbiyaning o'rni, ahamiyati talqin etilganli, hamda tarbiya yosh avlodni muayyan maqsad yo'lida har tomonlama voyaga yetkazish, unda ijtimoiy ong va xulq-atvorni tarkib topshirishga yo' naltirilgan jarayon haqida yozilgan.*
Kalit so'zlar: *shaxs, tarbiya, yosh avlod, ong, xulq-atvor, metod, faoliyat, shakllanish, rag'batlantirish, motivatsiyalash.*

Rakhmanova G.Sh.
Teacher
of the Department of General Pedagogy
Bukhara State Pedagogical Institute
https://orcid.org/0000-0002-7202-0129

THE ROLE AND IMPORTANCE OF EDUCATION IN THE MATURATION OF PERSONALITY

Annotation. *This article says that education is a process that prepares a person for public life, based on social experience, explaining the role and importance of education in the maturation of personality, as well as the process by which education is aimed at the comprehensive education of the younger generation with a specific purpose, the transfer of the content of social consciousness and behavior in it.*
Keywords: *personality, upbringing, the younger generation, consciousness, behavior, method, activity, formation, stimulation, motivation*

Tarbiya — muayyan maqsad asosida shaxsni ijtimoiy hayotga tayyorlovchi, ijtimoiy tajribaga suyangan holda olib boriluvchi jarayon. Boshqacharoq talqin etilganda, tarbiya yosh avlodni muayyan maqsad yo'lida har tomonlama voyaga yetkazish, unda ijtimoiy ong va xulq-atvorni tarkib topshirishga yo' naltirilgan jarayondir. Turli zamon va makonda ijtimoiy tarbiyaning mohiyati turlicha bo'lib, uning mazmuni ijtimoiy maqsadlardan kelib chiqib asoslangan. Turli makon va zamonda tarbiya g'oyasi turlicha ifodalangan bo'lsada, ammo yo'naltiruvchanlik xususiyati hamda obyektiga ko'ra yakdillikni ifoda etadi. Tarbiya xususida taniqli o'zbek pedagogi Abdulla Avloniy shunday deydi: «Al-hosil tarbiya bizlar uchun yo hayot yo mamot, yo najot yo halokat, yo sadoqat yo falokat masalasidur».

Ushbu fikrlardan anglashiladiki, shaxs tarbiyasi xususiy ish emas, balki ijtimoiy-milliy masaladir. Zero, har bir xalqning taraqqiyoti, davlatlarning qudratli boʻlishi avlodlar tarbiyasiga koʻp jihatdan bogʻliq.

Tarbiya jarayoni oʻzaro bogʻliq boʻlgan ikki faoliyatni — oʻqituvchi va oʻquvchi faoliyatini oʻz ichiga oladi. Bu jarayonda oʻquvchining ongi shakllana boradi, his-tuygʻulari rivojlanadi, ijtimoiy hayot uchun zarur boʻlgan va ijtimoiy aloqalarni tashkil etishga xizmat qiladigan xulqiy odatlar hosil boʻladi. Tarbiya jarayonida bolalarning hayoti va faoliyatini pedagogik jihatdan toʻgʻri uyushtirish gʻoyat muhimdir. Bola tashqaridan kelayotgan tarbiyaviy ta’sirlarga nisbatan ma’lum munosabatda boʻladi.

Tarbiyani samarali yoʻlga qoʻyish uchun uning harakatlantiruvchi kuchini, tarbiya jarayonining manbayini yaxshi bilish va hisobga olish muhimdir. Bu tarbiya jarayonidagi ichki va tashqi qarama-qarshiliklardan iborat. Tarbiyada oʻquvchilarning tarbiyalanganlik darajasini ham hisobga olish kerak, aks holda qarama-qarshiliklar vujudga kelishi mumkin. Faoliyat jarayonida hosil boʻlgan malaka va odatlar axloq me’ yorlariga rioya qilishni yengillashtiradi.

Demak, tarbiyachi bola shaxsining tez rivojlanadigan davri — oʻquvchilik yillarida uning ongiga turli-tuman faoliyat (oʻqish, mehnat, ijtimoiy ishlar, oʻyin, sport, badiiy havaskorlik) yordami bilan maxsus ta’sir etishi muhimdir. Aks holda xulq me’yorlari, axloq talablarini yaxshi tushunolmay qolishi natijasida shaxs ijtimoiy munosabatlarda beqaror, tasodifiy ta’sirga beriluvchan boʻ- lib qolishi mumkin. Tarbiya yaxlit jarayonda amalga oshiriladi, uning tarkibiy qismlari ham ayni bir vaqtda faoliyatning biror turi asosida uyushtiriladi.

Shaxsni shakllantirish boshqaruv, nazorat xarakteriga ega boʻlib, bu borada belgilangan vazifalar tasodifiy harakatlar orqali emas, balki oldindan belgilangan va puxta oʻylangan rejalar asosida hal etib boriladi. Tarbiya jarayonida uning maqsadi, shakl va metodlari, shaxsning oʻzini-oʻzi tarbiyalash va qayta tarbiyalash jihatlari muhim oʻrin tutadi. Tarbiya mazmuni ijtimoiy tuzum buyurtmasi asosida belgilanib, uning amalga oshishi uchun ma’- lum shart-sharoitlarning mavjudligi talab etiladi.

Tarbiya turlari turli sohalarga koʻra tasnif etiladi. Koʻproq umumlashgan tasnif oʻzida aqliy, mehnat, jismoniy tarbiyani qamrab oladi. Ta’lim muassasalaridagi tarbiyaviy ishlarning turli yoʻnalishlari bilan bogʻliqlikda fuqarolik, siyosiy, baynalmilal, axloqiy, estetik, mehnat, jismoniy, huquqiy, ekologik, iqtisodiy tarbiyaga boʻlinadi. Institutsional belgilariga boʻyicha oila, ta’lim muassasasi, ta’lim muassasasidan tashqari, diniy, bolalar, yoshlar tashkilotlaridagi tarbiya, maxsus ta’lim muassasalaridagi tarbiyaga boʻlinadi.

Tarbiya va tarbiyalanuvchilar orasidagi munosabatlar uslubiga koʻra avtoritar, demokratik, liberal, erkin tarbiya; turli falsafiy kontseptsiyalar bilan bogʻliqlikda pragmatik, aksiologik, jamoaviy, individual tarbiya farqlanadi.

Tarbiya usullari – umumiy metodning bir qismi, alohida harakati, yanada aniqlashuvi. Obrazli aytganda, usullar – bu qoʻyilgan maqsadga tezroq erishish uchun tarbiyachi oʻzining tarbiyalanuvchilari bilan yoʻl ochadigan oʻrganilmagan so‘qmoq. Agar uni boshqa tarbiyachilar ham foydalana boshlasa, u holda asta-sekin usullar keng ustunli yo‘llar – metodlarga aylanishi mumkin.

Amaliyotda tarbiya vositalari tushunchasi ham ajratiladi. Usullara degandata‘sirko‘rsatishlar birligi, vosita deganda, usullar yig‘indisi tushuniladi. Vosita – bu usul ham emas, metod ham emas. Masalan, mehnat – tarbiya vositasi, biroq uni ko‘rsatib berish, mehnatni baholash, ishdagi xatoni ko‘rsatish – bu usullar. So‘z (keng ma’noda) – tarbiya vositasi, biroq replika, taqqoslash – usullar. Bu bilan bog‘liqlikda ba’zan tarbiya metodlari qo‘yilgan maqsadni muvaffaqqiyatli amalga oshirish uchun foydalaniladigan usul va vositalar tizimi sifatida aniqlanadi. Xuddi shuningdek metodning tuzilishida usullar va vosita albatta mavjud bo‘ladi.

Tarbiyalanuvchilargata‘siretishi natijalariga ko‘ra metodlarni ikki guruhga bo‘lish mumkin:

- Axloqiy me’yorlar, motivlarni hosil qilishga, tasavvur, tushuncha, g‘oyalarni shakllantirishgata‘siretuvchi.
- Xulq-atvorning u yoki bu turini aniqlaydigan odatlarni hosil qilishgata‘siretuvchi.

Hozirgi vaqtda o‘zida tarbiya metodlaridagi yagona maqsad, mazmun va tartiblilikni aks ettiruvchi ko‘proq obyektiv va qulay metodlar qo‘llaniladi. Ana shunday tavsif bilan bog‘liqlikda tarbiya metodlari uch guruhga bo‘linadi:

- Shaxs ongini shakllantiruvchi metodlar.
- Faoliyatni tashkil etish va xulq-atvor tajribalarini shakllantirish metodlari.
- Xulq-atvorni va faoliyatni rag‘batlantirish metodlari.

Shaxsda dunyoqarash izchil, tizimli, uzluksiz hamda maqsadga muvofiq tashkil etilayotgan ta’lim -tarbiyaning yo‘lga qo‘yilishi, uning turli yo‘nalish va mazmundagi ijtimoiy munosabatlar jarayonida faol ishtirok etishi, shuningdek, o‘z-o‘zini tarbiyalab borishi natijasida shakllanadi. Yosh avlod dunyoqarashining shakllanishida ta’lim muassasalarida o‘qitilishi yo‘lga qo‘yilgan tabiiy, ijtimoiy va gumanitar fanlar asoslarining ular tomonidan puxta o‘zlashtirilishi muhim o‘rin tutadi.

Shaxsning ma’naviy-axloqiy qiyofasi, hayotiy yondoshuvlari, uning uchun ustuvor ahamiyatga ega bo‘lgan qadriyatlar hamda axloqiy tamoyillar mohiyati u ega bo‘lgan dunyoqarash mazmunini ifodalaydi. O‘z navbatida dunyoqarashning boyib borishi shaxsning shaxsiy sifat va fazilatlarining tobora barqarorlashuvini ta’minlaydi. O‘z mazmunida ezgu g‘oyalarni ifoda etgan dunyoqarash shaxs qiyofasida namoyon bo‘layotgan ijobiy fazilatlarning boyib borishiga yordam beradi.

Dunyoqarash o‘z mohiyatiga ko‘ra, ilmiy (muayyan falsafiy tizimga ega) va oddiy (muayyan falsafiy tizimga ega bo‘lmagan) dunyoqarash tarzida farqlanadi. Ilmiy dunyoqarash asosida uzluksiz, izchil ravishda mavjud fanlar asoslarini puxta o‘zlashtirib borish, ijtimoiy munosabatlar jarayonida faol ishtirok etish natijasida barqarorlik kasb etgan g‘oyalar yotadi.

Shaxs dunyoqarashini shakllantirish uzoq muddatli, dinamik xususiyatga ega murakkab jarayon sanaladi.

Foydalanilgan adabiyotlar

1. Valerievna I. G., Shavkatovna R. G. The Content and Characteristics of Spiritual and Moral Education Works in Higher Education Institutions //Excellencia: International Multi-disciplinary Journal of Education (2994-9521). – 2024. – Т. 2. – №. 5. – С. 340-342.
2. Shavkatovna R. G. OILADA BOLALARNI AXLOQIY TARBIYALASH SHAKLLARI //Proceedings of International Educators Conference. – 2024. – Т. 3. – №. 5. – С. 53-56.
3. Рахмонова Г. Ш. СОДЕРЖАНИЕ И ХАРАКТЕР ДУХОВНО-НРАВСТВЕННОЙ ВОСПИТАТЕЛЬНОЙ РАБОТЫ В ВЫСШИХ УЧЕБНЫХ ЗАВЕДЕНИЯХ //Proceedings of International Conference on Scientific Research in Natural and Social Sciences. – 2024. – Т. 3. – №. 6. – С. 5-8.
4. Рахмонова Г. Ш. СОДЕРЖАНИЕ И ХАРАКТЕР ДУХОВНО-НРАВСТВЕННОЙ ВОСПИТАТЕЛЬНОЙ РАБОТЫ В ВЫСШИХ УЧЕБНЫХ ЗАВЕДЕНИЯХ //Proceedings of International Conference on Scientific Research in Natural and Social Sciences. – 2024. – Т. 3. – №. 6. – С. 5-8.
5. Shavkatovna R. G. Improving the educational process in the development of spiritual and moral competences in students //Genius Repository. – 2023. – Т. 25. – С. 10-12.
6. Shavkatovna R. G. Methods of the Competence Approach in the Spiritual and Moral Education of Students //American Journal of Language, Literacy and Learning in STEM Education (2993-2769). – 2024. – Т. 2. – №. 2. – С. 535-539.
7. Рахмонова Г. Ш. Технологии Развития Духовно-Нравственной Компетентности Студентов //Miasto Przyszłości. – 2024. – Т. 45. – С. 306-309.
8. Raxmonova G. S., Norquliyeva O. O. MAKTABGACHA TARBIYA YOSHDAGI BOLA SHAXSINING SHAKLLANISHI VA RIVOJLANISHI //Educational Research in Universal Sciences. – 2024. – Т. 3. – №. 2. – С. 295-297.
9. Raxmonova G. S., Abdunabiyeva F. N. MAKTABGACHA TA’LIM TASHKILOTI VA OILA HAMKORLIGI //Educational Research in Universal Sciences. – 2024. – Т. 3. – №. 2. – С. 729-734.

Rustamov B.Kh.
teacher
of Department of Management
faculty of pedagogical
Chirchik state pedagogical university

FACTORS FOR DEVELOPING FORECASTING SKILLS IN FUTURE TEACHERS BASED ON TEACHING PHILOSOPHY

Abstract*. At the current stage of global educational development, the problem of philosophical and pedagogical justification for researching and forecasting the social effectiveness of education is particularly relevant.*

In the assessment of knowledge, its predictive function serves to obtain information about the educational process, its future, that is, its foreseeable state. At each stage of the educational process, it is possible to verify whether the specific knowledge, skills, and abilities intended for a specific part of the educational material are sufficiently formed or not.

The article highlights the factors shaping future teachers' predictive skills based on the teaching of the subject "Philosophy."

Key words*: Efficiency, foresight, ability, knowledge, philosophy, skills, competence, goal.*

In philosophy, academic development is an integral part of the whole pedagogical process, ensuring the ordering of knowledge, the creation of schedules, and the creation of favorable conditions for learning. This process incorporates a comprehensive approach and approaches to advance and align educational requirements, thereby contributing to higher quality and reliability of the educational process. Today, future educators must not only be equipped with professional knowledge and practical skills, but also be trained to be critical thinkers, independent decision-makers, quick-moving in the face of uncertainty, capable of producing effective outcomes, and equipped to meet non-standard expectations for professional responsibilities.

As a philosophical scholar, professor N. Muhammadiev distinguishes philosophical disciplines in the following order: philosophy of science, philosophy of technology and information technologies, philosophy of medicine, philosophy of economics, philosophy of competition, philosophy of law, philosophy of the art of war, philosophy of information security and technologies, philosophy of culture and art, philosophy of education and upbringing, philosophy of history, philosophy of politics [3].

Mirza Abdul Kadir Bedil occupies an important place among the Central Asian philosophers and thinkers who have worked in India, Iran, and Afghanistan. He was born in 1644 in Azimabad, India, and spent the rest of his life in Hindustan, engaged in science and literature. His philosophical works, such as The Four

Elements, The Nutcracker, and Irfan, have survived, as have a number of works on literary scholarship.

In Bedil's philosophy, the exploration of human cognitive capacities was a distinct focus. It is the first level of his intellectual knowledge, his nature and possibilities are bound up with the emotional qualities of man. The qualities of a person's senses correspond to the individual character. So every human being has a limited sense of possibility and a limited sense of world. The mind, the intellect, the mind is the perfect invention of the intellect.

In the philosophy of the 17th and 18th centuries, the socio-philosophical considerations of Boborakhim Mashrab (1640-1711) are of particular importance. Mashrab is a person who has earned great respect and recognition among the people, not only as a brilliant creator, but also as a courageous person who at the same time cannot come to terms with the injustice of the society. It is not known whether he collected his own works or compiled them. The social content and strong critical attitude of the author were shaped by the poet's idealistic worldview, populist philosophy, and critical attitude to the tragic events of his time. The creative heritage of Mashrab includes both religious and philosophical ideas, as well as some of the most important instruments of the city's history, which was widespread at that time. Thus, if in the past the skill of the specialist was considered to be the acquisition of knowledge and skills known to the masses, now it is necessary to acquire the skills of the master, which involve the purposeful development of the universal abilities of the person on the basis of new social needs [5].

At the present stage of the development of education in the world, the problem of the philosophical-pedagogical foundation for the study and implementation of the social effectiveness of education is becoming more and more complex. The formation of the cognitive capacities of school teachers on the basis of the study of philosophy is a process of purposeful development of specifically organized, movement-oriented abilities, based on the probable tendencies in the scientific development of objects or subjects of pedagogical reality. It is known that the outcome of education depends on the ratio of the two most important components of the educational process: the development of knowledge (in our case, the development of the foundations of scientific knowledge) and the development of students (the development of thought processes) [2].

The system of shaping factors for the development of the basic skills of school teachers based on the study of philosophy consists of 3 elements:

1) knowledge component (a body of knowledge in executive translation as an integral part of the effective pedagogical process);

2) activity component (completion of supervisory skills, professional and practical experience in management);

3) motivation component (a thorough understanding of the content of the supervisory competence, understanding its importance and readiness to shape the supervisory competence);

The component of knowledge is represented as an integral part of the body of knowledge in the sphere of education, as well as in the pedagogical activity.

As a means of improving academic competence, students should have the following skills: to set goals and form their capabilities, to understand their goals; to formulate cognitive functions and to enter hypotheses; to analyze their academic activity; to learn independently; to perform reflection in their academic activity; to evaluate themselves in their academic activity; to describe and present the results of their research. The socio-labor component is the regulation of professional activity on the basis of scientifically based forecasts; the formation of new leadership experience in the process of active learning and cognitive activity; the promotion of the use of leadership in pedagogical activity [6].

A valuable content and motivation component - motivation, as a key factor in shaping a person's motivation, behavior, and activity, is a curiosity in all human beings. In this sense, motivational psychology is especially important for representatives of the socioeconomic type of professions (such as physicians, teachers, managers and administrators) where the human being is the object of labor [4].

The motivation component of supervision is the need to learn and use supervision in everyday pedagogical practice.

The following factors are important in effective education:

A fascination with new technologies. Guidance enables teachers to adapt to constantly changing technological demands. Knowing future trends can help us integrate new educational technologies, which in turn can lead to more effective learning.

The final knowledge and skills of students can be determined through the use of information technology in the process of teaching, which can be monitored to ensure that they meet the didactic requirements. It involves determining, monitoring, evaluating, and analyzing aggregated and statistical data to determine the extent to which students' knowledge, skills, and competencies are being developed.

Considering personal needs. Academic leadership involves analyzing the needs of each student, allowing for the creation of personalized instructional programs. This, in turn, helps to maximize the use of time and resources, and to increase the motivation and curiosity of students. Know the training requirements of the labor market in advance. In the field of education, modernization allows us to adapt educational programs to the demands of the labor market. This helps the builders to learn not only theoretical, but also practical skills and prepare competitive personnel.

Optimize the learning process. Knowing what's going to change in the future allows you to optimize your learning process, anticipate problems, and develop more efficient ways of doing things.

In the research process, it is considered important that the archaeological investigations help to identify the methodology to a certain extent. In controlling education, its executive function serves to obtain information about the educational process, its future, i.e. the situation in which it can be known more than before. At each stage of the learning process, the teacher is able to check whether the required knowledge, skills, and abilities have been sufficiently developed or not, depending on the known future of the learning material. The results are then used to model the students' future careers based on a known scientific background. Such a forecast will help to draw clear conclusions for planning and implementation of future events [1].

The mechanism is the self-dependent and negligent part of narcissism [7]

The mechanism of shaping scientific evolution must take into account two complementary processes:

1) Information block is intended to develop knowledge that can be used as a basis for information-advice (for example , knowledge in the form of revealing the identity of students), the associative learning mechanisms are put into practice;

2) Activity block is implemented on the basis of technological activities , algorithmic mechanisms , which are designed to adapt the operational components;

3) Intellectual-creative block is based on creative mechanisms, which are intended to purposefully reveal the virtues of the thought processes necessary for the successful implementation of the activity.

The mechanisms for the formation of such blocks are reflected in the methods of mutual influence between the future teacher and the student on the goals, content and means of education [8]. A number of strategies can be integrated into the curriculum to reveal these new areas of guidance. For example, in the method of creating and solving a problematic task or situation in the field of management, each participant (pedagogue and student) is involved in the process and is subject to two stages of litigation. This is where the participants of the debate work on and improve their ability to articulate their positions in a clear and balanced way, to be logical, to find solutions in a short time, to analyze and analyze a conflict from all sides.

Many problems of pedagogical theory and practice have been the shaping factors of the development of pedagogical skills based on the study of philosophy. These are the philosophical analysis, the problems of understanding pedagogical knowledge and processes of pedagogical knowledge, the analysis of the social efficiency of education and the stylistic principles of governance, the laws of shaping and developing pedagogical governance, the social efficiency, the general conditions for the construction of educational, socio-economic governance models, the general scientific and personal tendencies of pedagogical governance, the comparison of pedagogical institutions, the comparison of the main paradigms and strategies of educational institutions, the historical-pedagogical analysis, the pedagogical and social principles of educational practices, the general conditions for the construction of pedagogical models of governance, the comparison of pedagogical and social models of educational institutions with other institutions, , In the context of the current changes, the dynamic dynamics, which is intended to characterize the leading tendencies of social dynamics, the static dynamics, which in the context of relative reconstruction makes it impossible to understand the nature of social processes, and the complexities, which reveal the situation, are taken into account in the pedagogical management of the system of knowledge. Similarly, the factors shaping the evolving capacities of future teachers based on the study of the philosophical field include the redefinition of the phenomenon of knowledge (these parts of knowledge are complex disciplines, transdisciplinary and interdisciplinary knowledge), the resolution of problems of interdisciplinary nature and complexity, the quality and effectiveness of modern educational systems, and the participation in scientific research in the pedagogical prognostic society.

References

1.Джураева Р.Б. Талабаларни ўкитишда билим, малака ва кўникмаларини шакллантириш. Oʻzbekistonda fanlararo innovatsiyalar va ilmiy tadqiqotlar jurnali, 2022/13. Б. 106-107.

2.Захаров А.В. Механизмы формирования прогностических умений у будущих учителей. Сибирский педагогический журнал, 2009. Б. 270.

3.Муҳаммадиев Н.Э. Мустафаев У.У. Олий ўқув юртларида фалсафа фанини ўқитишни тубдан ислоҳ қилиш-давр талаби. //Янгиланаётган Ўзбекистонда ижтимоий тарққиётни жадаллаштиришнинг фалсафий муаммолари мавзусидаги вазирлик миқёсида ўтказилган онлайн илмий-амалий анжуман.- Термиз 2020 й.

4.Нисанбаева А., Чиналиева А.. Шахс фаолиятида мотивациянинг аҳамияти. Science and innovation, 2022.

6.Сайфуллина Н.А. Структурно-содержательная характеристика прогностической компетентности студентов педагогической магистратуры, 2020/4.

7.Рустамов Б. Х. Бўлажак педагогларда турмуш тарзини соғломлаштириш кўникмаларини шакллантиришнинг методик тизими. // Чирчиқ давлат педагогика университети инсон фаровонлигини ўрганишда фанлараро ёндашув халқаро илмий конференция материаллари тўплами. Чирчиқ 2023-й.

8.Rustamov B. X. In the works of eastern thinkers - illumination of a healthy lifestyle. Science and innovation International scientific journal volume 3 issue 3 march 2024 uif-2022: 8.2 | issn: 2181-3337 | scientists.uz.

Safarova G.I.
Buxoro davlat pedagogika instituti
Maktabgacha va boshlang'ich ta'lim
pedagogikasi kafedrasi o'qituvchisi

1920-1938-YILLARDA BUXORODA MAKTAB TA'LIMINING RIVOJLANISHI

Annotatsiya. *Prezidentimiz Sh.Mirziyoyev "Biz Yangi O'zbekistonni bunyod etishda sog'lom va barkamol yoshlarimizni hal qiluvchi kuch deb bilamiz. Shu maqsadda ularning bilim, madaniyat, san'at va sport bo'yicha salohiyatini ro'yobga chiqarish, tadbirkorlik faoliyatini rag'batlantirish borasida ham yangi tizim yaratamiz" deb bekorga aytmadilar. Maqolada Buxorodagi XX asrning birinchi yarmida maktablarining tashkil topishi va rivojlanishi haqida ma'lumot berilgan.*

Kalit so'zlar: *jadid, yangi usul, maktab, ma'rifatparvar, madaniyat, pedagogik fikr*

Safarova G.I.
Bukhara State Pedagogical Instituti
teacher
of the Department of Pedagogy
of Preschool and Primary Education

DEVELOPMENT OF SCHOOL EDUCATION IN BUKHARA IN 1920-1938

Annotation*. President Sh. Mirziyoyev said: "We consider our healthy and comprehensively developed youth to be a decisive force in building the New Uzbekistan. To this end, we will create a new system for realizing their potential in the fields of knowledge, culture, art and sports, as well as encouraging entrepreneurship. The article provides information on the establishment and development of schools in Bukhara in the first half of the 20th century.*

Keywords*: modernity, new method, school, educator, culture, pedagogical thought.*

Ma'lumki, Buxoro shahri asrlar davomida nafaqat Turkistonda, balki butun islom Sharqida yorqin ilm mash'ali vazifasini o'tab kelgan. So'nggi asrlarda bu yolqin birmuncha pastlagandek ko'rinsa-da, Buxoro madrasalari hamisha Turkistonning barcha bo'lgalaridan tashqari Hindiston-u Eron, arab diyorlari, uzoq tatar dashtlaridan kelgan talabalar bilan to'lib-toshgan edi. Garchi Turkiston siyosiy jihatdan uch davlatga bo'lingan bo'lsa-da, Buxoro o'zining ilm-ma'rifat poytaxti sifatidagi mavqeyini aslo yo'qotmadi…

20-yillarning birinchi yarmida maorif institutlari yuqori malakali maktab o'qituvchilari tayyorlash vazifasi bajardi. Ushbu oliy o'quv yurtlarida boshlang'ich maktab va savodsizlikni tugatish maktablari uchun o'qituvchilar tayyorlandi. 1923-yili O'zbekistonda 11 ta maorif instituti bo'lib, ularda 1900 talaba o'qir, ulardan 80% ishchi va dehqonlar edi. Keyinroq moliyaviy qiyinchiliklar tufayli ular qayta tashkil etildi.1924-yili jami 7 ta maorif instituti bo'lib, shundan beshtasi Toshkentda, Samarqand va Buxoroda bittadan edi.

Turkistondagi maktabxonalar faoliyatini Abdurauf Fitrat shunday ta'riflaydi: "Maktab shunday joydirki, bir muallimi bor, uni "maktabdor" deydilar, bolalar u yerda yetti yildan to o'n yilgacha zaruriy xat-savodlarini chiqargunga qadar qoladilar, undan keyin xohishlariga qarab, madrasaga borib, dars o'qiy boshlaydilar[62]

Turkistonda ilk bor yangi usul maktablari Buxoroda tashkil etilib taxminan 1900-1903 yillar oralig'iga to'g'ri keladi. Aynan shu yillarda tatar o'qituvchilari tomonidan ilk yangi usul maktablari ochilgandi.

1920-yil 2-sentabrda Buxoroda amirlik tartibi ag'darilganidan so'ng (monarxiyaga qarshi tuntarish) dastlabki oylardanoq zamonaviy maorif tizimini vujudga keltirish choralari ko'rildi. Buxoro Respublikasi rahbarlari ushbu masalaga: «Maorif kerak, chunki hech bir mamlakat, hech bir millat va hech bir inqilob maorifsiz yashamas, o'qimok uchun maktab kerak, maorif kerak kitob kerak-bular haqiqat»[63]-tarzida qaradilar.

BXSRning 10 nafar kishidan iborat hukumat tarkibi jadidlardan, asosan taraqqiyparvarlardan iborat bo'lib, ular xalqni savodli qilish orqali jaholat va qoloqlik botqog'idan xalos qilish mumkinligi to'g'risidagi orzu-umidlarining ro'yobga chiqish vaqti yetdi, deb hisobladilar. Ayni BXSR davrida aholidatexnik bilimlarni rivojlantirish, xo'jalik yuritishni modernizarsiyalashtirish maqsadida chetdan texnika vositalari kirib keldi.

Ayniqsa BXSR hukumatining dastlabki yilida ishlab chikilgan va «Buxoro axbori» gazetasida BXSR maorif noziri Qori Yo'ldosh Po'latov va maktab sho'basi mudiri imzosi ostida chop qilingan «Maktablar haqida umumiy qoidalar» («Qoidalar»)[64] alohida ahamiyatga molik bo'ldi.

Ushbu hujjat: «Umumiy qoidalar», «Ta'lim-tarbiya ishlariga oid», «Maktab idorasi xay'ati vazifasi», «Maktab sho'rosining vazifasi», «Maktab xodimlari uchun kategoriyalar» kabi bo'limlardan iborat. BXSRda ta'lim tizimini zamonaviylari kirish ushbu "Qoidalari"dan boshlaydi.

"Qoidalarda", amirlik zamonida mavjud bo'lgan eskicha ta'lim tizimini tubdan isloh kilish, aholini yoppasiga savodini chiqarish masalasi kun tartibiga quyiladi. Maktab ishlari haqidagi rejada: 8-16 yoshli bolalar uchun ibtidoiy

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[62] Абдурауф Фитрат Ҳиндистонда бир фаранги ила Бухороли мударриснинг жадид мактаблари хусусида қилган мунозараси. Танланган асарлар; 1 жилд. Т.: Маънавият; 2000. - Б. 50.

[63] «Бухоро ахбори», 55-сон. 1921 йил,18 ноябр. (Бекбой. «Маориф ишлари теграсида»). ("Бухоро ахбори", "Озод Бухоро" газеталаридаги материалларини тақдим этганлиги учун диссертант тарих фанлари номзоди, доцент К.Ж.Рахмоновга миннатдорчилик билдиради.

[64] «Мактаблар хакида умумий коидалар», «Бухоро ахбори», 1920 йил, 29 ноябр. 10-сон.

(boshlang‘ich) maktablar ochish, savodsizlikni tugatish kurslari hamda muallim va murabbiylar tayyorlaydigan maxsus o‘quv yurtlarini tashkil etish ko‘zda tutiladi. Matbuot sahifalarida «Qoidalar» e’lon qilinganidan keyin, bu jamoatchilik muhokamasidan o‘tgan.

Jumladan, boshlang‘ich maktablarda o‘kuv muddati 7-8 yil davom etishi qayd qilingan. Keyinchalik bu masalada munozaralar kuchayib ketadi. «Buxoro axbori» gazetasining bir qator sonlarida ushbu muddatni 4-5 yilga tushirish bilan bog‘liq takliflar bildirilgan. Maorif noziri Qori Yo‘ldosh Po‘latov: «Buxoroning boshlang‘ich maktablarida o‘qish muddatini Bekboy («Buxoro axbori» muxbirlaridan biri) o‘rtoq 4 yil bo‘lsun deydur. Maorif nazorati bu masalani obdon qarab chiqib 6 va 7 yillik emas, boshlang‘ich o‘qish muddatini 5 yillik o‘laroq qabul kilgan edi»[65] deb yozadi. «Qoidalar»da eski maktablarni isloh qilish, yangi maktablar ishida madrasada ta’lim bergan muallimlardan foydalanib turish, qizlar maktablarini tashkil etish, bolalar bog‘cha va yaslilari ochish, ta’limning majburiyligini ta’minlash, o‘quvchilarni hukumat hisobidan bepul ovqatlantirish masalalari sanab o‘tiladi. «Qoidalar»ning 1-bo‘lim 11-bandida: «Maktablarning har qaysisida tarbiya olmoq bilan birga, bolalar uchun mumkin bo‘lg‘on ravishda osh, choy, kiyim ham berilur»[66] –deb yozilgan. Maktablarda bolalar sog‘ligini nazorat qilish uchun doimiy tibbiy nazorat ko‘rigini tashkil etishga diqqat-e’tibor qaratilgan.

Ta’lim-tarbiyada «bolalarni so‘qmoq, urmoq, jazo bermoq bitirilib, o‘git-nasihat, tanbeh, o‘rnak ko‘rsatish (ibrat-namuna)» usullarini qo‘llash qoidasi ko‘rsatilgan. Ta’lim «axloqiy, faniy, siyosiy (mafkuraviy)» ravishda bo‘lishi, har bir sinfdagi o‘quvchilar soni 30-35 tagacha qilib belgilanishi yozib kuyilgan[67].

Yuqoridagi qaydlar hozirgi zamon ruhi bilan hamohang ekanligining guvohi bo‘lamiz. Ayniqsa, ta’limning shakllari, ta’lim-tarbiya usullari, hatto bir sinfdagi o‘quvchilar soni kabilar zamonaviy ta’lim tizimi va jarayoni talablariga mos keladi.

Ushbu yillarida maorif ta’lim-tarbiyaning jonkuyar fidoiylari bo‘lgan F.Xo‘jaev, A.Fitrat, Q.Y.Po‘latov, Atoulla Xo‘ja, Said Ahroriy kabilar boy moddiy, ma’naviy madaniyatimizni rivojlantirish, o‘tmishdan qolgan ma’naviy boyliklarimizni asrash, kelajay avlodlarga yetkazishga o‘z kuch-qudratlarini bilim va salohiyatlarini sarfladilar. Moddiy ma’naviy madaniyatimizni rivojlantirish, zamon talablari darajasida ilmiy-texnik mutaxassislarga va ziyolilarga ega bo‘lish yo‘lida ibratomuz amaliy qadamlar qo‘yilgan edi.

1923-yilda maktab qurilishining yangi bosqichi boshlandi, bu kompleks qurilishga o’tish va dasturlarni sxematiklashtirish bilan belgilandi. “Ta’lim” so‘zi asta-sekin “ijtimoiy-siyosiy ta’lim” va “jamoat ongini tarbiyalash” tushunchalari bilan almashtirildi.

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[65] «Бухоро ахбори», 1921 йил 26 ноябр 56-сон. («Мубохаса» рукни. Кори Йўлдош. «Маориф ишлари тугрисида»).

[66] «Мактаблар хакида умумий коидалар», «Бухоро ахбори», 10-сон. 1920 йил 29 ноябр.

[67] Ҳайитов Ш. ва бошқалар. Бухоро халқ совет Республикаси: иқтисодиёт, ижтимоий сиёсат ва маданий ҳаёт. Бухоро: "Бухоро" нашриёти, 2005 - Б. 72.

XX asr 30-yillari O‘zbekistonda xalq ta’limida keskin burilishlar amalga oshirilishi 1930 yilning 25-iyulida VKP(b)MKning «Umumiy boshlang‘ich majburiy ta’lim to‘g‘risida» gi qarori asosidagi O‘zbekiston SSR XKS ham 1930 yilning 23 avgustida «O‘zbekiston SSRda boshlang‘ich umumiy majburiy ta’limga o‘tish to‘g‘risida»gi203 qarorlarning qabul qilinishi bilan bog‘liq. Bu qarorga ko‘ra, 1930-1931 o‘quv yilidan boshlab shaharlarda, fabrika va zavodlar joylashgan qo‘rg‘onlarda 8,9,10 yoshga yetgan bolalar, ommaviy va yoppasiga kollektivlashtirilgan rayonlarda sovet xo‘ja-liklari (sovxoz) va MTSlarda 8 yoshli bolalar ham umumta’lim maktablariga qamrab olinishi kerak.

1931-1932-o‘quv yilidan boshlab esa 11 yoshli o‘smirlar ham majburiy boshlang‘ich ta’lim tarmoqlari bilan qamrab olinishi, turli sabablar bilan maktabga tortilmay qolgan 11-15 yoshli o‘smirlar esa 1 yoki 2 yillik tezlashtirilgan o‘quv kurslarida o‘qitilishlari kerak edi.

Ushbu yillarda Buxoroda ta’lim tizimi tom ma’noda o’zgardi. Maktab ta’limiga oid qator hujjatlar, qonunlar ishlab chiqildi. Ushbu qaror va qonunlar Buxoro maorifining o’zgarishiga debocha vazifasini bajardi.

Adabiyotlar ro’yxati

1. Mirziyoyev Sh.M. Milliy taraqqiyot yo‘limizni qat’iyat bilan davom ettirib, yangi bosqichga ko‘taramiz. Tom I. T.: O‘zbekiston NMIU, 2018. – 592 b.

2. Abdusattor Jumanazar. Buxoro ta’lim tizimi tarixi. – T.: Akademikash, 2017. - 592 b.

3. Ahmadov O.Sh. Hamidov H.K. Pedagogika nazariyasi va tarixi (Pedagogika tarixi XIX – XX asrlar)//o‘quv qo‘llanma. – Buxoro. Kamolot nashriyoti. 2022-yil. 188 bet

Samadov A.Kh.
Acting Professor
of the Department
"Oil and Gas works" of Karshi Engineering
economic institute.
Ashurov Sh.M.
Assistant
of the department
"Development and operation of oil and gas fields".
Tashkent State Technical University named after Islam Karimov.
Boikobilova M.M.
Assistant
of the Department of
Economics and Engineering,
Karshi International University.
Uzbekistan, Karshi.

ASSESSMENT OF THE EQUIPMENT USED IN THE DISPOSAL OF GASES IN LOW-PRESSURE FIELDS AND ITS ECONOMIC EFFICIENCY

Annotation:*Today, a decrease in oil production indicators, non-proliferation of new oil fields, a decrease in pressure at the fields in operation affect the oil production indicator. Therefore, the use of new technologies in the disposal of gases produced at low-pressure fields remains relevant.*
keywords: *disposal, environmental Environment, Atmospheric Protection, compressor station, hydrate formation, torch gases, driving aggregates.*

In the oil and gas sectors, activities are planned to ensure the ecological environment of meyori and the disposal of natural gas, oil satellite gases and gases. Currently, when collecting products from wells in oil fields and in the process of preparing a neftgazkondensat mixture, gases are separated from the composition of the effect from special separation devices, and condensates are degassed and burned into the atmosphere in torches due to low pressure due to the inability to give the gas to the transport system.

The Kruk, West Kruk, South Kemachi, North Urtabulak and Umid oil and gas condensate fields are part of the group of Mubarakneftgaz LLC fields and are located in the territory of Bukhara and Kashkadarya region. Deposits in this group include oil and gas condensate fields, gaz condensat fields and oil fields.

At the fields of the Mubarek group, oil and gas deposits are used in a single system. In most wells, the products are collected in a closed sealed system. A compressor station is being built for utilization of associated gases at the Southern

Kemachi's oil and gas condensate fields. Emissions of additional pollutants into the environment from existing field facilities are taken into account at all times.

It is known that in the near future the oil part of the well was worked out from the Southern Kemachi's field, and the products from the existing oil wells will be collected using two automatic group measuring units. In 2004, a gas complex preparation facility was built for industrial test use at the South Kemachi's mine. In industrial test use, the data of the detected mine in one was obtained, and on the basis of this data, industrial production was designed to ensure the maximum extraction of hydrocarbons from the reservoir in the layer. When oil and gas heaps are used together, all products of extracting wells (gas liquid mixture) are collected directly by coming to the gas complex preparation device. From there, the gas condensate and water mixture are fed to the refinery, where complex treatment is performed and the gas liquid is divided into two components: gas and liquid hydrocarbons, produced water and dissolved gases. The gas is collected by the line of the inlet block connected to the wells through the beam system and transported by the collector to the gas treatment facility. The oil gas condensate mixture is prepared in a low-temperature separation device using the drossel-effect [1,2, 3,6].

Diethylenglycol is used as an inhibitor in hydrate formation. The one-year capacity of the gas complex preparation device is equal to $3.0x10^9 m^3$/year.

The purified and dried gas is fed through the measuring node to the connecting Southern Kemachi's-Urtabulak gas transmission, and from there the medium-Mubarak gas processing plant is transported to the gas transmission. Purified and dried gas is supplied through the measuring unit to the South Kemachi-O'rtabulak interconnecting gas transmission and from there to the O'rtabulak-Mubarek gas processing plant gas transmission.

The following oil field equipment complex has been installed in the South Kemachi's field: wells, automatic group measuring device, oil transmissions, reservoirs, pumps and torch equipment, gas complex preparation device, oil preparation device, etc. Waste from these structures has an anthropogenic effect on the environment.

The Kruk and West Kruk flare gases flow together through the South Kemachi compressor station interconnecting gas pipeline, which also receives gas from the North O'rtabulak and Umid fields.

To measure the flow rate of flare gases, measuring units are installed at the exit from each field to the connecting gas pipeline-collector. The Kruk Oil Processing Unit, Automatic Multiple Metering Unit * for 1,2,3,4,5,6 mesh gas and together with West Kruk gas will be sent to the South Kemachi Compressor Station. Gas is also supplied to the compressor station through the automatic group measuring installation of North O'Habulok - line-2 of the inlet unit at 1,2,3. According to hydraulic calculations, the pressure of the gas pipeline with a diameter of 530x6 mm is 0.1 MPa and the temperature at the last end of the 34^0C is 5.0 kilometers long.

Air pollutant emissions from existing facilities are about 3188.1 t/year. Most of the emissions are carbon monoxide - 63.81%, hydrogen sulfide - H2S, nitrogen - NO^2, dry and nitrogen oxide - NO [4,5].

Compression system includes gas distributor on filter-separators before regenerating device, gas distributing device, air distributing device for its cooling and filter-separators of condensed liquid separation. According to 2.6 calculations, compressor power and 25.53 MW are required to compress gas from 0.1 to 5.6 MPa per day. The transmission to the Southern Kemachi's compression compressor station-the size of the collector diameter is equal to 325x10 millimeters in the connection to the Southern Kemachi-O'rtabulak-Mubarek gas processing plant and 1 kilometer in length. Therefore, due to the operation of the compression compressor station and other facilities, additional gas is released into the atmosphere, and the combustion dump products of hydrocarbons. The composition of such emissions includes nitrous oxide-24.6% and carbon monoxide - 67.82%.

The total discarded waste is 8 species (hydrocarbons methane, carbon monoxide, nitrogen two oxides, sulfur two oxides, nitrous oxide, hydrogen sulfide, soot and hydrocarbons), and is 1140.2 tonnes/year. Taking into account the fact that in the Kruk field after 2013, most wells were transferred from the gaslift method to the barbell depth pump device, the volume of non-disposal gases will be sharply reduced, and its amount will be equal to the amount of satellite gases contained in the extracted oil.

Emissions into the atmosphere will be reduced by 2047.88 tons/year due to the disposal of oil gases from the Mubarak Group fields. Emissions into the atmosphere will be reduced by 2047.88 tons/year due to the disposal of oil gases from the Mubarak Group fields. Thus, it became known about the burning of 9.3% of all produced gas. According to the information of Uzneftegazdobycha JSC, 317,000 m^3 of gas per day is emitted and polluted from the North O'Rabulak field into the atmosphere. It is known that some of the wells in the Kruk field are used by the gas lift method and after the implementation of gas lift, exhaust gas is burned together with oil. For the operation of wells by the gas lift method, gas is supplied from the Umid field and amounts to 457 thousand m^3/day.

From the fields of the Mubarek group, the total flow of flare gases enters the compressor station at the South Kemachi field, where it is filtered. The device cleans solids by 100%, and moisture drops - by 8 micrometers or more. Filter separators are equipped with a system for collecting and removing purified gases.

After that, the purified gas is collected in the gas recirculation device at the inlet of the compressor shop of the compression compressor station. In addition, the structure of the compression compressor station includes: compressors of the gas recirculation station unit, compressor separators, separators at the inlet of the gas recirculation unit, systems for connecting pipelines and fittings, and the fuel gas system of the gas recirculation unit. Separators included in the gas recirculation unit module prevent the condensed gas from entering the compressor in liquid form after the recirculation station unit. In the South Kemachi field, gas disposal is carried out at the compression compressor station of the first option under a pressure of 0.1 to 7.55 MPa, and the volume of gas is measured at the measurement nodes and collected in a complex gas preparation device through a special gas transmission.

Based on approximate calculations, the potential composition of C_{5+} in the total flare gas flow is 45.74 g/m^3 and when condensate is extracted in the amount of 60%, the additional gas coming out of the complex gas preparation device of the Southern Kemachi mine is 71,354 t/day or 23,546 t/year. according to the second option of the compression compressor station, gas is compressed at a pressure of 0.1 to 7.5 MPa and is measured through measurement nodes and directed to the gas transmission of the South Kemachi-Northern O’rtabuloq-Mubarak gas processing plant. When compressing gas through a compressor at a pressure of 0.1 to 5.5 MPa in the amount of 2.6 million m^3/day, the compressor shaft consumes 25.53 MW of energy. two-stage centrifugal pump unit is installed on gas turbine drive during construction of compressor station. A pumping station unit, separators and a fuel gas preparation unit are installed in the production building.

Selective compression of gas is carried out at two stages, the first stage enters the cooling apparatus with gas air, and the second stage is cooled to low pressure before supply. when the pumping station unit exits, gas distributors are installed to separate condensed liquid contained in the gas after its cooling. After the second step, the gas is supplied to the cooling plant and cooled to the required temperature in the unit of the high pressure station. Then they are collected in separators, and then transferred to a measuring unit and a gas pipeline. To measure flare gases, measuring units are installed, which are quickly measured from each field to the connecting gas transmission headers.

When compressing gas through a compressor at a pressure of 0.1 to 5.5 MPa in the amount of 2.6 million m^3/day, the compressor shaft consumes 25.53 MW of energy. two-stage centrifugal pump unit is installed on gas turbine drive during construction of compressor station. A pumping station unit, separators and a fuel gas preparation unit are installed in the production building.

In addition to the compressor shop, the following are installed on the square: gas cleaning device; device for cleaning and preparation of buffer gas from hydrogen sulfide; pulse gas preparation device; gas measurement unit; nitrogen storage area; flare facilities.

The hydrogen sulfide buffer gas treatment unit provides fuel to the compressor station and buffer gas to the gas transfer unit. The scheme of the device also provides for cleaning from hydrogen sulfide. The pump oil tank supplies the unit with oil, during the operation of the compressor station, oil is cleaned and regenerated. From safety valves and process equipment, gas is discharged to flare headers and transferred through the separator to the flare system. complex of fully auxiliary buildings and structures on the compressor station area is considered.

Gas cleaning equipment includes block and enclosing, adjustment and reinforcement devices, fasteners and pipelines. equipment installed at the compressor station ensures the safety, reliability and efficient operation of the system, including instrumentation and automation, oil level control, vibration, cooling, gas generation and fire control, automatic fire extinguishing, heating, ventilation, and air supply.

Literature used

1. Samadov A.X., Shukrullayev D.D., Shodmonqulov A.O Parrakli burg‘ilarning turlari va tuzilishini o’rganish // Экономика и социум. 2024. №5-2 (120). URL: https://cyberleninka.ru/article/n/parrakli-burg-ilarning-turlari-va-tuzilishini-o-rganish (дата обращения: 21.09.2024).
2. Samadov, A. X., Ahadova, G., & Shukrullayev, D. D. (2023). PDC TURDAGI INNOVATSION BURGILARNING QOLLASHNI ASOSLASH. Экономика и социум, (5-2 (108)), 340-346.
3. Samadov A. X., Qosimova A. Y. ZAMONAVIY ROCKSTRONGTM VA GIDRO-SEAT BARREL TIZIMI (HSBTM) KERN OLISH TIZIMLARINI ASOSLASH //Экономика и социум. – 2024. – №. 2 (117)-1. – С. 621-624.
4. Самадов А. Х., Бойқобилова М. М., Мажидова Ю. С. ТЕХНОЛОГИЯ ВОЗДЕЙСТВИЯ ПАРОВОГО ТЕПЛА И ГОРЯЧЕЙ ВОДЫ НА ПЛАСТ ЧЕРЕЗ НАГНЕТАТЕЛЬНУЮ СКВАЖИНУ // Экономика и социум. 2023. №10 (113)-1. URL: https://cyberleninka.ru/article/n/tehnologiya-vozdeystviya-parovogo-tepla-i-goryachey-vody-na-plast-cherez-nagnetatelnuyu-skvazhinu (дата обращения: 11.11.2024).
5. Samadov A.X., Kasimova A.Y., Umedullayev A.G. USE OF GEONAVIGATION SYSTEM IN CONTROLLING AND FAST CONTROL OF HORIZONTAL WELLS' STEM TRAJECTORY // Экономика и социум. 2024. №3-1 (118). URL: https://cyberleninka.ru/article/n/use-of-geonavigation-system-in-controlling-and-fast-control-of-horizontal-wells-stem-trajectory (дата обращения: 11.11.2024).
6. Nomozov B.Yu., Samadov A.X., Yuldashev J.B., Boyqobilova M.M. ISM TURDAGI QATTIQ QOTISHMALI BURG`ILAR // Экономика и социум. 2023. №9 (112). URL: https://cyberleninka.ru/article/n/ism-turdagi-qattiq-qotishmali-burg-ilar (дата обращения: 11.11.2024).

Samadov A.H.
Acting Associate Professor
of the Department of "Oil and Gas working"
Karshi Institute of Engineering and Economics.
Kasimova A.Y.
Head of the Department for
Youth Work, Spirituality and Education
University of Information Technology and Management
Ashurov Sh.M.
Assistant of the department
"Development and operation of oil and gas fields"
Tashkent State Technical University named after Islam Karimov
Uzbekistan G. Karshi

TECHNOLOGY OF CHEMICAL DEHYDRATION AND HEAT-CHEMICAL EMULSION OF OIL

Annotation:*The quality of petroleum products is due to the use of modern technologies in cleaning it from various components. The article explores the application of thermal and chemical methods used in oil refining, the conduct of the refining process, the practical application in the fields of our republic.*
Key words: *dehydration, reagents, chemical methods, deemulgators, deemulsification, fractionation.*

In the oil industry, chemical methods are widely used in oil dehydration, which is based on the decomposition of an emulsion using chemical reagents. The effectiveness of chemical dehydration will depend to a large extent on the property of the reagents used [1,2]. The choice of reagent-deemul'gators will in turn depend on the water-oil emulsion, the property of the oil, the emulsion to be lowered. To break down the emulsion, a reagent-deemul'gator is introduced and mixed with it, after which conditions are created for the release of water from the oil through the precipitate. A method of continuous decomposition of the periodic state or emulsion is used. It is often preferable to use a continuous process.

There are 3 chemical methods of oil dehydration.

1. Pavement deemulsion-dehydration will be based on deemulsion, and it is carried out in an oil harvesting pipeline transmission. In this case, a reagent is introduced into the starting part of the oil collection collector.

2. Intra-borehole deemulsion-dehydration will be based on deemulsion, and reagents are injected and carried out directly into the pipe.

3. Deemulsion and oil dewatering are carried out directly in the incinerating reservoirs. In this case, the reagent is introduced into the reservoir filled with the emulsion and lowered into the processing.

Hot-chemical processes reduce or completely break down the strength of Iron Curtain coatings and accelerate the separation of thick oil emulsion and make it cheaper.

Currently, more oil is transferred from a hot-chemical treatment device. The reason for the many applications of such processing is the use of equipment and apparatus, and the possibility of oil treatment using waters of different composition, simplicity of construction, the possibility of replacing deemul'gators depending on the property of the penetrating emulsion [3]. In combination with this, there are also a number of disadvantages of hot-chemical methods. Deemul'gators have a higher movement and an increase in heat consumption. In practice, the processes of oil dehydration and desalination are carried out at a temperature of 50-100°C. Used demulators poured onto emulsified oils, divided into electrolytes, non-electrolytes and colloids.

Demulsifiers-electrolytes are divided into organic and mineral acids: acetic acid; sulfur and salt; alkalis and salts; table salt; iron chlorite; aluminum compounds, etc. Electrolytes may also form deposits insoluble in the salt emulsion. Reduces the stability of iron curtains or the destructive properties of emulsifiers for the destruction of iron coatings. Electrolytes, like demulsifiers, can be used in limited conditions due to their high price or significant corrosiveness to metal equipment.

Non-electrolytes are organic substances and have the ability to melt iron shells and reduce the viscosity of oil. Such demulsifiers include gasoline, acetone, alcohol, benzene, four carbon dioxide oxides, phenol and others.

The production of non-electrolytes in industry is not used due to high prices. Demulsifiers - colloids - surfactants, which, when emulsified, destroy the shells of vessels or weaken their protection.

Surfactants are divided into anionfol, cotionfol, non-ionogen. Anionic surfactants dissociate the negative charges of the ions of the corbon-active part and positively charged metals or hydrogen ions in aqueous solutions. This group includes corbonate acids and their salts, sulfuric acids, alkulsulfonates and others. Cationic surfactants break down into positively charged radicals in aqueous solutions and residues of negatively charged acid.

Surfactants such as demulsifiers are used industrially. Nonionic Surfactants do not break down into ions in aqueous solutions. This group includes oxylated alkylphenols (demulsifiers,,,,,, etc.) and oxylated organic substances consisting of mobile hydrogen atoms (diproxamine 157, proxamine 385, proxanol 305, etc.) [4]. Demulsifiers should dissolve well in the emulsion phase (in water and oil) and be hydrophilic and hydrophobic, have a surface activity sufficient to destroy ferruginous shells, inert to metals, do not impair the properties of oil, be cheap and provide universal compared to emulsions and have a decomposing character.

The faster the demulsifier is introduced into the mixture of water and oil, the faster the emulsion decomposes. For complete contact with the emulsion to be treated, heating of the accelerated turbulence and emulsion is achieved.

Thermochemical methods of splitting oil and water emulsions are widely used in the fields. This method has a number of advantages and allows you to replace demulsifiers without replacing equipment and apparatus. that water does not affect the regime, and also has a number of drawbacks in thermochemical methods. losses due to high costs for demulsifiers, evaporation of light fractions in large quantities in pressurized tanks, excess heat consumption, negative environmental impact and hackoses. The implementation of the thermochemical method includes devices operating under atmospheric and overpressure.

The device operating under the atmosphere is most often used in the oil industry. The oil emulsion freed from gas at the field is collected in the tank (4) through collection headers, from where the pump (3) is supplied to the product tank through the superheater (2) (Fig. 1).

When oil enters the heater, a demulsifier is added to the emulsion, and in some cases, water supplied to the recirculation. The demulsifier is supplied by a metering pump, uniform oil supply is controlled and ensured. The demulsifier is dosed and counted using meters, but subsequently all these meters are replaced by automatic flow control devices.

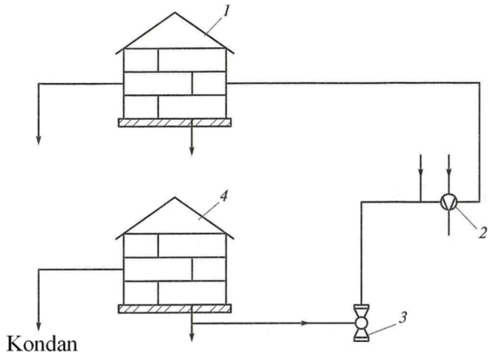

Fig. 1 Process flow diagram of the thermochemical plant (without pressure): 1-commodity reservoir; 2-steam heater; 3-pump; 4-raw material reservoir.

Mixing and dispensing demulsifiers with an oil emulsion is highly dependent on the effectiveness of the emulsion, and accurate pressure differentials must be maintained in the mixers to ensure classification of the emulsions produced for each oil.

In order to reduce the fuel consumption for heating oil emulsions, introduce a given temperature into the dehydration and desalination processes and reduce the loss of light fractions during stagnation of the emulsion in tanks, these processes are carried out under increased pressure [5].

The quality of use of these devices increases when pressure dehydration and desalination are carried out at hermetized capacities.

The advantages of hermetically sealed capacity include:

- it is possible to completely eliminate the loss of light fractions in which an oil-based emulsion is infused under pressure of 10 kgs/sm^2 at hermetized capacities;

- due to the sharp decrease in viscosity when the temperature of the working emulsion rises to 150ºC, the tinting

time is reduced from 1 to 3 hours, the strength of the protective layer of the globule of the emulsified water is reduced, the property of absorbing the chemicals (deemul'gators) included in them is increased, and the latest consumption is reduced;

- the Heat spent on heating the emulsion is reduced due to the fact that the main part of the heat in the oil flows is regenerated.

- there is the possibility of large-scale control of the mode of the emulsion, which has different solubility and durability at the expense of increasing the durability and reliability of carrying out processes.

The principle scheme of a technological device operating under pressure is shown in Figure 2.6. Oil is collected from the field into a reservoir of raw materials (7), from where it is transferred using a pump (6) to a heat exchanger (5). Oil can also enter raw.

Due to the heat entering the heat exchangers, the product heats the incoming oil and cools to 45..40ºC for the first time. The heated 35..65ºC gacha oil is re-supplied to the superheater (4), the temperature is increased (70..150ºC) in accordance with the process conditions.

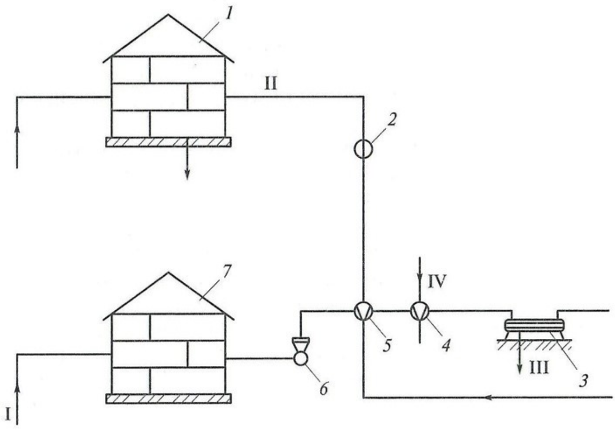

Figure 2.6. Process Flow Diagram of Thermochemical Units (Pressurized):

1-commodity reservoir; 2-refrigerant; 3-clarifier; 4-Steam heater; 5-heat exchanger; 6-pump; 7-raw material reservoir;

I-crude oil; II-dehydrated oil; III-layer water; IV-water vapor.

Prior to heat supply to the heat exchanger in heat-chemical plants during pressure testing under atmospheric pressure, an emulsifier or water impregnated in recirculation is introduced into the oil. If the device operates in the desalination mode on two stages, in addition to the demulsifier, heated fresh water is introduced into the oil before reloading, therefore, a special heating and a water unit for the cycle are previously provided on the unit.

The oil is heated to the required temperature and treated with a deemul'gator, collected in a clarifier (3) (horizontal, upright or spherical), followed by 1..For 3 hours, the layer water is separated. At the latest, it is taken out of the tin. The dehydrated crude oil is fed into a batch heat exchanger, with the incoming oil being released into the unit (1) in the commodity reservoir, giving it its heat. If the temperature of the oil is above the norm, the oil is cooled in special group water coolers (2) after a heat exchanger in commodity reservoirs to limit the loss of light fractions.

Thermally chemically desalination processes are also not common in independent oil extraction and refining.

Literature used

1. Номозов, Б. Ю., Самадов, А. Х., & Юлдашев, Ж. Б. (2022). Особенности эксплуатации нефтегазовых месторождений горизонтальными скважинами. Экономика и социум, (11-2 (102)), 569-574.

2. Самадов, А. Х., & Ахадова, Г. (2023). Причины возникновения сложностей при проведении буровых работ нефтегазовых месторождений. Новости образования: исследование в XXI веке, 1(7), 577-582.

3. Samadov A.X., Ashurov Sh.M., Bekmuratov J.A. BURG`ILASH MINORASINI MONTAJ VA DEMONTAJ QILISH TEXNOLOGIYASINI ASOSLASH // Экономика и социум. 2024. №5-1 (120). URL: https://cyberleninka.ru/article/n/burg-ilash-minorasini-montaj-va-demontaj-qilish-texnologiyasini-asoslash (дата обращения: 11.11.2024).

4. Samadov A.X., Ahadova G., Shukrullayev D.D. PDC TURDAGI INNOVATSION BURG`ILARNING QO`LLASHNI ASOSLASH // Экономика и социум. 2023. №5-2 (108). URL: https://cyberleninka.ru/article/n/pdc-turdagi-innovatsion-burg-ilarning-qo-llashni-asoslash (дата обращения: 11.11.2024)..

5. Nomozov B.Yu., Samadov A.X., Yuldashev J.B., Boyqobilova M.M. ISM TURDAGI QATTIQ QOTISHMALI BURG`ILAR // Экономика и социум. 2023. №9 (112). URL: https://cyberleninka.ru/article/n/ism-turdagi-qattiq-qotishmali-burg-ilar (дата обращения: 11.11.2024).

6. Самадов А. Х., Бойқобилова М. М., Мажидова Ю. С. Технология воздействия парового тепла и горячей воды на пласт через нагнетательную скважину // Экономика и социум. 2023. №10 (113)-1. URL:https://cyberleninka.ru/article/n/tehnologiya-vozdeystviya-parovogo-tepla-i-goryachey-vody-na-plast-cherez-nagnetatelnuyu-skvazhinu (дата обращения: 11.11.2024).

7. Samadov A.X., Kasimova A.Y., Umedullayev A.G. Use of geonavigation system in controlling and fast control of horizontal wells' stem trajectory // Экономика и социум. 2024. №3-1 (118). URL: https://cyberleninka.ru/article/n/use-of-geonavigation-system-in-controlling-and-fast-control-of-horizontal-wells-stem-trajectory (дата обращения: 11.11.2024).

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Samyayev A. K.
Samarqand viloyat pedagoglari mahorat markazi v.b dotsenti
Samarqand sh.O'zbekiston

QUYI ZARAFSHON TABIATINING ANTROPOGEN OMILLAR TA'SIRIDA O'ZGARISHI VA LANDSHAFTLARINING ANTROPOGEN MODIFIKATSIYALANISHI

Annotatsiya. *Ushbu maqolada Quyi Zarafshonda uzoq yillar mobaynida almashlab ekish qoidasiga amal qilmaslik, tuproqlarga agrotexnik ishlov bermaslik, hosildorlikni oshirish maqsadida mineral o'g'itlar va pestitsidlarni me'yoridan ortiq ishlatilishi, minerallashgan suvlardan ekin maydonlarini sug'orish natijasida ikkilamchi sho'rlanishning paydo bo'lishi va shunga o'xshash antropogen omillarning salbiy ta'siri natijasida landshaftlarning antropogen modifikatsiyalanishi haqida ma'lumotlar keltirilgan.*

Kalit so'zlar : *sug'orma dehqonchilik, almashlab ekish, ikkilamchi sho'rlanish, kimyoviy o'g'itlar, pestitsitlar, gipsli qatlam, antropogen ta'sir, landshaftlar modifikatsiyasi*

Samyaev A.K.
Acting Associate Professor
Center for Pedagogical Excellence of the Samarkand Region
Samarkand, Uzbekistan

CHANGES IN THE NATURE OF LOWER ZARAFSHAN UNDER THE INFLUENCE OF ANTHROPOGENIC FACTORS AND ANTHROPOGENIC MODIFICATION OF LANDSCAPES

Annotation. *This article reveals the serious consequences of anthropogenic impact on the landscapes of Lower Zarafshan. Long-term neglect of crop rotation rules and lack of agrotechnical processing have led to a decrease in soil quality. Excessive use of mineral fertilizers and pesticides, as well as the use of mineralized water for irrigation, have aggravated the situation, causing secondary salinization of lands. All this has led to a deep anthropogenic modification of the natural landscapes of the region*

Keywords: *Irrigated agriculture, crop rotation, secondary salinization, chemical fertilizers, pesticides, gypsum layer, anthropogenic impact, landscape modification*

Kirish. Quyi Zarafshon agrolandshaftlari antropogen geosistemlarning inson tomonidan boshqariladigan va tuzatishlar kiritiladigan toifasiga kiradi. Hududning agrolandshaftlarida, ayniqsa sugʻoriladigan agrolandshaftlarida tabiiy komponentlar tub oʻzgarishlarga duch kelgan va ular oʻz doirasidagi geokomplekslarni tartibga solishda, ularning ekologik holatini yaxshilashda yetarli darajada ta'sir koʻrsata olmaydi. Geosistemalarning oʻzini-oʻzi tozalash va oʻzini-oʻzi tartibga solish qobiliyati joylarning litologik tuzilishi va relef shakllariga bogʻliq. Nishabligi sezilarli darajada kam boʻlgan prolyuvial tekisliklarning quyi qismlarida, qayirusti terrasalarida, qayirlarda, konussimon yoyilmalarning oraligʻidagi pastqam joylarda rivoj topgan agrolandshaftlarda, ayniqsa, paxta plantatsiyalari keng tarqalgan uchastkalarda oʻz-oʻzini tozalash va oʻz-oʻzini tartibga solish jarayoni nihoyatda sust kechadi. Bunday joylarda yer usti va yer osti suvlarining harakati, ularning vertikal, ayniqsa, gorizontal almashinishi juda sekin kechadi va bu yerda yuvilib ketish (eroziya) jarayoni emas, balki turli xil moddalarning toʻplanishi, ya'ni akkumulyatsiya jarayoni hukmronlik qiladi. Natijada, qishloq xoʻjaligida ishlatiladigan ma'danli oʻgʻitlar va zararkunandalarga qarshi qoʻllaniladigan barcha pestidsidlar hamda suvlarning tarkibidagi turli xil tuzlar tuproq qoplamiga singib, asta-sekin toʻplana boradi, agrolandshaftlarning biomassasini va hosildorligini kamaytiradi. Sugʻoriladigan agrolandshaftlarda geoekologik muvozanat buzilib ekologik tanglikni vujudga keltiradi, qadimdan madaniylashtirilgan unumdor yerlarni ishdan chiqaradi va ularni choʻllangan antropogen landshaft komplekslariga aylantiradi.

Asosiy qism. Quyi Zarafshon hududi qadimdan sugʻorma dehqonchilik markazi boʻlib kelgan. Hudud landshaftlarining katta maydoni paxta plantatsiyalari bilan band boʻlib kelgan. Uzoq yillar mobaynida almashlab ekish qoidasiga amal qilmaslik, tuproqlarga agrotexnik ishlov bermaslik, hosildorlikni oshirish maqsadida mineral oʻgʻitlar va pestitsidlarni me'yoridan ortiq ishlatilishi, minerallashgan suvlardan ekin maydonlarini sugʻorish kabi faoliyatlar agrolandshaftlarda tuproqlarning qashshoqlanishiga, shoʻrlanishiga va turli xil kimyoviy moddalar bilan ifloslanishiga olib keldi. Natijada agrolandshaftlarning ekologik muvozanati buzilib bir qator ekologik muammolar vujudga keldi. Sugʻoriladigan agrolandshaftlarning ekologik vaziyatini keskinlashtiruvchi va geoekologik muammolarni vujudga keltiruvchi omillardan biri qishloq xoʻjaligi ekin maydonlariga, ayniqsa, paxtachilikda me'yoridan ortiqcha mineral oʻgʻitlarni ishlatilishidir. Oʻzbekistonning paxta ekiladigan maydonlarida, shu jumladan, Quyi Zarafshonda ham oʻtgan asrning 80-chi yillaridan boshlab har gektariga 220 kg azot, 120-130 kg fosfor va 50 kg atrofida kaliy oʻgʻitlari solinib kelindi. Gʻoʻza oʻsimliklari ishlatilgan mineral oʻgʻitlarning 30-40 % ini oʻzlashtirgan, qolgan qismlari yer usti suvlarini ifloslantiradi, tuproq qoplami va oʻsimliklar organizmida toʻplanib boradi. Quyi Zarafshon agrolandshaftlarini doimiy ravishda zaharlab kelgan va hududda yashayotgan insonlar salomatligiga ta'sir koʻrsatayotgan, ekologik vaziyatni vujudga keltirgan ikkinchi kimyoviy omil pestitsidlardir. Dunyo boʻyicha har yili qishloq xoʻjaligi zararkunandalariga qarshi kurashish uchun 1 mln tonna pestitsidlar ishlatilgan. Ekin maydonlarining har bir gektariga ishlatiladigan pestitsidlar miqdori oʻrta hisobda Rossiyada 1-2 kg. ni, AQSH da 2-3 kg. ni, Oʻzbekistonda paxta plantatsiyalarida, jumladan, Quyi Zaravshon agrolandshaftlarida 54 kg. ni tashkil etgan. Agrolandshaftlarda ishlatilgan mineral oʻgʻitlar, pestitsidlarning salbiy oqibatlari sugʻoriladigan tuproqlarda, madaniy oʻsimliklarda, meva va sabzavotlarda, barcha tirik organizmlarda yaqqol sezilmoqda. Sugʻoriladigan agrolandshaftlar tarkibida nitratlarning koʻpayishi qishloq xoʻjaligida ishlab chiqariladigan mahsulotlarning biologik xususiyatlarini, ayniqsa, ularning sifatini buzilishiga ta’sir koʻrsatmoqda.

Quyi Zarafshon agrolandshaftlarining ekologik holatini buzulishiga ta’sir etuvchi omillardan yana biri bu tuproqlarning qayta shoʻrlanishidir. Tuproqlarning qayta shoʻrlanishining asosiy sababi sugʻoriladigan suvlardan irrigatsion qatlamlarga akkumulyasiya boʻladigan qoʻshimcha tuzlar, tuproqlarning quyi qatlamlaridagi ona jinslar tarkibida boʻlgan tuzlarning namlanishi tufayli faollashuvi, minerallashgan grunt suvlari sathining koʻtarilishidir. Zarafshon daryosi havzasidagi dalalarga sugʻorish suvi bilan birga har yili gektariga 10,8-17,8 tonnagacha oqiziq jinslar, jumladan, oʻrtacha 2350 kg/ga $CaCO_3$, 485 kg/ga K_2O va 0,41 kg/gacha N_2O_5 oqib keladi. Sugʻoriladigan yerlarga kelib tushadigan agroirrigatsion yotqiziqlar miqdori yiliga 0,8—1,3 mm ga ortadi. Quyi Zarafshonda tashlama suvlar hisobiga paydo boʻlgan koʻllarning iqlim quruq kelgan yillari qurib qolishi natijasida, ularning yuza qismida chang-tuz aralashgan qatlamlar paydo boʻladi va yuzadan koʻtarilgan bu aralashmalar yiliga sugʻoriladigan agrolandshaftlarning har gektariga oʻrtacha 1000-1500 kg. atrofida tushadi va ularni ifloslaydi.

Quyi Zarafshon hududining shimol va shimoli-sharqida joylashgan Oʻrtachoʻl va Malikchoʻl massivlarida 0,5 – 1,5 metrlik tuproq – grunt qoplami tagida gips qatlamli suffoziya relef shakllari keng tarqalgan. Bu joylar oʻzlashtirilgach gips qatlamiga suv yetishi bilan uning erishi hisobiga tuproq qatlamida qator choʻkishlar roʻy bermoqda. Shuningdek gipsli qatlamlardagi erigan tuzlar yer usti va yer osti suvlari bilan Buxoro vohasiga kirib kelgan. Natijada vohada tuzlarning toʻplanishiga va ularning miqdori oshib tuproqlarning shoʻrlanishiga sabab boʻlgan.

Uzoq yillar davomida Quyi Zarafshon tabiatiga antropogen ta’sir kuchli, ayrim joylarda juda kuchli boʻlib kelgan. Natijada tabiiy landshaftlar antropogen modifikatsiyalashgan. Koʻpchilik geoekolog olimlar fikriga koʻra har qanday geosistemaning antropogen ta’sirga chidamlilik darajasi bor. Agar ta’sir kuchlar meyoridan oshsa geosistemalarda komponentlar oʻrtasidagi modda va energiyaning aylanma harakatidagi muvozanat buziladi, oqibatda komponentlarda sifat oʻzgarishlar roʻy beradi va geosistemalarda umumiy degradatsiya boshlanadi. Bunday holat Quyi Zarafshon agrolandshaftlari tuproqlarida unumdorlikning pasayishi, shoʻrlanishning kuchayishi, erozion jarayonlarning jadallashishi, yer usti va osti suvlari sifatining yomonlashishi, bularning oqibatida aholi oʻrtasida ba’zi kasalliklarning koʻpayishi va boshqa koʻrinishlarda namoyon boʻlmoqda.

Quyi Zarafshon hududi tektonik bukilmada joylashganligi sababli, yer usti va yer osti suvlari, shamollar va havo oqimlari turli xil yotqiziqlarni olib keladi. Shuning uchun hududda doimo profilaktik tadbirlar oʻtkazib turish talab etiladi. Hududning shimoliy va sharqiy qismlarida prolyuvial yoʻl bilan vujudga kelgan shagʻal, qum va qumoq jinslar tarqalgan qismidan aholi yaylov sifatida foydalanib keladi. Mahsuldorligi juda past boʻlgan bu yaylovlarda qoʻy va echkilarning me’yoridan ortiq boqilishi choʻllanishga sabab boʻlmoqda. Hududning Shoʻrkoʻl atroflarida va Toʻdakoʻlning janubiy sharqiy qismlarida katta maydonlarni gipsli choʻllar egallaydi. Bu choʻllarni sugʻorma dehqonchilik maqsadida oʻzlashtirilishi katta maydonlarda soxta karst hodisalariga sabab boʻlmoqda. Har qanday agrolandshaftlarni strukturali-morfologik tadqiq etishda landshaft-ekologik yondashuv metodidan foydalaniladi. Hozirgi zamon geosistemalarining ekologik holatini oʻrganish, ulardagi ifloslanish darajasini aniqlash, ekologik vaziyatni baholash va shular asosida tasniflash kabi muammolarni yechimini ishlab chiqishda landshaft-ekologik nuqtai nazardan yondashish muhim nazariy va amaliy ahamiyatga ega.

Xulosa. Xulosa qilib aytganda, Quyi Zarafshon tabiatiga antropogen ta’sir kuchli, ayrim joylarda juda kuchli boʻlib kelgan. Natijada tabiiy landshaftlar antropogen modifikatsiyalashgan. Koʻpchilik geoekolog olimlar fikriga koʻra har qanday geosistemaning antropogen ta’sirga chidamlilik darajasi bor. Agar ta’sir kuchlar meyoridan oshsa geosistemalarda komponentlar oʻrtasidagi modda va energiyaning aylanma harakatidagi muvozanat buziladi, oqibatda komponentlarda sifat oʻzgarishlar roʻy beradi va geosistemalarda umumiy degradatsiya boshlanadi. Bunday holat Quyi Zarafshon agrolandshaftlari tuproqlarida unumdorlikning pasayishi, shoʻrlanishning kuchayishi, erozion jarayonlarning jadallashishi, yer usti va osti suvlari sifatining yomonlashishi, bularning oqibatida aholi oʻrtasida ba’zi kasalliklarning koʻpayishi va boshqa koʻrinishlarda namoyon boʻlmoqda. Mashhur ekolog Yu.Odum ekosistemalarga antropogen yukni antropogen stress deb atab, uni shartli ikki guruhga boʻlishni tavsiya qiladi:

1) Kuchli stress - qisqa vaqtda keskin va tez roʻy beradigan;

2) Surunkali stress - sekin ta’sir qiluvchi, lekin uzoq davom etuvchi buzilishlarga aytiladi.Tabiiy ekosistemalar kuchli stresslardan keyin oʻzining asl holatiga qaytadi. Masalan, kesilgan oʻrmon tiklanadi, chorva mollar sonini tartibga olish natijasida yaylovlar asl holatiga qaytadi va hokazo. Lekin, surunkali stressning oqibatlarini baholash qiyin, chunki u uzoq davom etadigan jarayon. Bugungi kunda Quyi Zarafshon tabiatiga antropogen ta’sirni surunkali stressga kiritish mumkin.

Foydalanilgan adabiyotlar roʻyxat:

1.Abbasov S.B., Samyayev A.K. Modern Ecolojical Problems Of Zarafshan River Delta // International Scientific Journal ISJ Theoretical & Applied Science Philadelphia, USA issue 01, volume 81 published January 30, 2020. -P. 636-638.

2.Алибеков Л.А., Самьяев А.К. Химизация орошаемых земель и процессы опустынивания (дегумизация почв) // Фарғона водийсида табиатдан

фойдаланиш ва муҳофаза қилишнинг долзарб муаммолари. Респ. илмий–амалий конф. материаллари. –Наманган. 2014 йил 6-7 июнь.
3.Назаров И.К. Абиогенные потоки в аридных геосистемах: оптимизация природопользования. –Т.: Фан, 1992. –99 с.
4.Одум Ю. Экология. В 2-х т. –М.: Мир. 1986. Т.1. –323 с.
5.Рахматуллаев А., Самъяев А., Равшанов А. Структурно-динамические особенности и оптимизация ландшафтов долины р. Зарафшан // Структурно - динамические особенности, современное состояние и проблемы оптимизации ландшафтов: Междунар. конф., посвященная 95-летию со дня рождения Ф.Н.Милькова. -Воронеж, 2013, -С.324-326.
6.Самъяев А.К. Некоторые проблемы использования водных ресурсов нижнего Зерафшана // Tog‘ va tekislik landshaftlari barqaror riojlanishining geografik asoslari. Respublika ilmiy-texnik anjuman materiallari. -Samarqand. 2023. B. 112-114.

Sanaeva L.Sh., b.f.n. dots v.b
Usmanov M.R. g.f.f.d (PhD) dots v.b.
Jizzax davlat pedagogika universiteti

MIRZACHO'L–TUZKON EKOTURISTIK KLASTERI VA UNING TURIZMNI RIVOJLANTIRISHDAGI O'RNI

Annotatsiya: *Ushbu maqolada klaster atamasi, Jizzax viloyatining ekoturistik klasterlarga ajratilishi, Mirzacho-Tuzkon ekoturistik klasteri, xalqaro tajribada turistik klasterning Yevropa, Amerika va Osiyo tajribasi, turizm turi va turizm uchun foydalanish manbaalari, M-39 xalqaro magistrali, Mirzacho'l va Aydar-Arnasoy ko'llar tizimi asosiy ekoturistik maskan ekanligi, Jizzax shahri va 5 ta cho'l tumanlarini qamrab olgan ushbu klaster asosan daryo, cho'l, ko'l, tog', agro va madaniy landshaflardan iborat ekanligi haqida ma'lumotlar berilgan.*

Kalat so'zlar: *klaster, ekoturistik klaster, Mirzachol-Tuzkon ekoturistik klasteri, turizm turi va turizm uchun foydalanish manbaalari, Sangzor daryosi va Aydar-Arnasoy ko'llar tizimi, agrotuizm, nastalgiya turizmi, ekoturizm, gastroturzim.*

MIRZACHOL-TUZKAN ECO-TOURISM CLUSTER AND ITS ROLE IN TOURISM DEVELOPMENT

Annotation: *In this article, the term cluster, the division of Jizzakh region into ecotourism clusters, the Mirzachol-Tuzkon ecotourism cluster, the European, American and Asian experience of the tourist cluster in international experience, the type of tourism and the sources of use for tourism, the M-39 international highway, Aydar-Arnasoy it is reported that the lake system is the main ecotourism destination, and that this cluster, which covers the city of Jizzakh and 5 desert districts, mainly consists of river, desert, lake, mountain, agro and cultural landscapes.*

Keywords: *cluster, ecotourism cluster, Mirzachol-Tuzkon ecotourism cluster, type of tourism and sources of use for tourism, Sangzor river and Aydar-Arnasoy lake system, agrotourism, nostalgia tourism, ecotourism, gastrotourism.*

Kirish. "Klaster" atamasi XX asrning 80-yillarida M.Porter tomonidan ilmiy jarayonga iqtisodiy kategoriya sifatida kiritilgan [6]. Ya'ni "Klaster" atamasi "klaster" ingliz tilidan tarjima qilinganida birlashuv, guruh, to'planishi ma'nolarida mustaqtl birlik sifatida dastlab matematikada va aksariyat tabiiy fanlarda ishlatilgan.

Hozirgi vaqtda Yevropada turizm yo'nalishda 392 ta klasterlar faoliyat yuritib, ular 100 tadan tadbirkorlik sub'ektlarini o'z ichiga qamrab oladi. Ularning asosiy maqsadi turizmga yo'nalishiga qo'shimcha investitsiyalarni jalb qilish, xususiy sektor uchun qulay shart-sharoitlar yaratishdir. Natijada esa turizm infratuzilmasi yanada takomillashib, aholi bandligi ta'minlanadi, transport qatnoviga qo‘shimcha yo‘nalishlar ochiladi, ichki va tashqi bozorlarda turizm salohiyati keng targ‘ib qilinishi jadallashadi.

Hozirda turizm sohasini rivojlantirish hamda davlat tomonidan boshqarishda yangi tartib-tamoyillarini joriy qilish maqsadida mamlakatimizda ko‘plab davlat dasturlari va qarorlari chiqarilmoqda [1-2]. Ularda asosan aholi daromad manbaini kengaytirish, ekologik turizm yo‘nalishida faoliyati yo‘lga qo‘yiladigan istiqbolli turistik klaster loyihalarining manzilli ro‘yxatiga muvofiq tasdiqlangan bo‘lib, Jizzax viloyatida ekoturizmni tashkil etish va rivojlantirishga doir topshiriqlar belgilab qo‘yilgan [3-4].

Tadqiqot ishining maqsadi. Jizzax viloyatidagi ekoturistik klasterlardan bo‘lgan Mirzacho‘l-Tuzkon ekoturistik klasteri haqida ma’lumot berish. Uning mintaqada ijtmoiy va iqtisodiy rivojlanishidagi ahamiyatini tahlil qilish, tabiatni muhofaza qilishdagi rolini ochib berish hamda ekoturizmning barqaror rivojlanishi tamoyillarini ko‘rsatb o‘tish. Jizzax viloyatidagi Mirzacho‘l-Tuzkon ekoturistik klasteri va uning rivojanish istiqbollari hamda ahamiyatini ochib berish.

Materiallar va usullar. Tadqiqot jarayonda turizm sohasida klaster yondashuvini ilmiy asoslash, turizm klasteri siyosatining maqsadi, vazifalari va yo‘nalishlarini yoritish jarayonida sohadagi transformatsiyalashish jarayonlarini hisobga olish, turizm klasteri shakllanishini metodologik jihatdan o‘rganish, bu borada mutaxassislar fikrini o‘rganish natijasida dialektik va tizimli yondashuv, qiyosiy va solishtirma tahlil, statistik yondashuv hamda guruhlash usullaridan foydalanildi.

O‘rganilganlik darajasi. Turizm klasterlarida jahon tajribalari haqidagi fikrlarni M.Porter, V.M.Kitsis, A.V.Yeliseeva, S.K.Volkov va mintaqamiz olimlaridan B.N.Navruz-Zoda, N.S.Ibragimov, A.Q.To‘xtamishov, A.Yergashova, D.X.Aslanova, M.M.Xashimova va A.N.Nigmatov ishlarida ko‘rishimiz mumkin [5-6]. Jizzax viloyatidagi Mirzacho‘l-Tuzkon turistik klasterini ekoturistik klaster nuqtai-nazardan talqin qilish amalga oshirilmagan.

Olingan natijalar va ularning tahlili. Xalqaro tajribada turistik klasterning Yevropa, Amerika va Osiyo tamoyillari farq qiladi va har biri o‘zga xos ravishda tarkib topadi va rivojlanmoqda. Masalan, Shimoliy Amerika mintaqasining turizm klasterida federal hukumatning turizm klasterlarini yaratish jarayonlariga aralashuvini ko‘zda tutiladi. Yevropa mintaqasi turizm klasterlarini tashkil etish tamoillarida biznes tuzilmalarining davlat organlari bilan o‘zaro hamkorligi kuzatiladi, ammo yirik hususiy korxonalar faoliyatida hukumatning keng miqiyosida turizm klasterlariga chuqur kirib borishi kuzatilmaydi [6].

Jizzax viloyatining turistik salohiyati yuqori bo‘lib, viloyatning hududiy joylashuvi ekologik landshaftlariga ko‘ra 4 ta ekoturistik klasterlarga ajratiladi [5]. Ular orasida Mirzacho‘l-Tuzkon ekoturistik klasteri Jizzax shahri va keyingi 50-70 yil mobaynida o‘zlashtirilgan Mirzacho‘l hududida tashkil bo‘lgan Mirzacho‘l tumani, Mirzachol va Tuzkon ekoturistik maskanlarni o‘zida birlashtiradi. Shuningdek, M-39 xalqaro magistralining yo‘l bo‘yi infratuzilmalarini yaxshilab, turizm turi va turizm uchun foydalanish manbaalari quyidagi turistik marshrutlar sifatida taklif etildi (1-jadval).

№	Turizm turi	Turistk obyektlar
1.	Ekoturizm	Mirzacho‘l kanali, Aydar-Arnasoy ko‘llar tizimi va uning boy fauna va florasi, Qizilqum cho‘lining fauna va florasi.
2.	Etnoturizm	O‘zbek, qozoq, rus, tojik millatlarining etnik tizilmalari va ularning an’ana-udumlari.
3.	Madaniy turizm	Kosmonavtlar muzeyi, aholining urf-odatlari va an’analari
4.	Nostalgiya turizmi	Hududda ilgari yashagan millat vakillariing tashrifi bilan bog‘liq.
5.	Gastronomik turizm	Milliy oshxona va zamonaviy restoranlar. Baliqli taomlari.
6.	Agroturizm	Mirzacho‘l bag‘ridagi tumanlarning agrolandshaftlari.
7.	Sog‘lomlash-tirish turizmi	Gagarin sihatgohi.
8.	Ov turizmi	Tuzkondagi suv-botqoq qushlari va baliq ovlash.
9	Ornitologik turizm	Mirzacho‘l va Tuzkondagi suv-botqoq qushlari hamda noyob qushlarni kuzatish.

Mirzacho‘l-Tuzkon ekoturistik klasterida temir yo‘l hamda xalqaro yo‘lning mavjudligi turistik marshrutlarning asosiy qulayliklaridan hisoblanadi. Hududning pasttekisliklardan iborat ekanligi, kuchli sanoatlashganligi hamda madaniny va agrolandshaftlarga boy ekanligi, bu joyda sanoat turizmi, agroturizm, gastronomik turizmi, nostalgiya turizmi, etnoturizm, madaniy-ilmiy turizm, ornitologik turizm, gastromik turizm, nostalgiya turizmi viloyatdagi mavjud tog‘li hududlarning ekoturistik marshrutlarni to‘ldiradi va boyitadi.

M-39 xalqaro magistrali bo‘ylab joylashgan Mirzacho‘l tumani paxta, g‘alla va poliz ekinlari va dalalarida agroturistik marshrutlarni ishlab chiqib, qiziquvchi turistlarni jalb etish, marshrutlar bo‘ylab infratuzilmalarni shakllantirish xizmatlar turini ko‘paytirish orqali marshrutlar qiziqarliligi va jozibadrorliligini oshirish mumkin. Jumladan, hozirda ushbu M-39 xalqaro magistral yo‘li bo‘yida Mirzacho‘l va Do‘stlik tumanlarida qovun, tarvuz va boshqa poliz ekinlarining bozori tashkil etilgan bo‘lib, ularni to‘liq xalqaro talablarga javob beradi deya olmaymiz. Shu hududlarda zamonaviy sanitariya-gigiyena shaxobchalari bilan birga asal, meva va poliz ekinlarining degustatsiya maydonchalarini tashkil qilish maqsadga muvofiq bo‘ladi. Shuningdek, asalari qutilarini joylashtirish va asal yetishtirish texnologiyalarini sayyohlarga ko‘rsatib berish, yoki ularni asal olish va asalari uyalarini parvarish qilish mashg'ulotlariga jalb qilish ham sayyyohlarning ushbu hududda qolish va xizmatlardan foydalanish ko'lamini kengaytiradi.

Mirzacho'l-Tuzkon turistik klasterida Mirzacho'l shahridagi Kosmonavtlar muzey sayohatchilar uchun qiziqarlidir. Turizm klaslerida reklama tashkilotlari va turistik firmalarning mavjud bo'lishi muhim bo'lib, ushbu klasterda yuqorida tashkil etilishi ko'zda tutilgan marshrutlar xorijiy turizm bozori uchun yetarlicha targ'ib etilmagan. Shu sababli hozircha ushbu hududlarda ichki turizm uchun mahalliy sayyohlar oqimi mavjud.

Xulosa va takliflar. Jizzax viloyatidagi Mirzacho'l-Tuzkon ekoturistik klasterining turistik salohiyati yuqori bo'lib, ushbu klasterda turizmning o'nga yaqin turlarini yo'lga qo'yish mumkin. Biroq, turizm infratizilmalarining to'laligicha tashkil etilmagani va tashqi turizm bozori uchun yetarlicha reklama qilinmaganligi bois, hududda turizm faqat mahalliy turistilar bilan cheklanib qolmoqda. Shunday bo'sada bu klaster tarkibidagi tumanlarda katta miqdorda agrolanshaftlarning borligi mana shunday go'shalarga sayyohlarni taklif qilish uchun ekoturizmning bog'dorchilik, polizchilik, g'allachilik, asalarichilik turizmini, ya'ni agroturizmni rivojlantirish istiqbolini belgilab beradi. Bu esa o'z navbatida mintaqada qishloq xo'jaligi hajmini kengaytirish va sayyohlarni ekskursiya qilishda yaxshi natija beradi. Ekoturizmni rivojlantirish borasida Aydar-Arnasoy ko'llar tizimi Tuzkon bo'limi asosiy ekoturistik maskan bo'lsada, ular qirg'oqlarida turizm infratuzilmalarining tashkil etilishi ko'ngildagidek emas. Masalan, Aydarko'lga Samarqand va Toshkent, Sirdaryo viloyatlari Mirzacho'l tumanidan yaqin bo'lsada asosiy infatizilmalar Arnasoy va Forish tumanlari tomonidan tashkil etilgan.

Endilikda hududda turizm xizmatlarini yaxshilash va turizm infratuzilmasini rivojlantirish uchun mahalliy investitsiyalar bilan birga xorijiy investitsiyalarni jalb qilish; turizmni rivojlantirish bo'yicha mintaqalarga mos xorijiy tajribalardan keng foydalanish; turistlarga xizmat ko'rsatuvchi kemping, pansionatlar hamda yotoqxonalarni zamon talablari darajasida barpo etishda mazkur maskanlarni tadbirkorlarga imtiyozli tarzda berish; xorijiy investitsiyalarni jalb qilishga qaratilgan turistik ob'ektlarni yaxshilash, ushbu ob'ektlarga investitsiyalarni jalb qilish mezonlarini belgilash; xorijiy investitsiyalarning samaradorlik ko'rsatkichlarini ilmiy jihatdan asoslash; turizm sohasi xodimlari malakasini oshirish, ularni turizm rivojlangan mamlakatlarga amaliy ko'nikma olishga yuborish va amalda qo'llashda yordam berish; turizm sohasiga jalb qilinayotgan ichki va tashqi investitsiyalarni yanada ko'paytirish maqsadga muvofiq bo'ladi. Mirzacho'l qadimdan shirin qovun tarvuzlari biln mashhurdir. Shularni hisobga olib Gagarin shahrida "Qovun sayli" tashkil etish orqali Mirzacho'l-Tuzkon turistik klasterini targ'ib qilish lozim. Mirzacho'l tumanidagi sixatgoh, muzey, tuzkon atrofidagi baliqchilik xo'jaliklari va dam olish maskanlari turoperatorlarga namoyish qilinib, ommaviy axborot vositalari yordamida keng targ'ib etilmoqda.

Yuqoridagi ko'rsatib o'tilgan mavjud salohiyat va manbaalardan to'laqonli foydalanilsa va amaliyotga joriy etilsa, aholining dam olish, turistik ekskursiya kabi xizmatlarini to‘g‘ri yo‘lga qo‘yish orqali Jizzax viloyatining ekoturistik klasterini qamragan tumanlarida yangi ish o‘rinlari yaratish va qo‘shimcha mablag‘ to‘plash imkoniyatlari paydo bo‘ladi deb hisoblaymiz.

Foydalanilgan adabiyotlar va manbaalar:

1. O‘zbekiston Respublikasi Prezidentining 2020 yil 6 oktabrdagi O‘zbekiston Respublikasida o‘rmon xo‘jaligi tizimini 2030 yilgacha rivojlantirish konsepsiyasini tasdiqlash to‘g‘risida”gi PQ-4850-sonli qarori.
2. O‘zbekiston Respublikasi Prezidentining 2023-yil 27 iyuldagi “Turizm yo‘nalishidagi isloxatlarni yanada jadallashtirish va sohada davlat boshqaruvi tizimini samarali taikil qilish chora tadbirlari to‘g‘risida” gi PQ-238-son qarori.
3. O‘zbekiston Respublikasi Prezidentining 2023-yil 26 apreldagi “Respublikaning turizm salohiyatini jadal rivojlantirish xamda, maxalliy va xorijiy turistlar sonini yanada oshirishga doir qo‘shimcha chora-tadbirlar to‘g‘risida” gi PQ-135-son qarori.
4. 2024-yil 12 yanvarda “O‘zbekiston Respublikasida ekologik turizmni jadal rivojlantrish chora-tadbirlari to‘g‘risida”gi PQ-21-sonli qarori 5. L.Sanaeva, K.Safarov. Jizzax viloyatining tabiiy landshaftlarini ekoturistik klasterlash jizzax viloyatining tabiiy landshaftlarini ekoturistik klasterlash. Namagan davlat universiteti ilmiy axborotnomasi. 2024 yil. 6-son.
6. Журакулов С.Б. Особенности формирования кластера агротуризма в Узбекистане. URL: https://cyberleninka.ru /article/n/osobennosti-formirovaniya-klastera-agroturizma-v-uzbekistane
7. В.М.Кицис, А.В.Елисеева “Опыт зарубежных стран развития туристских кластеров”. URL: http://edrj.ru/article/09-06-20
8. Komilova, N. K. (2021). Tourist destination as an object of research of social and economic geography. Psychology and Education Journal, 58(1), 2058-2067.

Savrieva M. Kh.
independent researcher
Navoi Innovation University

TRENDS IN ECONOMIC GROWTH AND DEVELOPMENT OF INDUSTRIAL SECTORS IN NAVOI REGION

Abstract: *The article examines the trends in economic growth and development of industrial sectors in the Navoi region. In addition, the Navoi region is one of the most industrialized regions. The annual volume of industrial production here is more than 80 trillion soums ($ 5.7 billion). Among the "drivers" of the region's economy are mining, chemical industry, construction materials industry and textile production. The importance of studying this topic is due to the significant impact that large companies have on the regional economy, including through job creation, increased tax revenues to budgets at all levels and the development of social infrastructure.*

Large monopoly enterprises create jobs, increase tax revenues, invest in infrastructure and contribute to the development of the local manufacturing complex. However, it is also necessary to take into account the risks associated with dependence on one industry and strive to diversify the economy to reduce vulnerability to global economic changes.

Key concepts: *monopoly enterprises, industrial sectors, economic development of the territory, employment, industrial complex, socio-ecological-economic system of the region, regional economic system, level of industrial development of the region, chemical industry, mining industry, mechanical engineering industry, growth of industrial production, volume of production.*

Relevance of the study. In modern economic science, the issue of the influence of large enterprises on the development of territories is particularly relevant. The importance of studying this topic is due to the significant influence that large companies have on the economy of regions, including through the creation of jobs, an increase in tax revenues to budgets at all levels and the development of social infrastructure. In this article, we will consider the Navoi Mining and Metallurgical Plant (NMMC) as an example of the influence of a large enterprise on the economic development of a territory. The study is aimed at analyzing the economic, social and environmental aspects of the company's activities, as well as its contribution to the development of the region.

Introduction. Industry is one of the decisive factors in the sustainable development of the socio-ecological-economic system of the region. The social subsystem of the region has the following relationship with the level of industrial development. The level of industrial development determines the number of jobs, the number of employees, the level of wages and the level of unemployment. Secondary factors are the amount of taxes levied on the working-age population, filling the budget, and their size determines the level of social protection of the population and the consumption of material goods and services. In order to expand the production of finished competitive products through the accelerated development of high-tech areas of industry in the country, the widespread attraction of private investment, increasing the income of the population by creating new production capacities in the regions, as well as the introduction of a management system based on advanced international standards in large industrial sectors:

- implementation of a unified industrial policy and introduction of modern mechanisms for the development of its industries;
- determination of areas that stimulate industrial development taking into account the availability of natural raw materials, labor resources and the "relative advantages" of regions, as well as coordination of their implementation;
- development of basic industries, including oil and gas, energy, chemical, mining, mechanical engineering industries, increasing their competitiveness, implementing diversification, developing strategies and programs for their reform;
- ensuring proportional distribution of resources across industries and regions, as well as balanced development of infrastructure, etc.[1]

The decree "On the Strategy of Actions for Further Development of the Republic of Uzbekistan" adopted by the President of the Republic of Uzbekistan SH. strategy" [2], paragraph 3.2 is called "Deepening structural changes, increasing its competitiveness due to the modernization and diversification of the leading sectors of the national economy" and "creating an effective competitive environment for economic sectors and providing products and services step-by-step reduction of monopoly in display markets; In principle, the tasks of mastering the production of new types of products and technologies, mainly ensuring the competitiveness of national goods in the domestic and foreign markets. The optimal directions of this decree were developed and projects were drawn up.

The level of industrial development has the following impact on the ecological subsystem of the region - it determines the level of environmental pollution, the level of use of natural resources in production activities, the level of negative impact on the environment [3].

The regional economic system and level of development are associated with the production activities of monopoly enterprises, which largely determines the economic potential of the region, the volume and efficiency of production as a whole, the state of regional markets, investment activity and financial self-sufficiency of the region. Various types of industrial activity and their geo-ecological consequences can be expressed in the form of an industrial-ecological pyramid. It is known that about 98% of the raw materials mined at this stage go to waste in the form of waste rock, low-concentration ore, soil, non-standard wood, etc. Only 2% of the raw materials reach the next level, which can be called the level of raw material processing. As a result, intermediate products are obtained, for example, iron, rolled products [4].

Industry is the most important consumer of natural resources (metallic and non-metallic ores, agricultural products, various types of energy). And the results of production processes are the need for planned or unexpected emissions of harmful gases, solid waste and various waste liquids. This can happen during production or later, during the use of the product. Some waste and industrial products are very toxic and can cause serious illness.

From here, we can make a theoretical assumption, and only then check it with practical research, which means that the development of industry affects the growth of the gross regional product, its increase leads to an increase in the intensity of the use of natural resources; waste and an increase in harmful waste from industrial activities, as well as a decrease in the well-being and standard of living of the region's population.

The growth of the country's economy depends on the rate of growth of industrial production, which means that the country will be able to produce diverse and complex industrial products, its level of well-being and further development of the country's economy will be higher.

The purpose of the study. The purpose of this study is a comprehensive analysis of the impact of the activities of a large industrial enterprise, the Navoi Mining and Metallurgical Plant (NGMK), on the economic development of the Navoi region. The main objective is to identify and assess the economic, social and environmental impact of the enterprise at the regional level. The study is expected to examine such aspects as the company's contribution to the formation of the regional gross product, job creation, investment in social and infrastructure development, and to assess the impact of its activities on the environmental situation in the region.

Particular attention will be paid to the analysis of tax deductions and their role in the regional budget. The study involves the use of complex methods of economic analysis, including statistical data processing, analysis of company reporting and regional economic information. The results of the work can be used to develop recommendations for optimizing interaction between large enterprises and regional authorities for the purpose of sustainable economic development of the territories.

Material and methods of the research. In the framework of this study, aimed at analyzing the impact of the activities of the Navoi Mining and Metallurgical Plant (NMMC) on the economic development of the Navoi region, various methodological approaches and data sources are used.

Statistical data reflecting the economic state of the Navoi region are used as the main materials for the analysis.

The research methods are: the method of theoretical and practical analysis, the method of comparative analysis.

Analysis of the study. In recent years, a number of positive and effective measures have been taken in the Navoi region in terms of accelerated industrial development, localization of production, expansion of cooperation ties in industry, and optimization of imports. Today, about 3.600 industrial enterprises and more than 200 enterprises with foreign investment operate effectively in the region. The Navoi region is a major industrial center of the republic as a whole. The region is home to production of non-ferrous metals, cement, chemicals and other industrial goods.

Such large industrial enterprises as Navoi Mining and Metallurgical Plant (NMMC), OJSC NavoiyAzot, OJSC QizilqumSement, AmantaytauGoldFilds, JSC Gozg'onMarmar and other industrial facilities make up the bulk of the entire production economic indicator of the region. Also, measures are being taken in the region to further localize production. Thus, the production of bentonite powder has been established in the Bentonit joint venture, basalt thread in the Tizol-N private enterprise, glugitsira in the Avitsenna industrial company, phosconcentrate in the NMMC, the Nur Navoi Solar solar photovoltaic station and others.

According to the results of January-March 2023, the gross added value of industry in the Navoi region amounted to 11,430.4 billion soums and, compared to January-March 2022, increased by 1.3%, and compared to January-March 2019 by 32.8%. In January-September 2023, industrial products were produced in the amount of 73 trillion soums, the growth rate was 105.8%, the share in the republic was 16%.

Table 1

Share of the volume of industrial production in the region (in percent) [5]

Regional	2020 y	2021 y	2022 y	2023 y	January-September 2024
Navoi region	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**
Navoi city	84,5	84,8	84,7	84,8	83,8
Zarafshon city	0,5	0,5	0,4	0,5	0,6
Gozgon city		0,1	0,1	0,1	0,1
including:					
Karmana district	10,7	10,0	9,7	9,3	8,6
Conimex district	0,2	0,2	0,7	0,7	0,6
Kyziltepa district	1,7	1,0	1,9	1,2	1,1
Navbahor district	0,8	0,9	0,9	1,0	0,9
Nurota district	0,4	0,3	0,4	0,4	0,4
Tomdi district	0,1	0,1	0,1	0,1	0,1
Uzguduk district	0,3	0,3	0,4	0,4	0,4
Khatirchi district	0,9	1,8	0,7	1,5	1,5

The city of Navoi (83.8%), Karmana (8.6%), Kyzyltepa (1.1%), Navbahor (0.9%) and Khatirchi (1.5%) districts contribute a high share to the total industrial production of the region.

Table 2

Industrial production per capita in districts (thousand soums) [5]

	2020 y	2021 y	2022 y	2023 y	January-September 2024
Navoi region	**64 737,5**	**71 925,7**	**80 786,1**	**95 593,6**	**94 276,4**
Navoi city	377 957,7	419 769,1	466 327,8	544 734,7	523 766,7
Zarafshon city	3 741,8	4 288,0	4 219,7	6 258,4	7 157,9
Gozgon city		6 385,3	8 405,8	14 746,5	13 684,6
including:					
Karmana district	54 777,0	56 559,4	60 963,8	68 731,2	62 960,7
Conimex district	3 844,1	3 162,7	16 353,4	19 569,6	16 837,1
Kyziltepa district	7 400,8	4 769,8	10 361,7	7 386,8	7 069,2
Navbahor district	4 398,9	5 995,8	6 794,9	8 145,6	7 960,8
Nurota district	2 840,8	3 031,0	3 466,7	4 550,8	4 227,6
Tomdi district	2 501,8	3 027,7	3 019,9	4 037,3	3 962,3
Uzguduk district	4 697,9	5 384,7	7 939,5	9 847,8	9 882,9
Khatirchi district	2 862,7	6 618,8	2 886,7	7 460,4	6 979,0

High rates of industrial production per capita in the central territories of the region are the city of Navoi (523,766.7 million soums), Karmana (62,960.7 million soums), Konimekh (16,837.1 million soums), Gozgan (13,684.6 million soums). The volume of products manufactured by the mining industry and open-pit mining enterprises in January-September 2023 amounted to 9 billion 029.3 billion soums or 12.4% of the total volume of industrial products manufactured.

The volume of products manufactured by industrial enterprises during the reporting period amounted to 59.1 trillion soums or 80.9% of the total volume of industrial products.

Table 3

Key indicators of regional industry [5]

Indicators	2020 y	2021 y	2022 y	2023 y	January-September 2024
Volume of industrial output, billion soums	65 084,9	73 633,5	84 393,7	101 841,9	102 069,1
Growth rate of industrial production, as a percentage of the previous year	109,1	107,0	106,1	107,2	107,8
including:					
Mining industry and exploitation of open pits, billion rubles soums	6 152,1	9 520,2	11 742,0	12 041,0	12 429,3
Metallurgical industry, billion soums	44 282,0	44 942,9	50 607,2	62 856,0	65 875,2

According to the results of January-September 2023, the share of the metallurgical industry in the industry was 75.4%, an increase of 6.9% compared to the corresponding period of the previous year, the share of the food industry - 3.0% compared to the previous year increased by 13.3%, the share of textile products was 2.1% and increased by 15.2% compared to last year.

The production of consumer goods per capita in the region is 3,946,000 soums in the Karmana district, 3,305,200 soums in the city of Navoi, 2,667,500 soums in Kyzyltepa, 2,667,500 soums in the Navbahor districts amounted to 2,636.5 thousand soums and in the city of Zarafshan - 2,376. 0 thousand soums.

The largest share of production of consumer goods in the region was 18.6% in the Karmaninsky district, 18.0% in the city of Navoi, 15.6% in the Khatyrchi district and 14.7% in the Kyzyltepa district.

Results of the study. In the modern economy, large enterprises play a key role in the development of territories, exerting a multifaceted influence on local economies and social structures. One of the main aspects of this influence is the creation of jobs, which helps to reduce unemployment and increase incomes of the population. In addition, large companies make a significant contribution to the economic growth of the region both directly and indirectly, stimulating the development of related industries and small businesses.

An important aspect is also the increase in tax revenues to local and state budgets, which allows funding public projects and improving infrastructure. Investments in infrastructure, including roads, transport, education and healthcare, are a key factor in improving the quality of life of the population and the attractiveness of the region for further investment. These factors together emphasize the importance of large enterprises in the economic development of territories.

When studying the impact of industrial production enterprises on the economic development of the Navoi region, it is important to take into account both economic and social aspects.

Such enterprises, including NMMC contribute to the growth of the region's economy through job creation and increased tax revenues, which affects the standard of living of the population and the development of social infrastructure. However, it is also necessary to consider the environmental impact of the plant's activities and look for ways to minimize the negative impact on the environment. An integrated approach is important when assessing the impact of NMMC on the development of the territory and identifying potential areas for improvement and development.

An economy based on a monoculture, such as the heavy dependence on the industrial sector in the Navoi region, may face serious risks. This is due to the fact that global economic changes, such as fluctuations in prices for mining and metallurgical products, can significantly affect the economy of the region as a whole.

If prices for mining and metallurgical products fall, this can lead to a decrease in export revenues, a decrease in tax revenues and a reduction in investment in the industry. As a result, a region that is heavily dependent on the mining industry may face economic difficulties, such as increased unemployment and a decrease in the overall standard of living of the region's population.

This situation requires the use of diversification methods for the stability of the region's economy. The development of alternative industries will help reduce dependence on price instability in industrial production. For example, the development of tourism in the region, the agro-industrial sector, renewable energy sources (solar photovoltaic power station built by Masdar from the UAE) [6] and the use of digital technologies in production complexes can be a potential solution. It is also important to implement programs to support the private sector, small and medium businesses, which can create additional jobs and contribute to the economic growth of the region. Strengthening and close integration of these sectors will help mitigate the effects of economic downturns in the industrial sector, including the mining and metallurgical industry, ensuring more stable and sustainable development of the region's economy.

Conclusions. The conclusion of the article on the influence of large industrial enterprises on the economic development of the region emphasizes the importance of these companies as the main drivers of economic growth and social progress in the region. Large monopoly enterprises create jobs, increase tax revenues, invest in infrastructure and contribute to the development of the local industrial complex. However, it is also necessary to take into account the risks associated with dependence on one industry and strive to diversify the economy to reduce vulnerability to global economic changes. The balance between the use of resources of large enterprises and the development of other sectors is a key factor in the sustainable economic development of territories.

References

1. Decree of the President of the Republic of Uzbekistan, On additional measures for the accelerated development of industry and its basic sectors, dated 12.10.2023 No. UP-169.
2. Decree of the President of the Republic of Uzbekistan dated February 7, 2017 No. PF 4947 "On the Strategy of Actions in the five priority areas of development of the Republic of Uzbekistan in 2017-2021".
3. E.E. Kononova. Assessment of the impact of industrial development on the socio-ecological-economic characteristics of the region.https://cyberleninka.ru
4. Golubev G.N. Geoecology: textbook [Electronic resource]. Access mode: http://ugrafmsh.ru.
5. Stat.uz. https://navstat.uz/uz/rasmiy-statistika/industry-2.
6. https://www.gazeta.uz/ru/2021/08/27/energy-navoi/

Shokirova X.Sh.
Assistant
of the Department of Plant Protection and Quarantine
Andijan Institute of Agriculture and Agrotechnologie

CHARACTERISTICS OF ENTOMOPATOGENIC FUNGI IN LOCUSTS

Annotation *The article gives information about 5 species of entomopathogenic fungi identified in locusts, which are 3 species recorded as highly pathogenic for second instar nymphs of the Italian locust. Strain VD-85 of the fungus B.brongniartii is proposed for further study.*

Keywords:*Fungus, B.brongniartii, chemical methods, Apply, microorganisms, Asian migratory locust. Italian locust*

INTRODUCTION. It is important to protect plants from harmful organisms in the production of high-quality and ecologically clean products from agricultural crops. In recent times, plant protection is becoming a developed and perfected agricultural direction on a new scientific biological basis.

Over the years, the use of chemicals has led to several negative consequences. As a result of the practical use of chemicals, the environment and human health are injured, causing enormous environmental and economic damage. For this reason, the problem of reducing the amount of chemicals has appeared.

For this, it was necessary to find other preparations that could replace pesticides or to apply new methods instead of chemical methods. Therefore, in recent years, important biological research on the use of beneficial insects and microorganisms has been rapidly developed, in-depth study of the biological properties of harmful organisms - insects, plant diseases, and weeds.

Entomopathogenic fungi, unlike other entomopathogenic microorganisms, can pass through the cover (cuticle) of insects and cause disease (Nurjanov, 2019). We have isolated entomopathogenic fungi that cause disease in locust species, which cause great damage to crops, and studied their pathogenicity against the nymphs of these locusts.

MATERIALS AND METHODS. It is known that there are more than 250 species of grasshoppers in our Republic. Among them, the Asian migratory locust (Locusta migratoria migratoria L.) and Italian locust (Calliptamus italicus italicus L.), which we are studying, are widespread in the Lower Amudarya region and form large reservations mainly in the territory of the Republic of Karakalpakstan (Nurjanov, 2019). In our research, we have fully studied the microbiome of grasshoppers collected from this area. Microorganisms were isolated from locusts brought to laboratory conditions, and we studied their morpho-cultural, physiological, and pathogenic characteristics. Locust nymphs, imagoes and pupae were collected and observed to isolate microorganisms. When the insects were observed under the microscope and found fungi on the outer layer(cuticula). They were planted in the prepared nutrient media in a Petri dish using a Inoculation hook. If fungi were not detected in the cuticle of insects, they were studied in wet chambers under sterile conditions. For this, a Petri dish was taken, a filter paper and a glass slide were placed inside it, and the studied insects were placed on it. Such prepared moist chambers are stored and monitored in a thermostat at 25-280 C for 5-7 days. During this period, insects with fungus growing on their bodies were studied. With the help of a bacterial loop, fungal spores are taken and planted in the nutrient medium in a petri dish, and they are kept in a thermostat at a temperature of 27-280 C and observed for 2, 4, 6 days.

In order to determine the virulence properties of entomopathogenic fungi, target insects were treated by spraying with suspension of spores.

We used a Goryaev camera to determine the amount of spores in the suspension. Different solutions (from 1X10 3 to 1X10 8) were prepared and the insects of the experimental variants were treated. In the analytical version, insects were treated with plain water. The studied insects were kept in special insectaries and were fed with plants.

RESULTS. Factors affecting the pathogenic properties of microorganisms include the degree of virulence of microorganisms, the susceptibility of insects to diseases, and external factors.

For the practical use of fungi isolated from locusts, we studied their pathogenicity against 2-years-old nymphs of the Italian locust. This, 2-year-old nymphs of the locust were treated with a spore suspension prepared from the cultural solution of fungi. In addition to the fungi isolated from the Asian locust and the Italian locust, the pathogenicity of the VD-85 strain of the Beauveria brongniartii fungus isolated from the Moroccan locust (Dociaustarus maroccanus Thunb) was determined for the nymphs of the Italian locust. The results of the experiments are presented in Table 1. As can be seen from the data presented in the table, for the 2-year-old larvae of the Italian locust, the VD-85 strain of the fungus Beuveria brongniartii and the fungi Aspergillus flavus, Aspergillus ochraceus can be included among the fungi showing high pathogenicity. This type of entomopathogenic fungi was able to show 95.8%, 70.0% and 68.0% of mortality during the 10th day. It was found that the Fusarium oxysporum fungus has the ability to show 43.3% biological efficiency. Among the studied fungi, it was found that Paecilomuces varioti has very low virulence properties for Italian larvae. Thus, it was found that the entomopathogenic fungi A.flavus, A.ochraceus and B.brongniartii fungi isolated from locusts have high pathogenicity for Italian locust. Among the studied species of fungi, the species belonging to the genus Aspergillus are practically prohibited from being used in plant protection. Because it has been determined that the toxins produced by this type of fungi can affect animals, therefore, they are practically not used as entomopathogenic microorganisms. Therefore, we propose to study the VD-85 strain of the B. tenella fungus for practical use against locusts.

Table 1.

PATHOGENICITY OF ENTOMOPATHOGENIC FUNGI OF THE SECOND-YEAR INSTAR OF THE ITALIAN

Species	**Titr**	**Mortality %**		
A. flavus	$1x10^8$	13.3	36,7	70,0
A. ochraceus	$1x10^8$	7,3	30,0	68,0
P. varioti	$2x10^7$	0	3,3	13,3
F. oxysporum	$7x10^7$	3,3	23,3	43,3
B.brongniartii BD-85	$1x10^7$	4,2	72,0	95,8
Analytical		2,0	34,7	7,3

CONCLUSION. Three species from 5 types of entomopathogenic fungi such as, A. flavus, A. ochraceus and B. brongniartii has isolated from Asian migratory locust (Locusta migratoria migratoria L.), Italian locust (Calliptamus italicus italicus L) and Moroccan locust (Dociaustarus maroccanus Thunb.) was found to have high virulence properties and the VD-85 strain of B. brongniartii has recommended to study in practical use to control of locusts.

REFERENCES

1. Нуржанов А.А. Фауна и экология прямлкрылообразных насекомых южного Приаралья. Тошкент, Фан, 2019. 250 с.

2. Нуржанов А.А. Энтомопатогенные микроорганизмы прямокрылых насекомых. Тошкент, Фан, 2019. 96 с.

3. Nurjaniv A., Medetov M., Kholmatov B., Abdullahyev I., Tufliyev N., Nurjonov F., 2023. Orthoptera (Insecta) fauna of the Kashkadarya region, Uzbekistan. Biodiversitas 24:112-121. DOI: 10.13057/biodiv/d240115.

Sobirova M.T.
Teacher
of Navoi State University
Ochilova M.Sh.
Navoi State University
2th year student
of the Geography and Fundamentals of
Economic Knowledge department

FORMATION AND DEVELOPMENT OF THE CITY OF GAZGON

Abstract: *The article provides information about the geographical location, population, economy, toponym of the city of Ghazgon. Also, brief information about the history of the formation of the city is given. Although the city is newly established, it is considered an ancient settlement. At the same time, it is appropriate to say that the city of Ghazgon is considered a typical ancient region.*
Key words: *City, population, Marmarabad, marble, national composition, icon, toponym, Bukhara, Nurota, geographical location*

Any growth first has a starting point. Literally, this point can be called a solid foundation. All other changes: step-by-step development processes come from this source. The reason for the emergence of such a large-scale momentum is based not only on economic opportunities, but also on spiritual resources.

If we talk about the city of Gazgon, which has received the status of a new city of New Uzbekistan, the basis of today's changes in this area, which is one of the oldest corners of the republic and rich in marble mines, is also closely related to the above factors.

In fact, the territory of Gazgon city is rich in rainbow marble, as well as many rock paintings, petroglyphs, remains of an ancient fortress, signs of the Sughd culture show the rich history of this corner. If we consider these principles, it becomes clear that the process of fundamental changes in Gazgon did not happen by itself.

The city of Gazgon is located almost in the heart of the Republic of Uzbekistan. The city of Gazgon is located 10 km west of the city of Nurota, 90 km from the city of Navoi, on the outskirts of Kyzylkum, at the western foot of the Nurota mountain range. The city borders Nurota, Navbahor and Konimekh districts. The climate in the interior of the city is dry, continental. The area of the city is 0.05 thousand km2 (59.4 thousand hectares) and the border length is 105.3 kilometers.

At the beginning of the 20th century, only a few families lived in the Gazgon area, and the opening of a marble mine in the 1930s led to an increase in the population. Workers from different regions of the former Soviet Union and even from other countries came to work at the “Gazgon Marble” enterprise, which caused the population to gather in the area.

By 1975, the city received the status of a town-type settlement, and at that time the population reached 3,500 people. From that time, high-rise buildings for miners began to be built.

After the independence of Uzbekistan, the population of the city reached almost 5,000 people, and although the stone processing industry continued to work in the area, the potential of the marble mines was not fully utilized. In addition, during that period, Gazgon was transferred from the status of a town to the status of a village. When Uzbekistan entered a new history, it became an urgent task to improve the lifestyle of the population by effectively using underground resources and attracting investors to this process.

During his visit to Navoi region on March 2, 2018, President Shavkat Mirziyoyev called for restoration of the ancient and original quality of Gazgon marble and granite, for rational use of the priceless underground treasure for the well-being of our people, and for construction materials. and taking into account the high demand for stone slabs in the foreign market, set the tasks of establishing granite and marble processing enterprises based on the most modern technologies in the region. After that, the “Marmarabad” LLC cluster project was developed under the auspices of “Oʻzqurilishmateriallari” joint-stock company and “Oʻzmilliybank” joint-stock company, and a complex of two-stage investment plans for 2019-2020 and 2021-2022, consisting of a total of 64 projects confirmed. According to it, it is planned to increase the volume of marble and granite mining by almost four times, and the volume of processing by five times. During the President's visit to Navoi region on March 12, 2019, he got acquainted with the production process of rock products at the “Marmarabad” enterprise, which started operating in Gazgon. In this historic visit, he emphasized the need to constantly study market requirements and launch the production of marketable products. This ensures the purchase of goods and the stable operation of the enterprise. While inspecting the company's products, the head of state noted that they are not inferior to their alternatives in the world. Tasks were given to use effective technologies, reduce the cost of products due to the reduction of transport costs, thereby entering foreign markets. It was also noted that it is necessary to train personnel for deep processing of decorative stones based on world standards, to use local construction materials in construction work. At the same time, a presentation of the projects of production of building materials, establishment of industrial sculpture from marble in cooperation with Chinese investors, and development of the Gazgon region in Navoi region was held in 2019-2020. The President made a proposal to bring a railway to develop the infrastructure and industry of this region.[68]

After these historical events, on May 3, 2019, the Senate of the Oliy Majlis of the Republic of Uzbekistan passed the resolution “On changing the town of Gazgon, Nurota district, Navoi region, to the city of Gazgon, including the city of

[68] Oʻzbekiston Respublikasi Qonunchilik maʼlumotlari milliy bazasi-www.lex.uz (http://lex.uz/docs/5015039).

Gazgon in the series of cities subordinate to the region, and changing the borders of Nurota district, Navoi region" according to the decision, the city of Gazgon under Navoi region was established. The area of the city of Gazgon is 0.05 thousand square kilometers (59.4 thousand hectares) and the length of the border is 105.3 kilometers, of which it borders with Bukhara region (47.1 kilometers). According to the data of July 1, 2024, the population is 9,200 people, the number of citizens' assemblies is 4, the number of households is 1,615, and the number of families is 2,592.

According to the national structure, uzbeks, tajiks and representatives of other nationalities live in this area. It should be noted that on July 22, 2019, the decision of the Cabinet of Ministers of the Republic of Uzbekistan "On comprehensive development measures for the city of Gazgon, Navoi region in 2019-2021" was adopted. On this basis, the economy of the city, specializing in the production of industry, animal husbandry and building materials, is rapidly developing today. There are 3 schools in the city, and 12 preschool educational organizations, 8 of which are family non-governmental preschool educational institutions. In addition, there is one health facility. Also, there are 14 joint ventures, 164 small industrial enterprises, and 280 business entities in the region. 135 pedagogues-teachers, 86 educators, 6 doctors and 56 medical workers work in the city. A total of 1,554 students study in schools, and 791 children are educated in pre-school educational institutions.

In addition, on September 24, 2020, the decision of the Cabinet of Ministers of the Republic of Uzbekistan on "Measures for the establishment of Gazgon city administration within Navoi region" was announced.[69] On November 4 of this year, an organizational session of the Gazgon City Council of People's Deputies was held, according to which the candidates of 4 sector heads - the mayor, the prosecutor, the head of the internal affairs department and the head of the state tax inspection confirmed.

It should be noted that in 2019-2020, the government developed measures for the comprehensive development of the city of Gazgon of the Navoi region, and on this basis, a number of works were carried out in the area.

The state unitary enterprise "Marmarabad" occupying an area of 6 hectares in the city was built on a hilly area within 1-2 years, and the activities of a large cluster enterprise were launched, and the efforts of hundreds of local specialists working here today are not only representatives of our country. , but also recognized in foreign mass media.

It is known that the main demand for living in the city depends primarily on communication networks, road infrastructure, high quality of service and many other factors. Therefore, many works were carried out by the housing and communal services department of the city of Gazgon. In the first half of 2021, within the framework of the "Prosperous neighborhood" program, many multi-storey buildings were repaired, their surroundings were beautified, and many

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[69] Oʻzbekiston Respublikasi Qonunchilik maʼlumotlari milliy bazasi-www.lex.uz (http://lex.uz/docs/5015039).

buildings were modernized. Despite the short time that has passed, as a result of the works, a number of new objects, new streets were created, and the modern infrastructure of the city of Gazgon was improved. The continuous continuation of such works and, most importantly, the attention of our state and government to the further development of the city indicate that in the coming years, Gozgon will become a new city of New Uzbekistan.

Although today's relics and landmarks with a history of thousands of years preserved in the territory of Gazgon speak of the glorious history of this corner, the secrets of the ancient past of this place have not been fully explored yet. Although a number of scientists have started work in this regard, but due to various reasons, these researches have not been fully completed.

Although the old historical scholars also paid attention to Nurota land in their works, especially to the life of scholars who lived there, there are no special notes about Gazgon in these sources. In particular, Narshakhi, who lived in the 10th century, wrote in his book "History of Bukhara" that “Nur is a big place. It has a mosque. He has many connections. People from Bukhara and other places go there every year for pilgrimage. The people of Bukhara exaggerate a lot in this matter. A person who goes to the pilgrimage of light will have the virtue of a pilgrim; when he returns from pilgrimage, they decorate the city with hedge because he came from a blessed place. This Light is called Nuri Bukhara in other regions. Many of the subjects are buried there”,[70] noted. It is not surprising that Gazgon is also meant when it is said that “He has many relations”. However, taking into account the dense population of Gazgan and the fact that this settlement was an important trade point, ancient historians did not pay full attention to the importance of this corner. can be concluded.

Interest in the history of Gazgon began in the 50s and 60s of the last century, and archaeologists carried out excavations several times. After Uzbekistan gained independence, special attention was paid to the realization of the history of the regions. After that, a number of Navoi, Nurota and Gazgon scholars began to study the history of Gazgon.

Until today, the most important source related to the history of “Gozgon” is R. Asadov's work “Gazgonnoma”[71]. Although this work is not a complete scientific treatise, it is the only publication dedicated to the past of Gazgon. In addition, Istam Bobonazarov's “History of Shahimardon”[72] is a work dedicated to the history of the ancient mosque located in Gazgan. In addition, in the works of professor Dodo Nozilov, “Heart-felt stories about master craftsmen”[73], “Customs, rules and symbolic expressions in the architecture of Central Asia”[74] and other works, in the book “World of Architects”[75] by P. Zohidov, local historian Suyundik from Nurota.

[70] Abu Bakr Muhammad Narshaxiy Buxoro tarixi.-T.:-1991.
[71] Asadov R. G‘ozg‘onnoma T.: -2003
[72] Bobonazarov I. Shohimardon tarixi T.: - 2017.
[73] Nozilov D. O‘rta Osiyo me’morchiligida odatlar, qoidalar va ramziy ifodalar T.:-2011.
[74] Nozilov D. O‘rta Osiyo me’morchiligida odatlar, qoidalar va ramziy ifodalar T.:-2011.
[75] Zohidov P. Me’morlar olami. –T.:-1996.

In a number of works of Mustafa Nurotoi, in the book “Nurota district: yesterday and today”[76] authored by H. Qurbanov and others, in a word, in several works on the history of Nurota and Karmana, partial information about Gazgon is given.

There are several assumptions about the meaning of the toponym “Gazgon”. The most famous of these is “ghazi” “killed in battle”, “martyred (Arabic) warrior” and Tajik – “on” (-s) from the combination of the plural indicator - in the form of “Gozion”. was formed and later took the form of “Gozgon” to make it easier to pronounce.

According to Mahmud Koshgari[77], “Gazgon” means “uneven land” and was used to refer to places that are not suitable for building houses and planting crops.

Some local patriarchs explain the origin of the toponym “Gozgan” as follows: Genghis Khan conquers Nur. At that time, the khan's beg named Ghazi Khan stayed and ruled in this village and died there. Later, the village was named “Gozikhon”. Local residents have another opinion about the toponym. The stone thrown at Palakhmon was called “ghazban”. The above term “fanatic” seems to be correct. Because one of the streams near Gazgon is called “Gairut” and these two terms have the same meaning.

In the dictionary of geographical places in Uzbekistan, Gazgon is given a different definition: Gazgon is actually a Turkish word, a corruption of the word “kozgon” (“goose mine”). shape, because there is an assumption that priceless marble stone was mined from this place and its people were engaged in stonework. Another assumption is that the Koriz, villages and settlements around Gazgan, shepherd flocks were called by both Persian and Turkish names.

For example, Pargat-fargat, Koriz-Kakh Rez, Pashshot, Chiltan, Kukhir Ravuk, Besh Budoy, Yonbosh, Hindikush, Pakhsa, Pakhol, Navroz, Sultanboy, Dushokha, Charkhana, Shamalguduk, Korizi Kalon, Boshang, Khojakorson, white eagle, Dilshad, Kurka Sokhta, Shahid, Kuhisiya, Karakarga, Tumar, Changli, Olchin, Kuduqcha, Uzunkuduq, Esankura, Turdiboy kura, Kumcha, Arba, Kamarko‘ton, Ko‘toni gum-gum, Ikrom dula, Dushocha, Sokhta, Barot, Kudugu Momarahim, Sultanboy, Jumaboy kudugu, etc. Arabic toponyms are also found in Gazgan. One of them is “Arba” pass road. This term means “gate” and “unit of measurement” in Arabic.

In conclusion, it should be said that the reforms and initiatives carried out by the head of our state make a great contribution to the development and progress of the city of Gazgon, as well as the rise and expansion of its economy. The development and expansion of the city's economy contributes to the employment of city residents and their employment.

References

1. O‘zbekiston Respublikasi Qonunchilik ma’lumotlari milliy bazasi-www.lex.uz (http://lex.uz/docs/5015039).
2. Abu Bakr Muhammad Narshaxiy Buxoro tarixi.-T.:-1991.

[76] Qurbonov X. va boshqalar. Nurota tumani: kecha va bugun. T.:-2021.
[77] Mahmud Qoshg‘ariy Devoni lug‘atit turk T.:-1963.

3. Asadov R. G‘ozg‘onnoma T.: -2003
4. Aslanov O. Gazgon city: yesterday and today.-T.:-2021.
5. Bobonazarov I. Shohimardon tarixi T.: - 2017.
6. Mahmud Qoshg‘ariy Devoni lug‘atit turk T.:-1963.
7. Nozilov D. O‘rta Osiyo me’morchiligida odatlar, qoidalar va ramziy ifodalar T.:-2011.
8. Qurbonov X. va boshqalar. Nurota tumani: kecha va bugun. T.:-2021.
9. Zohidov P. Me’morlar olami. –T.:-1996.

Sofoyeva F. D.
Xalqaro Nordik Universiteti o'qituvchisi

TARMOQ VA INTERNET

Annotatsiya: *Ushbu maqolada hozirgi kunda dolzarb mavzulardan biriga aylangan ma'lumotlarni web-qidiruv tizimlar himoyasi va unda uchraydigan muammolar, yechimlar berib o'tilgan. tarmoq va internet ma'lumotlar va statistik ma'lumotlar bilan to'ldirilgan. Shu bilan birga qidiruv tizimlarida axborot ma'lumotlarini olish uchun himoyalash uchun muhim tavsiya va maslahatlar berib o'tilgan.*

Kalit so'zlar: *PAN, LAN, MAN, WAN, TCP/IP, shina topologiyasi, yulduz topologiyasi, CSMA/CD, DARPA, ICANN, TLD, DNS, NNTP, FTP*

Sofoyeva F.D.
Teacher
of the International Nordic University

NETWORK AND INTERNET

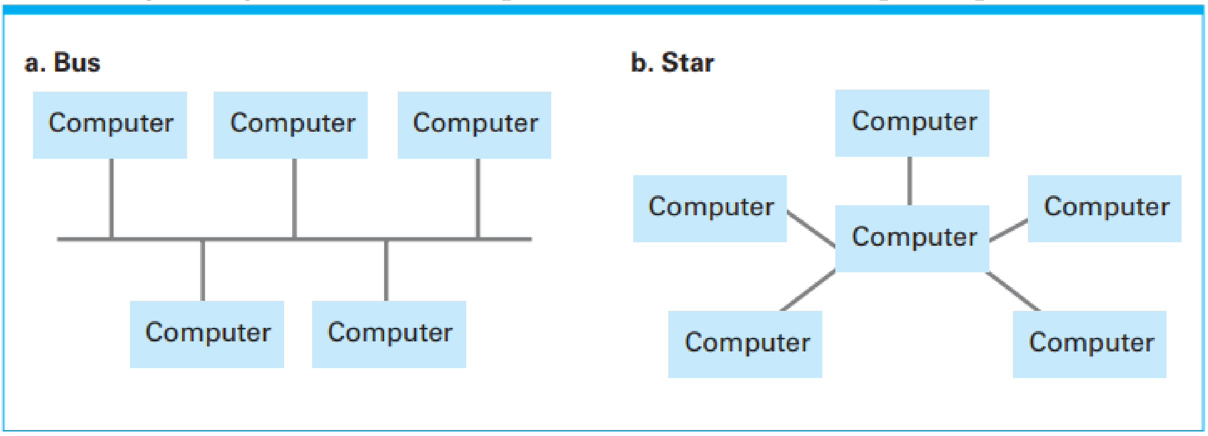
Abstract: *In this article, the protection of information web-search systems, which has become one of the current topics, and the problems and solutions encountered in it are given. the network and the Internet are filled with information and statistics. At the same time, important recommendations and tips were given for the protection of information in search engines.*

Keywords: *PAN, LAN, MAN, WAN, TCP/IP, bus topology, star topology, CSMA/CD, DARPA, ICANN, TLD, DNS, NNTP, FTP*

Kirish

Kompyuter tarmog'i ko'pincha **shaxsiy tarmoq (PAN)**, **lokal tarmoq (LAN)**, **metropoliten tarmoq (MAN)** yoki **mintaqaviy tarmoq (WAN)** deb tasniflanadi. PAN odatda qisqa masofali (odatda bir necha metrdan kamroq) aloqa uchun ishlatiladi, masalan, simsiz eshitish vositasi va smartfon o'rtasida yoki simsiz sichqoncha va shaxsiy kompyuter o'rtasida. Bundan farqli o'laroq, LAN odatda bitta bino yoki binolar majmuasidagi kompyuterlar to'plamidan iborat. Masalan, universitet kampusidagi yoki ishlab chiqarish zavodidagi kompyuterlar LAN orqali ulanishi mumkin. MAN - bu oraliq o'lchamdagi tarmoq, masalan, mahalliy hamjamiyatni qamrab oladigan tarmoq. WAN - qurilmalarni uzoqroq masofaga bog'laydi – masalan, qo'shni shaharlarni yoki dunyoning qarama-qarshi tomonlarini.

Tarmoqlarni tasniflashning bir usuli tarmoq topologiyasiga asoslangan bo'lib, u mashinalar ulangan tarmoqga ishora qiladi. Eng mashhur topologiyalardan bittasi bu shina bo'lib, unda barcha qurilmalar shina deb ataladigan umumiy aloqa liniyasiga ulanadi (5.1a-rasm) va keyingisi yulduz bo‘lib, bitta qurilma markaz bo‘lib xizmat qiladi va yulduz shaklida ulanadi (5.1b-rasm). Shina topologiyasi 1990-yillarda Ethernet deb nomlanuvchi standartlar to‘plami ostida amalga oshirilganda ommalashgan va Ethernet tarmoqlari bugungi kunda ishlatiladigan eng mashhur tarmoq tizimlaridan biri bo‘lib qolmoqda.



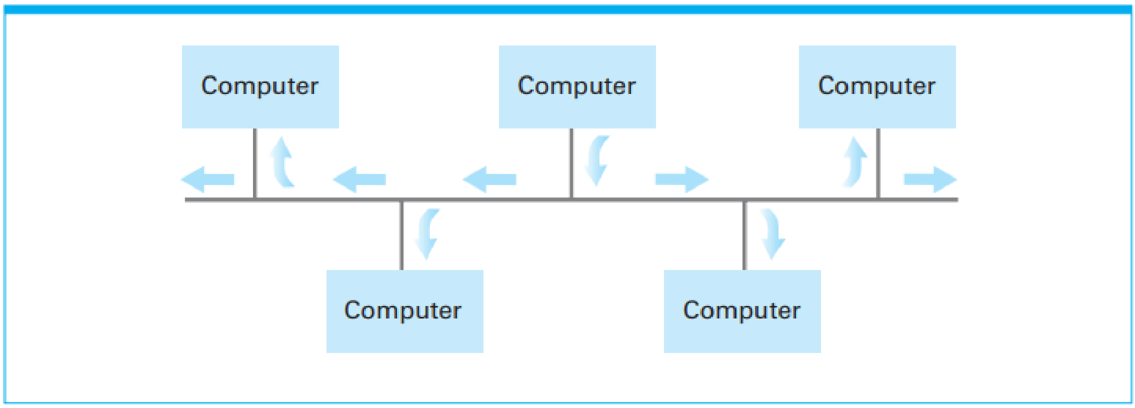
1-rasm. Ikki mashhur tarmoq topologiyasi.

Yulduz topologiyasining tarixi 1970-yillarga borib taqaladi. U ko‘plab foydalanuvchilarga xizmat ko‘rsatadigan katta markaziy kompyuter paradigmasidan rivojlandi. Ushbu foydalanuvchilar tomonidan ishlaydigan oddiy terminallar o‘zlari kichik kompyuterlarga aylanganligi sababli, yulduz tarmog‘i paydo bo‘ldi. Bugungi kunda yulduz konfiguratsiyasi simsiz tarmoqlarda mashhur bo‘lib, u yerda aloqa radioeshittirish orqali amalga oshiriladi va kirish nuqtasi (AP) deb ataladigan markaziy mashina barcha aloqalar muvofiqlashtirilgan markaz bo‘lib xizmat qiladi.

Protokollar

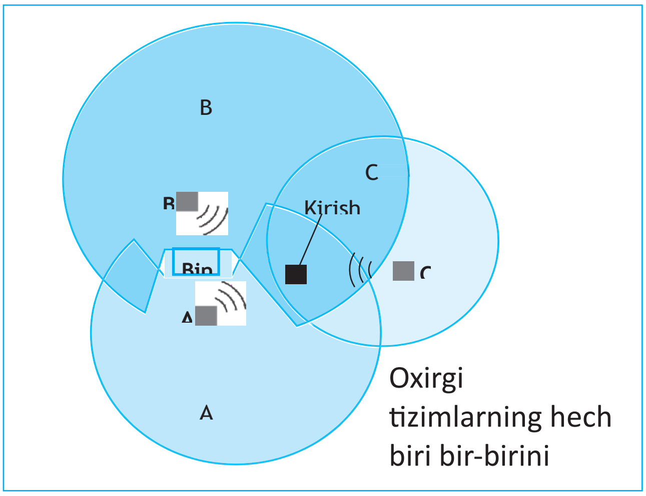
Tarmoqning ishonchli ishlashi uchun faoliyatni amalga oshirish qoidalarini belgilash muhimdir. Bunday qoidalar protokollar deb ataladi. Protokol standartlarini ishlab chiqish tarmoq texnologiyalarini ishlab chiqishda ajralmas jarayondir. Protokol kontseptsiyasiga kirish sifatida tarmoqdagi kompyuterlar o‘rtasida xabarlarni uzatishni muvofiqlashtirish muammosini ko‘rib chiqaylik. Ushbu aloqani tartibga soluvchi qoidalarsiz, barcha kompyuterlar bir vaqtning o‘zida xabarlarni uzatishni talab qilishi yoki yordam kerak bo‘lganda boshqa qurilmalarga yordam bermasligi mumkin.

Ethernet standartlariga asoslangan shina tarmog‘ida xabarlarni uzatish huquqi CSMA/CD (Carrier Sense, Multiple Access with Collision Detection) deb nomlanuvchi protokol tomonidan boshqariladi. Ushbu protokol har bir xabar shinadagi barcha qurilmalarga uzatilishini talab qiladi (5.2-rasm). Har bir qurilma barcha xabarlarni kuzatib boradi, lekin faqat o‘ziga yuborilgan xabarlarni saqlaydi. Xabarni uzatish uchun qurilma shinada harakat oxirigacha kutadi va bu vaqtda u tarmoqni kuzatishda davom etayotganda uzatishni boshlaydi.



2-rasm. Shina tarmog‘i orqali aloqa

Esda tutingki, CSMA/CD barcha mashinalar markaziy AP orqali aloqa qiladigan simsiz yulduz tarmoqlariga mos kelmaydi. Buning sababi shundaki, qurilma o‘zining uzatmalari boshqasiniki bilan to‘qnashayotganini aniqlay olmasligi mumkin. Masalan, mashina boshqasini eshitmasligi mumkin, chunki o‘z signali boshqa mashinaning signalini o‘chiradi. Yana bir sabab, turli xil mashinalarning signallari bir-biridan ob’ektlar yoki masofa bilan bloklangan bo‘lishi mumkin, garchi ularning barchasi markaziy kirish nuqtasi bilan bog‘langan bo‘lsa ham (yashirin terminal muammosi deb nomlanuvchi holat, 5.3-rasm). Natijada simsiz tarmoqlar to‘qnashuvlarni aniqlashga emas, balki ularni oldini olishga harakat qilish siyosatini qabul qiladi. Bunday siyosatlar CSMA/CA bilan bir nechta kirish sifatida tasniflanadi, ularning aksariyati IEEE 802.11 va protokollarida belgilangan protokollar doirasida IEEE tomonidan standartlashtirilgan.



3-rasm. Yashirin terminal muammosi.

Internet, internet protokollari va ularning turlari.

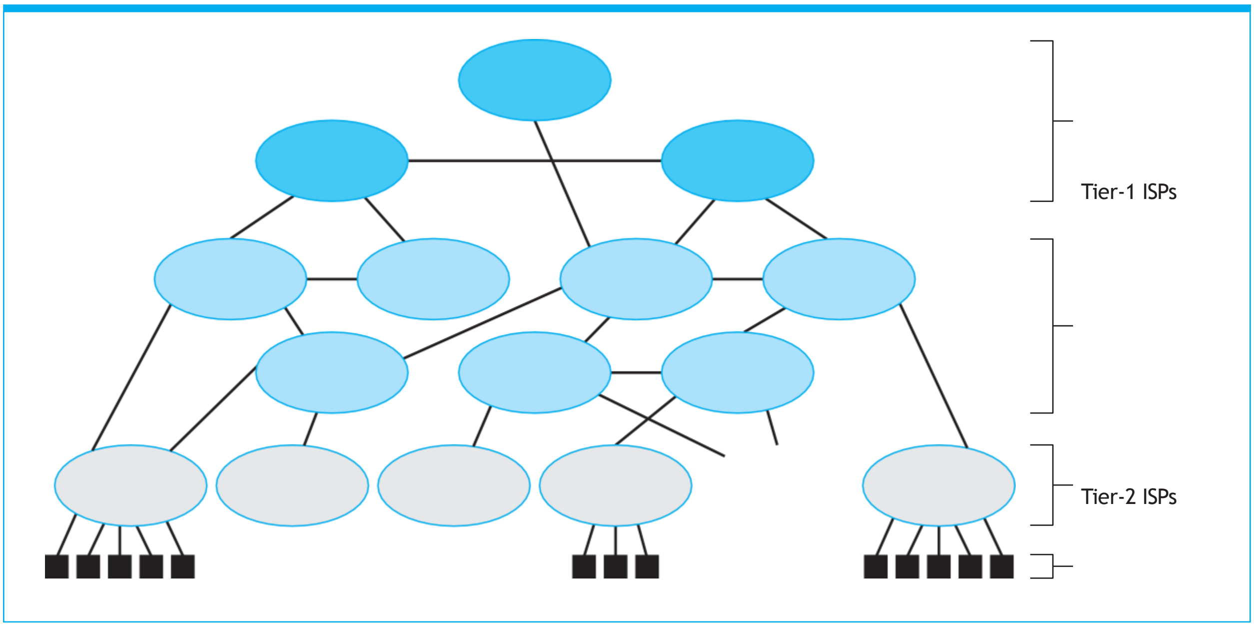
Internetning eng yorqin namunasi 1960-yillarning boshlarida olib borilgan tadqiqot loyihalaridan kelib chiqqan. Maqsad turli xil kompyuter tarmoqlarini bir-biriga bog‘lash qobiliyatini rivojlantirish bo‘lib, ular mahalliy ofatlar tufayli buzilmaydigan ulangan tizim sifatida ishlaydi. Ushbu ishlarning aksariyati AQSh hukumati tomonidan Mudofaa ilg‘or tadqiqot loyihalari agentligi (DARPA) orqali homiylik qilingan. Yillar davomida Internetning rivojlanishi hukumat homiyligidagi loyihadan akademik tadqiqot loyihasiga oʻtdi va bugungi kunda u millionlab kompyuterlarni oʻz ichiga olgan PAN, LAN, MAN va WAN larning butun dunyo boʻylab kombinatsiyasini bogʻlaydigan tijorat tashkilotidir.

Internet ulangan tarmoqlar toʻplamidir. Umuman olganda, bu tarmoqlar Internet provayderlari (ISP) deb nomlangan tashkilotlar tomonidan quriladi va xizmat koʻrsatiladi. Tarmoqlarning oʻziga nisbatan ISP atamasidan foydalanish ham odatiy holdir.

Misol tariqasida an'anaviy telefon kompaniyasi sifatida paydo boʻlgan va boshqa aloqa xizmatlarini koʻrsatish sohasini kengaytirgan kompaniyani keltirish mumkin.

1-darajali Internet-provayderlarga ulanish 2-darajali Internet-provayderlar boʻlib, ular koʻlami boʻyicha koʻproq mintaqaviy va oʻz imkoniyatlaridan kamroq kuchga ega. (1-darajali va 2-darajali provayderlar oʻrtasidagi farq koʻpincha fikr masalasidir) Shunga qaramay, bu tarmoqlar aloqa biznesidagi kompaniyalar tomonidan boshqariladi.

1-darajali va 2-darajali provayderlar asosan Internet aloqa infratuzilmasini birgalikda ta'minlovchi marshrutizatorlar tarmogʻidir. Shunday qilib, ularni Internetning asosiy qismi deb hisoblash mumkin. Ushbu yadroga kirish odatda 3-darajali ISP deb ataladigan vositachi tomonidan ta'minlanadi. Kirish provayderi asosan mustaqil internet boʻlib, ba'zan intranet deb ataladi va u alohida uylar va korxonalarni Internetga kirishni ta'minlash bilan shugʻullanuvchi yagona organ tomonidan boshqariladi. Masalan, oʻz xizmatlari uchun haq oladigan kabel va telefon kompaniyalari, shuningdek, oʻz tashkilotlari ichidagi shaxslarga Internetga kirishni ta'minlashni oʻz zimmalariga olgan universitetlar yoki korporatsiyalar kabi tashkilotlar kiradi.



4-rasm. Internet tarkibi.

Shaxsiy foydalanuvchilar kirish provayderlariga ulanadigan qurilmalar oxirgi tizimlar yoki xostlar sifatida tanilgan. Ushbu soʻnggi tizimlar noutbuklar yoki shaxsiy kompyuterlar boʻlishi mumkin, lekin tobora koʻproq boshqa qurilmalar, jumladan telefonlar, videokameralar, avtomobillar va maishiy texnikalarni qamrab oladi. Axir, Internet aslida aloqa tizimidir va shuning uchun boshqa qurilmalar bilan aloqa qilishdan foyda koʻradigan har qanday qurilma potentsial yakuniy tizimdir.

Internet Addressing

Internetga tizimdagi har bir kompyuterga noyob identifikatsiya manzilini belgilaydigan Internet boʻylab manzillash tizimi kerak. Internetda bu manzillar IP manzillar sifatida tanilgan (IP atamasi "Internet protokoli" ga ishora qiladi). Dastlab, har bir IP-manzil 32 bitdan iborat boʻlgan, ammo manzillarning kattaroq toʻplamini ta’minlash uchun konvertatsiya qilish 128-bitli manzillarga ulanish jarayoni hozirda davom etmoqda. Ketma-ket raqamlangan IP-manzillar bloklari Internet ishini muvofiqlashtirish uchun tashkil etilgan notijorat korporatsiya boʻlgan tayinlangan nomlar va raqamlar uchun Internet korporatsiyasi (ICANN) tomonidan provayderlarga beriladi. Soʻngra provayderlarga oʻz vakolatlari doirasidagi mashinalarga oʻzlarining berilgan bloklaridagi manzillarni ajratishga ruxsat beriladi. Shunday qilib, butun Internetdagi qurilmalarga noyob IP-manzillar beriladi.

Manzillash tizimi domen kontseptsiyasiga asoslangan boʻlib, uni universitet, klub, kompaniya yoki davlat idorasi kabi yagona hokimiyat tomonidan boshqariladigan Internetning "mintaqasi" sifatida koʻrish mumkin. Registratorlar deb ataladigan kompaniyalar tomonidan boshqariladigan jarayon ICANN da roʻyxatdan oʻtgan boʻlishi kerak. Bu rol ICANN tomonidan tayinlangan. Ushbu roʻyxatga olish jarayonining bir qismi sifatida domenga Internetdagi barcha domen nomlari orasida noyob boʻlgan mnemonik domen nomi beriladi. Domen nomlari koʻpincha domenni roʻyxatdan oʻtkazuvchi tashkilotni tavsiflaydi, bu ularning odamlar uchun foydaliligini oshiradi.

Misol tariqasida Marquette universitetining domen nomi mu.edu hisoblanadi. Nuqtadan keyingi qoʻshimchaga e’tibor bering. U domen tasnifini aks ettirish uchun ishlatiladi, bu holda edu qoʻshimchasi bilan koʻrsatilgandek "ta’lim". Ushbu qoʻshimchalar yuqori darajadagi domenlar (TLD) deb ataladi. Boshqa TLDlar orasida tijorat muassasalari uchun com, AQSH davlat muassasalari uchun gov, notijorat tashkilotlari uchun org, muzeylar uchun muzey, cheklanmagan foydalanish uchun ma’lumotlar va dastlab internet-provayderlar uchun moʻljallangan, ammo hozirda ancha kengroq miqyosda foydalaniladigan tarmoq kiradi. Ushbu umumiy TLDlarga qoʻshimcha ravishda, Avstraliya uchun au va Kanada uchun ca kabi ma’lum mamlakatlar uchun (mamlakat kodi TLD deb ataladi) ikki harfli TLDlar ham mavjud.

Internet ilovalari.

Internetning dastlabki kunlarida koʻpchilik ilovalar alohida, oddiy dasturlar boʻlib, ularning har biri tarmoq protokoliga amal qilgan. Newsreader ilovasi

Network News Transfer Protocol (NNTP) yordamida serverlar bilan bog‘langan, tarmoq bo‘ylab fayllarni ro‘yxatga olish va nusxalash uchun dastur File Transfer Protocol (FTP) joriy qilingan yoki boshqa kompyuterga uzoq masofadan kirish uchun dastur Telnet protokolidan foydalangan holda, yoki Secure Shell (SSH) protokoli. Veb-serverlar va brauzerlar yanada murakkablashgani sayin, ushbu an’anaviy tarmoq ilovalari tobora ko‘proq kuchli Hyper Text Transfer Protocol (HTTP) orqali veb-sahifalar tomonidan boshqarila boshlandi.

SMTP (Simple Mail Transfer Protocol) elektron pochta xabarini bir xostdan ikkinchisiga uzatishda tarmoqdagi ikkita kompyuterning o‘zaro ta‘sir qilish usulini belgilaydi. Mail.skaro.gov pochta serverining tardis.edu domenidagi oxirgi foydalanuvchi “doctor” ga “dalek” dan elektron pochta xabarini yuborish misolini ko‘rib chiqamiz. Birinchidan, mail.skaro.gov dagi pochta bilan ishlash jarayoni mail.tardis.edu dagi pochta serveri jarayoni bilan bog‘lanadi. Buni amalga oshirish uchun u DNS, boshqa tarmoq protokoli yordamida inson o‘qiy oladigan maqsad domen nomini to‘g‘ri pochta serveri nomiga, so‘ngra uning IP manziliga moslashtiradi. Xuddi shunday, serverning boshqa tomonidagi jarayon javob berganida, protokol o‘zini qo‘ng‘iroq qiluvchiga identifikatsiyalashi kerakligini aytadi. Ularning SMTP almashinuvining transkripti quyidagicha ko‘rinishi mumkin:

1. 220 mail.tardis.edu SMTP Sendmail Gallifrey-1.0; Fri, 23 Aug 2413 14:34:10
2. HELO mail.skaro.gov
3. 250 mail.tardis.edu Hello mail.skaro.gov, pleased to meet you
4. MAIL From: dalek@skaro.gov
5. 250 2.1.0 dalek@skaro.gov... Sender ok
6. RCPT To: doctor@tardis.edu
7. 250 2.1.5 doctor@tardis.edu... Recipient ok
8. DATA
9. 354 Enter mail, end with "." on a line by itself
10. Subject: Extermination.
11. EXTERMINATE!
12. Regards, Dalek
13. .
14. 250 2.0.0 r7NJYAEl028071 Message accepted for delivery
15. QUIT
16. 221 2.0.0 mail.tardis.edu closing connection

1-qatorda masofaviy pochta serveri jarayoni qo‘ng‘iroq qiluvchiga o‘z nomini, u gapirayotgan protokolni va boshqa qo‘shimcha ma’lumotlarni, masalan, protokol versiyasini, sana va vaqtni e’lon qilish orqali javob beradi. 2-qatorda pochta serverini yuborish jarayoni o‘zini tanishtiradi. 3-qatorda masofaviy server jo‘natuvchi server nomini tan oladi.

Tarmoq xavfsizligi.

Virus - bu kompyuterda allaqachon mavjud bo‘lgan dasturlarga o‘zini kiritish orqali kompyuterga zarar yetkazadigan dastur. Keyin, "xost" dasturi bajarilganda, virus ham bajariladi. Amalga oshirilganda, ko‘pgina viruslar o‘zlarini kompyuterdagi boshqa dasturlar ustidan nazorat qilishga harakat qiladi. Biroq, ba’zi viruslar operatsion tizim qismlarini buzish, ommaviy saqlashning katta bloklarini o‘chirish yoki ma’lumotlar va boshqa dasturlarni buzish kabi halokatli harakatlarni amalga oshiradi.

Worm - bu o‘zini tarmoq orqali uzatadigan, kompyuterlarda joylashadigan va o‘z nusxalarini boshqa kompyuterlarga yo‘naltiradigan avtonom dastur. Virus holatida bo‘lgani kabi, worm ham faqat o‘zini ko‘paytirish yoki ekstremal vandalizm uchun mo‘ljallangan bo‘lishi mumkin. Wormning o‘ziga xos oqibati - bu wormning takrorlangan nusxalarining hosil bo‘lishi, bu qonuniy ilovalarning ish faoliyatini yomonlashtiradi va oxir-oqibat butun tarmoq yoki internetda ortiqcha yuklama hosil qilishi mumkin.

Troyan oti - bu jabrlanuvchi tomonidan o‘z xohishi bilan import qilinadigan o‘yin yoki foydali yordamchi dasturlar to‘plami kabi kerakli dastur sifatida yashiringan kompyuter tizimiga kiradigan dastur. Biroq, kompyuterda troyan oti zararli ta’sir ko‘rsatishi mumkin bo‘lgan qo‘shimcha harakatlarni amalga oshiradi. Ba’zan bu qo‘shimcha harakatlar darhol boshlanadi. Boshqa hollarda, troyan oti ma’lum bir voqea, masalan, oldindan tanlangan sananing paydo bo‘lishi bilan qo‘zg‘atilgunga qadar harakatsiz yotishi mumkin. Troyan otlari ko‘pincha jozibador elektron pochta xabarlariga qo‘shimchalar shaklida keladi. Qo‘shimcha ochilganda (ya’ni, qabul qiluvchi ilovani ko‘rishni so‘raganda), troyan otining noto‘g‘ri harakatlari faollashadi. Shunday qilib, noma’lum manbalardan kelgan elektron pochta qo‘shimchalari hech qachon ochilmasligi kerak.

Zararli dasturiy ta’minotning yana bir ko‘rinishi josuslik dasturlari bo‘lib, u o‘zi joylashgan kompyuterdagi harakatlar haqida ma’lumot to‘playdigan va bu ma’lumotni hujumni qo‘zg‘atuvchiga qaytaradigan dastur hisoblanadi. Ba’zi kompaniyalar josuslik dasturlarini mijozlar profilini yaratish vositasi sifatida ishlatishadi va shu nuqtai nazardan, u shubhali axloqiy ahamiyatga ega. Boshqa hollarda, josuslik dasturi ochiqdan-ochiq zararli maqsadlarda, masalan, parollar yoki kredit karta raqamlarini qidirishda kompyuter klaviaturasida kiritilgan belgilar ketma-ketligini yozib olish uchun ishlatiladi.

Ayg‘oqchi dastur orqali ma’lumotni yashirincha olishdan farqli o‘laroq, fishing ma’lumotni shunchaki so‘rash orqali aniq olish usulidir. Fishing atamasi baliq ovlash so‘zi bo‘yicha o‘yindir, chunki bu jarayon kimdir "o‘lja oladi" degan umidda ko‘plab “tuzoqlar” qo‘yishdir. Fishing ko‘pincha elektron pochta orqali amalga oshiriladi. Jinoyatchi elektron pochta xabarlarini moliya instituti, hukumat byurosi yoki ehtimol huquqni muhofaza qilish organi sifatida yuboradi. Elektron pochta potentsial qurbondan qonuniy maqsadlar uchun zarur bo‘lgan ma’lumotni so‘raydi. Biroq, olingan ma’lumotlar jinoyatchi tomonidan dushmanlik maqsadlarida foydalaniladi.

Viruslar va josuslik dasturlari kabi ichki infektsiyalardan farqli oʻlaroq, tarmoqdagi kompyuterga tizimdagi boshqa kompyuterlarda ishlaydigan dasturiy taʼminot ham hujum qilishi mumkin. Misol sifatida, kompyuterni xabarlar bilan ortiqcha yuklash jarayoni boʻlgan xizmat koʻrsatishni rad etish (DoS) hujumini keltirish mumkin. Kompaniya biznesini buzish uchun Internetdagi yirik tijorat veb-serverlariga qarshi xizmat koʻrsatishni rad etish hujumlari boshlandi va baʼzi hollarda kompaniyaning tijorat faoliyatini toʻxtatib qoʻydi.

Xizmat hujumini rad etish qisqa vaqt ichida koʻp sonli xabarlarni yaratishni talab qiladi. Buni amalga oshirish uchun tajovuzkor odatda signal berilganda xabarlarni ishlab chiqaradigan koʻplab shubhasiz kompyuterlarga dasturiy taʼminot oʻrnatadi. Keyin, signal berilganda, bu kompyuterlarning barchasi (baʼzan botnet deb ataladi) maqsadni xabarlar bilan toʻldiradi. Demak, xizmat hujumlarini rad etishning oʻziga xos xususiyati shundaki, sherik sifatida foydalanish uchun shubhasiz kompyuterlarning mavjudligi. Shuning uchun barcha shaxsiy kompyuter foydalanuvchilari foydalanilmayotganda Internetga ulangan kompyuterlarini tark etishlari tavsiya etilmaydi. Hisob-kitoblarga koʻra, kompyuter Internetga ulangandan soʻng, kamida bitta buzgʻunchi 20 daqiqa ichida uning mavjudligidan foydalanishga harakat qiladi. Oʻz navbatida, himoyalanmagan shaxsiy kompyuter Internetning yaxlitligiga jiddiy tahdid soladi.

Keraksiz xabarlarning koʻpligi bilan bogʻliq yana bir muammo - spam deb ataladigan keraksiz elektron pochta xabarlarining koʻpayishi. Biroq, xizmat hujumini rad etishdan farqli oʻlaroq, spam hajmi kamdan-kam hollarda kompyuter tizimini bosib olish uchun yetarli. Buning oʻrniga, spamning taʼsiri spamni qabul qiluvchi odam haqidagi maʼlumotlarni olishdir. Yuqorida aytib oʻtganimizdek, spam viruslar va boshqa zararli dasturlarni tarqatishi mumkin boʻlgan troyan otlarini qoʻzgʻatish va fishing uchun keng qoʻllaniladigan vosita ekanligi bu muammoni yanada kuchaytiradi.

Himoya va yaxshilash

Firewall butun tarmoqlar yoki domenlarni emas, balki alohida kompyuterlarni himoya qilish uchun ham ishlatiladi. Misol uchun, agar kompyuter veb-server, nom serveri yoki elektron pochta serveri sifatida ishlatilmayotgan boʻlsa, u holda bunday ilovalarga yoʻnaltirilgan barcha kiruvchi trafikni blokirovka qilish uchun ushbu kompyuterda firewall oʻrnatilishi kerak. Darhaqiqat, buzgʻunchining kompyuterga kirishining bir usuli mavjud boʻlmagan server tomonidan qoldirilgan "teshik" orqali aloqa oʻrnatishdir. Xususan, josuslik dasturlari tomonidan toʻplangan maʼlumotlarni olishning usullaridan biri zararlangan kompyuterda yashirin serverni oʻrnatishdir, bu orqali zararli mijozlar josuslik dasturlari topilmalarini olishlari mumkin. Toʻgʻri oʻrnatilgan xavfsizlik devori ushbu zararli mijozlarning xabarlarini bloklashi mumkin.

Filtrlovchi konnotatsiyalarga ega boʻlgan yana bir profilaktik vosita bu proksi-serverdir. Proksi-server - bu mijozni serverning salbiy harakatlaridan himoya qilish maqsadida mijoz va server oʻrtasida vositachi boʻlgan dasturiy taʼminot birligi. Proksi-serversiz mijoz toʻgʻridan-toʻgʻri server bilan bogʻlanadi, ya’ni server mijoz haqida ma’lum miqdorni o‘rganish imkoniyatiga ega. Vaqt o‘tishi bilan, tashkilotning intranetidagi ko‘plab mijozlar uzoq server bilan shug‘ullanar ekan, bu server intranetning ichki tuzilishi haqida ko‘plab ma’lumotlarni to‘plashi mumkin - keyinchalik zararli harakatlar uchun ishlatilishi mumkin bo‘lgan ma’lumotlar. Bunga qarshi turish uchun tashkilot ma’lum bir xizmat turi (FTP, HTTP, telnet va boshqalar) uchun proksi-server o‘rnatishi mumkin. Keyin, har safar intranet ichidagi mijoz shu turdagi server bilan bog‘lanishga harakat qilganda, mijoz haqiqatda proksi-server bilan bog‘lanadi. O‘z navbatida, proksi-server mijoz rolini o‘ynab, haqiqiy server bilan bog‘lanadi. Shu vaqtdan boshlab proksi-server xabarlarni oldinga va orqaga uzatish orqali haqiqiy mijoz va haqiqiy server o‘rtasida vositachi rolini o‘ynaydi. Ushbu tartibga solishning birinchi afzalligi shundaki, haqiqiy server proksi-server haqiqiy mijoz emasligini bilishning imkoni yo‘q va aslida u haqiqiy mijozning mavjudligidan hech qachon xabardor emas. O‘z navbatida, haqiqiy serverda intranetning ichki xususiyatlarini o‘rganish imkoniyati yo‘q. Ikkinchi afzallik shundaki, proksi-server serverdan mijozga yuborilgan barcha xabarlarni filtrlash imkoniyatiga ega. Masalan, FTP proksi-serveri barcha kiruvchi fayllarni ma’lum viruslar mavjudligini tekshirishi va barcha zararlangan fayllarni bloklashi mumkin.

Foydalangan adbiyotlar

1. Rajabov S. et al. Tasavvurli, umumiy-tasavvurli va raqamli-tasavvurli qoidalarni tahlil //Science and Education. – 2024. – T. 5. – №. 5. – С. 262-268.
2. Rajabov S. TASAVVURLI, UMUMIY-TASAVVURLI VA RAQAMLI-TASAVVURLI QOIDALARNI TAHLILI //Raqamli iqtisodiyot va axborot texnologiyalari. – 2024. – Т. 4. – №. 1. – С. 113-119.
3. Абдуллаев М. ORGANIZATION OF WASTE PROCESSING IN SOLVING ENVIRONMENTAL PROBLEMS IN UZBEKISTAN //Nordic_Press. – 2024. – Т. 1. – №. 0001.
4. Qobilov A. et al. ASSOTSIATIV QOIDALAR VA BOZOR SAVATLARINING TAHLILI //Raqamli iqtisodiyot va axborot texnologiyalari. – 2023. – Т. 3. – №. 3. – С. 115-120.
5. Rajabov S. B. et al. Social mining and it is development stages //Science and Education. – 2023. – Т. 4. – №. 4. – С. 1342-1345.
6. Oybek o‘g’li O. N., Urinovich K. A., Baxtiyorovich R. S. RAQAMLI IQTISODIYOT SHAROITIDA SOLIQLAR VA BOSHQA MAJBURIY TOLOVLARNI AMALGA OSHIRISHDA RAQAMLI TEXNOLOGIYALARDAN FOYDALANISH //Архив научных исследований. – 2022. – Т. 5. – №. 5.
7. Ziyadullayevich S. A., Mirzaliev S. M., Bakhtiyorovich R. S. IMPROVING THE PROGRESSES OF WASTE PRODUCTS PROCESSING THE AUTOMATED MANAGEMENT SYSTEM //Galaxy International Interdisciplinary Research Journal. – 2022. – Т. 10. – №. 5. – С. 372-381.

8. Mirzarakhimova A., Abdulakhatov M. Analysis of Healthcare Services in the Digital Economy //Proceedings of the 7th International Conference on Future Networks and Distributed Systems. – 2023. – С. 410-414.

9. Abdulakhatov M. M., Avlokulova S. S. TECHNOLOGY OF SEARCH ORGANIZATION IN VIRTUAL E-SHOPS WITH IMAGE RECOGNITION //Архив научных исследований. – 2022. – Т. 2. – №. 1.

10. Kobilov A., Abdulakhatov M., Jaloliddinova M. PECULIARITIES OF THE USE OF ARTIFICIAL INTELLIGENCE IN THE EDUCATIONAL PROCESS //Raqamli iqtisodiyot va axborot texnologiyalari. – 2021. – Т. 1. – №. 3. – С. 32-37.

11. Nigmanov A. U. XITOY SANOAT TARMOQLARIDA ENERGIYA SAMARADORLIGINI OSHIRISH TAHLILI //XXI Asr: Fan va ta’lim masalalari (XXI Век: Вопросы науки и образования). – 2024. – Т. 1. – С. 146-162.

12. Нигманов А. У. и др. ERKIN IQTISODIY ZONALARDA INVESTITSIYA FAOLIYATINI AMALGA OSHIRISHNING ASOSIY YONALISHLARI //ГЕОГРАФИЯ: ПРИРОДА И ОБЩЕСТВО. – 2020. – Т. 1. – №. 2.

13. Bobojonov J. B. O. XXR investitsion siyosatining istiqboldagi tendensiyasi //Science and Education. – 2024. – Т. 5. – №. 10. – С. 203-209.

14. Нигманов А. УЗБЕКСКО-КИТАЙСКОЕ ЭНЕРГЕТИЧЕСКОЕ СОТРУДНИЧЕСТВО //Sharq ma'shali/Восточный факел. – 2022. – Т. 14. – №. 1. – С. 127-135.

15. Sofoyeva F. JDK, JRE va JVM. Dasturlash muhitini tayyorlash //Nordic_Press. – 2024. – Т. 3. – №. 0003.

16. Sofoyeva F. Java dasturining asosiy tushunchalari //Nordic_Press. – 2024. – Т. 3. – №. 0003.

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Soliyev Y.
senior teacher
Namsu
Samandarov SH. S.
senior teacher
Namsu

DEVELOPING YOUNG LEARNERS SPEAKING SKILL BY USING INTERACTIVE METHODS

Abstract: *This paper explores the development of speaking skills in young learners through the application of interactive methods. It examines the unique characteristics of young learners and their language acquisition processes, highlighting the need for engaging and stimulating activities to foster oral communication. The paper then delves into specific interactive techniques, such as role-playing, games, storytelling, and collaborative projects, demonstrating their effectiveness in promoting fluency, accuracy, and confidence in speaking. The paper also addresses the importance of creating a positive and supportive learning environment where young learners feel comfortable experimenting with language and taking risks. Ultimately, the paper aims to provide practical insights and strategies for teachers to effectively develop young learners' speaking skills through the implementation of interactive methodologies.*

Keywords: *young learners****,*** *speaking skills****,*** *interactive methods****,*** *language acquisition****,*** *role-playing****,*** *games****,*** *storytelling****,*** *collaborative projects****,*** *motivation****,*** *confidence building*

INTRODUCTION

The ability to communicate effectively is a fundamental skill that empowers individuals to engage with the world around them. For young learners, developing strong speaking skills is crucial for building confidence, fostering social interaction, and laying the foundation for future language learning. However, traditional methods of teaching speaking can often feel rigid and uninspiring, failing to capture the imagination and enthusiasm of young minds.

This paper explores the power of interactive methods in developing young learners' speaking skills. It acknowledges the unique characteristics of young learners, their innate curiosity, and their desire for playful engagement. The paper argues that by incorporating interactive techniques, teachers can transform language learning into a dynamic and stimulating experience, where young learners are encouraged to actively participate, experiment with language, and express themselves confidently. This approach not only promotes fluency and accuracy but also cultivates a love for language and a desire to explore its endless possibilities.

The following sections will delve into the specific features of young learners' language acquisition, explore various interactive methods that can be effectively implemented in the classroom, and discuss the key benefits of using these methods to foster speaking skills. By understanding the power of interactive learning, teachers can empower young learners to confidently embrace the world of spoken language, unlocking their potential for communication and creativity.

MAIN BODY

Young learners approach language acquisition with a unique blend of enthusiasm and curiosity. They are naturally inclined to mimic, experiment, and explore new sounds and structures. However, they also require a supportive and engaging environment to feel comfortable taking risks and developing their speaking abilities. Their learning is heavily influenced by:

- **Playful Learning:** Young learners thrive in environments that encourage play and imagination. Interactive methods that tap into their natural curiosity and playful tendencies are highly effective.
- **Visual and Auditory Stimulation:** Young learners respond well to visually appealing materials and engaging audio elements. Integrating visual aids, songs, and rhymes into lessons can enhance their comprehension and engagement.
- **Short Attention Spans:** Young learners have limited attention spans, requiring activities that are varied, engaging, and relatively short. Breaking lessons into smaller segments with frequent changes in activity can keep them engaged.

Interactive Methods for Developing Speaking Skills:

Various interactive methods can effectively engage young learners in the process of developing their speaking skills. Here are some examples:

- **Role-Playing:** Creating scenarios where learners take on different roles, like characters in a story or people in everyday situations, allows them to practice language in context.
- **Games:** Games that involve language use, such as "Simon Says," "Bingo," or "Twenty Questions," provide a fun and engaging way for young learners to practice vocabulary, grammar, and pronunciation.
- **Storytelling:** Storytelling encourages young learners to use language creatively and expressively. They can retell familiar stories, create their own narratives, or participate in interactive storytelling activities.
- **Collaborative Projects:** Group activities like creating posters, designing a play, or building a model together promote teamwork, communication, and language use in a collaborative environment.

Benefits of Interactive Methods:

1. **Increased Fluency:** Interactive methods encourage young learners to practice speaking more frequently and confidently, leading to improved fluency.
2. **Improved Accuracy:** Through repetitive practice, games, and structured activities, learners become more familiar with correct pronunciation, grammar, and vocabulary.

3. **Enhanced Motivation:** Interactive methods make learning fun and engaging, fostering a positive attitude towards language learning and increasing motivation.

4. **Boost in Confidence:** Creating a supportive environment where learners feel comfortable experimenting with language without fear of judgment helps build confidence in their speaking abilities.

5. **Development of Communicative Competence:** Interactive methods focus on using language for real-life purposes, promoting communicative competence beyond just grammar and vocabulary.

Creating a Supportive Learning Environment:

- Encouraging and praising learners' efforts, even for small successes, is crucial for building confidence and fostering a positive learning atmosphere.
- Establishing clear expectations for speaking activities and providing clear instructions helps young learners understand what is expected of them.
- Recognizing that learners progress at different paces and have different learning styles is essential for tailoring activities to individual needs.

Developing young learners' speaking skills through interactive methods requires a shift from traditional, teacher-centered approaches to a more dynamic and engaging learning environment. Here's a breakdown of how to achieve this:

1. Creating a Supportive and Engaging Environment:

- **Establish a Safe Space:** Young learners need to feel comfortable taking risks and making mistakes. Create a classroom atmosphere where errors are seen as learning opportunities, not failures.
- **Positive Reinforcement:** Encourage and praise learners' efforts, even for small successes. Use positive language and focus on progress rather than perfection.
- **Visual Aids and Props:** Use colorful visuals, pictures, objects, and realia to make language learning more concrete and engaging. This can be particularly helpful for younger learners who are still developing their understanding of abstract concepts.
- **Music and Movement:** Integrate songs, rhymes, and simple dance routines to make learning fun and memorable.

2. Interactive Techniques for Speaking Practice:

- **Role-Playing:** Create scenarios that allow learners to act out different roles and practice language in context. This could involve simple dialogues, familiar situations like ordering food at a restaurant, or even playing pretend games.
- **Games:** Use games that encourage language use, such as:

- **Simon Says:** This classic game helps with listening comprehension and following instructions.
- **Bingo:** Bingo with vocabulary words or phrases reinforces language learning and encourages active participation.

- **Twenty Questions:** This game encourages learners to ask questions and make deductions, developing critical thinking and communication skills.
- **Storytelling:** Storytelling can be highly engaging for young learners. Encourage them to retell familiar stories, create their own narratives, or participate in interactive storytelling activities where they contribute to the plot or dialogue.
- **Show and Tell:** This activity encourages learners to describe objects and share their experiences.
- **Drama and Puppet Shows:** Using puppets or simple costumes can help young learners overcome shyness and practice speaking through a fun and imaginative activity.
- **Picture Descriptions:** Show learners pictures and have them describe what they see, using target vocabulary and simple sentence structures.
- **Conversation Starters:** Use prompts like “What did you do today?” or “What do you like to eat?” to encourage natural conversations.

3. Technology Integration:

- **Interactive Whiteboards:** Use interactive whiteboards for displaying visuals, playing videos, and engaging in collaborative activities.
- **Online Games and Activities:** Explore online resources that offer interactive games and activities designed for young learners.
- **Video Conferencing:** If possible, connect with other classes or native speakers through video conferencing for real-time interaction and language practice.
- **Recording and Feedback:** Use audio or video recording tools to allow learners to listen to their own speaking and receive feedback from the teacher or peers.

4. Key Considerations:

- **Focus on Communication:** The primary goal should be to develop communicative competence, not just grammatical accuracy. Encourage learners to use language naturally, even if it’s not perfect.
- **Build Confidence Gradually:** Start with simple activities and gradually increase the complexity as learners gain confidence.
- **Offer Choices:** Provide learners with choices and opportunities to personalize their learning experience. This helps keep them engaged and motivated.
- **Celebrate Success:** Recognize and celebrate learners’ achievements, no matter how small. This helps build confidence and reinforces a positive learning experience.

By implementing interactive methods and creating a supportive learning environment, teachers can effectively develop young learners’ speaking skills, fostering a love for language and setting them on a path to becoming confident communicators.

CONCLUSION

Developing young learners' speaking skills through interactive methods is not just about achieving fluency and accuracy; it's about igniting a passion for language and creating a love for communication. By embracing playfulness, creativity, and a focus on genuine interaction, teachers can transform the learning experience into an exciting adventure.

This journey begins by fostering a supportive environment where young learners feel safe to experiment, take risks, and celebrate their successes, no matter how small. Interactive methods like role-playing, games, storytelling, and collaborative projects offer dynamic opportunities for practice, pushing learners beyond rote memorization and encouraging them to use language naturally. Technology can further enhance this experience, providing interactive platforms, visuals, and tools for recording and reflection.

The ultimate goal is to equip young learners with the confidence and skills to navigate the world of spoken language with enthusiasm and a sense of accomplishment. By embracing interactive methods, teachers can nurture a generation of confident, fluent communicators, ready to express themselves, connect with others, and explore the boundless possibilities that language offers. The journey continues, not just in the classroom, but in every interaction, where young learners can confidently share their voices and engage with the world around them.

REFERENCES

1. Lightbown, P. M., Spada, N. (2013). How languages are learned. Oxford University Press.
2. Cameron, L. (2001). Teaching languages to young learners. Cambridge University Press.
3. Scott, W., Ytreberg, L. (2009). Teaching English to children. Longman Pearson.
4. Wright, A., Betteridge, D., Buckby, M. (2008). Games for language learning. Cambridge University Press.
5. Harmer, J. (2007). The practice of English language teaching. Longman Pearson.
6. Richards, J. C. (2006). Curriculum development in language teaching. Cambridge University Press.
7. Warschauer, M., Healey, D. (2019). Computers and language learning: A practical guide for teachers. Cambridge University Press.
8. Weller, M. (2014). Digital literacies for the classroom: Tools and resources for teachers and students. Bloomsbury Academic.

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Soliyev Y.
senior teacher
Namsu
Samandarov SH. S.
senior teacher
Namsu

DEVELOPING YOUNG LEARNERS READING SKILL
SOLIYEV YOQUBJON

Abstract: *The development of reading skills in young learners is crucial for their overall academic success and lifelong learning. This paper explores various strategies and methodologies aimed at enhancing reading proficiency among children in early education settings. It examines the role of phonemic awareness, vocabulary development, and comprehension skills, emphasizing the importance of a balanced literacy approach that incorporates both phonics and whole language methods. Additionally, the impact of engaging reading materials and interactive activities is analyzed, highlighting how these factors can foster a love for reading. The study also considers the influence of family involvement and classroom environment on young learners' reading development. By integrating evidence-based practices and innovative teaching techniques, educators can significantly improve reading outcomes for young learners.*

Keywords: *Young learners, reading skills, literacy development, phonemic awareness, vocabulary acquisition, comprehension strategies, balanced literacy approach, phonics, whole language method, family involvement, early education.*

INTRODUCTION

Reading is a foundational skill that plays a crucial role in a child's overall development and lifelong learning. For young learners, the ability to read not only enhances their academic success but also fosters creativity, critical thinking, and emotional intelligence. As children engage with texts, they explore new ideas, cultures, and perspectives that help shape their understanding of the world around them.

The early years are particularly vital for reading development. During this formative stage, children are introduced to letters, sounds, and vocabulary through various engaging activities. It is essential for educators and caregivers to create a supportive environment that nurtures curiosity and a love for reading. This involves using age-appropriate materials, interactive storytelling, and guided reading sessions that cater to diverse learning styles.

Moreover, developing reading skills is not just about decoding words; it encompasses comprehension, fluency, and the ability to make connections between texts and personal experiences. By integrating strategies such as phonics instruction, sight word recognition, and comprehension exercises into daily routines, we can empower young learners to become confident readers.

In this exploration of developing young learners' reading skills, we will discuss effective techniques for fostering literacy development, the importance of creating a print-rich environment, the role of technology in enhancing reading experiences, and strategies for engaging parents in their children's literacy journeys. By prioritizing these elements within educational frameworks and home settings alike, we can lay a strong foundation that supports our young learners on their path to becoming proficient readers.

MAIN BODY

Developing reading skills in young learners is a multifaceted process that lays the foundation for lifelong literacy and learning. It involves several key strategies and approaches that cater to the diverse needs of children. Here’s an exploration of effective methods to enhance reading skills among young learners:

- Phonemic awareness is the ability to hear, identify, and manipulate individual sounds in spoken words. Teaching young learners phonics, which connects sounds with letters or groups of letters, is crucial for decoding words. Activities such as rhyming games, sound matching, and phoneme segmentation can help build these foundational skills.

- A rich vocabulary is essential for reading comprehension. Young learners should be exposed to a wide range of words through conversations, storytelling, and read-aloud sessions. Introducing new vocabulary in context helps children understand meanings more deeply. Techniques like word walls or vocabulary journals can encourage active engagement with new words.

- Reading aloud to children regularly exposes them to language patterns, vocabulary, and storytelling techniques while fostering a love for books. It also provides an opportunity for discussion about the text, which enhances comprehension skills as children learn to predict outcomes, summarize content, and ask questions.

- Creating a print-rich environment encourages children to explore books independently. Providing access to various genres—including fiction and non-fiction—tailored to their interests can motivate them to read more frequently. Setting aside dedicated reading time in classrooms or at home reinforces this habit.

- Engaging children during reading sessions by asking open-ended questions or prompting them to make predictions keeps them involved in the story. Techniques like "think-alouds," where educators verbalize their thought processes while reading, model comprehension strategies effectively.

- Incorporating technology into reading instruction can captivate young learners’ attention and provide interactive learning experiences through educational apps and e-books that often include audio support and engaging visuals.

- Recognizing that each child learns at their own pace is critical in developing reading skills. Differentiated instruction involves tailoring lessons according to students' individual abilities—some may benefit from additional phonics practice while others might need support with comprehension strategies.

- Writing activities reinforce reading skills by allowing children to process what they read on a deeper level. Encouraging young learners to keep journals or write stories based on their readings fosters creativity while enhancing comprehension through expression.

- Engaging parents in the learning process strengthens children's literacy development outside of school hours. Providing parents with resources on how they can support their child's reading journey—such as shared reading practices or library visits—can significantly bolster literacy growth at home.

- Regular assessment of young learners' progress helps identify areas needing improvement while providing valuable feedback that guides future instruction strategies tailored toward individual needs.

Developing reading skills in young learners is essential for their academic success and overall cognitive development. Here are several strategies that can be effective:

1. Create a Reading-Friendly Environment:

- Set up a cozy reading corner with comfortable seating and good lighting.
- Provide a variety of age-appropriate books, magazines, and other reading materials.

2. Read Aloud Regularly:

- Read to children daily using expressive voices and engaging storytelling techniques.
- Choose a range of genres, including fiction, non-fiction, poetry, and folklore.

3. Encourage Predictive Reading:

- Before reading a book, discuss the cover, title, and illustrations to make predictions about the story.
- Ask guiding questions as you read to foster comprehension skills.

4. Integrate Phonics and Phonemic Awareness:

- Teach letters and sounds through fun activities like rhymes, songs, and games.
- Use phonics-based programs or resources to help children decode words.

5. Promote Vocabulary Development:

- Introduce new words during reading sessions; explain their meanings using context.
- Encourage children to use new vocabulary in their conversations or writing.

6. Incorporate Sight Words:

- Use flashcards or word walls to help children recognize high-frequency sight words.
- Practice these words in context through reading exercises.

7. Engage in Shared Reading Activities:

- Involve children in reading by taking turns or having them read repetitive phrases.

- Discuss the story elements together (characters, setting, plot) after reading.

8. Use Technology Wisely:

- Incorporate educational apps or e-books that promote interactive reading experiences.

- Balance screen time with traditional books to enhance engagement.

9. Encourage Independent Reading:

- Allow children to choose their own books based on their interests to foster motivation.

- Set aside dedicated time for independent reading at home or school.

10. Set Reading Goals and Rewards:

- Establish achievable goals (e.g., number of books read per month) and celebrate accomplishments with rewards or recognition.

11. Connect Reading with Other Subjects:

- Integrate literacy into subjects like science or social studies by providing related texts.

- Encourage projects that involve research through reading materials.

12. Foster Discussion About Books:

- Organize book clubs or discussion groups where children can share thoughts about what they've read.

- Encourage them to ask questions and express opinions about characters' actions or story outcomes.

13. Be Patient and Supportive:

- Recognize that every child learns at their own pace; provide encouragement along the way.

- Celebrate small successes to build confidence in their abilities.

By implementing these strategies consistently and enthusiastically, educators and caregivers can significantly enhance young learners' reading skills while instilling a lifelong love of reading.

Developing reading skills in young learners requires a comprehensive approach that combines phonemic awareness, vocabulary development, interactive activities, technology integration, differentiated instruction, parental involvement, and ongoing assessment efforts. By creating an engaging learning environment filled with rich literacy experiences, educators can inspire a love of reading that will serve students throughout their lives.

CONCLUSION

In conclusion, developing reading skills in young learners is a multifaceted process that requires a supportive and engaging environment. It is essential to foster a love for reading by introducing age-appropriate materials and incorporating interactive activities that cater to different learning styles. Strategies such as phonemic awareness, vocabulary development, and comprehension exercises play a crucial role in building foundational skills. Additionally, the involvement of parents and caregivers can significantly enhance a child's reading journey by creating opportunities for shared reading experiences.

As educators and caregivers, we must remain patient and encouraging, recognizing that each child progresses at their own pace. By instilling confidence and enthusiasm for reading from an early age, we can help young learners develop not only their literacy skills but also critical thinking abilities, imagination, and a lifelong passion for learning. Ultimately, the goal is to equip young readers with the tools they need to navigate the world of information and ideas successfully, setting them on a path toward academic achievement and personal fulfillment.

REFERENCES

1. Patricia A. Antonacci "Beginning Reading and Writing: A Guide for Teachers"
2. Gail Boushey and Joan Moser "The Daily 5: Fostering Literacy in the Elementary Grades"
3. National Reading Panel (2000). "Teaching Children to Read: An Evidence-based Assessment of the Scientific Research Literature on Reading and Its Implications for Reading Instruction."
4. Snow, C.E., Burns, M.S., & Griffin, P. (1998). "Reading Difficulty: A Scientific Perspective on a Persistent Problem." National Academy Press.
5. Rasinski, T.V., & Padak, N.D. (2008). "Effective Reading Instruction: A National Perspective." The Reading Teacher, 62(3), 232-235.
6. Duke, N.K., & Pearson, P.D. (2002). "Effective Practices for Developing Reading Comprehension." In "What Research Has to Say About Reading Instruction."
7. Smith, F., & Elley, W.B.(1997). "How Children Learn to Read." Heinemann Educational Books

Soyibjonova K.Y.
Pediatriya fakulteti
206-guruh talabasi ADTI

XOTIRA VA UNING FIZIOLOGIK PSIXOLOGIK BIOLOGIK ASPEKTRLARI

Annotatsiya: *Ushbu maqola xotira va uning mohiyati mavzusiga bag'ishlangan bo'lib, unda hotiraning fiziologik, psixologik va biologik aspektrlari tahlil qilinadi.*
Kalit so'zlar: *Neyron, sinaps, gipokamp, amigdala, prefrontal korteks, neyrotransmitterlar, asetilxolin, glutamat, kortizol, dofamin.*
Soyibjonova K.Y.
Faculty of Pediatrics
Student of group 206 ASMI

MEMORY AND ITS PHYSIOLOGICAL, PSYCHOLOGICAL AND BIOLOGICAL ASPECTS

Abstrakt: *This article is devoted to memory and its essence, which analyzes the physiological, psychological and biological aspects of memory.*
Keywords: *Neuron, synapse, hippocampus, amygdala, prefrontal cortex, neurotransmitters, acetylcholine, glutamate, cortisol, dopamine.*

Xotira inson aqliy faoliyatining asosiy komponentlaridan biri bo‘lib, bilim olish, shaxsiy rivojlanish va ijtimoiy muloqotda muhim rol o‘ynaydi. Xotira orqali inson o‘z tajribasini saqlab qoladi, uni qayta ishlaydi va yangi vaziyatlarga moslashadi.

Xotira neyronlar, sinapslar va miyaning maxsus sohalarida yuzaga keladigan jarayonlar orqali shakllanadi. Har bir yangi ma'lumot miyaga kelganida, sinapslarning kuchlanishi va yangi bog‘lanishlar paydo bo‘lishi kuzatiladi. Bu jarayon sinaptik plastiklik deb ataladi. U quyidagi asosiy mexanizm orqali amalga oshadi: Qisqa muddatli sinaptik o‘zgarishlar-bir necha soniyadan daqiqagacha davom etadi. Bu jarayon sinapslar faoliyati orqali yuz beradi.Uzoq muddatli potensiyalashuv (LTP)-axborotni uzoq muddatli xotirada saqlash uchun javobgar bo‘lib, asosan gipokampda yuz beradi.Quyida xotiraning barcha mexanizmlari uchun javobgar bo'lgan bosh miya qismlari haqida bir qancha ma'lumotlar keltirildi.

Gipokamp yangi ma'lumotni uzoq muddatli xotiraga o‘tkazishda markaziy rol o‘ynaydi. Gipokamp shikastlanganda yangi ma'lumotni eslash qobiliyati yo‘qoladi.Amigdala emotsional xotira uchun mas'ul bo‘lib, voqealarning hissiy aspektlarini saqlaydi.Prefrontal korteks: Operativ va ishlovchi xotirani boshqaradi, qaror qabul qilish va rejalashtirish jarayonlariga yordam beradi.

Xotira jarayonida asab impulslarini uzatishda qatnashadigan kimyoviy moddalar, neyrotransmitterlar muhim ahamiyatga ega. Quyida neyrotransmitterlar haqida malumotlar keltirildi.

Asetilxolin: Xotirani shakllantirish va saqlash uchun zarur.

Glutamat: Sinaptik plastiklikni kuchaytiradi va uzoq muddatli potensiyalashuvda ishtirok etadi.

Dofamin: Motivatsiya va mukofot tizimi orqali o‘rganishni rag‘batlantiradi.

Xotira nafaqat fiziologik jarayon, balki inson ongining murakkab psixologik funksiyasi hamdir. Bu jarayonlar quyidagi bir qancha bosqichlarni o‘z ichiga oladi.

Axborotni kodlash-axborotni qabul qilish va uni miyada ma’lum tizimga moslashtirish jarayonidir. Diqqat, kodlashning sifatini belgilaydi, ya’ni odam qanchalik e’tiborli bo‘lsa, axborot shunchalik yaxshi saqlanadi.

Axborotni saqlash-xotira axborotni qisqa muddatli, uzoq muddatli yoki operativ saqlash imkonini beradi. Qisqa muddatli xotira: Ma’lumotlarni bir necha soniyadan daqiqagacha saqlaydi. Masalan, telefon raqamini eslash. Uzoq muddatli xotira: Tuzilgan ma’lumotlarni yillar davomida saqlashga imkon beradi. Masalan, bolalikdagi voqealarni eslash. Operativ xotira: Muayyan vazifalarni bajarishda vaqtinchalik ma’lumotlarni ushlab turadi.

Ma’lumot turiga qarab xotiraning tasnifi: Semantik xotira- atamalar, tushunchalar va umumiy bilimlarni eslash imkonini beradi. Epizodik xotira- hayotiy voqealarni, masalan, shaxsiy xotiralarni saqlaydi. Protsessual xotira- harakatlarni, masalan, velosiped haydashni eslash va qayta bajarish qobiliyatidir. Emotsional xotira- hissiyotlar bilan bog‘liq voqealarni saqlash uchun mas’ul bo‘lgan xotira turi bo‘lib, amigdala faoliyati bilan bog‘liq.

Qayta tiklash-xotiradagi axborotni kerakli vaqtda esga olishni anglatadi. Bu jarayon frontal korteks va gipokamp o‘rtasidagi o‘zaro bog‘lanishga asoslanadi.Kuchli hissiy hodisalar xotirada uzoq muddat saqlanadi. Masalan, katta hayajon, quvonch yoki qo‘rquv bilan bog‘liq voqealarni odamlar oson eslaydi.

Insonlarda davomli stres holatlarida stress gormoni – kortizolning yuqori darajasi xotira faoliyatiga salbiy ta’sir ko‘rsatadi. Xususan, uzoq davom etgan stress gipokamp hajmini kichraytirishi mumkin. Yosh o‘tishi bilan miyada neyronlar soni kamayadi, bu esa xotirani pasaytiradi.

Motivatsiya xotira jarayonini yaxshilaydi. O‘rganishga bo‘lgan ijobiy munosabat ma’lumotni yaxshiroq kodlash va saqlashga yordam beradi.

Xotirani mustahkamlash usullari sog‘lom turmush tarzi, Omega-3 yog‘ kislotalariga boy oziq-ovqatlar iste’moli va muntazam jismoniy mashqlar miyaning sog‘lom faoliyatini qo‘llab-quvvatlaydi. Aqliy mashqlar krossvordlar va mantiqiy o‘yinlar xotira faoliyatini kuchaytiradi.Tinch uyqu vaqtida ham miya yangi axborotni qayta ishlaydi va mustahkamlaydi.Axborotni muntazam ravishda takrorlash xotira jarayonlarini mustahkamlaydi.

Xulosa: Xotira inson miyasining eng murakkab va muhim funksiyalaridan biri bo‘lib, uning fizik va psixologik mexanizmlarini chuqur o‘rganish bizga bilim olish va shaxsiy rivojlanish jarayonlarini yaxshiroq tushunishga yordam beradi.

Sog‘lom turmush tarzi, aqliy faollik va psixologik barqarorlik xotirani rivojlantirish va uni uzoq muddat saqlashda muhim omillardir.

Foydalanilgan adabiyotlar:

1. Bliss, T. V., & Lomo, T. (1973). Long-lasting potentiation of synaptic transmission in the dentate area of the anaesthetized rabbit following stimulation of the perforant path. The Journal of Physiology, 232(2), 331–356.
2. Squire, L. R. (2004). Memory systems of the brain: A brief history and current perspective. Neurobiology of Learning and Memory, 82(3), 171–177.
3. Craik, F. I., & Lockhart, R. S. (1972). Levels of processing: A framework for memory research. Journal of Verbal Learning and Verbal Behavior, 11(6), 671–684.
4. Luria, V. A. (1973). Мозг и память. Moscow: Nauka.
5. Sirotkina, N. P. (2008). Основы психологии памяти. St. Petersburg: Rech.
6. Teplov, B. M. (1974). Нейропсихология памяти. Moscow: Nauka.

Sultanova D. A.
Teacher
of the Management Department of
Chirchik State Pedagogical University

TECHNOLOGIES FOR IMPLEMENTATION OF MANAGEMENT PROCESSES BASED ON EDUCATIONAL SUPPORT

Abstakt: *The emergence of new types of educational institutions and changes in the content of education have placed the task of modernizing the management system at the forefront. Implementing management activities based on supporting education is an effective means of ensuring goal-oriented, organized, and structured management in the strategic, tactical, and didactic aspects of an increasingly complex and evolving education system.*

Pedagogical management can be defined as a non-standard type of management activity within a student community, aimed at supporting the communication process to organize the teaching process, manage educational data, organize academic work, and shape the educational process.

The article discusses how the quality of education characterizes the effectiveness of all aspects of an educational institution's activities and highlights issues related to the marketing of educational services, strategy development, and the organization of the educational process.

Keywords: *education, management, organization, structure, methods, techniques, strategy, marketing.*

INTRODUCTION

The implementation of a set of programs that reveal the national ideology of education is entrusted to practical workers who are prepared to think and act in new ways. A management system, which is both based on the modern principles, approaches, and scientific achievements of general social management theory and takes into account the specific characteristics of educational organizations, can ensure effective functioning.

The emergence of new types of educational institutions and changes in the content of education have placed the task of modernizing the management system at the forefront. Implementing management activities based on supporting education is an effective tool for achieving goal-oriented, organized, and structured management in the strategic, tactical, and didactic aspects of an increasingly complex and evolving education system.

In the dynamic conditions of social life, on the one hand, there is insufficient investment, and on the other hand, one of the compensatory measures is the introduction of new pedagogical technologies into school life, including the management of the educational process. Only a scientifically well-founded and qualified internal school management can guarantee advancement along a chosen trajectory in a certain mode. This means that the demand for professional school managers in modern society has significantly increased.

CONCEPTUAL FRAMEWORK

In the continuous education system, particularly within the general secondary education system, the pedagogical conditions for implementing the monitoring of teaching quality, which is an independent category of educational management, have received significant attention in the scientific works of our country's scholars, such as R. Juraev, Sh. Qurbonov, R. Ahliddinov, and R. Karimov. These works have focused on improving the management of teaching quality in general secondary education institutions and investigating the implementation of a systematic-activity approach to the monitoring of teaching quality.

The implementation of management activities based on supporting education encompasses various aspects, including:

- the theory of management in educational institutions (V.I. Zagvyazinsky, L.E. Kapto, M.M. Potashnik, and others);
- the management system of educational institutions and the search for ways to develop it as necessary, as well as making strategic and operational decisions (B.S. Gershunsky, S.V. Lazarev, E.V. Yakovlev, and others);
- the management of academic activities (A.M. Moiseev, V.P. Simonov);
- the principles, methods, organizational forms, and technological techniques of managing pedagogical systems, which are aimed at enhancing the effectiveness of their functioning and development (N.V. Kuzmina, E.Yu. Nikitina, and others).

Taking into account the different aspects of understanding management activities, L.V. Goryunova defines pedagogical management as "a type of management activity carried out by a teacher in the classroom, aimed at achieving the goals of developing a child's personality, ready for life in new socio-pedagogical conditions."

Researcher V.P. Simonov describes pedagogical management as a set of principles, methods, organizational forms, and technological techniques aimed at managing pedagogical systems to enhance their functioning and development [8, p. 3].

Thus, pedagogical management can be identified as a non-standard type of management activity within the student community, aimed at supporting the communication process to organize the teaching process, manage educational data, organize academic work, and shape the educational process.

METHODOLOGY

The primary tasks for implementing management activities based on supporting education are as follows:

1. Planning the Educational Process: Developing the strategy and plans for the activities of educational institutions, defining the goals and priority directions of the educational process.

2. Organizing the Management of Educational Institutions: Creating a management structure, distributing authorities and responsibilities, and developing a control and reporting system.

3.Motivating and Developing Staff: Encouraging staff, ensuring professional development and training, and creating conditions for the effective work of faculty and staff.

4. Financial Management: Planning the budget, controlling expenses, ensuring financial stability, and efficiently utilizing resources.

5. Quality of Education and Educational Process: Evaluating the quality of education, developing measures to improve educational quality, and monitoring and assessing educational outcomes.

The use of these management tools based on supporting education allows for the successful development of educational institutions, improvement in the quality of education, and the creation of conditions for achieving educational goals.

The main tools for implementing management activities based on supporting education are a set of methods, techniques, and strategies aimed at effectively organizing the educational process and achieving the set educational goals. Below are the main management tools explained in detail:

1. Strategic Planning: This tool enables the identification of the long-term goals and priority directions of the educational institution, as well as the development of strategies and tactics for achieving them. Strategic planning involves analyzing both the external and internal environments of the educational institution, identifying competitive advantages and weaknesses, and selecting an optimal development strategy.

2. Organizational Management: This tool involves developing the organizational structure of the educational institution, distributing authority and responsibilities among staff, establishing internal rules and regulations, and creating control and reporting systems.

3. Staff Motivation: It is necessary to motivate pedagogical and administrative staff to ensure the effective operation of the educational institution. This may include various methods of motivation, such as financial rewards, professional development, recognition of achievements, and others.

4. Financial Management: This tool includes planning the budget of the educational institution, controlling expenditures and revenues, and efficiently using financial resources. Financial management helps ensure financial stability and sufficient funds for the implementation of educational programs and projects.

5. Quality of Education and Outcome Management: Various methods and tools are used to evaluate the quality of education and manage educational outcomes, such as the attestation of teaching staff, internal and external monitoring of educational quality, and evaluating educational quality.

The use of these management tools based on supporting education ensures the effective functioning of educational institutions, improves the quality of education, and helps achieve educational goals. Each of these tools has its unique features and requires a comprehensive approach when applied in pedagogical management.

This table shows how management tools, functionality, and focus areas are customized across different educational levels to address the unique needs and developmental stages of learners, from preschool to higher and additional education.

The implementation of management activities based on educational support can be considered a specialized field of management with unique characteristics and laws specific to it. The uniqueness of pedagogical management lies in the exclusivity of the subject, products, tools, and outcomes of the educational process manager's work. The object of the manager's work is the activity of the management subject, and the product of the work is the information about the educational process. The tool of the work is words, speech. The result of the work is the object of pedagogical management – the literacy (teaching), education, and development level of students.

CONCLUSION AND DISCUSSION

When comparing pedagogical and managerial activities based on educational support, it is possible to identify the alignment of functions such as motivation, construction, organization, information, control, and decision-making. Analyzing the actions required for implementing management from the perspective of changing the role of the teacher, it can be argued that integrating management and pedagogical activities is appropriate.

The levels of management in the implementation of managerial activities based on educational support are as follows:

First and highest level of educational institution management includes the director and their deputies. The director is responsible for the outcomes and fulfills obligations to founders, parent associations, and clients. The director manages the educational institution based on principles of optimal harmony between leadership and team self-management. At the same level, there are also deputies for educational process management (chief teachers), who organize the educational process and its scientific-methodological base.

Second group of leaders includes heads of methodological and other creative associations of teachers. This group does not belong to administrative staff and has no formal authority. The success of this group depends on the competencies of relevant subject teachers (class teachers) in the knowledge area they supervise.

Third group consists of the teachers themselves, who manage students' educational and cognitive activities. The teacher sets the goals for the activity, ensuring these goals are understood and accepted by the students. The object of control is the students and their activities.

To manage a specific educational system effectively, it is essential to creatively apply the theoretical and methodological foundations presented for solving the management challenges of each educational system.

Relying on the theoretical and methodological foundations of educational system management in pedagogical and managerial practice ensures that over time, these types of activities will be carried out purposefully and professionally, rather than through trial and error.

Educational quality is defined as a comprehensive concept that characterizes the effectiveness of all aspects of an educational institution's activities, encompassing the marketing of educational services, strategy development, and organization of the learning process. A key structural component of the educational quality system is the quality of the product.

The quality management system in education must consider several specific features of organizations providing educational services:

- not producing a materialized product;
- the consumption of services begins during their provision;
- most of the educational institution's staff are in direct contact with external consumers;
- in the service provision process, the consumer evaluates and perceives the scientific level, professional knowledge, and social skills of the educational institution’s staff.

The analysis of current approaches and practices in the implementation of management activities based on educational support highlights the main direction of educational institutions. This includes ensuring compliance with state educational standards, controlling the formal requirements imposed on the organization during the educational process, and assessing the educational process itself, all of which are developed by scholars and methodologists from educational institutions.

Thus, the technologies for implementing managerial activities based on educational support are achieved through the results of the educational processes. Therefore, achieving this depends on the quality of these processes. On the other hand, the structure of the process itself and the quality of its elements depend on the organizational structures. Educational systems are mechanisms that implement the order in society in the field of education, which is transformed into educational goals.

REFERENCES

1.Ahlidinov R.Sh. Maktabni boshqarish san’ati. – Toshkent: Fan, 2006. - 206 b.

2.Джураев Р.Х. Проектирование качества образования. – Ташкент: Фан. 2009.

3.Karimov R.Q. Umumiy o‘rta ta’lim davlat ta’lim standarti monitoringini ta’minlashning pedagogik asoslari. Ped. fan. nom. ... diss. avtoref. – T., 2006.

4.Qurbonov Sh.E., Seytxalilov E. Ta’lim sifatini boshqarish. /T.: «Turon-Iqbol», 2006. -592 b.

Suyunova D. D.
doctoral student
at the Graduate School of
Business and entrepreneurship

FACTORS AFFECTING THE DIGITALIZATION OF CORPORATE MANAGEMENT IN JOINT JOINT STOCK COMPANIES AND SCIENTIFIC APPROACHES TO RISK ASSESSMENT

Annotation:_The article explores the factors influencing the digitalization of corporate management in joint-stock companies, emphasizing the integration of digital technologies in corporate governance. It discusses how adherence to environmental, social, and governance (ESG) principles can enhance the transparency and attractiveness of companies for investors. The paper highlights the growing role of digitalization, focusing on two key segments: the digitalization of information processes and the digitalization of management processes. It outlines current challenges, such as the lack of regulatory frameworks, internal and external digital risks, and insufficient development of virtual meeting tools. The article also introduces a risk assessment framework for digital transformation, considering various types of digital risks, including technological, cyber, strategic, and data leakage risks. The study concludes that comprehensive legal and organizational mechanisms are necessary to effectively leverage digital technologies and manage digital risks in corporate governance._

Keywords:_Digitalization, corporate Management, Joint-Stock Companies, Corporate Governance, ESG Principles, Digital Risks, Risk Assessment, Information Technologies, Cybersecurity, Corporate Relations, Blockchain, Big Data Artificial Intelligence, Virtual Meetings, Digital Transformation_

Today in the world, in order to ensure the minimization of external impacts caused by the activities of joint-stock companies, great importance is attached to the correct and effective corporate management in the companies in terms of compliance with environmental standards, their social responsibility and management principles (ESG). Therefore, as part of management, societies are required to consider the environment and society as stakeholders and to meet their needs, rather than merely following their income. It can be assumed that by introducing environmental standards into the management system of societies (companies), management will be fully responsible for costs in the social and environmental sphere.

One of the factors affecting the corporate governance of joint-stock companies is the existence of legal documents and regulations. In countries with weak or underdeveloped governments, companies get out of control and start building their own systems that are against the rules. But if the companies strictly adhere to the adopted regulatory documents, there will be no mistrust from investors and third parties. The existence of a transparent system of regulation of corporate relations shows the viability and investment attractiveness of the company.

Among many factors, it is impossible to identify the main factors that should be the basis for evaluating the effectiveness of the company's corporate governance.

Today, digitization is entering all areas of our lives, and corporate governance is no exception. Corporate relations play an important role in society, but their understanding and meaning give rise to different points of view. They cover a wide range of interactions between corporate legal entities, including management, control and interactions.

Scientific studies and works of various authors, e.g.

S.Gulomov, P.V. Nesterov, E. Toffler, A.P. Shikhverdiev, S. Westlake, A.M. Karminsky, J. Haskell, J. Sink, W. Visser, W. Inman, K. Schwab, R. Barker, B. Libert, D. Suyunov, A. Kejabaev, T. Kadirov, E. Khalmuradov, D. Suvanova and others are scientists who studied this problem and developed relevant scientific and practical recommendations and proposals. But today, many researchers are founders of corporate relations and management of these companies by corporate legal entities and understand as a whole system of relations related to their activity in control.

In addition, corporate relations are relations that arise in the process of establishing, operating and liquidating companies as legal entities. Examples of corporate relations are joint ventures, partnerships, contracts for the supply of goods and services, network contracts between different companies in any field, joint investment gathering, contracts between firms related to the development of new technologies, etc.

Corporate relations can be internal and external. External corporate relations are relations related to the processes of establishment, operation and liquidation of a corporate organization, as well as its interactions with state bodies or other corporate organizations. Internal corporate relations are relations within a corporate organization.

There are current trends in the development of corporate relations related to the digitization process. In the modern world, the use of digital technologies in corporate organizations can be divided into two main segments.

The first segment includes the development trend of digitalization of information and operational processes, which implies increasing the efficiency of decisions made between the participants of corporate relations.

For example, conducting digital analysis using Big Data, using artificial intelligence and working with blockchain. Also, information

and the trend towards digitalization of operational processes is the increased use of digital analytics, cloud technologies and mobile applications.

The second segment includes the trend of digitalization of corporate management processes. It involves simplifying the corporate relationship between owners and managers. Development is driven by the introduction of digital technologies such as virtual meetings and communications, as well as electronic voting.

Of course, the trends of developing corporate relations related to digitization processes are increasing every year.

There are certain challenges in digitizing corporate relationships. They are associated with the emergence of new digital technologies and their rapid development. These may include:

First, the lack of law enforcement practices regulating the use of digitization processes in the field of corporate relations. In this regard, new digital technologies are being introduced into the activities of corporate organizations, but it is slow to produce the expected results.

Secondly, the participants of the corporate organization, the management

and the existence of certain internal and external digital risks that pose a risk to the data of its business.

Thirdly, the corporate management system related to digital technologies does not have the level of global standards, that is, it is low. Among the main problems with this industry is the lack of a single platform or a digital corporate governance system. This factor has a negative impact on the consistency and mutual relations of the participants of corporate relations.

Fourth, insufficient development of virtual meeting and electronic voting processes. In most cases, the exact rules for remote voting and remote meetings between the participants of corporate relations are not defined. Their forms and types are not specified. This problem contributes to the complete and incorrect implementation of digital technologies in corporate organizations.

Based on the above, it can be concluded that extensive research should be conducted in the field of digitization of corporate relations in order to promote the use of digital technologies and their absolute introduction.

Digitization is becoming an increasingly important factor in the development of corporate relations. It makes changes to the information and operational processes, improves the efficiency of the decisions made and simplifies the interaction between the participants of corporate relations. However, there are problems with the lack of regulation and the emergence of new digital risks. It is necessary to develop legal and organizational mechanisms that ensure the effective use of digital technologies in corporate relations and the protection of the interests of all participants. Only in this way can digitalization become a useful tool for the development and improvement of corporate relations in the future.

One of the most important trends at the moment is digitization, which has a profound impact on all aspects of business, including corporate governance. As digital technologies become increasingly intertwined with traditional business processes, these fundamental changes will lead to an even greater role for the corporate secretary and corporate counsel.

Digitization of corporate governance in joint-stock companies is not just a technology trend; it's an entire paradigm that is redefining how we do business, manage data, and interact with our stakeholders. It began with the advent of the first computers and digital databases at the end of the 20th century, but became a real breakthrough with the development of the Internet, cloud technologies, big data, artificial intelligence and blockchain. Thus, the concept is becoming very important in the modern world, where information technology has become an integral part of the daily activities of companies.

Thus, the conclusion is that digital transformation has become an integral part of business, regardless of its size or form of organization. Large companies, due to their resources, have more opportunities to implement advanced digital technologies, but on the other hand, the wide management structures typical of large companies can create problems and development characteristics at every level.

In the economic literature, digital transformation is described as changes in business and organizational activities, processes, and competencies through the use of digital technologies. For companies, digital transformation means developing new business models and operating rules, both externally and internally. Therefore, it is possible to encounter certain risks in the use of digital technologies in making corporate management decisions and improving its effectiveness. We can express this in Table 1 as the risks in the company's digital ecosystem

In the conditions of today's digital economy, a risk zone based on their main determinants, which can be called a system of digital risks, is being formed. Digital risk is a term that covers all digital opportunities arising from ICT, data processing automation and decision automation. The use of digital technologies creates digital risks. The risks of digitization are the consequences of their implementation.

In economic scientific literature, the most dangerous areas of the company's activity are distinguished: according to the criterion of the source of occurrence - external, affecting the organization from the external environment and internal acting in the internal environment; according to the criteria of the region of origin - technological, economic, normative-legal, personnel, etc.; by time period - operational, strategic; and according to the criterion of frequency of occurrence - static, dynamic.

Table 1

Types and content of risks in the digital ecosystem in corporate governance in joint-stock companies and increasing its effectiveness

Types of determinants/risks	The threat of loss	Key areas of management
Technology / technological	The degree of risk of loss due to existing technological failures or obsolete technologies.	The scale, modern compatibility and functional accuracy of the technology we are introducing to management and other processes.
Cyberspace / cybernetic	Unauthorized access to the company's activities (network exploitation), then use for malicious activities such as extortion and interference with the normal flow of business processes.	Strengthening the digital platform organized for management and other processes based on network characteristics; program security; perform vulnerability management and security monitoring.
Strategy / strategic	The threat of loss is usually related to the company's goals and objectives. A risk may be external to the company and when it occurs, it will lead to a change in the strategic direction of its operations. This usually affects customer acquisition, brand equity, reputation and competitive advantage in the market.	Organization of processes of strategic development of the company's activities, development of a monitoring system; to achieve an appropriate level of control in operational processes.
Risk of data / data leakage	The risk of dissemination, loss and sale of information related to the company's management and its activities to other competing companies.	Ensuring data protection in the digital ecosystem at various stages of company management; focuses on classification, storage, processing, data encryption and others.
Third parties (consumers, suppliers) / third parties	It includes risks arising from the company's activities, suppliers, third-party operating environments and inadequate controls of their cyber vulnerabilities.	It will be related to the sharing of information in the main management process, integration of technology, dependence on operations, stability of managers and organizers, etc.

In conclusion, ensuring the effectiveness of corporate governance in joint-stock companies requires the collective action of companies with a common interest in the implementation of digital technologies to combat digital risks, digital regulation risks or cyber security risks. The main approaches to risk management are defined by the International Organization for Standardization (ISO) in standards for risk management, as well as information and cyber security. Therefore, it will be possible to put forward the opinion that we should only comply with it and strengthen the responsibility in making corporate management decisions.

List of used literature:

1. Decree of the President of the Republic of Uzbekistan dated September 11, 2023 No. PF-158 on approval of the "Uzbekistan-2030" Strategy.
2. Decree of the President of the Republic of Uzbekistan dated January 28, 2022 No. PF-60 "On the development strategy of New Uzbekistan for 2022-2026".
3. S.D. Kholmurodovich, K. Vokhid. Problems in the development of remote banking services in commercial banks of Uzbekistan. World Economics and Finance Bulletin 26, 39-46. 2023.
4. A. Davletyarov, D. Suyunov, A. Kenzhabaev. Foreign experience in the development of small business and private entrepreneurship in the field of service. Global Scientific Review 14, 5-11.2023.
5. S.D. Kholmuradovich, K. T. Uzokovich. Ways for a leader to work on speech and improve speaking skills. American Journal of Pedagogical and Educational Research 11, 29-32.2023.
6. D. Kh. Suyunov, V. R. Kaitavov. Current issues of digitization of transformational processes in commercial banks. American Journal of Business Management, Economics and Banking 10, 38-45.2023.
7. D. Kh. Suyunov. Scientific-theoretical foundations of improving the introduction of a modern corporate control system in joint-stock companies. Rules of Management and Ethics Online Scientific Journal 3 (2), 433-441.2023
8. D.K. Suyunov, M. I. Maksudov. Benefits of digitalization of the economy in Uzbekistan. Economy and society, 748-751. 2023.
9. D. Kh. Suyunov. Improvement of Uzbekistan's position in international rankings and indexes and mechanisms of systematic work with them in state bodies and organizations. Science and innovation 2 (Special Issue 13), 486-488.2023.
10. D. Kh. Suyunov, N. K. Yormatova. Tsifrovaya transformatsiya protsesov upravleniya personnelom v kommercheskom banke. Journal of new century innovations 43 (4), 75-78.2023.
11. D.Kh. Suyunov, A.T. Kenjabayev. Electronic commerce. textbook. 2023 year. 450 pages. 2023.
12. Vasilenko I.V., Pridachuk M.P., Vasilenko Il.V. Sotsialnye riski tsifrovoy ekonomiki organizatsii: kriterii znaniya i urovnya soglasiya // Mejdunarodnyi nauchno-issledovatelskii zurnal. – 2021. – No. 9-2(111). - c. 119-123. - doi: 10.23670/IRJ.2021.9.111.056.
13. Antonova N.L., Madjar D.O. Planirovanie deyatelnosti organizatsii v usloviyax neopredelennosti i riska // Naukosfera. – 2021. – No. 1-2. - c. 170-174.
14. Yureva L.V., Dolzhenkova E.V. Riskoorientirovannaya concept adaptatsii promyshlennyx predpriyatiy k usloviyam tsifrovoy ekonomiki. / Monograph. - Nizhny Tagil: NTI (branch) UrFU, 2019. – 100 c.
15. Berdnikova L.F., Vokina E.B. Functionality and risk management, management and economic security of the organization and the conditions for digitization of business // Vestnik SamGUPS. – 2019. – No. 4(46). - c. 72-77.

Temirov A. S.
TSUE independent researcher

PEDAGOGICAL CONDITIONS FOR TRAINING MODERN MANAGERS IN THE HIGHER EDUCATION SYSTEM

Abstract: *This article explores the pedagogical conditions for training modern managers in the higher education system. Emphasizing innovative educational approaches, it discusses active learning methods such as training, case studies, and role-playing games, which enhance leadership skills and practical decision-making abilities for future leaders.*
Keywords: *higher education, management training, active learning methods, leadership development, educational technology, case study.*

Temirov O.S.
TDIU mustaqil izlanuvchisi

OLIY TA'LIM TIZIMIDA ZAMONAVIY MENEJERLARNI TAYYORLASHNING PEDAGOGIK SHARTLARI

Annotatsiya: *Maqolada oliy ta’lim tizimida zamonaviy menejerlarni tayyorlashning pedagogik sharoitlari tahlil qilinadi. Inovatsion ta’lim yondashuvlari, jumladan, treninglar, keys-metodlar va rolli o‘yinlar, kelajak rahbarlari uchun liderlik ko‘nikmalarini va amaliy qaror qabul qilish qobiliyatini rivojlantirishga xizmat qiladi.*
Kalit so‘zlar: *Oliy ta’lim, menejerlar tayyorlash, faol o‘qitish metodlari, liderlik rivojlanishi, ta’lim texnologiyalari, keys-metod.*

To date, as a leading trend of modern innovative changes in the field of higher education of our country, the personality-developing direction of educational processes determines the transition of subjects of educational activity, including subjects of management activity, from authoritarian-communicative to humanitarian-communicative interaction. It is characterized by the attitude to the democratization of management activities in the socio-economic environment and the creation of educational partnerships in the community, which is also reflected in the innovative approaches to training in the system of advanced training of modern leaders in higher education. Today, in the modern practice of training highly qualified personnel in our country, the following active teaching methods are widespread: trainings, programmed, computer-based training, group discussions, case studies (analysis of concrete, practical situations), educational and role-playing games.

In order to meet the requirements of the times, the educational process is being strengthened in higher education institutions by introducing active educational technologies, creating a psychologically comfortable environment that ensures freedom of choice of educational forms and methods of future specialists. Currently, the ever-increasing flow of information requires the introduction of modern teaching methods that allow transferring a large amount of knowledge in a very short time, ensuring a high level of assimilation of the material studied by the audience and strengthening it in practice.

Trainings mean training sessions focused on the practical development of the studied material, during which, in the process of modeling specially defined situations, students have the opportunity to develop and strengthen the necessary knowledge and skills, change their attitude to their experience. The concept of training has a general collective meaning. Various methods and means of active learning are widely used in trainings: educational, role-playing and simulation games, analysis of specific situations and group discussions.

At the beginning of the 21st century, when the higher educational institutions of our country began to familiarize themselves with Western teaching methods, the following types of training became very popular among managers: training of negotiation skills and training of presentation skills. This type of training is of great importance even now in training leaders, especially the basics of business communication in a foreign language.

Nowadays , leadership skills training for leaders is becoming more and more widespread in HEIs, they learn various aspects of management during their education, such as motivating subordinates, making decisions, properly organizing work in teams, etc. As a result of such training, managers not only analyze the process of management activities (planning, decision-making, evaluation, control, etc.), but also learn to acquire knowledge, skills and abilities to solve management tasks and use them to develop their leadership potential.

The essence of programmed education is to structure the presented material at a high level and to assess the level of its mastery step by step. With programmed teaching, information is presented in small blocks in printed form or on a computer monitor. After working on each block, the student is also required to complete tasks that demonstrate the level of mastery of the material studied.

The advantage of programmed learning is that it allows the student to move at his or her own pace. The transition to the next block of material occurs only after the previous one has been mastered. One variant of programmed learning is computer-based learning. The computer evaluates the students' responses and determines which material to present later. A special feature of computer learning is that the feedback here can be as rich and varied as in modern computer games. Currently, computer training is an integral part of other active training methods used in personnel training. For example, many computer business games have been developed that allow you to manage an educational organization, conduct advertising campaigns, and conduct negotiations.

Educational discussion as a method of teaching consists of conducting educational group discussions on a specific problem in relatively small groups of students (from 6 to 15 people). Traditionally, the concept of "discussion" is understood as the exchange of ideas in all its forms. The experience of history shows that without an exchange of ideas. development of society is impossible without debates and disputes. This is especially related to development in the field of spiritual life and professional development of a person. Discussion as a group discussion can have different character depending on the process being studied, its level of problem and the judgments expressed as a result.

For the teacher organizing the learning discussion, the outcome is usually known in advance. The goal here is a search process that is objectively known, but subjectively should lead to new knowledge from the students' point of view. In addition, this search can naturally lead to a task planned by the teacher , and it can only happen if the search for a solution to the problem (group discussion) is fully controlled by the teacher.

Here, management is of two-fold importance, namely:

First, in order to conduct a discussion, the teacher creates and maintains a certain level of relationship between students, a relationship of goodwill and openness, that is, the teacher's management of the discussion is communicative in nature.

Second, the teacher directs the truth-seeking process. It is generally accepted that educational discussion is allowed, provided that the teacher can ensure the validity of the conclusions.

Summarizing the above, we can identify the following characteristics of a well-organized and conducted educational discussion:

1) high qualification of the teacher-organizer on the problem under consideration and, as a rule, the presence of sufficient practical experience in solving such problems among students;

2) a high level of predicting solutions to typical problem situations due to serious methodological training of the teacher-organizer, that is, a relatively low level of improvisation by the teacher. At the same time, there is a very high level of improvisation by students, so the need for the teacher to manage the discussion process;

3) that the purpose and result of the educational discussion is to acquire real knowledge at a high level by students, to eliminate misconceptions, and to develop dialectical thinking in them;

4) the source of real knowledge is variable, depending on the specific problem situation, the teacher-organizer or the students, or the latter receives real knowledge with the help of the teacher.

It should be noted that this method allows the full use of the listeners' experience and contributes to a better mastering of the material they are studying. The reason for this is that in a group discussion, it is not the teacher who tells the audience what is right, but the students themselves develop arguments, justify the principles and approaches proposed by the teacher, and make the most of their personal experience.

Discussions in small study groups in the classroom are most effective in learning and developing complex material and in building the right attitude. This active learning method provides good opportunities for feedback, reinforcement, practice, motivation, and transfer of knowledge and skills from one domain to another.

In today's practice, one of the most popular methods of improving the qualifications of senior personnel is the analysis of specific practical situations (case study). In the last ten years, this method is increasingly used in the study of various subjects in the higher education system of Uzbekistan. This method involves moving from a practice-oriented approach to the actual activity of the leader, based on the activities of gathering knowledge. It is one of the most proven methods of teaching decision-making and problem-solving skills in the training of highly qualified personnel.

The purpose of this method is to teach students to analyze data, identify key problems, select alternative solutions, evaluate them, find the best option, and formulate action programs. When analyzing specific situations, it is especially important to combine the individual work of students with a problem situation and the group discussion of proposals prepared by each member of the group. It allows students to develop group and team work skills, which expands the possibilities of solving typical problems within the studied subjects. As a result of personal analysis, group discussion, identifying problems, finding alternatives, choosing actions and their implementation plan, students will have the opportunity to develop analysis and planning skills.

The development of practical situations can occur in two ways: based on the description of real events and actions or on the basis of artificially constructed situations. Listeners are more interested in analyzing practical situations taking into account the specific characteristics of our country. This may include challenges faced by new managers in today's volatile economic environment, as well as typical challenges faced by leaders at various levels.

In the context of today's globalization, local researchers have developed recommendations for solving a specific problem situation:

the problem situation, as a rule, is not limited to one subject or discipline of the course, usually it is interconnected with other problems, students use the skills of finding interdisciplinary connections;

in the process of analyzing a problematic situation, students can identify not only external but also internal causes;

students demonstrate an understanding of the concepts, ideas, and approaches described in the course, as well as the ability to use them to analyze a specific situation and make recommendations, and that a problem situation can be interpreted from multiple perspectives and that the audience is prepared to identify ambiguity;

you should not stop when you find one problematic side of the situation, you should try to find other problems and areas of analysis;

students are instructed to provide examples from personal experience that confirm the correctness of the analysis and the proposed proposals;

the approach to work with a practical situation is also required to be systematic.

Summarizing the analysis of the case-study method, it is necessary to emphasize the importance of this method for the formation of special, methodological and communicative competence among students , namely:

establish interdisciplinary relationships;

analytical and systematic thinking;

evaluation of alternatives;

presentation of analysis results;

assessing the consequences associated with decision-making;

mastering communication skills and teamwork skills.

A number of active learning methods have the general name "role-playing games". This method is a complex role-playing game, with different, often conflicting interests of its participants and the need to make decisions at the end of the game or during the game. Role-playing games help leaders develop important key skills such as communication skills, tolerance, ability to work in small groups, independent thinking, and more. When conducting role-playing games, the teacher requires methodological training, the ability to predict the results and draw appropriate conclusions.

Business games in higher educational institutions are aimed at solving specific practical problems, acquiring the skills of performing specific techniques of activity. The need for this type of games arises when the existing abilities of the participants of management activities are not sufficient to implement ready-made norms of activity or when there is an inconsistency in activity as a result of changes in external conditions. Therefore, there is a need to develop skills that are lacking in the business game process on a special model platform.

Business games, as a rule, are carried out in the form of a coordinated group brainstorming, which requires the involvement of all participants in the game. Basically, this teaching method is a special form of communication.

In any type of communication, one of the participants takes the role of the author, who expresses his point of view. The second participant is the receiver, who perceives the author's text and creates an image of what he understands in order to recreate his point of view. The third participant in the dialogue within the business game can be a more formalized and perfected critic who develops his point of view based on the results of the decision. And the fourth participant, the communication organizer, coordinates all kinds of work and transforms various actions into a purposeful action to improve the author's point of view.

The business game ends with a conclusion, where the main focus is on analyzing the results that are most important for practice. However, the final stage can be expanded to reflect the entire direction of the game. The objects of such reflection can be: the dynamics of individual, group and intergroup trajectories of thought processes; dynamics of formation of collective opinion based on changes in interpersonal relations; players' positions and positional relationships, etc.

If the goal of professional development is to master effective management models, to test new projects of organizational activity, then the most effective method of training is a game. It can be a business game with the ability to reproduce, design and model activity-oriented relationships, cooperative communication links involving representatives of different subsystems of the organization. Consequently, leaders develop not only organizational, but also methodological and game-technical abilities during the training process.

Summarizing the analysis of active learning methods used in leadership development programs, it should be noted that they increase the ability of leaders of different levels to identify and structure problems, collect and analyze data, prepare alternative solutions when necessary, and choose the most optimal option. It should also be noted that recently, in the local practice of professional training, the experience of training managers based on active methods of training is increasingly used.

Active educational technologies in higher educational institutions are considered as methods of acquiring knowledge, forming skills and competencies, and developing necessary competencies in the process of communication and interaction between the teacher and the student as the subject of educational activity. The center does not consider the teacher as an expert who answers all the questions correctly, but as a teacher-moderator who creates conditions for independent work in the lesson, self-development of students, strives for the form of consultation. The essence of active educational technologies is that they rely not only on the processes of perception, memory, and attention, but also, first of all, on the creative, effective thinking, behavior, and active communication of all participants of the educational process.

List of used literature:

1. J. Shaturaev . Public education of Indonesia and Uzbekistan: quality of education & academic outcomes. Lab Lambert Academic Publishing, 2021.

2. Elena G. Popkova, Mukhabat F. Khakimova, Marija A. Troyanskaya, Elena S. Petrenko . Responsible Innovations as Tools for the Management of Financial Risks to Projects of High-Tech Companies for Their Sustainable Development . Risks . 1/27/2024 .

3. Khakimova M.F. Requirements for the training of highly qualified specialists. Collection of scientific articles. Tashkent-KUALA LUMPUR -2017. Pages 54-58.

4. Khakimova M.F., Integrative technologies and processes of education and training . Mejvuzovsky International Congress. Vysshaya skola: nauchnye issledovaniya. Moscow 2020 . S. 70-75 .

5. Abduraimova Nigora Radjabovna Khakimova Mukhabat Fayziyevna, Khakimova Khulkar Khamitovna. Principles and Integration of Entrepreneurship into Local Neighborhoods Using Business Intelligent Systems in Advanced Countries . // United Arab Emirates. 2023/12. 65-70.

Teshabaev Sh.
associate professor
Andijan Institute of Agriculture and Agrotechnologies
Eraliev I.
assistant
Andijan Institute of Agriculture and Agrotechnologies

EFFECT OF TILLAGE METHODS AND HERBICIDES APPLICATION ON WEEDS IN COTTON FIELDS

Abstract. *Annual weeds were reduced by 85.4% and perennial weeds were reduced by 82.7% as a result of the combined application of herbicides with two-layer plow tillage against weeds. has a positive effect on the growth and productivity of the stem.*

Key words: *Cotton, soil, main treatment, weed, annual weeds, perennial weeds, option, return, agronomy, control, efficiency, yield, control of crop rotation with herbicides.*

33 million people from more than 80 countries of the world. Cotton is grown on about 100,000 hectares, and winter wheat is grown on more than 200 million hectares in more than 100 countries, and 10-15% of the harvested crop is lost due to weed infestation. In a number of other countries of the world, such as China, Germany, USA, Brazil, Argentina, India, Pakistan, Australia, South Korea, Russia, Ukraine, Kazakhstan, more than 3000 types of weeds are spread, of which more than 200 types damaging the main agricultural crops. These problems are eliminated as a result of the combined agrotechnical and chemical control measures against weeds.

The research conducted in Ghoza (2012-2015) was carried out by placing 6 options, 4 repetitions and 1 layer. The area of each option was 720 m2, the area of consideration was 360 m2. The total area of the experiment is 1,728 hectares. Weed control Dafosat pre-plough, Stomp 33% e.c. herbicides are sprayed along with planting. Andijan-35 variety of cotton was cultivated in the experiment.

The obtained data show that when the number of weeds in the field is taken into account before plowing the soil with a simple plow at a depth of 28-30 cm, the number of annuals was 28 units/m2, this indicator, It was found that it was 23 pieces/m2 in p years. In the spring, it was noted that the number of annual weeds was 21 weeds/m2, and the number of perennial weeds was 13 weeds/m2.

When the number of weeds in the field was taken into account before plowing at a depth of 28-30 cm on a two-layer plow, it was found that the number of annuals was 29 pieces/m2, and this indicator was 22 pieces/m2 in perennials. . In the spring, it was observed that the number of annual weeds was equal to 14 pieces/m2, and the number of perennials was equal to 8 pieces/m2.

It can be seen from the obtained data that when plowing with a two-layer plow at a depth of 28-30 cm, compared to plowing the soil with a regular plow at a depth of 28-30 cm, annual weed germination is 7 units/m2, perennial weeds It was observed that it was less than 5 units/m2.

Based on the above data, it can be concluded that when the soil is plowed to a depth of 28-30 cm with a simple plow, compared to plowing with a two-layer plow at a depth of 28-30 cm, weed residues and seeds are buried in deep layers and buried before plowing. As a result of applying Dafosat herbicide against annual weeds at the rate of 6.0 l/ha, their seeds and root stems can be explained by the fact that it has low fertility.

In our first observation, the number of annual weeds was 16.93 units/m2, and the number of perennial weeds was 11. 95 units/m2, in the variant where Dafosat herbicide was applied at the rate of 6.0 l/ha before autumn plowing, the number of annual weeds was 16.40 units/m2, and perennial weeds were 11.70 units/m2 that, in the option where Stomp herbicide was used at the rate of 2.0 l/ha along with seeding, the number of annual weeds was 16.85 units/m2, and the number of perennial weeds was 12.20 units/m2 was recorded.

In the experiment, in order to determine the effectiveness of the methods of soil treatment against weeds and the combined use of herbicides, when observation was carried out after 20 days, the soil was cultivated with a simple plow to a depth of 28-30 cm, and herbicides were applied against weeds. The number of annual weeds increased by 28.20 units/m2 (32.5%), and the number of perennial weeds increased by 16.80 units/m2 (18.6%) in the non-planted control option. In the variant where Dafosat herbicide was applied at the rate of 6.0 l/ha before autumn plowing, the number of annual weeds increased to 6.65 units/m2 (67.2%), and perennial weeds to 3.75 units/m2 (73.2%), in the case of application of Stomp herbicide at the rate of 2.0 l/ha along with seeding, the number of annual weeds decreased by 4.60 units/m2 (77.7%), and perennial weeds were found to have increased by 15.30 units/m2 (5.1%).

The number of annual weeds increased by 20.80 units/m2 (23.8%) in the control option, plowed at a depth of 28-30 cm with a two-layer plow, and no herbicide was applied. and the number of

Although it increased by 13.67 units/m2 (16.3%), the number of annual weeds was 4.70 units/m2 (by 73.9%), and perennials by 2.30 pieces/m2 (82.0%), annual weeds in the option where Stomp herbicide was applied at the rate of 2.0 l/ha along with seeding while the number of weeds decreased by 2.60 units/m2 (84.1%), it was observed that perennial weeds increased by 12.63 units/m2 (3.6%).

In order to account for weeds in the experiment, after 40 days, the soil was tilled with a simple plow at a depth of 28-30 cm, and in the control option, where no herbicide was applied, the number of weeds in one year was 28.95 units/m2 (by 35.0%), and the number of perennial weeds increased by 17.20 units/m2 (21.8%), in the variant where Dafosat herbicide was applied at the rate of 6.0 l/ha before autumn plowing annual weed count by 6.25 pcs/m2 (69.3%) and perennials by 3.62 pcs/m2 (73.9%) with Stomp herbicide 2.0 l /ha, the number of annual weeds decreased by 4.27 units/m2 (79.5%), and perennial weeds by 15.65 units/m2 (7.6 %) was found to have increased.

The number of annual weeds increased by 21.35 units/m2 (26.1%) in the control option, plowed to a depth of 28-30 cm with a two-layer plow, and no herbicide was applied. and the number of grasses increased by 13.91 units/m2 (18.5%), these indicators Dafosat herbicide before autumn plowing In the variant applied at the rate of 6.0 l/ha, the number of annual weeds increased to 3.75 units/m2 (75.9%), and perennial weeds increased to 2.14 units/m2 (82.7%) ha, in the case of application of Stomp herbicide at the rate of 2.0 l/ha along with seeding, the number of annual weeds increased by 2.40 pcs/m2 (85.4%) decreased, but perennial weeds increased by 12.86 units/m2 (5.1%).

In the study, when we consider the weeds after 60 days, the number of weeds in one year was 29.57 weeds/m2 (by 38.4%), and the number of perennial weeds increased by 17.62 pieces/m2 (24.4%), but in autumn In the variant where Dafosat herbicide was applied at the rate of 6.0 l/ha before plowing, the number of annual weeds increased to 6.43 units/m2 (68.3%), and perennial weeds increased to 5.83 units/m2 (by 59.5%), the number of weeds in one year was 4.43 in the option where Stomp herbicide was applied at the rate of 2.0 l/ha along with seeding units/m2 (78.7%) decreased, and perennial weeds increased by 19.15 units/m2 (40.8%).

The number of annual weeds increased by 21.92 pieces/m2 (30.4%) in the control variant, which was treated with a two-layer plow at a depth of 28-30 cm, and no herbicide was applied. and the number of weeds increased by 14.29 units/m2 (21.5%), Dafosat herbicide 6.0 l/ha before autumn plowing the number of annual weeds increased to 3.89 units/m2 (75.5%) and perennial weeds to 4.20 units/m2 (64.7%) in the moderately applied option with seeding together with Stomp herbicide at a rate of 2.0 l/ha, the number of annual weeds decreased by 2.28 units/m2 (85.7%), perennial weeds it was found that grass increased by 15.75 pieces/m2 (17.0%).

In the experiment, when we took into account the amount of increase of weeds in the control options compared to the main soil tillage methods, after 20 days when the soil was plowed with a two-layer plow at a depth of 28-30 cm compared to the option in which the soil was plowed with a simple plow at a depth of 28-30 cm annual weeds by 8.7%, perennial weeds by 2.3%, 40 days after 8.9% to 3.3%, and after 60 days from 8.0% to 2.9% less germination was observed.

Compared to the main tillage methods, after 20 days the effect on annual weeds is up to 6.4%, the effect on perennial weeds is up to 8.8%, after 40 days a effect on annual weeds up to 5.9%, effect on perennial weeds up to 8.8%, after 60 days effect on annual weeds Up to 6.3%, it was noted that the effect on perennial weeds was up to 5.2%.

Compared to the main tillage methods, after 20 days the effect on annual weeds is up to 6.4%, the effect on perennial weeds is up to 8.8%, after 40 days a effect on annual weeds up to 5.9%, effect on perennial weeds up to 8.8%, after 60 days effect on annual weeds Up to 6.3%, it was noted that the effect on perennial weeds was up to 5.2%.

References

1. O‘zbekiston Respublikasi Prezidentining 2019 yil 17 iyundagi PF-5742-son «Qishloq xo‘jaligida yer va suv resurslaridan samarali foydalanish chora-tadbirlari to‘g‘risida” gi farmoni

2. Mo‘minov K.M., Rizaev Sh.X. Агротехнические и химические меры борбы с сорняками на посевах озимой пшеницы // Зерновое хозяйство. 2005. №6. С. 21-22

3. Hasanova F.M., Salomov Sh.T. “Qishloq xo‘jaligida yangi tejamkor agrotexnologiyalarni joriy etish” mavzusidagi xalqaro ilmiy amaliy konferensiya ma’ruzalar to‘plami. T. 2011. B. 258-259.

4. Teshabaev Sh.A., Xoshimov I.N. “G‘o‘za maydonlarida o‘suvchi begona o‘tlarga qarshi uyg‘unlashgan kurash” AGROILM 2020 №1.B. 57-59

Teshabaev Sh., associate professor
Andijan Institute of Agriculture and Agrotechnologies
Eraliev I.
assistant
Andijan Institute of Agriculture and Agrotechnologies

THE EFFECT OF SOIL MAINTENANCE AND HERBICIDES APPLICATION ON WINTER WHEAT SEEDS GERMINATION

Abstract: *Effects of integrated weed control in a cotton field maintained as a previous crop on weeds in a winter wheat field and a cultivator at a depth of 15-20 cm between cotton rows Processing with the help of winter wheat seeds has a positive effect on the germination and actual seedling thickness.*

Key words: *Winter wheat, soil, main treatment, weed, annual weeds, perennial weeds, option, return, agronomy, control, efficiency, yield, rotation control planting herbicides.*

33 million people from more than 80 countries of the world. Cotton is grown on about 100,000 hectares, and winter wheat is grown on more than 200 million hectares in more than 100 countries, and 10-15% of the harvested crop is lost due to weed infestation. In a number of other countries of the world, such as China, Germany, USA, Brazil, Argentina, India, Pakistan, Australia, South Korea, Russia, Ukraine, Kazakhstan, more than 3000 types of weeds are spread, of which more than 200 types damaging the main agricultural crops. The urgent issue of today is the joint implementation of agrotechnical and chemical control measures against weeds.

In our republic, it is very important to carry out research on the improvement of agro-technologies for the cultivation of high and quality crops from cotton and winter wheat crops, along with the main methods of soil cultivation, using herbicides in harmony in different periods and rates. From this point of view, it is appropriate to carry out scientific research on determining the effectiveness of the combined use of herbicides and the main methods of soil cultivation in the fight against weeds in cotton and grain fields, as well as their widespread implementation.

Field experiments were conducted in 6 variants, 4 replications and 1 layer. The area of each option was 720 m2, the area of consideration was 360 m2. In our winter wheat field trials, we used Granstar 75% DF for annual weeds and Granstar plus herbicide for perennials. The winter wheat variety "Krasnodar-99" was cultivated in the experiment.

In our conducted scientific research, observations were made on the germination, wintering of winter wheat and the effect on the actual seedling thickness at the end of the period of operation.

In the first year of our research in winter wheat, herbicides were applied at 28-30 cm depth with plowing with a two-tier plow to the weed control soil in the cotton field maintained as a predecessor crop of winter wheat seed germination. as a result of the effect of combined application, it has a positive effect on the soil compared to the options plowed with a simple plow at a depth of 28-30 cm, the highest it was observed that the indicator was 87.1% in the 6th option and was 2.1% higher than the control option.

It should be noted that in the months of November, December, January, and February of 2019-2020, when the research was conducted, there was no significant difference in air temperature compared to perennials, a significant negative impact on the wintering of winter wheat meadows in the experimental area. did not show, but it was observed that the effect of the treatment methods on the previous crop was slightly different.

According to the results obtained from the research, depending on the cultivation methods of the previous crop, the germination of seedlings per 1 m2 was 28-30 cm deep plowed into the soil against weeds, and no herbicide was applied in the 1st control option. on average was 411.3 units/m2, in this method of soil cultivation at the rate of 6.0 kg/ha per hectare It was found that the germination of seedlings was 412.1-425.2 units/m2 in the options where Dafosat and Stomp herbicides were used at the rate of 2.0 l/ha.

It was observed that the above pattern was preserved in the variants plowed with a two-tiered plow at a depth of 28-30 cm. 435.6 pieces/m2, compared to the variants plowed with a simple plow to the soil, 13.6; 23.4; It was noted that it is more than 10.1 units/m2.

It should be noted that the effect of the types and rates of herbicides used against winter wheat weeds on the emergence and survival of the plant was also observed at the end of the wintering period and at the end of the period of operation.
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The obtained data show that when the number of winter wheat seedlings that emerged from the winter was analyzed in the section of options, the previous crop

in the field treated with cotton, against weeds in a simple plow at a depth of 28-30 cm compared to the plowed background with a two-layer plow at a depth of 28-30 cm to the soil with a two-layer plow at a depth of 28-30 cm. It was observed that the difference between the thickness of the chat was significant, in the control option it was 9.4-12.4 units/m2, in the options where Dafosat herbicide was used at the rate of 6.0 kg/ha per hectare, it was 29.8-35.8 units/m2 up to 24.8-31.8 pieces/m2 in the options where Stomp herbicide was used at the rate of 2.0 l/ha per hectare.

Based on the above data, it can be concluded that the combined weed control in the cotton field maintained as a predecessor crop has a subsequent effect on the weeds in the winter wheat field and cotton. It was observed that cultivation with a cultivator at a depth of 15-20 cm between the rows had a positive effect on the germination of winter wheat seeds and the thickness of the actual seedling. It was observed that similar data were obtained in the following years of research, keeping the above rules.

List of used literature

1.O‘zbekiston Respublikasi Prezidentining 2019 yil 17 iyundagi PF-5742-son «Qishloq xo‘jaligida yer va suv resurslaridan samarali foydalanish chora-tadbirlari to‘g‘risida” gi farmoni

2.Hasanova F.M., Salomov Sh.T. “Qishloq xo‘jaligida yangi tejamkor agrotexnologiyalarni joriy etish” mavzusidagi xalqaro ilmiy amaliy konferensiya ma’ruzalar to‘plami. T. 2011. B. 258-259.

3.Teshabaev Sh.A., Xoshimov I.N. “G‘o‘za maydonlarida o‘suvchi begona o‘tlarga qarshi uyg‘unlashgan kurash” AGRO ILM 2020 №1.B. 57-59

4.Teshabaev Sh.A, Namazov.F.B, Turaev J.I **“**ВЛИЯНИЕ МЕТОДОВ БОРБЫ ПРОТИВСОРНЫХ РАСТЕНИЙ НА РОСТ И РАЗВИТИЕ ОЗИМОЙ ПШЕНИЦЫ” Международной научно-практической конференции, Состоявшейся 15 декабря 2019 г. в г. Пенза**IX**

Tojiboyeva Sh.
O‘zbekiston davlat san’at va madaniyat instituti
“Milliy qo‘shiqchilik” kafedrasi dotsenti

MILLIY MUSIQA SAN’ATINING RIVOJLANISH TARIXI: O‘ZBEKISTONDAGI AMALIYOT VA XORIJIY TAJRIBA YONDASHUVLARI

Annotatsiya: *Ushbu maqola O‘zbekistonning milliy musiqa san’ati hozirgi holatini, duch kelayotgan muammolarni va ular uchun amaliy yechimlarni tanqidiy-tahliliy nuqtai nazardan o‘rganadi. Tadqiqot davomida xorijiy tajribalar ham o‘rganilib, ularni O‘zbekiston sharoitida qo‘llash imkoniyatlari tahlil qilindi. Statistik natijalar milliy musiqa san’atini rivojlantirish uchun keng ko‘lamli islohotlar zarurligini ko‘rsatdi. Ushbu maqola milliy san’atning jamiyat va iqtisodiyotga ijobiy ta’sirini oshirish uchun amaliy choralarni taklif etadi.*

Kalit so‘zlar: *Milliy musiqa, madaniy rivojlanish, xorijiy tajriba, san’atni saqlash, amaliy yechimlar, O‘zbekiston, rivojlangan mamlakatlar tajribasi.*

Tojiboyeva Sh.
Associate Professor
of the "National Singing" Department
State Institute of Art and Culture of Uzbekistan

HISTORY OF NATIONAL MUSICAL ART DEVELOPMENT: APPROACHES TO PRACTICE AND FOREIGN EXPERIENCE IN UZBEKISTAN

Abstract: *This article critically analyzes the current state of national musical art in Uzbekistan, the challenges it faces, and practical solutions from an analytical perspective. The study also examines foreign experiences and analyzes the possibilities of their application in the context of Uzbekistan. Statistical results indicate the necessity for comprehensive reforms to develop national musical art. This article proposes practical measures to enhance the positive impact of national art on society and the economy.*

Key words: *National music, cultural development, foreign experience, art preservation, practical solutions, Uzbekistan, experience of developed countries*

O‘zbekiston milliy musiqa san’ati xalqimizning boy madaniy merosi bo‘lib, avloddan-avlodga o‘tib kelayotgan bebaho qadriyatdir. Milliy musiqa nafaqat ma’naviy, balki iqtisodiy va ijtimoiy jihatdan ham jamiyatimiz rivojida muhim o‘rin tutadi. Biroq, zamonaviy globallashuv davrida milliy san’atimiz qator muammolarga duch kelmoqda. Ularni hal etish nafaqat milliy merosni saqlash, balki yosh avlodning o‘z tarixiga, madaniyatiga hurmatini oshirishga ham yordam beradi. O‘zbekistonning iqtisodiy va ijtimoiy o‘sishi doirasida milliy san’atni rivojlantirish nafaqat madaniy merosni saqlab qolishni, balki jahon bozoriga milliy musiqani eksport qilish orqali iqtisodiy imkoniyatlarni ham kengaytirishni taqozo etadi. Milliy musiqa san’atining madaniyatimizdagi o‘rni va uni jahon darajasida tanitish bugungi kunning dolzarb vazifalaridan biridir.

Tadqiqot metodologiyasi

Mazkur maqola doirasida muammolarni o‘rganish uchun tanqidiy-tahliliy yondashuv qo‘llanildi. Asosiy manbalar sifatida O‘zbekiston madaniyat va san’at sohasidagi amaliy tadqiqotlar va xorijiy ilmiy maqolalar tahlil qilindi. Statistik ma’lumotlar orqali milliy musiqa san’atining bugungi kundagi holati chuqur o‘rganildi. Bundan tashqari, xorijiy tajribalarni O‘zbekistonda qo‘llash imkoniyatlarini baholash uchun bir qator xalqaro tadqiqotlar tahlil qilindi. Olingan ma’lumotlar asosida san’atni rivojlantirish uchun amaliy chora-tadbirlar va takliflar shakllantirildi.

Natijalar

Milliy musiqa san'ati rivojida bir qator jiddiy muammolar mavjud. Ular orasida quyidagilarni alohida ta'kidlash mumkin:

1. Kadrlar tayyorlash va malaka oshirishdagi kamchiliklar – O‘zbekiston oliy ta’lim tizimi milliy musiqa sohasidagi mutaxassislarni tayyorlashda global standartlarga mos kelmaydi. Ko‘plab yoshlar musiqa sohasida o‘qishni xohlashsa-da, ularning malakasini oshirish uchun yetarli sharoitlar yo‘q. Xorijiy tajriba ko‘rsatishicha, ilg‘or davlatlarda musiqa sohasi mutaxassislariga alohida ahamiyat qaratiladi va amaliy o‘quv dasturlari keng joriy etiladi.

2. Texnologik rivojlanish va an’anaviy uslublarni saqlash masalasi – Raqamli texnologiyalar rivoji milliy musiqa asboblari va uslublarini saqlab qolish jarayonini qiyinlashtirmoqda. Yosh avlod milliy musiqa asboblarini anglash va ulardan foydalanish qobiliyatidan uzoqlashmoqda. Masalan, Koreyada an’anaviy musiqa texnologik rivojlanish bilan birga olib borilmoqda va raqamli asbob-uskunalar an’anaviy ohanglarni asliga yaqin tarzda chiqarishga yordam beradi.

3. Moliya va homiylik imkoniyatlarining yetarli emasligi – Milliy musiqa san’atini rivojlantirish uchun moliyaviy resurslar yetarli emas. Bu nafaqat yangi asarlar yaratishda, balki mavjud musiqiy asarlarni xalqaro miqyosda targ‘ib qilishda ham to‘siq bo‘lib turibdi. Turkiya, Italiya va Fransiya kabi davlatlarda esa milliy san’at uchun maxsus grantlar va davlat dasturlari mavjud bo‘lib, ular san’at rivojida katta yordam beradi.

Xorijiy tajribalar

Dunyo bo‘yicha milliy san’atni rivojlantirishda ilg‘or davlatlar tomonidan qo‘llanilayotgan bir qator muvaffaqiyatli tajribalar mavjud:

Koreya tajribasi – Koreya an’anaviy musiqasini saqlab qolish va targ‘ib qilish maqsadida raqamli texnologiyalardan keng foydalanmoqda. Masalan, raqamli dasturlar orqali an’anaviy asarlarni jahon miqyosida ommalashtirish ishlari amalga oshirilmoqda. Bu jarayonda Koreya hukumati ham iqtisodiy va madaniy dasturlar orqali yordam ko‘rsatadi.

Turkiya tajribasi – Turkiya o‘z milliy san’atini rivojlantirish uchun davlat grantlari ajratadi. Milliy musiqa festivallari o‘tkazilib, dunyo miqyosida Turkiya madaniyatini tanitishda katta o‘rin tutadi. Bu orqali milliy musiqaning xalqaro ko‘rinishdagi imidji shakllanadi.

Yaponiya tajribasi – Yaponiya milliy san’atni saqlab qolish va rivojlantirish uchun an’anaviy va zamonaviy uslublarni uyg‘unlashtirish siyosatini olib bormoqda. Madaniyat vazirligi tomonidan san’at o‘qituvchilari va talabalarga maxsus grantlar ajratiladi. Ushbu dasturlar milliy musiqa asarlarini yaratish va asrab qolishda katta yordam beradi.

Statistik tahlillar

So‘rov natijalari milliy musiqa san’ati sohasida moliyaviy yordam yetishmasligi, raqamli texnologiyalar ta’siri, yoshlarning milliy musiqaga qiziqishi pastligi kabi qator muammolar mavjudligini ko‘rsatdi. O‘zbekistonda milliy musiqaga ajratilgan mablag‘lar boshqa davlatlarga nisbatan ancha past. Tadqiqotlar shuni ko‘rsatdiki, milliy musiqa san’atining bugungi rivojlanish darajasi hali ham yetarli emas va islohotlar talab qilmoqda.

Amaliy tavsiyalar

1. Kadrlar tayyorlash tizimini yaxshilash – Milliy musiqa san’ati yo‘nalishidagi oliy o‘quv yurtlari talabalariga amaliy mashg‘ulotlar va xorijiy ekspertlar bilan ishlash imkoniyatlarini kengaytirish kerak.

2. San’atni raqamli texnologiyalar yordamida saqlash – Milliy musiqa asarlarini zamonaviy usulda saqlash uchun raqamli platformalar va audio-vizual texnologiyalar yaratish zarur.

3. Grant va davlat dasturlari – Milliy musiqa san’atini moliyalashtirishda xususiy sektor va davlat tomonidan ko‘proq mablag‘ ajratilishi lozim. Ushbu mablag‘larni xalqaro festival va ko‘rgazmalarga yo‘naltirish orqali milliy musiqamizni jahon miqyosida targ‘ib qilish mumkin.

Xulosa

O‘zbekiston milliy musiqa san’ati bugungi kunda globallashuv sharoitida o‘z mavqeini mustahkamlash uchun keng islohotlarni talab qilmoqda. Yaponiyada milliy musiqa va san’atga bo‘lgan qiziqishni oshirishga qaratilgan dasturlar kabi, O‘zbekistonda ham milliy san’atni raqamlashtirish, festival va ko‘rgazmalar tashkil qilish, shuningdek, yoshlar orasida milliy musiqaga qiziqishni oshirish bo‘yicha keng qamrovli dasturlarni ishlab chiqish zarur.

O‘zbekistonda milliy musiqani xalqaro miqyosda tanitish va saqlash bo‘yicha olib boriladigan choralar milliy o‘zlikni mustahkamlashga, yosh avlodning tarixiy qadriyatlariga bo‘lgan hurmatini oshirishga va iqtisodiy rivojlanishga xizmat qiladi. Xorijiy tajribalardan kelib chiqib, milliy san’atning jahon bozoriga kirib borishini ta'minlash orqali mamlakatimizning xalqaro obro‘-e'tiborini yanada yuksaltirish mumkin.

Foydalanilgan adabiyotlar ro'yxati:

1. Madaniyat vazirligi. (2023). Milliy san'atni saqlash va rivojlantirish strategiyalari. Toshkent: Madaniyat nashriyoti.
2. Smith, J. (2022). Digital Preservation of Traditional Music: The Korean Experience. Seoul: Korea Cultural Research Institute.
3. Turkiya madaniyati va san'ati rivojlanishi to'g'risidagi hisobot. (2021). Turkiya madaniyat vazirligi. Ankara.
4. Qoraboyev, S. (2024). MAQOM ASARLARINI SAHNADA IJRO ETISH KO ‘NIKMALARINI MUKAMMALLASHTIRISH. *Oriental Art and Culture*, *5*(5), 337-340.
5. Qoraboyev, S. (2022). THE PROBLEM OF SELF AWARENESS IN RESCHOOLPREPARATORY GROUPS THEORETICAL STUDY. *Uzbek Scholar Journal*, *8*, 98-102.
6. Mardonov, Z. M. (2024). O ‘ZBEK CHOLG ‘U IJROCHILIGIDA IJRO USLUBLARI O ‘RGATISHDA PEDAGOGIK YONDASHUVLAR. *Oriental Art and Culture*, *5*(5), 351-358.
7. Mardonov, Z. (2019). The importance of biological education at school. *European Journal of Research and Reflection in Educational Sciences Vol*, *7*(12).
8. Sh, D. (2024). ALISHER NAVOIY LIRIKASIDA MUSTAZOD. *Экономика и социум*, (4-2 (119)), 100-103.
9. O'zbekistonda san'at va madaniyatni qo'llab-quvvatlash dasturlari. (2022). Milliy san'atni rivojlantirish agentligi.
10. Olimjonova, M., & Nishonova, J. (2022). ACTING ARTS: TRADITIONS AND ISSUES OF DEVELOPMENT. *Science and Innovation*, *1*(8), 33-36.
11. SHERMANOV, E. (2023). Kirish so'zi. *O ‘zbek musiqiy merosining ta'lim tizimidagi o ‘rni va ahamiyati*, *1*, 3-4.
12. Nakamura, H. (2021). Modernization of Traditional Music in Japan. Tokyo: Japan Cultural Foundation.

UDK: 631-454

To‘xtashev F.E.
Oziq-ovqat texnologiyalari va muxandisligi
xalqaro institutI katta o‘qituvchisi

G‘O‘ZANI SUYUQ AZOTLI O‘G‘ITLAR BILAN OZIQLANTIRISHNI O‘SISH VA RIVOJLANISHIGA TA’SIRI. (BARGI ORQALI)

Annotatsiya: *Ushbu maqolada yangi suyuq azotli o‘g‘itlar, asosan Uni-agro preparati bilan ishlov berishning g‘o‘zani o‘sishi, rivojlanishi va g‘o‘za hosil elementlarini oshirishga ta’sirini o‘rganish natijalari keltirilgan. Suyuq azotli o‘g‘itlarning paxta hosildorligi va tola sifati elementlarini oshirishga ta’siri hamda ularni ishlab chiqarishga tavsiya etishning maqbul standartlari ham keltirilgan.*

Tukhtashev F. E.
Senior lecturer
Institute of Food Technology and Engineering.

EFFECT OF FEEDING COTTON WITH LIQUID NITROGEN FERTILIZERS ON GROWTH AND DEVELOPMENT. (THROUGH LEAVES).

Abstract: *The article presents the results of studying the effect of new liquid fertilizers on the growth, development of cotton and, most importantly, on increasing the elements of cotton yield when it is treated with Uni-agro preparations. In addition, the effect of liquid nitrogen fertilizers on increasing the elements of the cotton crop and the quality of the fiber was studied, and the optimal norms for recommending them for production were determined.*

O‘zbekiston qishloq xo‘jaligida asosiy ekinlar paxta hamda kuzgi bug‘doy bo‘lib, bu ekinlardan yuqori va sifatli hosil olishda turli xil agrotexnik tadbirlarni, kasallik va zararkunandalarga qarshi kurash choralarini o‘tkazilishi muxim o‘rin tutadi. Ayniqsa, paxta hosilini salmog‘i va sifatini oshirishda, g‘o‘zaning o‘suv davri davomida agrotexnik tadbirlarni o‘z vaqtida va sifatli o‘tkazilishi birinchi navbatda hosil elementlarini ko‘proq saqlanib qolinishiga e’tibor qaratiladi. Shularni e’tiborga olgan holda ilmiy tadqiqotlar o‘tkazish har doim agrar sohadagi olimlar e’tiborida bo‘lgan. Jumladan, bu borada; A.I.Imomaliyev, M.V.Muxammadjonov, Z.S.Tursunxo‘jayev, L.V.Rumshevich, M.A.Belousov, B.G.Aleyev, Q.Mirzajonov, I.Madraimov, Sh.Abdualimov, B.Tillabekov, B.Niyazaliyevlarning ko‘p yillik ilmiy izlanishlarida g‘o‘za o‘simligining katta ichki imkoniyatlari mavjudligi ta’kidlangan. Lekin, Farg‘ona viloyatining o‘tloqi soz, kuchli va o‘rtacha sho‘rlangan tuproqlari sharoitida g‘o‘za parvarishida navlarini hosil elementlarini ko‘proq saqlab qolish orqali hosil salmog‘i va sifatini oshirishda zamonaviy agrotadbirlarni o‘rni katta bo‘lib qolmoqda. Shularni hisobga olgan holda agrotadbirlarni qo‘llash borasida ilmiy izlanishlar olib borilmagan.

Ilmiy tadqiqotlarimizda g‘o‘zani, Uni-Agro suyuq o‘g‘iti bilan bargidan qo‘shimcha oziqlantirganimizda, uning o‘sish va rivojlanishiga ta’siri variantlarimizda turlicha bo‘lganligi kuzatildi (2 jadval).

Uni-Agro- Farg‘ona Azot OAJ tomonidan tavsiya etilgan yangi turdagi suyuq kompleks o‘g‘it hisoblanadi..(1-jadval)

Tadqiqotda qo‘llanilayotgan preparatning qo‘llash me’yorlari hamda muddati to‘g‘risida aniq ma’lumotlar olinib, shular asosida xulosa qilinadi va amaliyotga tavsiyalar beriladi (1-jadval).

1-jadval

№	Ta’sir etuvchi moddalar nomi	Moddalar me’yori
1	Umumiy azot (N%)	27-30
2	Umumiy oltingurgut (S%)	1,8-2,0
3	Stimulyator (….%)	0,3-0,4
4	Mikroelement (Cu%)	0,036-0,041
5	Eritmaning vodorod ko‘rsatgichi pH	7

Ushbu preparatda ko‘rinib turibdiki, preparatni asosiy qisimini azot moddasi tashkil qiladi, g‘o‘za azot bilan yetarli ta’ minlanmasligi natijasida o‘sish jarayonlarini susayishi, ya’ni asosiy poyaning o‘sishi kechikadi, o‘sish shoxchalari hosil bo‘lmaydi.

Tajribalarimizda Uni-agro o‘g‘iti bilan g‘o‘zani bargidan oziqlantirish maqsadida qo‘llanilmoqda.

Ta’kidlash joizki, bu o‘g‘it suyuq holda bo‘lib, undan eritma tayyorlashda oziq moddalar cho‘kmaga tushmaydi va fermer xo‘jaliklardagi kabi filtrlashning xojati bo‘lmaydi.

2-jadval

Uni-agro suyuq azotli o‘g‘itini g‘o‘zani o‘suv davrida qo‘llash me’yorlari va muddatlarining g‘o‘zani o‘sishi va rivojlanishiga ta’siri.

T/r	Tajriba variantlari	Bosh poya balandligi, sm				Chin barg, doni		Hosil shoxlari soni,dona		Shonalar soni, dona		Ko`sak soni		Ochilgani
		1.06	1.07	1.08	1.09	1.06	1.07	1.08	1.09	1.07	1.08	1.08	1.09	1.09
1	Nazorat	18,47	40	71,9	82,9	6,94	6,34	8,9	9,34	12,8	15,4	6,98	1,06	7,05
2	Suspenziya (karbamid+ fosfor+kaliy)	17,8	40,9	73,0	86,5	7,01	6,65	8,86	9,97	13,9	17,1	7,74	1,02	7,97
3	Uni – Agro (5 l/ga-10 l/ga)	18,47	41,3	72,5	84,2	6,96	6,32	9,12	9,53	13	16,1	7,25	1,26	7,55
4	Uni – Agro (10 l/ga-15 l/ga)	20,21	43,9	73,3	87,1	7,46	6,34	8,85	9,96	15,1	18,6	7,98	1,2	7,85
5	Uni – Agro (15 l/ga-20 l/ga)	24,33	45,4	80,1	87,8	8,49	7,06	9,65	11,2	17,3	20,4	8,18	1,34	8,64
6	Uni – Agro (20 l/ga-25 l/ga)	22,95	42,9	76,8	88,2	7,77	5,99	9,62	10,5	14,1	16,7	7,88	1,16	8,49

Shonalash davrida qo'llanilgan preparatimizni g'o'zani o'sishi va rivojlanishiga ta'sirini tahlil qiladigan bo'lsak, nazorat variantida bosh poya balandligi avgust oyining boshida 71,9 sm ni tashkil qilmoqda. Uni agro o'g'iti 105l/ga 20 l/ga bilan ishlangan 5 variantda esa ushbu ko'rsatkich eng yuqori ya'ni 80,1 sm ni tashkil etdi. Nazorat variantiga nisbatan 5-vbariantda bosh poya 8,2 sm balandroq bo'ldi. Biroq sentabr oyining boshida nazorat variantimizda bosh poya balandligi 82,9 sm ni tashkil etgan bo'lsa, Uni agro o'g'iti 15 l/ga 20 l/ga bilan ishlangan 5 variantda esa 87,8 sm ni tashkil etdi, ya'ni nazorat variantiga nisbatan 4,9 sm balandroq bo'ldi. Uni agro o'g'iti 20 l/ga 25 l/ga bilan ishlangan 6 variantda esa 88,2 sm ni tashkil etdi. Bu esa nazoratdan 5,3 sm ga, 5-variantdan esa 0,4 sm ga yaxshiroq demakdir.

Hosil shoxlari soni 1-iyulda olingan tahlillar shuni ko'rsatadki, nazorat variantida 6,34 donani tashkil qilmoqda, 1-avgusda esa 8,9 donani tashkil etmoqda. Ushbu ko'rsatkich boshqa variantlarda turlicha ya'ni Uni agro o'g'iti 10l/ga 15 l/ga bilan ishlangan 4 variantda esa 1-sentabrda 9,96 donani tashkil etmoqda hosil shoxlarining soni Uni agro o'g'iti 15l/ga 20 l/ga bilan ishlangan 5 variantda hosil 1- sentabrda 11,2 tani tashkil etmoqda. Bu esa nazoratga nisbatan 2,3 ta hosil shox ko'pligini ko'rsatmoqda. 3-variantimizda esa bu ko'rsatkichlar nazorat variantimizdan deyarli farq qilmayapti.

Shonalash davrida shonalar sonini tahlil qiladigan bo'lsak, iyul oyida olib borilgan fenologik kuzatuvlarimiz Uni agro o'g'iti 10 l/ga 15 l/ga bilan ishlov berilgan 4 variantda shonalar soni 15,1 donani tashkil qilganini ko'rsatmoqda. Bu esa nazorat va boshqa variantlarga nisbatan eng yaxshi ko'rsatkich deb qarasak bo'ladi albatta, lekin Uni agro o'g'iti 15 l/ga 20 l/ga bilan ishlangan 5 variantda esa ushbu ko'rsatkich 17,3 donani tashkil qilmoqda. Ya'ni nazorat variantiga nisbatan 4,5 donaga ko'p. Bu esa barcha variantlarimiz ichida eng maqbuli bo'lib turibdi.

Xulosa o'rnida shuni aytish mumkinki, Uni-agro suyuq azotli o'g'iti bilan bargidan qo'shimcha oziqlantirish g'o'zaning o'sish va rivojlanishiga sezilarli darajada ta'sir ko'rsatmoqda.

Uni-agro o'g'iti bilan g'o'zaning 3-4 chinbarglik hamda gullash-shonalash davrida ishlov berish maqsadga muvofiq.

G'o'zaning 3-4 chinbarglik davrida 15 l/ga, hamda gullash-shonalash davrida 20 l/ga (5-variant) Uni-agro suyuq o'g'iti bilan ishlov berish nazorat hamda boshqa variantlarga nisbatan yuqorirqo samara bermoqda.

Adabiyotlar

1. Давронов К.А., Тухташев Ф.Э. Изучение условий и норм применения жидких азотных удобрений при выращивании хлопка в условиях последних почв // Universum: технические науки : электрон. научн. журн. 2021. 6(87). URL: https://7universum.com/ru/tech/archive/item/12010

2. Tukhtashev, F. E., & Davronov, Q. A. (2021). Effect of Liquid Nitrogen Fertilizers on the Increase of Cotton Yield Elements. European Journal of Life Safety and Stability (2660-9630), 11, 70-73. Retrieved from http://ejlss.indexedresearch.org/index.php/ejlss/article/view/197

3. Tukhtashev, F. E., Cotton Leaf Feeding on Cotton Fiber Quality Indicators (1-6) , (9)1 2023 Web of Agriculture: Journal of Agriculture and Biological Sciences https://scholar.google.ru/citations?view_op=view_citation&hl=ru&user=cCzyKiAAAAAJ&citation_for_view=cCzyKiAAAAAJ:-f6ydRqryjwC
4. Q.A Davronov, F.E To'xtashev, S.R Abdukarimov., G‘o‘zani suyuq azotli o‘g‘itlar bilan bargidan oziqlantirishning tola sifatiga ta’siri 2022 https://scholar.google.ru/citations?view_op=view_citation&hl=ru&user=cCzyKiAAAAAJ&citation_for_view=cCzyKiAAAAAJ:IWHjjKOFINEC

Turdaliyev Z.B.
Surxondaryo viloyati
Denov tadbirkorlik va pedagogika instituti
tadqiqotchi pedagog

TA’LIM MUASSASALARIDA SIFAT MENEJMENTI TIZIMI TAKOMILLASHTIRISH

Annotatsiya. *Sifat menejmenti ta'lim sifatini oshirish, talabalar qoniqishini ta’minlash va muassasalar samaradorligini kuchaytirish uchun muhimdir. Maqolada muassasalar orasida sifat nazoratining zaif jihatlari aniqlanib, xalqaro tajribaga asoslangan takliflar keltiriladi. So‘rovnoma va intervyu natijalari asosida sifat menejmenti tizimining o‘ziga xos muammolari va ularni bartaraf etish bo‘yicha tavsiyalar ishlab chiqildi.*

Kalit so’zlar*. Ta’lim tizimi, menejment, sifat menejment, ichki nazorat*

Turdaliyev Z. B.
research pedagogue
Denov Institute of Entrepreneurship and Pedagogy
Surkhandarya region

IMPROVEMENT OF THE QUALITY MANAGEMENT SYSTEM IN EDUCATIONAL INSTITUTIONS

Abstract. *Quality management is important for improving the quality of education, ensuring student satisfaction and increasing the efficiency of institutions. The article identifies weak aspects of quality control among institutions and makes suggestions based on international experience. Based on the results of the survey and interviews, specific problems of the quality management system and recommendations for their elimination were developed.*

Key words. *Education system, management, quality management, internal control*

Kirish. Ta'lim muassasalarida sifat menejmenti tizimi ta'lim sifati va talabalar qoniqishining asosiy omillaridan biri hisoblanadi. Bu tizim ta'lim jarayonidagi resurslarni samarali boshqarish, ta'lim jarayonidagi jarayonlar va natijalarni tahlil qilish, va uzluksiz takomillashtirish uchun javobgardir. Shu bilan birga, ko‘p hollarda ta'lim muassasalarida sifat menejmenti tizimlari yetarlicha rivojlanmagan, bu esa o‘quv jarayonida ma'lum muammolarni keltirib chiqaradi. Oqibatda, muassasalar samaradorligining pasayishi va talabalarning ta'lim jarayonidan noroziligi kuzatiladi.

Maqolada ta'lim muassasalarida sifat menejmenti tizimining mavjud kamchiliklarini aniqlash va ularni takomillashtirish yo‘llarini ishlab chiqish maqsad qilib qo‘yilgan. Xalqaro tajriba va zamonaviy boshqaruv usullariga asoslanib, talaba va o‘qituvchi qoniqishini ta’minlashga yordam beruvchi usullarni ko‘rib chiqish maqsad qilingan. Tadqiqot natijalariga asoslanib, ta'lim muassasalari uchun xalqaro standartlarga mos keluvchi sifat menejmenti tizimini joriy qilish bo‘yicha tavsiyalar beriladi.

Ta'lim sifatini oshirish va talaba qoniqishini ta'minlash uchun samarali sifat menejmenti tizimini joriy qilish ta'lim muassasalarining asosiy vazifalaridan biridir. Sifat menejmenti tizimi samarador ta'lim jarayonini yaratishga yordam beradi, shuningdek, ta'lim muassasalarida barqaror rivojlanishni ta'minlaydi. Talabalar va o‘qituvchilar o‘rtasidagi aloqani kuchaytirish, sifatni nazorat qilish tizimlarini takomillashtirish orqali ta'lim muassasalari samaradorligini oshirishga erishish mumkin.

Tadqiqo metodologiyasi. Tadqiqotda sifat menejmenti tizimlarini tahlil qilish uchun turli metodlardan foydalanildi. Birinchi navbatda, ilmiy adabiyotlarni o‘rganish orqali ta'lim muassasalarida sifat menejmentining o‘rni va ahamiyati haqida chuqur bilimlar olindi. Keyinchalik, sifat menejmenti tizimining amaliyotini tahlil qilish uchun muassasalarda so‘rovnoma va intervyular tashkil qilindi.

Natijalar. So‘rovnoma va intervyu natijalari shuni ko‘rsatadiki, aksariyat ta'lim muassasalarida sifat menejmenti tizimining zaifligi kuzatilmoqda. Bu, asosan, ichki nazorat mexanizmlari rivojlanmaganligi, sifatni ta’minlash uchun zarur bo‘lgan samarali aloqa imkoniyatlari yetishmasligi va muassasalarning xalqaro standartlarga mos kelmasligi bilan bog‘liq.

Muassasalar orasida, talaba va o‘qituvchi qoniqishini ta'minlaydigan, sifat menejmenti tizimlarining yuksak darajada tashkil etilmaganligi aniqlandi.

Muassasalarning sifat menejmenti tizimini xalqaro standartlarga moslashtirish uchun ichki sifat nazorat tizimini joriy qilish talab etiladi. Bu jarayonda o‘qituvchi va talabalar o‘rtasida aloqa mexanizmlarini mustahkamlash, ochiq fikr-mulohaza berish imkoniyatlarini oshirish, shuningdek, muassasa ichida muntazam tarzda sifat nazorati o‘tkazish lozim. Bu talaba va o‘qituvchilar qoniqishini oshirishga va ta'lim sifati yaxshilanishiga yordam beradi.

Xalqaro standartlarga asoslangan sifat menejmenti tizimlari talaba va o‘qituvchilarning ta'lim jarayonidagi ishtirokini kuchaytiradi. Bunday tizimlar talabalar qoniqishini oshirib, ularning ta'limdan noroziligini kamaytirishi mumkin. Shuningdek, sifat nazorati jarayonini rivojlantirish ta'lim muassasalari samaradorligini sezilarli darajada oshirishga yordam beradi. Bu nafaqat ta'lim jarayonining o‘ziga, balki muassasaning umumiy reytingiga ham ijobiy ta’sir ko‘rsatadi.

Natijalar tahlili. Natijalar xalqaro tajribalar bilan taqqoslandi va umumiy o‘xshashliklar aniqlandi. Xalqaro ta'lim muassasalarida sifat menejmenti tizimining rivojlanishi asosiy ahamiyat kasb etadi, bunda asosan talaba va o‘qituvchilar o‘rtasidagi aloqa, ochiq fikr bildirish imkoniyatlari, va doimiy ravishda jarayonlarni kuzatish tizimlariga katta e’tibor qaratiladi. Tadqiqotda aniqlangan muammolar xalqaro tajribaga asoslanib takomillashtirilgan tavsiyalar yordamida hal qilinishi mumkin.

Tadqiqotning ayrim cheklovlari mavjud. Jumladan, tadqiqot kichik namunalar asosida o‘tkazilgani sababli, natijalar keng miqyosda umumlashtirilishi qiyin. Bundan tashqari, ayrim ta'lim muassasalarida sifat menejmenti tizimining o‘zgacha xususiyatlari tadqiqot jarayoniga ta’sir qilgan bo‘lishi mumkin. Keyingi tadqiqotlarda kengroq namunalar va turli ta'lim muassasalari turlari qamrab olinishi lozim.

Xulosa. Sifat menejmenti tizimini takomillashtirish orqali ta'lim muassasalari samaradorligini oshirish va talaba qoniqishini ta'minlash mumkin. Tadqiqot natijalari ko‘rsatadiki, xalqaro sifat standartlariga asoslangan tizimlar ta'lim sifatini oshirish va muassasalarda talabalar va o‘qituvchilar uchun samarali ta'lim muhiti yaratishda muhim rol o‘ynaydi. Ta'lim muassasalarining ichki nazorat tizimlarini rivojlantirish va talaba o‘qituvchi munosabatlarini yaxshilash orqali ularning sifat menejmentini sezilarli darajada oshirish mumkin.

Adabiyotlar ro’yhati.

1. Bolliyev Sh. T. Oliy ta’lim tizimida sifat menejmentini takomillashtirish. Orient Renaisance: Inovation, educetionla, natural and social sciences. 3(6) 2023

2. Ismatullayev P.R., Axmedov B.M., P.M.Matyakubova, G‘.X.Xamroqulov, Sh.A.Turayev Sifat menejmenti tizimi va uni sertifikatlash. 2014

3. M.A.Maxkamova, Dj.Kusharbaev Ta’lim sifati innovatsion menejment. O’quv qo’llanma. 2022

4. Saidqulova F. Mamlakatimiz Oliy ta’lim muassasalarida sifat menejmentidan foydalanishning konseptual asoslari. Yashil iqtisodiyot va taraqqiyot. 2024

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Tursunov M.M.
Andijon viloyati Andijon tumani
33-maktabning geografiya fani o'qituvchisi

SUV RESURSLARIDAN SAMARALI FOYDALANISHNING HUDUDIY XUSUSIYATLARI (QORADARYO MISOLIDA)

Annotatsiya: *Ushbu maqolada Andijon viloyati hududidan oqib o'tuvchi Qoradaryo misolida suv resurslaridan samarali foydalanish haqida ma'lumotlar berilgan. Suv resurslarining taqsimotida nimalarga e'tibor berilishi, daryo suvlarini qanday taqsimlasa yaxshi natija berishi haqida batafsil ma'lumotlar berilgan.*

Kalit so'zlar: *Qoradaryo, suv resurslari, ekologik xavfsizlik, sug'oriladigan yerlar, urbanizatsiya, daryolar, suv taqsimoti, Qorag'ulja, Tor daryosi, Andijon suv ombori, dehqonchilik va baliqchilikning rivojlanishi, Qashaqasuv, O'zgan, Teshiktosh, Kuyganyor.*

Tursunov M.M.
Geography teacher of school 33
Andijan district, Andijan region

REGIONAL CHARACTERISTICS OF EFFICIENT USE OF WATER RESOURCES (IN THE EXAMPLE OF KORADARYO)

Abstract: *This article provides information on the effective use of water resources on the example of the Kara Darya flowing through Andijan region. Detailed information is given on what to pay attention to in the distribution of water resources, how to distribute the river's waters and give good results.*

Key words: *Karadarya, water resources, ecological safety, irrigated lands, urbanization, rivers, water distribution, Karagulja, Tor River, Andijan Reservoir, development of agriculture and fisheries, Qashqasuv, Ozgan, Teshiktosh, Kuyganyar*

O'zbekistonning ekologik xavfsizligi nuqtai nazaridan qaraganda, suv zaxiralarining, shu jumladan yer usti va yer osti suvlarining keskin taqchilligi xamda ifloslanganligi katta tashvish tug'dirmoqda. Respublikaning daryolari, kanallari, suv omborlari va xatto yer osti suvlari ham xar taraflama inson faoliyatining ta'siriga uchramoqda. Sug'oriladigan hududlarda suv tabiatning bebaho in'omidir. Butun xayot suv bilan borlik. Zotan, suv tamom bo‗lgan joyda xayot ham tugaydi. Shunday bo'lsada, Markaziy Osiyoda suv zaxiralari juda cheklangan. Yiliga 78 kub kilometr suv keltiradigan Amudaryo va 36 kub kilometr suv keltiradigan Sirdaryo asosiy suv manbalaridir. Suv zaxiralarining sifati eng mudim muammolardan biridir. 60-yillardan boshlab Markaziy Osiyoda yangi yerlar keng ko'lamda o'zlashtirildi.

Sanoat, chorvachilik komplekslari ekstensiv rivojlantirildi. Urbanizatsiya kuchaydi. Kollektor-zovur tizimlari qurildi hamda daryo suvlari sug'orish uchun muttasil yuqori hajmlarda olindi. Shu bois havza- lardagi suvning sifati tobora yomonlasha bordi. Qadimdan mamlakatimiz hududida suv xayot manbai sifatida qadrlangan, tirikchilikning birinchi omili sanalgan, uni muqaddas bilib, asrab - avaylab, tejab - tergab sarflangan. Bu qarashlar o'z moxiyatini bug'un xam yo'qotgan emas. Darhaqiqat mamlakatimiz qishloq, xo'jaligi ishlab chiqarishini suvsiz tasavvur etish mumkin emas. Shuning uchun suvdan maqsadli, tejab - tergab foydalanish hozirgi bozor iqtisodiyoti sharoitida yana ham dolzarb bo'lib turibdi. Chunki qishloq xo'jaligi ishlab chiqarishining asosiy qismi bo'lgan paxta, g'alla va boshqa mahsulotlar yetishtirish bevosita suv ta'minoti bilan chambarchas bog'liq. Respublika bo'yicha sug'orish uchun yiliga o'rtacha 55 mlrd. m 3 suv talab etiladi. Bu ko'rsatkich Markaziy Osiyo respublikalarida iste'mol qilinadigan suvning deyarli yarmiga tengdir. Respublikada foydalaniladigan suvning ko'p qismi qo'shni davlatlar hududlaridan oqib keladi. Respublikada foydalaniladigan suvning 85 foizi qishloq xo'jaligida ishlatiladi. Dexdonchilikka mo'ljallangan yerlarning 98 foizini sug'oriladigan maydonlar tashkil etadi. O'zbekiston hududida vujudga keladigan suv resurslarining ulushi Amudaryo havzasi bo'yicha 6 foizni, Sirdaryo havzasi bo'yicha 16 foizni, respublika bo'yicha jami oqimning taxminan 8 foizini tashkil qiladi. Ko'rinib turibdiki, suvdan tejab-tergab, samarali foydalanilmasa, kelgusida suv ta'minotida muammolar kelib chiqishi mumkin.

Respublikamizda suv resurslaridan samarali foydalanish maqsadida bir nechta ishlar amaga oshirilmoqda. Endi esa buni Andijon viloyati hududida joylashgan Qoradaryo daryosi misolida ko'rib chiqamiz. Andijon viloyatidagi Qoradaryo viloyatning eng yirik daryolaridan biri bo'lib, uning umumiy uzunligi 180 km uning 37 km qismi Qozog'iston Respublikasi hududidan oqib o'tadi. Suv yig'ish havzasining umumiy maydoni 30100 kvadrat kilometrni tashkil qiladi. Uning yillik suv sarfi o'ta sersuv yillari sekundiga 1200-1500 kub metrni tashkil qilgan bo'lsa, doimiy holda 800-1000 kub metrga yetadi. Qoradaryoning asosiy ikkita irmog'I bo'lib, ular Qorakulja va Tor daryolari hisoblanadi. Qoradaryoning o'ng irmog'I hisoblangan Qora-Kulja Farg'ona tizmasining janubi – sharqiy qismida 4692 metr balandlikdagi g'arbiy yonbag'rlaridan boshlansa, Tor daryosi Qizilqiyaning shimolida Qashqasuv degan joydan boshlanadi. [78] Qorag'ulja daryosi bilan Tor daryosi O'zgan shahrining sharqida 15 kilometr uzoqlikda qo'shilishidan Qoradaryo hosil bo'ladi. Qoradaryoga Oloy tog' tizmasidan suv oladigan Qulja daryosiga Qorasuv shahri atrofida o'z suvini Qoradaryoga olib kelib quyadi. Undan tashqari yana bir nechta jilg'alar, soylar Qoradaryoni suv resursi bilan ta'minlaydi.

O'zgan shahridan o'ng tomonda Yassi, chap tomondan esa Qurshab daryolari ham o'z suvlarini olib kelib quyadi. Qoradaryoning to'yinish manbayi, asosan, muzlik va qor hisoblanadi. Daryo o'zanida vodiydagi eng yirik suv omborlarida biri hisoblangan Andijon suv ombori barpo etilgan bo'lib, ushbu suv omborida yil davomida suv to'planib, Andijon, Namangan, Farg'ona viloyatlari aholisini va xo'jaliklarini suv manbayi bilan ta'minlashga xizmat qiladi.

[78] M.Mamajonov. X.Aliyev. Andijon geografiyasi. Andijon viloyati tabiiy va iqtisodiy-ijtimoiy geografiyasi.

Qoradaryo o'zani Andijon suv omboridan chiqib viloyatning Qorg'ontepa, Jalaquduq, Andijon,Paxtaobod, Izboskan, Oltinko'l va Baliqchi tumanlari hududidan oqib o'tadi, bu hududlardan oqib o'tgunga qadar, unga daryoning o'ng tarafidan Kuok-Art, Tentaksoy, Maylisoy daryolari qo'shilsa, chap tarafdan Qorag'unon daryosi kelib o'z suvini quyadi. Qoradaryo Baqliqchi tumanining Qo'rg'oncha mahlla fuqarolar yig'ini hududidagi Chumchuqyor qishlog'ida Norin daryosi bilan birlashib Sirdaryoni hosil qiladi. Qaradaryo o'zagida suv oqimini tartibga solib uni boshqarib turish uchun Teshiktosh va Kuyganyor gidrouzellari qurilgan bo'lib, bu suv inshootlari daryo suvini taqsimlab undan foydalanish imkoniyatlarini yaxshilab nazorat qiladi. Undan tahqar daryo tabiatda bo'ladigan sel va kollektor – zovur suvlarini ham olib chiqib ketish xizmat qiladi. [79]

Qoradaryo daryosida suv sesurslaridan samarali foydalanishimiz uchun nimalarga e'tibor berishimiz kerak? Ular quyidagilar:

- ✓ Hududning gidrografik vaziyati: suv resurslariga yaqin bo'lgn hududn holatining muhimligi Bu juda ham yaxshi omil hiosblanadi. Chunki qanchalik suvga yaqin bo'lsa, shuncha yuqori darajadagi samaradorlik va agroiqtisodiyotni bir martalik darajada rivojlantirish sharti. Mobodo suv yetarli darajada bo'lmasa, u har bir sohaga barqaror ta'sir qiladi.
- ✓ Yer usti yoki relyefining xususiyatlari va unumdorligi: u yaxshi va unumdor yer resurslariga ega. Ayniqsa rivojlantirish zarur bo'lgan qishlq xo'jaligi rayoni uchun qulay zaminning pastligi, tez ta'minlash uchun zarur bo'lgan qishloq xo'jaligi rayoni uchun muhimdir. Qishloq xojaligi uchun qulay bo'lga zaminning pastligi, tez ta'minlash uchun zarur bo'lgan suv tanqisligi kabi muammolar mavjud. U sharqiy mintaqada joylashgan. Birinchi navbatda bunday kamomad asoslarini doimiy ravishda kuzatib borish kerak.
- ✓ Aholining tarixiy holatia ta'sir ko'rsatishi: bu hudud boshqa yerlarga nisbatan yaxshi yerda joylashgan. Odamlar u yerlarda asrlardan beri yashaydi va gullab yashnagan. Bundan tashqari aholi chorvachilik, bog'dorchilik va uzumchilik bilan shug'ullanadi.

Xulosa sifatida aytishimiz mumkinki, Qoradaryo daryosi Andijon viloyatining asosiy daryolaridan biri hisoblanadi. Chunki, Andijon suv ombori ham aynan Qoradaryoga qirilgan. Shuning uchun ham boshqa daryolarga nisbatan ahamiyatliroq hisoblanadi. Bu havzaning yaqinida odamlar qulay joylashgan. Qolaversa, bu hududning iqtisodiyoti ko'proq qishloq xo'jaligiga bog'liq holsa rivojlanadi. Shuning uchun ham suv resurslari bilan ta'minlashga alohida e'tibor berishimiz kerak. Biz avvalo suv resurslarini behuda isrof qilmaslik va daryolarning ifloslanishini oldini olishimiz zarur. Shunndagina daryolarning suvlaridan samarali foydalanishimiz mumkin.

FOYDALANILGAN ADABIYOTLAR RO'YXATI

1. M.Mamajonov. X.Aliyev. Andijon geografiyasi. Andijon viloyati tabiiy va iqtisodiy-ijtimoiy geografiyasi.

[79] https://uz.wikipedia.org sayti.

2. X.Valieyev, Sh.Murodov, B.Xolbayev. suv resurslaridan mukammal foydalanish va muhofaza qilish.
3. S.Djalolov. suv tanqisligi sharoitida sug'orma dehqonchilik. T. 2000 y
4. V.Shuls, A.Mashrapov. Gidrografiya O'rta Osiyo. – T. "Iqtisodiyot", 1963
5. A.Rahmatullayev. O'zbekistonda suv resurslari va sug'orma dehqonchiligi. Cho'larni o'zlashtirish muammolari

Tursunova Sh. B.
Department of Uzbek language and Social disciplines
Tashkent University of Information
Technologies named after Muhammad al-Khwarizmi
Urgench, Uzbekistan
Orcid: 0009-0008-9812-308X

IN THE FIRST STAGE OF PUBLIC ADMINISTRATION , THE NECESSARY MEASURES TO SUPPORT THE OPERATION OF THE AIRPORT

Abstract: *In this article, the mass media play an important role in ensuring the participation of citizens in the management of public and state life, in communicating the goals and objectives of their administration to the highest levels, in establishing a constructive dialogue between the people and the state, in achieving innovative development. In this sense, it is important to recognize that the functional characteristics of the mass media, which are designed to combat social existence, public life and people's worldview, as well as the ideological foundations of the media, are based on the laws of innovative thinking.*

Key words: *OAV, media center, news security, journalism, television, magazine, operations, media analysis, media news, Internet sites, and cybercrime.*

Tursunova Sh. B.
O'zbek tili va ijtimoiy fanlar kafedrasi
Toshkent axborot universiteti
Muhammad al-Xorazmiy nomidagi texnologiyalar
Urganch, O'zbekiston
Orkid: 0009-0008-9812-308X

DAVLAT BOSHQARUVINING BIRINCHI BOSQICHIDA AEROPORT FOYDALANISHINI QO'LLAB-QUVVATLASH BO'YICHA ZARURIY TODORALAR

Annotatsiya*: Mazkur maqolada fuqarolarning jamiyat va davlat hayotini boshqarishdagi ishtirokini ta'minlash, ularni boshqarishning maqsad va vazifalarini yuqori bo'g'inlarga yetkazish, xalq o'rtasida konstruktiv muloqotni yo'lga qo'yishda ommaviy axborot vositalari muhim o'rin tutadi. va davlat, innovatsion rivojlanishga erishishda. Shu ma'noda shuni e'tirof etish kerakki, ijtimoiy borliq, jamiyat hayoti va odamlarning dunyoqarashiga qarshi kurashishga qaratilgan ommaviy axborot vositalarining funksional xususiyatlari, ommaviy axborot vositalarining mafkuraviy asoslari innovatsion tafakkur qonuniyatlariga asoslanadi. .*

Kalit so'zlar: *OAV, media markaz, yangiliklar xavfsizligi, jurnalistika, televidenie, jurnal, operatsiyalar, media tahlili, media yangiliklari, internet saytlari va kiberjinoyat.*

Introduction:

In the world, the acceleration of the development of countries requires the use of mass media to shape the innovative mindset of young people, to improve their legal knowledge and legal culture. In the new era of our country's development, reforms are being carried out to strengthen and expand the activity of mass media, to understand their role in solving the problems of socio-economic development. “In our country, we continue to pay special attention to strengthening the state and society in this area by intensifying the processes of democratic engagement, increasing the effectiveness of mass media activities, and encouraging the hard work of these representatives in every way. We consider this as one of the most important innovations in state policy and will continue to do so in the future”[1]. From this point of view, the activities of national mass media and media centers in the media space, the creation of socio-legal mechanisms for shaping innovative thinking, the development of scientific-rational and constructive ways of promoting humanistic tendencies are of great importance.

Practice (research) is an objective utility, derived from the French "moyens d'information de masse", meaning "mass media", and has been in scientific use since the 1960s. Its main characteristic is that the media (newspapers, magazines, radio, television, telephone) can convey information to the public in an open manner. Some commentators have suggested that it is customary to send news stories from top to bottom, and therefore it is better to use the category of "media" instead. Sometimes the term "public education media" is used in the category of mass media. [2]. In Uzbek, and in journalism in particular, these categories are not subject to prosecution, they are generally referred to as "mass media". We think that there are different ways to think about it, to do etymological analysis, to be able to include these categories in terms of the timeliness, objectivity and emotional reception of the news. For example, in the classroom, we sometimes use the terms media report, media center, media analyst. The most important is that the mass media fulfill their media functions.

The literature recognizes the existence of various types of OAVs and categorizes them into transnational, national, regional, and local varieties. In fact, media centers are organized by the same social geography, by the same distribution signals in the cyber space, and each media center operates in a certain geographic area, in a certain locality, in a certain place. But they can also take advantage of the freedom of the press and transnational news. In this case, even a regional newspaper or a provincial TV station is trying to create a global database of news and take advantage of it.

OAV can also be classified by its audience. For example, there are newspapers and magazines for young people, newspapers and magazines for schoolchildren, students, lawyers, doctors, scientists, diplomats, doctors, young researchers, housewives, cooks. The OAV is based on the curiosity of a specific audience, and is designed to meet their needs for news and information. OAW can be grouped into various categories, such as written, visual, and web sites, democratic character, private or public domain, quality of news coverage and dissemination, and publication standards. It's the job of journalism to analyze and reveal their inner functions and signs.

The results of the experiment (research) and the examination of the results: The main function of the mass media (media centers) is to communicate the news and changes in public life to the people, the nation. Any society that seeks to establish democratic values should take advantage of the possibilities offered by social media centers and media outlets. Because democracy is a bunch of one-sided, multi-sided nonsense. The processes of social communication, which are the barometers of public life, are primarily influenced by the mass media, their ideas and worldview, and public information affects the culture, environment [3].

There are fundamental aspects to the mass media itself. One of them participates in the activities of media centers, instructions and presentations of the news subject (journalist, publicist, author) primarily as a creator. These entities, in violation of their rights to freedom of expression and creativity, organize events in media centers, and communicate their views and recommendations to the public about these issues. The mass media, the activity of the journalist, has a syncretic character, in which there are such possibilities as the creation of visual images and the shaping of social thought, the reconstruction of historical experiences and their adaptation to contemporary problems, the decoration of visual aesthetic objects with technical means, the creation of images, symbols and artifacts, the popularization of individual images, metaphysical complexes, the reaching of a wide audience, the dissemination of intellectual power in the media, radio, television, newspapers, magazines, Internet sites. [4]

In our opinion, the first step should be to get rid of the media centers' activities in order to achieve the goals of social development. The goals of social development are the basis for strategic planning of the activities of media centers. If society wants democratic change, media outlets should serve this purpose, and their capabilities and means should help them achieve it. One must keep in mind that in no society is there a complete absence of social purpose, no free newspaper, magazine or television, and even when a blogger declares his private opinion, he is always acting out of the curiosity of the social environment in which he lives and solving the problems of that environment. A second important factor influencing the strategic regulation of media center activity is ethnicity. Whereas in the West, individual rights and freedoms were once again recognized as an ethno-culture, and the activities of all institutions were directed toward the protection of individual interests, in the East, this ethno-culture was reflected in communitarianism. Communitarianism is characterized by the strengthening of community life, the sharing of beliefs, the strengthening of one another's way of life, the tradition of putting the interests of ethnicity, people and race above personal desires. Media centers cannot ignore these ethnicities when strategically planning their activities, because their news products must be specific to the moral demands of the people, the population, and the ethnoenvironment. Could media outlets in Uzbekistan, for example, be a reflection of the democratic changes taking place in our society? Can they not recognize the signs of the disappearance of Uzbek ethnicity and communitarian lifestyle, while relying on democratic tendencies? Of course not. Uzbekistan has made it a strategic goal to build not only a democratic society, but also a democratic society that is in line with the historical and cultural development, mentality and aspirations of the Uzbek people, aimed at addressing the specific interests and needs of our people. So media centers and media outlets can help, guide and facilitate this strategic goal. There are different views and conceptual ideas about the inner workings of media centers. Whether they are democratic institutions, centers of social influence, is determined by their inner activity, their position. In developed countries, media centers have been able to identify and solve problems of the social environment on a national and ethnic scale. Journalists, too, are eager to turn a personal query into a national or ethnic issue, and to make a sensation out of a simple story is considered a career move. In their eyes, the fact that the OAS is a democratic institution is because it has captured both the simple and the precious reality and has attracted the attention of society and the state. This kind of internal organization, on the one hand, gives media outlets autonomy, and on the other hand, removes the need for them to assume responsibility.

Conclusion: Keeping information technology up-to-date and modernized is a requirement of the information age of scientific and technological progress. The dissemination of information technology should be consistent with the dissemination of news. The latest news, the latest technology, when it's disseminated, it's effective, it's popular, and it's educational. In the current era of scientific and technological development, the "third revolution" (Karl Schwabs) is characterized by the rapid dissemination and popularization of new information technologies, and media centers are not exempt from these processes and opportunities. The scientific and technical discoveries that are being made today are the products of the intensification and deepening of knowledge. Nanotechnology, websites, bloggers, and news organizations are disrupting the way that media outlets are infiltrating healthcare, commerce, finance, government services, and social communications. Now, while we need to keep up with the latest news, we also have to struggle to ensure that it has a quick and effective impact. It's what drives us to live in a world of innovation and discovery.

Trust is one of the requirements of a functional market economy. And in a market economy, the CBA is also forced to rely on it. It is the duty of the media to ensure the security of the news and media services, as well as the right and freedom of the person to receive information. The news disseminated by the OAW should not cause conflict between people, and should not be considered as a threat to human dignity and dignity of others. The safety of news and media services is primarily due to the ability to provide objective news and to address humanitarian trends in society.

REFERENCES

1. Mirziyoev Sh.M. Yangi O‘zbekiston strategiyasi. –¬ Toshkent: O‘zbekiston, 2021. – B. 121.
2. Лапшин И.И. Философия изобретения и изобретения в философии.– Москва: Республика, 1999.– С. 91
3. Бадрийяр Ж. Общество потребления. – Москва: Изд. АСТ, 2020. – С. 138–149.
4. Маркина Ю. В. Мировые транснациональные медиа корпорации сегмент глобализации информационной деятельности // Научные ведомости. Серия Гуманитарные науки. – 2018. – Том 37. – С. 25–29.

Uralov E.O., PhD
v.b. Professor
Nizomiy nomidagi Toshkent Davlat Pedagogika Universiteti

O'ZBEKISTONDA SANOATNI RIVOJLANISHINING TARIXIY-GEOGRAFIK TAHLILI

Аннотация: *Ushu maqolada O'zbekiston Respublikasi xududlarida sanoat korxonalarini, sanoat mahsulotlarini dastlabki shakillanishi, rivojlani tarixi ochib berilgan.*
Ключевые слова: *Samarqand, Buxoro, Xiva, Qo'qon, Toshkent, aroq-vino, tamakichilik, tegirmonchilik, ko'nchilik, ipakchilik, yog', sovun va sham tayyorlash.*

Uralov E.O.
Independent researcher
Tashkent State
Pedagogical University named after Nizami

HISTORICAL-GEOGRAPHICAL ANALYSIS OF INDUSTRY DEVELOPMENT IN UZBEKISTAN

Abstract: This article describes the history of the initial formation and development of industrial enterprises and industrial products on the territory of the Republic of Uzbekistan
Keywords: Samarkand, Bukhara, Khiva, Kokan, Toshkent, vodka and wine, tobacco, milling, leather production, silk production, oil, soap and candles.

Tarixan shakllangan respublika aholisiniing tadbirkorlik faoliyatiga moyilligi kichik va o'rta biznes rivojida ham muhim rol o'ynadi. Chunki O'zbekiston Yevrosiyo qit'asining asosiy savdo yo'llari tutashgan yerda joylashgan bo'lib Samarqand, Buxoro, Xiva, Qo'qon kabi shaharlar qadimdanoq, o'zining hunarmandlar, ustalar, va savdogorlar bilan dong taratishgan.

O'zbekiston sanoatini tarixiy rivojlanishini quyidagi davrlarga bo'lishimi mumkin.

1-ikkinchi jahon urishgacha bo'lgan davr sanoati

2- ikkinchi jahon urushidan keyin bo'lgan davr

3-Mustaqillikdan keyingi davr

1-ikkinchi jahon urishgacha bo'lgan davr sanoati. XX asrning 20 yillaridan boshlab O'zbekiston sanoati l-jahon urushi va fuqarolar urushi natijasida inqirozga uchragan mayda, kichik korxonalarni tiklash asosida rivojlana boshladi. Paxta tozalash zavodlari, pillakashlik, yigiruv-to'quv, tikuvchilik, poyabzal fabrikalari qurila boshladi ya'ni qishloqlarda xom ashyo yaqin joylarda yengil sanoat, 1937-yilda Toshkent to'qimachilik kombinati ishga tushirildi, XX asrning 40—50-

yillaridan boshlab ko‘mir sanoati, gaz sanoati, neftь sanoati jadal rivojlana boshladi. [3]

O‘zbekistonda korxonalarni qurish harakatini 1865 yili iqtisodiy rayonning yirik shaharlaridan biri Toshkent bosib olingandan keyin bu yerga kelishgan ruslarning turli qatlamlarning ko‘plab vakillari: harbiylar, amaldorlar, savdogarlar, ishbilarmonlar va boshqalar boshlab berishdi.

Ishbilarmonlar, birinchi navbatda, O‘zbekistonda tansiq bo‘lgan mahsulotlarga e'tiborlarini kuchaytirdilar. Ayniqsa, kundalik ehtiyojlar uchun zarur bo‘lgan gugurt, sovun, sham kabi ro‘zg‘or buyumlariga talab katta edi. Masalan, o‘lkada gugurt ishlab chiqarilmagani uchun u chet ellardan, asosan Rossiyadan keltirilgan.

Yengil sanoat turlaridan biri shoyi to‘qishdan boshqa sohalarda ham mahalliy hunarmandchilik bilan sanoat ishlab chiqarishi o‘rtasida raqobat kuchaydi. Bu kurash sanoatchilar foydasiga hal bo‘la boshladi. Masalan, 1872 yilda Toshkentda ruslar tomonidan Toshkent shahri sanoat ishlab chiqarishi jahatidan boshqa shaharlarga nisbatan tez rivojlandi. 1875-yili shaharning birgina mahalliy aholi yashaydigan qismida 73 ta bo‘yyoqchilik, 102 ta ko‘nchilik, 20 ta sham va sovunchilik korxonalari, 46 ta g‘isht zavodi va 239 ta tegirmon ishlab turgan. Mahalliy mulkdorlar va hunarmandlarga qarashli bo‘lgan zavodlarda (g‘isht zavodlaridan tashqari) ishchilarning soni o‘rtacha 4-5 kishidan oshmagan. Demak, bu zavodlar shu davrda Toshkent shahrini O‘rta Osiyoni boshqarishda markaz sifatida rivojlangan [4] .

Paxta zavodlari qurilishiga Samarqand viloyatida ham e'tibor kuchaydi. Ayniqsa, viloyat hududidan temir yo‘l o‘tkazilishi sanoat korxonalari qurish imkoniyatini kengaytirdi. 1886 yili knyaz Tinxachev tomonidan Kattaqo‘rg‘on uyezdining paxta ko‘p ekiladigan Mitan qishlog‘ida birinchi paxta zavodi qurildi. Demak, Samarqand viloyatida temir yo‘l ishga tushirilgandan keyin dastlabki sanoat korxonalari qurila boshladi.

Kattaqo‘rg‘on shahridan 30 chaqirim masofada joylashgan bu zavodga paxta atrof qishloqlardan ot va ho‘kizlar qo‘shilgan aravalarda tashilgan. Paxta yetishtirishning ko‘payishi tufayli, 1889 yili Kattaqo‘rg‘on shahrida, vokzal yaqinida injener L.O. Yugovich tomonidan bug‘ bilan ishlaydigan va 4 ta paxta tozalash zavodi qurildi. Paxtaga bo‘lgan talabni qondirish uchun har ikkala zavod ham takomillashtirib borildi .

Buxoro viloyatida ham paxta zavodlarining quvvati oshib borishi natijasida, ko‘p miqdorda chigit ham to‘plana boshladi. Ilgari qadrsiz bo‘lgan, hatto ayrim viloyatlarda o‘tin sifatida foydalangan chigitdan 1890-yildan boshlab sanoat usulida yog‘ olishga kirishildi. O‘lkada dastlabki yog‘ zavodi K.K. Drjevetsikiy tomonidan Yangi Buxoro (Kogon)da qurildi. Biroq bu zavod mablag‘ yetishmasligi, aholidan chigit yig‘ib olish imkoniyati cheklanganligi, ayniqsa, mahalliy aholining mashinada tayyorlangan yog‘ni iste'mol qilishni istamasliklari tufayli mahsulotini sota olmaganligi sababli o‘z faoliyatini to‘xtatgan. Chunki mahaliy aholi, ot juvozlardan chiqarilgan yog‘lardan unumli foydalanib kelgan.

Iqtisodiy rayon asosiy e'tibor paxta tozalash sanoatiga qaratilib, yetishtirilgan paxtaning katta qismi zavodlarda, qisman eski usulda mahalliy korxonalarda tozalangan. Paxta tozalash zavodlaridan keyin koʻnchilik, ipakchilik, yogʻ, sovun va sham tayyorlash, aroq-vino, tamakichilik, tegirmonchilik, shuningdek, qurilish materiallari ishlab chiqarishga e'tibor kuchaydi.

Oʻzbekiston sanoat ishlab chiqarishi va kapitalistik munosabatlarning rivojlanishi mahalliy mehnatkashlarning turmush tarziga ham jiddiy oʻzgarishlar kiritdi. Rossiyaning markaziy rayonlaridan sifatli sanoat mahsulotlarining keltirishi natijasida bozori kasod boʻlgan hunarmandlar oʻz kasblarini oʻzgartirishga, dastgohlarni ketmonga almashtirib, mardikorlik qilishga yoki yoʻq korxona egalariga yollanib ishlashga majbur boʻldilar. Oqibatda, hunarmanchilik korxonalarining soni kamaydi.

Oʻzbekiston xalq xoʻjaligi tinch qurilish yoʻliga oʻtib, aholiga keng iste'mol mollari yetkazib berishida respublika sanoat korxonalarning roli katta edi. Urush yillarda mamlakatning gʻarbiy rayonlaridan koʻchirib keltirishdan tinch maqsadda ishlab chiqarishga oʻtish katta ahamiyatga ega boʻlib, bu korxonalar qaytadan rekanstruktsiya qilinib ularning xalq iste'mol mollari ishlab chiqarishga yoʻnaltirish lozim edi.

Xalq xoʻjaligini tinch qurilish yoʻliga oʻtish, uning ishlab chiqarish quvvatini oshirish bu yillarda sanoat, korxonalarida ishchi kuchi, elektr energiya, yoqilgʻi mahsulotlari kabilarning yetishmasligi uni yanada qiyinlashtiradi.

Oʻzbekiston sanoatini qayta qurishda va halq xoʻjaligini rivojlantirishdagi yana bir xususiyat shundan iborat ediki, mamlakat paxta mustaqilligini ta'minlashdek muhim vazifa koʻndalang turardi. Bu esa oxir oqibatda respublikaning qishloq xoʻjaligida paxta yakkahokimligini keltirib chiqardi.

Sobiq shoʻrolar davrida Oʻzbekiston aholisining eng kerakli halq iste'mol mollari bilan ta'minlash, ularning ishlab chiqarish partiya va hukumat mollari bilan ta'minlash, ularni ishlab chiqarish partiya va hukumat rejalarida asosiy oʻrin tutgandi. Biroq bu reja, tadbirlar oʻz vaqtida bajarilmadi yoki bajarilishi yarim yoʻlda qolib ketadi. Mamuriy buyruqbozlik tizimining kuchayishi, yuqoridan turib rejalashtirish, respublikada, paxta yakka hokimligining amalga oshirishi, sanoat korxonalarini asosan xomashyoni qayta ishlashning dastlabki bosqichlariga moslashishi jamiyatni oldinga qarab rivojlanishga katta salbiy ta'sir koʻrsatadi. Ishlab chiqarishda chiqimlar foydadan oshib ketib, ularning oʻrtasidagi farq sobiq ittifoq byudjetidan qoplanardi. Sanoat ishlab chiqarishda maxsulot sifatiga emas, balki miqdoriga katta e'tibor beriladi. Biroq shunga qaramasdan respublika sanoat yirik sanoat ishlab chiqarish hajmi yildan yilga kamayib bordi.

2- ikkinchi jahon urushidan keyin boʻlgan davr. 1941—1945- yillardagi urush davrida Oʻzbekistonga Rossiyaning gʻarbiy qismlaridan 90 ga yaqin sanoat korxonasi koʻchirib keltirildi, ularning koʻpi mashinasozlik, asbobsozlik korxonalari edi. Urushdan keyingi yillarda koʻpgina korxonalar qurilishi natijasida mashinasozlik tarmoqlari koʻpaydi, samolyotsozlik, asbobsozlik, motorsozlik, elektroapparat, elektr dvigateль, ekskavator, kompressor zavodlari qurildi. Toshkent, Olmaliq, Chirchiq, Samarqand, Navoiy, Fargʻona, Yangiyoʻl, Namangan, Shoʻrsuv va boshqa shaharlar kimyo industriyasi markaziga aylandi. Bekobod, Chirchiq, Toshkent shahrida qora metallurgiya, Navoiy, Zarafshon, Olmaliq, Uchquduq shaharlari rangli metallurgiya markazlari hisoblanadi [3].

O‘z davrida Toshkent traktor zavodi, yirik sanoat korxonalardan biri bo‘lgan. “O‘zkishlokxo‘jalikmash,, xolding kompaniyasi tarkibiga kiradi. Universal chopik traktorlari, paxtachilik traktorlari, paxta tashish tirkamalari ishlab chikarilgan. O‘kdori ishlab chikariladigan zavod sifatida 1942-yilda ilk bor tashkil qilingan. 1945-yilda oziq-ovqat mashinasozlik zavodi, Tashprodmashga aylantirilib, oziq-ovqat sanoati uchun uskunalar va xo‘jalik mollari ishlab chiqarilgan. 1950 yildan Paxtachilik mashinasozligi zavodi deb atalib, unda paxtaga dastlabki ishlov berish uchun mashinalar, quritish-tozalash sexlari uchun uskunalar tayyorlangan. 1957- yildan paxta tashiydigan transport vositalari va Gaz 51 avtomashinasi ehtiyot qismlari ishlab chiqaradigan Tashavtomash zavodiga aylantirilgan. 1967 yilda rekontsruktsiya qilingan. 1969-yildan traktor zavodi. 1970 yildan

Rossiyadagi Vladimir traktor zavodida ishlab chiqarilgan tayyor agregat va uzellardan paxtachilik uchun moslashtirilgan paxta modifikatsiyasidagi T28X4 tarktorlari yig‘ilgan. 1972 yildan zavodning o‘zida tayyorlangan uzellardan traktorlar ishlab chiqarila boshladi. 1995 yildan hozirgi nomdadir. 1997 yildan AQShning “Keys” firmasi bilan hamkorlikda traktor ishlab chiqadigan “O‘zbekkeystraktor” qo‘shma korxonasi tashkil etilgan. O‘zbekistonni qishloq xo‘jalik mahsulotlari yetishtirishga katta xissa qo‘shgan [1].

Qurama va Chotqol tog‘lari etagida geologik qidiruv ishlari 1934 yildan boshlangan, natijasida Angren qo‘ng‘ir ko‘mir koni 1940-yilda ishga tushirildi. Ko‘mir xavzaning maydoni qaryib 70 km^2 maydonda, chuqurligi 860 metr gacha, O‘rta Osiyo barcha ko‘mir zaxiralarini ¼ qismini egalagan bo‘lib qatlamlari yura davri yotqiziqlari orasida joylashgan, qatlami judda serxosil yer yuzasida 20 metrdan 130 metrgacha chuqurlikda qazib olingan. Ko‘mir qazib olish bilan birgalikda “Erostigaz” stantsiyasida ko‘mir gazga aylantirilib, yiliga 50 mln. m^3 gaz ishlab chiqarilgan. Mamlakatimiz aholisi eletroenergetika sanoatiga va aholini extiyojlari uchun Angren ko‘mir koni xissa qo‘shib kelmoqda [3] .

3-Mustaqillikdan keyingi davr. Zarafshon mintaqasi qadimiy yirik sanoat korxonalari bu Buxoro vino zavodi “Shohrud” ochiq aktsiyadorlik jamiyatining vino zavodi–vino-aroq mahsulotlari ishlab chiqaruvchi sanoat korxonasi, Buxoro yog‘ ochiq turdagi aktsiyadorlik jamiyati, Navoiy issiqlik elektr stantsiyasi O‘zbekistondagi yillik issiqlik elektr stantsiyasi bo‘lib, u “O‘zbekenegriya” davlat aktsiyadorlik kompaniyasi tarkibida sho‘'ba korxonasi sifatida ochilgan, Navoiy kon-metallurgiya kombinati korxonasi “Qizilqumnodirmetalloltin” davlat kontserin tarkibidagi yirik sanoat korxonasi, Samarqand shahrida “Sino” aktsiyadorlik jamiyati—mashinasozlik sanoati korxonasi, “Samkochavto” qo‘shma korxonasi—avtomobilsozlik sanoati korxonasi. “O‘zavtosanoat” uyushmasi tarkibiga kiradi “O‘zavtosanoat” va “Koch xolding” (Turkiya) kompaniyasining hamkorligida tashkil etilgan. O‘rta hajmli avtobuslar va yuk mashinalari ishlab chiqarishga ixtisoslashgan [2,13]. O‘zbekiston va Turkiya o‘rtasidagi iqtisodiy munosabatlar asosida qo‘shma korxonani qurish to‘g‘risida 1995 yilda bitim, 1996 yilda ta'sis hujjatlari imzolandi. Korxona qurilishini moliyalashtirishda O‘zbekiston Respublikasi (50%), Turkiya tomonidan “KochAvtoinvest LTD” (40%), “RamDish tijaret ” (5%), “Koch xolding” (5%), kompaniyalari qatnashgan. 1999 yil mart oyida zavodning dastlabki mahsulotlari—shahar ichida va shaharlararo yo‘lovchi tashishga mo‘ljallangan o‘rta hajmli avtobuslar, ishlab chiqarildi. 2000 yildan 2 ta dan 5 tagacha yuk ko‘taradigan mashinalar ishlab chiqarish o‘zlashtirildi. 2002 yil shaharlararo yo‘lovchi tashuvchi turbodizelli dvigateь o‘rnatilgan avtobuslar va 10 tonna yuk ko‘taradigan yuk mashinalari ishlab chiqarila boshladi. 2002 yilda, shuningdek, o‘t o‘chirish, assenizatsion, evakuator, yoqilg‘i, ichimlik suv, chiqindi, non va non mahsulotlari tashuvchi maxsus avtomobillar ishlab chiqarish yo‘lga qo‘yildi. Korxonada Yaponiya, Germaniya, Italiya, Angliya va Turkiyada ishlab chiqarilgan eng zamonaviy texnologik uskunalar o‘rnatilgan. Korxonada ishlab chiqarilayotgan avtomobillar tannarxini kamaytirish, ularning butlovchi va ehtiyoj qismlarini mahalliy korxonalarda ishlab chiqarish chora tadbirlari ko‘rilmoqda. Korxona mahsulotlari O‘zbekiston ichki bozorida sotiladi, shuningdek, Rossiya, Ukraina, Qozog‘iston, Afg‘onistonga eksport qilinadi. Eksport salmog‘ini oshirish maqsadlarida shu davlatlarda korxonaning vakolatxonalari ochilgan.

Hamda Samarqand sharob kombinati, Samarqand kimyo zavodi - kimyo sanoatining yirik korxonalaridan biri. “O‘zkimyosanoat” davlat aktsiyadorlik kompaniyasi tarkibiga kiradi. Ammofos, oddiy superfosfat, boyitilgan superfosfat va boshqa fosforli o‘g‘itlar, sulьfat kislota ishlab chiqaradi. Samarqand shahridan 12 km g‘arbda, Kimyogarlar shaxarchasida joylashgan. Dastlab “Samarqand superfosfat zavodi” nomi bilan korxona kurilishi 1950- yilda boshlangan. 1980 yildan hozirgi nomda. 1954 yilda sulьfat kislota sexi, 1955 yilda superfosfat sexi ishga tushirilgan. Oddiy superfosfat, ammoniylashgan superfosfat, texnikada qo‘llaniladigan sulьfat kislota, texnik kislorod, ro‘zg‘orbop kimyoviy mahsulotlar ishlab chiqarish o‘zlashtirilgan. 3avodda 1965 yilda rekonstruktsiya qilinib, ishlab chiqarish quvvatlari 2 marta oshirildi. 1975 yilda yirik sulьfat kislota sexi foydalanishga topshirildi, 1978 yildan jahon tajribasida birinchi marta tarkibida 24,5% R2O5 bo‘lgan past navli Qoratov (Qozog‘iston) fosforitini qayta ishlashga o‘tdi. 1979 yilda zavodning 2navbati qurildi, yillik quvvati 450 ming tonna monogidrat bo‘lgan sulfat kislota sexi, 136,4 ming tonna ekstraktsion fosfor kislota ishlab chiqaradigan fosfor kislota sexi ishga tushirildi. Zavodning ammofos ishlab chiqarish bo‘yicha navbati 1982-1984 yillarda qurilib, ekstraktsion fosfor kislota sexi foydalanishga topshirildi. 1994 yildan zavodda ammoniy sulfat o‘g‘itini ishlab chiqarish o‘zlashtirildi. Korxonaning diammoniy fosfat o‘g‘iti bo‘yicha yillik quvvatini 200 ming tonnaga yetkazish uchun qayta qurish ishlari olib borilmoqda. Yiliga 500 ming tonna sulfat kislota, ammofos va boshqa o‘g‘itlar ishlab chiqarish quvvatlariga ega. Korxona mahalliy xomashyo bazasida ishlashga o‘tkazilgan. Korxonada ishlab chiqarilgan o‘g‘itlar Xitoy, Eron, Turkmaniston va boshqa davlatlarga eksport qilinadi [4] .

Tadbirkorlikning ko‘p yillik an'analari O‘zbekiston mustaqilikka erishganidan so‘ng qaytadan tiklana boshlandi.

Tarkibiy qayta qurishda chuqur o‘zgarishlarni amalga oshirish makroiqtisodiy barqarorlikka erishishning, istiqbolda barqaror iqtisodiy o‘sishini va aholi farovonligini ta'minlashning, jahon iqtisodiy tizimiga qo‘shilishning asosiy shartlaridan biridir.

Xomashyo yetishtirishga qaratilgan, chuqur hududiy nomutanosiliklarga hamda bo‘lgan iqtisodiyotni zamon talabiga javob beruvchi iqtisodiyotga aylantirish uchun quyidagi tarkibiy o‘zgarishlarni amalga oshirish zarur vazifalardan hisoblanadi:

1.Xomashyo yetishtirishga mo‘ljallangan iqtisodiyotimizning bir tomonlamaligini qat'iyan bartaraf etish tomon tarmoq tuzilishini tubdan o‘zgartirish tayyor mahsulot ishlab chiqarishga o‘tish mahsulot sifati va raqobatbardoshligini jahon bozori talablari darajasiga yetkazish.

2. Ishlab chiqaruvchi kuchlarni rivojlantirish va joylashtirishda yo‘l qo‘yilgan nomutanosiblikni tugatish.

Foydalangan adabiyotlar ro’yxati

1) Ўзбекистон миллий Энциклопедияси. 1, 2, 3, 4, 5, 6, 7-жилдлар. – Т.: “Энциклопедия”, 2005

2) Джамалова О.Б. и др. Воспроизподство валового продукта в промышленности Узбекистана. Под. ред.– Т.: «Фан», 1972.-С 13.

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Voxidova Z.T.
Assistant, candidate of medical sciences
Department of Operative Surgery and Topographic Anatomy Samarkand State Medical University

VITAMIN D3 ADMINISTRATION'S THERAPEUTIC BENEFITS ON EMBRYO IMPLANTATION

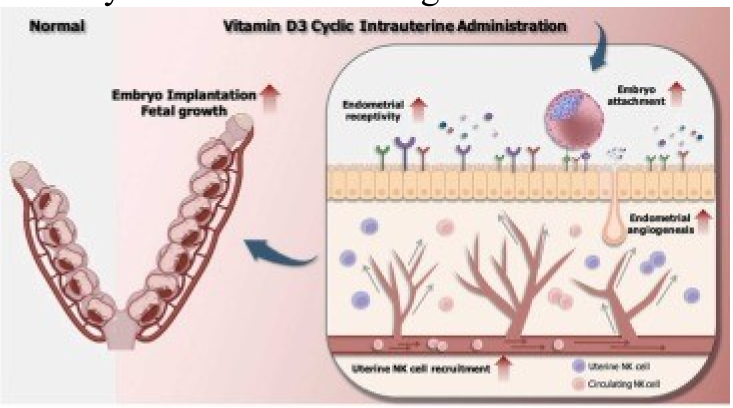
Abstract:*In vitro fertilization (IVF)-embryo transfer (ET) patients who have embryo implantation issues have been clinically tested for a variety of adjuvants. Vitamin D3, a crucial modulator of many physiological processes, has gained attention as a crucial adjuvant for a successful pregnancy because numerous studies have demonstrated a strong correlation between vitamin D deficiency and implantation failure and fetal growth restriction. Nevertheless, vitamin D has been frequently used in various procedures, producing results that are controversial and not reproducible. In this work, we showed that cyclic intrauterine vitamin D3 delivery enhanced angiogenesis and endometrial receptivity, which may be related to a greater recruitment of natural killer cells that reside in the uterus. Specifically, in vitro, cyclic vitamin D3 therapy strengthened the embryo's adhesion to endometrial cells, indicating that it may be useful in promoting the first maternal-fetal contacts during the early stages of embryo implantation. Our results indicate that vitamin D3 may be used as a risk-free adjuvant before IVF-ET operations to improve the uterine environment and make it favorable for embryo implantation in women who have experienced repeated implantation failure.*

Keywords:*Vitamin D3, endometrial receptivity, endometrial angiogenesis,uterine natural killer cells, embryo implantation.*

Introduction

In the complex process of embryo implantation, the blastocyst trophectoderm attaches itself to the uterine luminal epithelium, followed by more stable adherence and penetration into the uterine stroma [1], [2]. A vast vascular network that supports the proper growth of the implanted embryo is formed by the decidua, which coordinates this process [3], [4]. Numerous studies have established a robust link between effective pregnancy maintenance and vitamin D status [5, 6, 7]. Vitamin D levels during pregnancy are essential for fetal growth and rise throughout the first few months of pregnancy and continue to rise until birth [6], [8]. However, there is still uncertainty regarding the precise physiological roles that vitamin D supplementation plays during embryo implantation.

In its active form, cholecalciferol (vitamin D3; 1,25-dihydroxyvitamin D3), vitamin D3 is mainly engaged in the metabolism of calcium and phosphorus, which has a direct bearing on the composition and operation of the skeletal system [9]. By interacting with the vitamin D receptor (VDR), this significantly influences hormone secretion and the immune system [10]. Angiogenesis and re-endothelialization are crucial during embryo implantation and pregnancy, and the vitamin D3–VDR complex stimulates a number of transcription factors that control hypoxia inducible factor 1α signaling [11], [12]. Vitamin D levels in serum and follicular fluid have been found to positively correlate by 6% with the likelihood of a successful pregnancy result after IVF, according to recent research [16], [17], and [18]. Furthermore, enhanced parameters of the regulated ovarian hyperstimulation were substantially correlated with high vitamin D levels [16]. In order to increase implantation rates, we propose an ideal approach for intrauterine vitamin D3 delivery based on our findings.



Material and method

Fertility test

Three groups of female mice were created by random selection and given cyclic treatments every four days for one, two, and twelve days. Certain mice had saline injected into one side of their uterine horns and vitamin D3 put into the other. The mice were put in the same strain of the male cage the following morning. The following morning, the vaginal plug was examined and determined to be on day 1 of pregnancy. Only mice with a vaginal plug were separated from the male at the first day of pregnancy, and the uteri were slaughtered for additional analysis after 17 days. All of the fetus and placenta were weighed, and the number of implantation sites was noted in order to assess the impact of vitamin D3 on fertility.

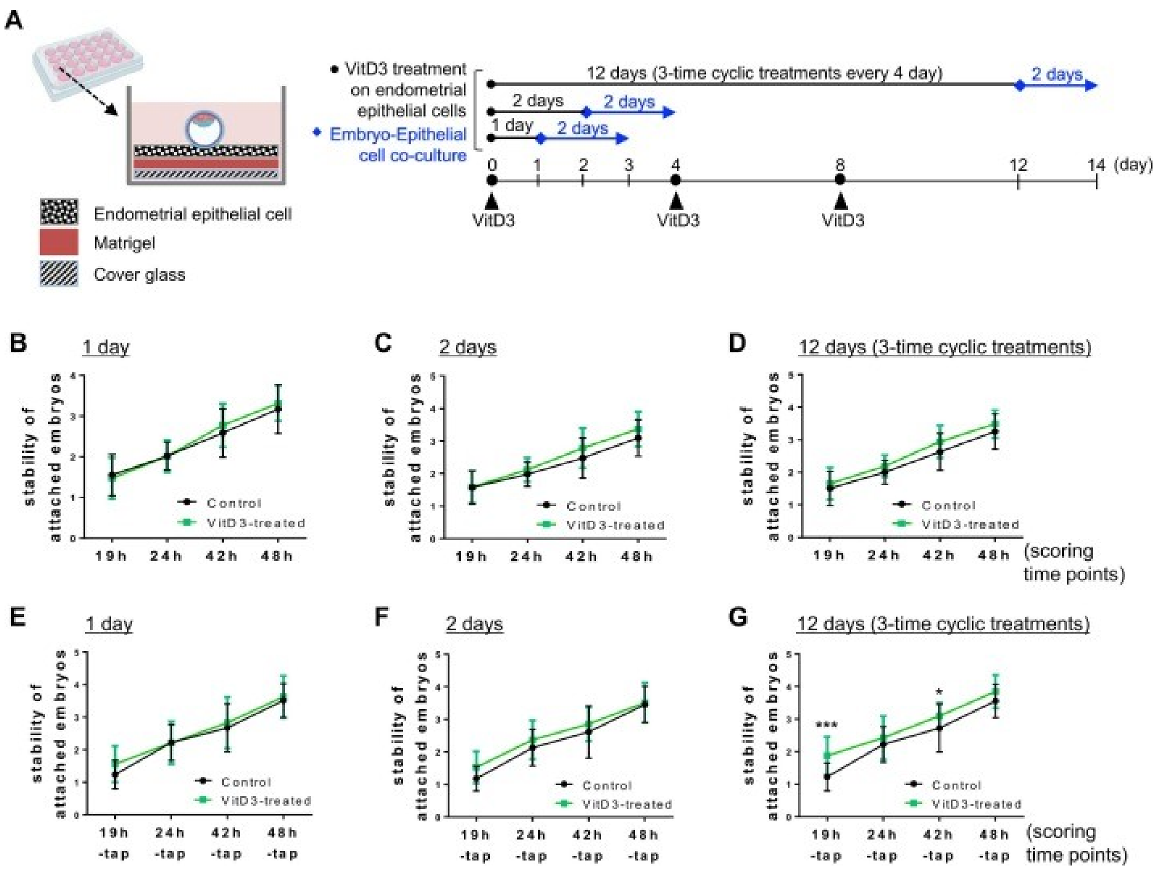


Figure 4: Administration of vitamin D3 accelerates the rate of embryo attachment. (A) 146 embryos (from 14 female mice) were used in the embryo attachment assay experiment. The stability of embryos attached to Ishikawa cells treated with vitamin D3 (y-axis) was measured at the given time-points (x-axis) either with tapping at 1 day (E), 2 days (F), and 12 days (G) or without tapping at 1 day (B), 2 days (C), and 12 days (3-time cyclic treatments every 4 days) (D). (B-G) The unpaired t test is used to examine the data, and p-values (*<0.05, **<0.01, ***<0.001, ****<0.0001) are included.

Discussion

Administration of vitamin D3 accelerates the implantation of embryos.

Using an in vitro model with or without tapping in the presence or absence of vitamin D3 pre-treatment of endometrial cells (1 day, 2 days, and 12 days; three-time cyclic treatments every 4 days), we evaluated the stability of embryos attached onto endometrial epithelial cells in order to assess the effects of vitamin D3 administration on the rate of embryo attachment (Fig. 4A). When the embryos were not disturbed during this procedure, assay studies showed that there was no discernible difference in the stability of connected embryos between the cells prepped with vitamin D3 and those pretreated with saline at any time points. In this study, we showed that cyclic intrauterine vitamin D3 injection boosted angiogenesis and endometrial receptivity, which in turn attracted more uterine-resident NK cells throughout pregnancy(Fig.4). Specifically, vitamin D3 treatment resulted in a more stable attachment of the embryo to endometrial cells in vitro, indicating that it may be useful in supporting the first maternal-fetal connection during the early phases of embryo implantation.

Our results demonstrated that the group that received vitamin D3 cyclically had the most markedly elevated endometrial expression of adhesion molecules (Itgb3 and Spp1), with particularly high expression in both luminal and glandular epithelia. The group that received only one treatment (1–4 days) showed the greatest variation in the expression of the secretion factor Lif (Fig. 1). Our results showed that cyclic vitamin D3 delivery led to a more stable attachment of embryos on endometrial cells primed with vitamin D3. At day 17 of pregnancy, the group that received three cycles of vitamin D3 therapy also had higher fetal weight and implantation sites. All of these results point to vitamin D3 playing a beneficial function in maternal-fetal interactions when implantation and pregnancy maintenance are just getting started.

Conclusions

Here, we find that cyclic intrauterine vitamin D3 delivery fostered consistent maternal–fetal connections during the early phase of implantation, increased endometrial receptivity and angiogenesis, and triggered the recruitment of uterine-resident NK cells. Based on our results, we propose that vitamin D3 could be used as a risk-free adjuvant during IVF-ET to help women who experience repeated implantation failure.

References

1.J.D. Aplin, P.T. Ruane.Embryo-epithelium interactions during implantation at a glance.J. Cell Sci., 130 (2017), pp. 15-22

2.K. Diedrich, B.C. Fauser, P. Devroey, G. Griesinger, G. Evian Annual Reproduction WorkshopThe role of the endometrium and embryo in human implantationHum. Reprod. Update, 13 (2007), pp. 365-377

3.S.K. Dey, H. Lim, S.K. Das, J. Reese, B.C. Paria, T. Daikoku, *et al.*Molecular cues to implantation. Endocr. Rev., 25 (2004), pp. 341-373

4.A.M. Kelleher, J. Milano-Foster, S.K. Behura, T.E. Spencer.Uterine glands coordinate on-time embryo implantation and impact endometrial decidualization for pregnancy success.Nat. Commun., 9 (2018), p. 2435

5.H. Du, G.S. Daftary, S.I. Lalwani, H.S. Taylor.Direct regulation of HOXA10 by 1,25-(OH)2D3 in human myelomonocytic cells and human endometrial stromal cells

Mol. Endocrinol., 19 (2005), pp. 2222-2233

6.K. Jakubiec-Wisniewska, H. Huras, M. Kolak.Effect of vitamin D supplementation on the fetal growth rate in pregnancy complicated by fetal growth restriction.Children, 9 (2022)

7.D. Li, Y. Xu, K. Wang, Z. Yang, H. Li, S. Lei, *et al.*Maternal Vit D supplementation in AMA mice and the role of Vit D/VDR signaling in the offspring's cognition.Am. J. Transl. Res., 13 (2021), pp. 12650-12661

8.K. von Websky, A.A. Hasan, C. Reichetzeder, O. Tsuprykov, B. Hocher.Impact of vitamin D on pregnancy-related disorders and on offspring outcome.J. Steroid Biochem. Mol. Biol., 180 (2018), pp. 51-64

9.P. Skowronska, E. Pastuszek, W. Kuczynski, M. Jaszczol, P. Kuc, G. Jakiel, *et al.*.The role of vitamin D in reproductive dysfunction in women – a systematic review.Ann. Agric. Environ. Med., 23 (2016), pp. 671-676

10.H. Hou, J.Y. Zhang, D. Chen, F. Deng, A.N. Morse, X. Qiu, *et al.*.Altered decidual and placental catabolism of vitamin D may contribute to the aetiology of spontaneous miscarriage

Placenta, 92 (2020), pp. 1-8

11.X. Ge, L. Wang, M. Li, N. Xu, F. Yu, F. Yang, *et al.*Vitamin D/VDR signaling inhibits LPS-induced IFNgamma and IL-1beta in Oral epithelia by regulating hypoxia-inducible factor-1alpha signaling pathway. Cell Commun. Signal., 17 (2019), p. 18

12.M.S. Wong, M.S. Leisegang, C. Kruse, J. Vogel, C. Schurmann, N. Dehne, *et al.*

Vitamin D promotes vascular regeneration. Circulation, 130 (2014), pp. 976-986

13.T. Yoshizawa, Y. Handa, Y. Uematsu, S. Takeda, K. Sekine, Y. Yoshihara, *et al.*

Mice lacking the vitamin D receptor exhibit impaired bone formation, uterine hypoplasia and growth retardation after weaning.Nat. Genet., 16 (1997), pp. 391-396

Xakimova Ir. X.
Chirchiq davlat pedagogika universiteti
Menejment kafedrasi o'qituvchisi

TA`LIM KLASTERI SHAROITIDA ZAMONAVIY O`QITUVCHI NUFUZINI OSHIRISHDA SHAXSGA YO`NALTIRILGAN TA`LIM METODIKASINI TAKOMILLASHTIRISH

Annotatsiya. *Ushbu maqola "Ta'lim klasteri sharoitida zamonaviy o'qituvchi nufuzini oshirishda shaxsga yo'naltirilgan ta'lim metodikasini takomillashtirish" mavzusida yozilgan. Maqolada shaxsga yo'naltirilgan ta'limning asosiy tamoyillari, metodlari va uning ta'lim jarayonida o'qituvchi nufuzini oshirishdagi ahamiyati tahlil qilinadi. Ta'lim klasterlari - bu ta'lim tizimida birlashgan va o'zaro hamkorlik qiladigan muassasalar va tashkilotlar tarmog'i sifatida ko'rib chiqilib, o'qituvchilarning professionalligi, innovatsion yondashuvlar va zamonaviy pedagogik texnologiyalarni qo'llash orqali o'qituvchi nufuzini oshirishning muhim imkoniyatlari ko'rsatiladi. Ushbu tadqiqot natijalari ta'lim sohasidagi amaliyotchilar, o'qituvchilar va ta'lim muassasalari uchun foydali tavsiyalarni taqdim etadi. Maqola shuningdek, o'qituvchilarni shaxsiy rivojlanish va ta'lim jarayoniga integratsiyalashgan yondashuv orqali yanada muvaffaqiyatli faoliyat yuritishga undaydi.*

Kalit so'zlar: *ta'lim klasteri, zamonaviy o'qituvchi, nufuz, shaxsga yo'naltirilgan ta'lim, metodika, takomillashtirish, innovatsion yondashuvlar.*

Khakimova I. Kh.
Teacher
of the Department of Management
Chirchik State Pedagogical University

IMPROVING PERSONALIZED EDUCATIONAL METHODOLOGY FOR INCREASING THE INFLUENCE OF A MODERN TEACHER IN EDUCATIONAL CLUSTER CONDITIONS

Abstract. *This article is written on the topic of "Improving the methodology of person-oriented education in increasing the authority of a modern teacher in the conditions of an educational cluster." The article analyzes the main principles and methods of person-oriented education and its importance in increasing the authority of the teacher in the educational process. Educational clusters are considered as a network of institutions and organizations that are united and cooperate in the educational system, and it is important to increase the authority of teachers through the use of professionalism of teachers, innovative approaches and modern pedagogical technologies. options are displayed. The findings of this study provide useful recommendations for educational practitioners, teachers, and educational* *institutions. The article also encourages teachers to work more successfully through an integrated approach to personal development and the educational process.*

Key words: *educational cluster, modern teacher, authority, person-oriented education, methodology, improvement, innovative approaches.*

KIRISH

Ta’lim sifatining pastligi hamda aholini savodsiz qilish o‘z navbatida jamiyatda sayoz fikrlash natijasida insonlar o‘rtasida bo‘linish va muxolifat yo‘nalishlarining paydo bulishiga, ijtimoiy tengsizlikka, amalga oshirilayotgan islohotlarning samarasizligiga, davlatning progressiv ijtimoiy-iqtisodiy rivojlanishiga tahdid solishi mumkin.

Buning uchun eng avvalo yosh avlod ongida sog‘lom dunyoqarashni shakllantirish uchun ta’lim tizimimizni yangi bosqichga olib chiqish loxim. Chunki fikrsizlik bu madaniyat kushandasi, ma’naviy o‘lim! Fikri yo‘q, odamning qiyofasi ham bo‘lmaydi, deydilar. Fikr yo‘q joyda olomonlik va johillik avj oladi. Bunga misol tariqasida dunyoda sodir bo‘layotgan tahlikali holatlar guvohlik beradi.

Zamonaviy ta’lim muassasalarining asosiy metodik yutuqlaridan biri sifatida qaralayotgan “Shaxsga yo‘naltirilgan ta’lim” pedagogik yo‘nalishda olib borilayotgan izlanishlarning predmetiga aylanganligini mazkur sohaga oid tadqiqotlar tahlili dalolat beradi. Shaxsga yo‘naltirilgan ta’lim (ShYT) ta’lim oluvchi (o‘quvchi yoki talaba)larga o‘z-o‘zini namoyon etish, mustaqil ta’lim olish (o‘qish, o‘rganish)ga intilish, o‘z qobiliyatlarini, ma’naviy kamolini rivojlantirish, o‘z-o‘zini anglash uchun eng maqbul sharoitni yaratuvchi o‘ziga xos pedagogik faoliyat sifatida qaralishi mazkur izlanishlar mazmuniga singdirilgan.

ADABIYOTLAR SHARHI

O‘z tadqiqot ishida ShYT texnologiyasini loyihaviy metod aspektida tadqiq etgan N.A. Alekseev ushbu tushunchani qisqa satrlarda tavsiflab o‘tadi [1]:

1. Shaxsga yo‘naltirilgan ta’lim (ShYT) – bu ta’lim oluvchining o‘ziga xosligi (xarakter-xususiyatlari), qadriyatlari va o‘quv jarayoni sub’ektivligini birinchi o‘ringa qo‘yadigan ta’lim turidir**.**

Mazkur masala yoritilgan qator izlanishlarda ShYT an’anaviy, ya’ni jamiyatda muayyan vazifani bajarishni o‘rgatadigan ta’lim turiga qarama- qarshi qo‘yilganligini kuztishimiz mumkin.

2. *ShYT* – bu faqatgina ta’lim oluvchi sub’ekt (shaxs)ning o‘ziga xosligini e’tiborga olish, balki ta’lim jarayonini tashkil etishning boshqa bir metodologiyasi bo‘lib, unda ta’lim oluvchidan shaxsiy funksiyalarni “yoqish/faollashtirish” yoki shaxsiy tajribalarning o‘zi talab etiladi.

Ushbu nuqtai nazarda, ya’ni shaxsiy tajribaga to‘xtalgan I.S.Yakimanskaya uning uch ko‘rinishini qayd etgan:

- predmetlar, tasavvur va tushunchalar;
- harakat va texnikalar, faoliyat/harakatni amalga oshiruvchi qoidalar (aqliy va amaliy);
- emotsinal kodlar (sub’ektiv/shaxsiy qadriyatlar, stereotiplar [2].

Sohaviy adabiyotlar tahlilidan ayon bo‘ladiki, “shaxsiy funksiyalar” tushunchasi pedagogika faniga dastlab V.V.Serikov tomonidan kiritilgan bo‘lib, u quyidagicha tasniflanadi: “Shaxsiy funksiyalar – bu (bu yerda) muayyan shaxsning mantiqiy fazilatlariga xos xislat emas, balki uning “shaxs sifatida namoyon bo‘lishi”ni ta’minlaydigan ijtimoiy ko‘rinishlardir”. Motivatsiya, vositachilik, kolliziya (qarama-qarshi qarashlar, intilishlar yoki manfaatlar to‘qnashuvi), tanqid, refleksiya, mantiqiy ijodkorlik, orientatsiya, o‘z-o‘zini namoyon qila olish, hayotiy faoliyatni ma’naviy jihatdan barqaror saqlash kabi xislatlar shaxsiy funksiyalar sifatida qayd etiladi [3].

TADQIQOT METODOLOGIYASI VA EMPIRIK TAHLIL

Mazkur shaxsiy funksiyalarni quyidagicha tafsiflash, tushunish mumkin bo‘ladi:

a. motivatsion – o‘z faoliyatini qabul qilish va asoslash;

b. vositachilik –shaxs tashqi ta’sir va xatti-harakatlar ichki impulslariga vositachilik qiladi;

shaxs ichki hamma narsani tashqariga chiqarmaydi, cheklaydi, ularga ijtimoiy shakl beradi;

c. kolliziyaviy – shaxs to‘liq garmoniya (uyg‘unlik)ni qabul qilmaydi, normal, rivojlangan shaxsiyat qarama-qarshiliklarga yuz tutadi, qidiradi;

d. tanqidiy – shaxs har qanday taklif qilingan vositalarga tanqidiy yondashadi, duch kelgan har qanday narsa norozilikka sabab bo‘ladi;

e. refleksiv – inson “Men”ining barqaror qiyofasini yaratish va ongda saqlash;

f. mantiqiy ijodkorlik – shaxs doimo ma’nolar ierarxiyasini aniqlaydi: nima maqsadda hayot kechirayotganligi borasida qanchalik tez- tezfikr yuritsa, u shunchalik rivojlangan sanaladi;

NATIJALAR

Keyingi yillarda umumta’lim tizimida sezilarli ijobiy o‘zgarishlar yuz berdi.

Davlatimiz rahbari qapopira muvofiq, maktabgacha ta’lim tizimi yangitdan shakllantirilgani, maktab, akademik litseylar faoliyati takomillashuvi, xorijning oliy o‘quv dargohlari ochilib, oliy ta’limga qabul kvotalarining kengaytirilgani, ustoz va murabbiylarning moddiy hamda ma’naviy rag‘batlantirilgani jamiyatda muallimning obro‘ va nufuzini oshirishga zamin yaratmoqda.

Shuningdek, atoqli shoir-yozuvchilarning ijod maktablari, Prezident maktablari, Adiblar xiyoboni tashkil etildi. Darhaqiqat, jamiyat hayotida yangicha qarashlar, o‘ziga xoc yondashuvlar paydo bo‘lmoqda.

Masalan, umumiy o‘rta ta’lim bosqichida kasbga o‘rgatish tizimi mehnat bozori talablariga moslashtirilmoqda. Bitiruvchilarni ish bilan ta’minlash borasida harakatlar boshlangan.

Pirovardida, ushbu tashkiliy-hyqyqiy ishlarning natijasi O‘zbekiston yalpi ichki mahsulotida tezroq namoyon bo‘lishi va xalqimiz farovonligining yuksalishiga xizmat qilishiga ishonamiz.

O‘zbekiston - ulkan imkoniyatlar mamlakati. Buni tariximiz ham bugungi kunimiz ham yaqqol o‘z namunalari bilan ko‘rsatib bergan. Shu boisdan ham ta’lim tizimida buyuk oʻzgarishlar yangi davr sharofati ila bosqichma-bosqich minglab islohotlarga yoʻl ochmoqda.

XULOSA VA MUNOZARA

Yuqoridagilarni hisobga olgan holda, quyidagi konseptual masalalarga alohida e’tibor qaratish zarur.

Birinchidan, mustaqillik yillarida aholining aksariyat qismi iqtisodiy qiyinchiliklardan aziyat chekkani bois mamlakatda yuzaga kelgan va kelib chiqishi mumkin bulgan iqtisodiy muammolarning yechimini toʻgʻri yoʻlga qoʻyish va ushbu masalalarni soha vakillari hisobiga hal etish maqsadida ta’lim va ishlab chiqarish oʻrtasidagi aloqalarni rivojlantirish asosiy mezondir.

Ikkinchidan, globallashuv sharoitida ma’naviy xavf-xatar iskanjasiga tushib qolish va yoshlar ongini boshqa tomonlarga yoʻnaltirmaslik uchun oʻquvchi va fuqarolar oʻrtasida Oʻzbekiston dunyoviy davlatdir degan tushunchani singdirgan holda muqaddas dinimizga hurmat ruhida tarbiyalash.

Mamlakatni koʻp millatli va koʻp konfessiyali ekanligini inobatga olgan holda oʻta muhim siyosiy, ijtimoiy va mafkuraviy maslalarga alohida e’tibor qaratish. Zero, buyuk qirgʻiz adibi Chingiz Aytmatov aytganidek **“Har bir oila oʻz farzandlarini har qanday mafkuraviy tajovuzkorlikdan himoya qilishga tayyor bulib turishi kerak”,** degan fikr oila va ta’lim muassasasi oʻrtasidagi uzviy zanjir hosil qilishi lozim.

Uchinchidan, Oʻzbekistonda ta’limni rivojlantirish, uni tubdan qayta oʻzgartirishda aniq yoʻnalishlar asosida ish olib borish.

Xususan, 1) ta’limni tubdan demokratlashtirish, 2) uzluksiz ta’lim gʻoyasi, soʻng “ta’lim — bir umrga” gʻoyasini “ta’lim — butun umr davomida” gʻoyasiga almashtirish, 3) bu nafaqat mutaxassislarni tayyorlash vositasi, balki jamiyatga ongli, fidoyi insonlarni yetkazib berish, 4) ta’limning globallashuviga erishish, 5) ta’limni axborotlashtirish.

Toʻrtinchidan, zamonaviy Oʻzbekistonda bugungi kun va kelajak uchun jamiyatda zamonaviy demokratik prinsiplar asosida fuqarolik jamiyatni shakllantirish.

Bunda dunyoning ilgʻor rivojlangan davlatlari tajribasini xususan Amerika, gʻarbiy Yevropa va Janubi-Sharqiy Osiyoning rivojlangan davlatlari taraqqiyotida oʻzaro farqli jihatlarni koʻrib chiqish, **fan va ishlab chiqarishning uygʻunligida erishilgan natijalar oʻlaroq** oʻz ta’lim tizimimizda transformatsiya jarayonlarini oʻzaro bogʻliqlikda amalga oshirish.

Shaxsga yoʻnaltirilgan ta’limni samarali tashkil etish mezonlari shaxsiy rivojlanish parametrlari hisoblanadi. Turli mualliflar tomonidan ularning indikativ roʻyxati shaxsiyat funksiyalari roʻyxatiga oʻxshaydi. Biroq, barcha tadqiqotchilar ushbu tushunchalarni amaliyotga tatbiq etish va ularni diagnostika qilish uchun adekvat tizimni yaratishdagi qiyinchiliklarni ta’kidlaydilar.

ADABIYOTLAR RO`YXATI

1. Alekseev N. A. Shaxsga yo'naltirilgan ta'lim; Nazariya va amaliyot masalalari: Monografiya. – Tyumen: Tyumen davlat universiteti nashriyoti, 2016. – 216 p.

2. Yakimanskaya I.S. Maktab o'quvchilarining shaxsiy rivojlanishiga qaratilgan ta'lim dasturlariga qo'yiladigan talablar // Psixologiya savollari. 2014 yil, –No 2. – B.64-77
3. Serikov V.V. Shaxsga yo'naltirilgan ta'lim // Pedagogika. 2014. – B.17.
4. Bespalova L. Klaster nima? [Elektron resurs] // URL: http://siok.rightside.ru/siok/ 2009-12-01-06-24-41. Qopqoq. ekrandan.
5. Osechkina L.I. Klaster yondashuvi universitet samaradorligini oshirish sharti sifatida // Rossiyada oliy ta'lim. 2012. № 8-9. 75-bet.
6. Sidorin A.V. Klaster yondashuvi asosida yuqori texnologiyali sanoatning kadrlar salohiyatini shakllantirish tizimi // "Naukovedenie" Internet jurnali. 2012 yil. № 4. S. 3.
7. Porter M. Musobaqa. Kiev: Uilyams, 2001. 208 b.
8. Davydova N.N., Igoshev B.M. Ta'lim klasteri uzluksiz pedagogik ta'limning mintaqaviy modelining tizimli tarkibiy qismi sifatida // Rossiyada pedagogik ta'lim. 2014. 75-bet.
9. Zohidov G.E. Klaster usuli yordamida ishlab chiqarishni tashkil etish va boshqarish usuli. T.: Fan, 2016. 160 b.

Xamrakulov O.M.
Farg'ona davlat universiteti
harbiy ta'lim fakulteti
mustaqil tadqiqotchisi

JADIDCHILIKNING PAYDO BO'LISHI VA RIVOJLANISHI JADIDCHILIK HARAKATINING TARIXIY SHARTLARI VA ASOSIY SHAXSLARI

Annotatsiya: *Zamonaviy dunyoda harbiy xizmatchilardan shaxsni har tomonlama rivojlantirishga qaratilgan yangi o'qitish usullarini ishlab chiqishni talab qiladigan dolzarb vazifa bo'lib qoldi. Harbiy ta'lim tizimi o'z oldiga yuqori shaxsiy sifatlarga, fazilatlarga, intizomga, shuningdek noaniq va qiyin sharoitda qaror qabul qilish qobiliyatiga ega bo'lgan professional kadrlami tayyorlash vazifasini qo'yadi.*

Shu nuqtai nazardan, XX asr boshlarida mamlakatlarda ta'lim tizimlarini yangilashda muhim rol o'ynagan jadidchilik — islohot harakati alohida qiziqish uyg'otmoqda. Jadidchilik ta'limoti tamoyillarining integratsiyasi talabalaming tanqidiy fikrlash, mas'uliyat va o'zini safarbar etish ko'nikmalarini rivojlantirish orqali ularning ta'lim darajasini oshirishi kutilmoqda.

Kalit so'zlar:

Jadidchilik, ma'naviy tushuncha, jasorat, ma'rifat, fidoyilik, ijtimoiy, siyosi, ma'rifiy harakat, uyg'onish mafkurasi, matbuotni ijtimoisiyosiy, millatning o'zligi, vatanparvarlik, milliyozodlik, konservatizm, konsepsiya, avangard jadidlar.

Khamrakulov O.M.
Fergana State University
Faculty of military education
independent researcher

THE EMERGENCE AND DEVELOPMENT OF JADIDISM, THE HISTORICAL CONDITIONS AND MAIN FIGURES OF THE JADIDISM MOVEMENT

(Abstract) *In the modern world, a task has become urgent that requires military personnel to develop new training methods aimed at the comprehensive development of the individual. The military education system sets itself the task of training professional personnel with high personal qualities, qualities, discipline, as well as the ability to make decisions in uncertain and difficult conditions.*

From this point of view, the Jadidist-reform movement, which played an important role in updating education systems in countries at the beginning of the 20th century, is of particular interest. Integrating the principles of Jadidism is expected to enhance my students' educational attainment by developing critical thinking skills, responsibility, and self-mobilization.

Key words:

Djadidism, spiritual understanding, mujestvo, enlightenment, samootverjennost, sotsialnoe, politicheskoe, prosvetitelskoe dvijenie, ideology probujdeniya, pressa, obshchestvenno-politicheskaya, natsionalnaya identichnost, patriotism, nationalism, conservatism, concept, avant-garde djadidy.

Kirish (Introduction)

Zamonaviy dunyoda harbiy xizmatchilardan shaxsni har tomonlama rivojlantirishga qaratilgan yangi o‘qitish usullarini ishlab chiqishni talab qiladigan dolzarb vazifa bo‘lib qoldi. Harbiy ta'lim tizimi o‘z oldiga yuqori shaxsiy sifatlarga, fazilatlarga, intizomga, shuningdek noaniq va qiyin sharoitda qaror qabul qilish qobiliyatiga ega bo‘lgan professional kadrlami tayyorlash vazifasini qo‘yadi.

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O‘zbekiston Respublikasi prezidenti Shavkat Mirziyoyev: “Jadidlar g‘oyasi –
Yangi O‘zbekiston strategiyasi bilan har tomonlama uyg‘un va hamohang. [1]
“Mamlakatimiz o‘z taraqqiyotining yangi, yuksak bosqichiga kirayotgan hozirgi p aytda bizga jadid bobolarimiz kabi g‘arb ilmfan yutuqlari bilan birga, milliy qadriy atlar ruhida tarbiya topgan yetuk kadrlar suv bilan havodek zarur”, - dedi prezident .

Davlat rahbari Toshkentda ўтказилган **“Jadidlar: milliy o‘zlik, istiqlol va davlatchilik g‘oyalari”** mavzusidagi konferensiya jahon ilmfan va madaniy jamoa tchiligi o‘rtasida katta qiziqish va e’tibor uyg‘otdi. Bu ishlarni yanada kengaytirish va
yangi bosqichga ko‘tarish maqsadida prezident qarori qabul qilinadi dedi prezident

Ja didchilik yoki jadidizm (arabcha: جديد jadīd — yangi деган маънони англатади) – XIX asr oxiглари XX asr boshлapida Turkiston, Kavkaz, Qrim, Tatariston hayotida muhim ahamiyat kasb etgan ijtimoiy-siyosiy, ma’rifiy harakat[1]. Jadidchilik харакати dastlab, XIX asrning 80-yillarida Qrimda vujudga keldi. XIX asrning 90-yillaridan бошлаб O‘rta Osiyoda tarqaldi.

Jadidchilik avval madaniyat ва маръpифат sohaларидаги harakat sifatida faoliyat yuritgan. Bu ҳаракат vakillari taraqqiyot uchun kurashish, turkiy tillarni rivojlantirish, shu tillardagi adabiyotni boyitish, dunyoviy ilmlarni o‘rganish, fan ва texnika yutuqlaridan foydalanish hamda ayollar va erkaklar tengligi uchun kurashishga chaqirishgan.

Sobiq Sovet davrida yozilgan adabiyotlarda jadidchilikka „burjua-liberal, millatchilik harakati“ deb ta’rif berilgan.

Jadidchilik dastlab XIX-asrning 80-90yillarida Qrimlik Ismoil Gaspirali rahbarligi ostida qrim tatarlar xalqi o‘rtasida vujudga kelgan.

Ismoil Gaspirali - qrim-tatar millatiga oid ziyolilar vakili, pedagog, yozuvchi, yirik siyosiy va jamoat arbobi . U jadidchilik va panturkizmning[1] asoschi deb ham hisoblanadi[2].

Ismoil Gaspirali nomi islom Sharq xalqlarining ma’rifatparvarlik harakati — jadidchilikning (**ta’limning (ta’limotning) yangi, dunyoviyroq usuli**) asos solishi va rivojlanishi bilan bog‘liq bo‘lib, u ko‘plab musulmon mamlakatlarida boshlang‘ich ta’lim berishda ko‘proq dunyoviy qarashlarga utg‘u beradi**. Odatiy ta’limning mohiyatini va tuzilishini tubdan o‘zgartirishga mansub**. Ismoil Gaspirali ma’rifatparvar ta’limning kelib chiqishi va maktabda jadidchilik deb nomlangan dunyoviy bilimlarni o‘qitish usulining rivojlanishida turdi. U o‘zining darslik, qo‘llanma va asarlarida musulmon mamlakatlaridagi boshlang‘ich maktabning allaqachon tanish bo‘lgan qonunlariga sezilarli darajada ta’sir ko‘rsatdi. Aynan Ismoil Gasprinskiy milliy-konfessional tizimni o‘zgartirish asoslarini ishlab chib ta’lim tizimiga joriy qildi. Ismoil Gasprinskiy o‘z tamoyillarini jamiyat taraqqiyotidagi taraqqiyot va konfessional bag‘rikenglikka asoslagan.

Gaspirali Ismoil yangi o‘qitish usullarini nafaqat Qrimda, balki Tatariston, Qozog‘iston, Boshqirdiston, Turkmaniston, Tojikiston, O‘zbekiston, Qirg‘iziston, Ozarbayjon, Turkiya, Shimoliy Fors va Sharqiy Xitoyda ham amalga qo‘lladi. Milliy rusumdagi yangi usul maktablari uchun darsliklar, qo‘llanmalar yozgan va nashr ettirgan.

Ismoil Gaspirali o‘sha davrdagi Rossiya matbaa ishchilari kasaba uyushmasining rvojlaniishida mahkam turdi. Ismoil Gaspirali ko‘plab „Kambag‘al musulmonlarga yordam berish jamiyatlari“, „Kutubxona jamiyatlari“ni tashkil etish taklif va g‘oyalarini tarqatgan va ularning ko‘pchiligida shaxsan o‘zi ishtirok etgan. Ismoil Gaspiralining mafkuraviy tamoyillari va g‘oyalari liberal mafkura, jamiyatning ilg‘or rivojlanishi, turkiy va slavyan xalqlarning do‘stligi, musulmon va xristianlarning diniy bag‘rikengligi, sotsialistlarning radikal talablarini rad etish asosida yaratilgan edi. Ismoil Gaspirali jamiyat taraqqiyotining evolyutsion shakllarini yoqladi.

Ismoil Gaspiralining qarashlari ijtimoiy kelib chiqish ahamiyati jihatidan atoqli pedagog va faylasuflar kabilarning g‘oyalari qatorida turadi.

Jadidchilik harakati harakatchilari o‘zlarini vatanparvar, taraqqiyparvarlar, keyinchalik esa jadidlar deb atashgan. O‘sha vaqtning ilg‘or vatanparvar, taraqqiyparvar kuchlari, birinchi navbatda, ziyolilar mahalliy aholining umumjahon taraqqiyotidan orqada qolayotganligini his etib, xalqni isloh qilishmajburligini tushunib yetgandilar.

Jadidchilik avvalo siyosiy harakat edi. Uning shakllanish, ifodalanish va mag‘lubiyatga uchrash oraliqlari bo‘lib, ular to‘rt davirga bo‘lish mumkin. Turkiston, Buxoro va Xiva hududida bu davrlar:

1. 1895–1905;
2. 1906–1916;
3. 1917–1920;
4. 1921–1929-yillarni o‘z ichiga oladi.

Ilk davrda yani birinchi Turkistonda Rossiyasining podshosi mustahkam o‘rnashib olishi kuzatiladi. O‘sha vaqtda mahalliy aholining talab va ehtiyojlari nazarga olinmay qo‘yildi, diniy e’tiqodlari, urf-odatlari bilan hisoblashmaslik, ularni mensimaslik xolatlari tobora kuchaydi. Hayotiy, ilmiy va amaliyotga ega bo‘lgan saviyasi yuqori bo‘lgan qozilar tajribasiz kishilar bilan almashtirildi, poraxo‘rlik, ijtimoiy-siyosiy adolatsizlik avj ola boshladi.

Madrasa va maktablar faoliyatlarini cheklash, mahalliy joy nomlarini ruscha atamalar bilan almashtirish, hatto mahkama jarayonida qozilar bo‘yniga xoch taqtirishgacha borildi.

Millatning nurli istiqbolini o‘ylovchi taraqqiyparvar kuchlar xalqning deyarli barcha tabaqalari - hunarmand, dehqon, savdogar, mulkdor, ulamolar orasida mavjud edi. Ziyolilar dastlab chorizmga (chorrossiya tizimi) qarshi kurashni xalqni asriy qoloqlikdan uyg‘otish - siyosiy-ma’rifiy jabhadan boshlashga qaror qildilar. Jadidchilik harakati shunday tarixiy bir sharoitda Turkiston mintaqasida rivojlanish uchun o‘ziga qulay zamin yarata oldi.

Ular orasidan yetuk olimlar, zamonaviy bilimdon mutaxassislari, madaniyat arboblari yetishib chiqib, yurtni obod va o‘z yurtini mustaqil ko‘rishni orzu qildilar va shu yo‘lda kurashdilar kereak bo‘lsa jononi ham qurbon qildilar. Jadidlarning Turkiston mustaqilligi uchun kurashida asosan yo‘nalishlari ustuvor edi:

1. yangi usul maktablari tarmog‘ini kengaytirish;
2. qobiliyatli yoshlarni chet elga o‘qishga yuborish;
3. turli ma’rifiy jamiyatlar va teatr truppalari tuzish;

1. gazeta va jurnallar chop qilish, xalqning ijtimoiy-siyosiy ongini yuksaltirish bilan Turkistonda milliy demokratik davlat qurish va barpo etish.

Jadid ziyolilarining kuchli partiyasi tashkil qilingan taqdirdagina bu ishlarni amalga oshirish mumkin edi.

Bunday olganda, XX-asr boshida yuzaga kelgan jadidchilik xarakati o‘sha xalqlarining milliylikka erishish, mustaqillik yo‘lida dastlab chor Rossiyasi, so‘ngra sovet mustamlakachiligiga qarshi kurashda muxim o‘rin tutadi. Bular qatoriga quyidagi jadidlarni ko‘rsata olamiz:

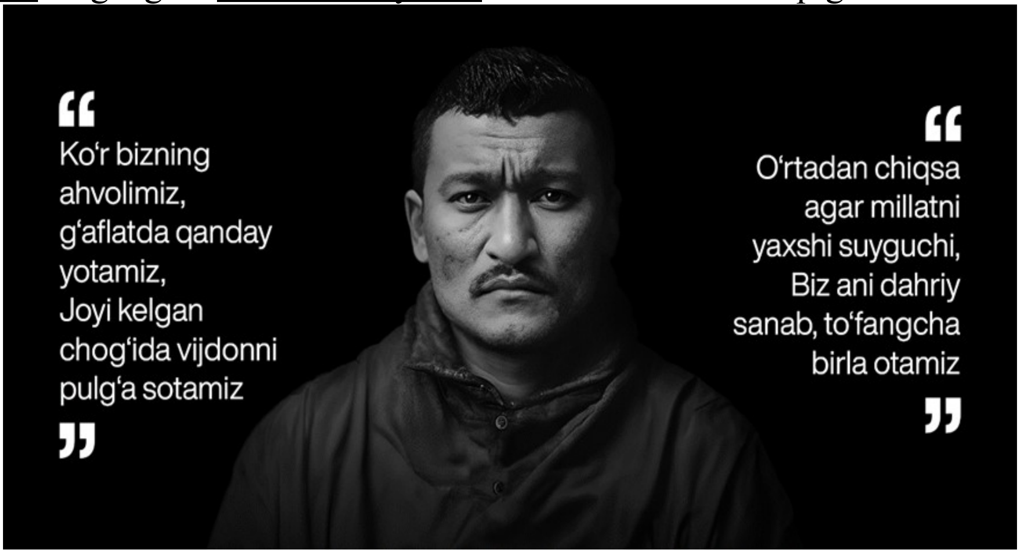
Mahmudxo‘ja Behbudiy, Abdulla Avloniy, Fayzulla Xo‘jayev, Said Ahmad Vasliy, Munavvarqori Abdurashidxonov, Abdulla Qodiriy, Abdulhamid Cho‘lpon, Abduqodir Shukuriy (Shakuriy), Hamza Hakimzoda Niyoziy, Ubaydullaxo‘ja Asadullaxo‘jayev, Abdurauf Fitrat, Abdulla Badriy va boshqalar o‘zlarning hayot va yashash davrida jadidchilik xarakatida juda yorqin iz qoldirdilar.

Hususan: **Mahmudxo‘ja Behbudiy ibn Behbudxo‘ja**) dramaturg, noshir, din va jamoat arbobi, jadidchilik harakati yetakchilaridan biri. Samarqandning Baxshitepa qishlog'ida diniy olim oilasida tavvalud topgan.

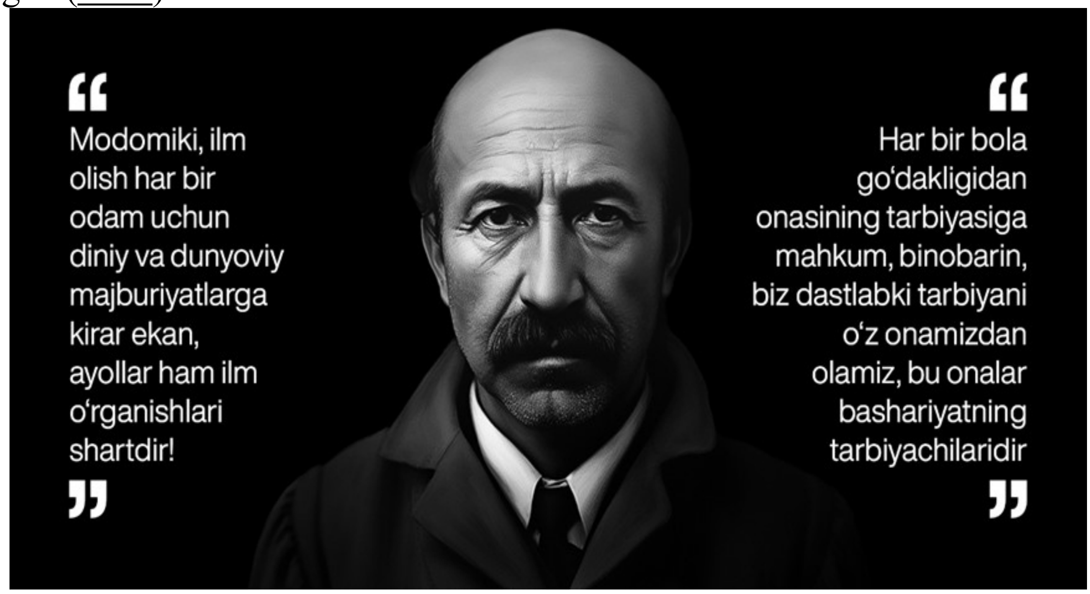
Uning kelib chiqishi Yassaviy avlodidan. Balog‘at yoshidan qozixonada ishchi qiladi, qozi, mufti darajasiga ko‘tariladi. Behbudiy haj safarida bo‘lgan chog‘ida Arabiston, Misr, Turkiyani kezib chiqqan (1899–1900). Sayohatlar davomida yangi maktab ochish fikrini mustahkamlab bordi. Samarqandagi Halvoyi qishlog‘ida Abdulqodir Shakuriylar bilan hamkorlikda yangi maktab ochadi. Behbudiy Qozon va Ufaga borib, u yerdagi yangi usul maktablari bilan tanishadi, tatar ziyolilari bilan aloqani yo‘lga qo‘yadi. Yangi maktablar uchun darsliklar tuzishga kirishadi. 25-Mart 1919 44-yoshida Qarshi shahrida vafot etgan.

Munavvarqori, Abdurashidxonov Munavvar qori (1878, Toshkent — 1931.23.4, Moskva) — O‘rta Osiyo jadidchilik harakatining yo‘lboshchisi, XX asr o‘zbek milliy matbuoti va yangi usuldagi milliy maktab asoschisi, yangi milliy teatr tashkilotchilaridan biri, adib va shoir. Abdurashidxonov Munavvar qori 23-aprel 1931-yil (52 yoshda) Moskva шаҳрида вафот этган.

Abdulla Qodiriy (asosiy taxalluslari: Qodiriy, Julqunboy) (1894.4.10-Toshkent-1938.10.4) – XX-asr yangi o‘zbek adabiyotining ulkan namoyandasi, o‘zbek romanchiligining asoschisi; 20-yillardagi muhim ijtimoiy-madaniy jarayonlarning faol ishtirokchisi. Bog‘bon oilasida tug‘ilgan. Otasi Qodirbobo (1820—1924) xon, beklar qo‘lida sarbozlik qilgan, rus bosqini paytida (1865) Toshkent mudofaasida qatnashgan. Otasi boshidan o‘tgan sarguzashtlar Abdulla Qodiriyning qator asarlari, xususan tarixiy romanlarining yuzaga kelishida muhim rol o‘ynagan. Abdulla Qodiriy musulmon maktabida (1904–1906), rus-tuzem maktabida (1908–12), Abulqosim shayx madrasasida (1916–17) ta’lim oldi; Moskvadagi adabiyot kursida (1925-26) oʻqidi. Yoshligidanoq qadimgi Sharq madaniyati va adabiyoti ruhida tarbiya topgan; arab, fors va rus tillarini oʻrgangan. Jahon adabiyotini ixlos bilan mutolaa qilgan.



Abdurauf Fitrat (1886, Buxoro shahri, Buxoro amirligi — 4-oktyabr, 1938, Toshkent shahri, Oʻzbekiston SSR) — oʻzbek tarixchisi, filolog, tarjimon, yozuvchi, dramaturg va shoir, zamonaviy oʻzbek tili va adabiyoti asoschilaridan biri, Oʻrta Osiyo jadidchiligining taniqli vakili, birinchi oʻzbek professori (1926)[1]. Jadidchilik milliy maʼrifatparvarlik harakatining tarafdori. Turkiyada taʼlim olgan. Inqilobga qadar Oʻrta Osiyoni Rossiyadan ozod qilinishi harakatlarida faol qatnashgan, politsiya nazorati ostida boʻlgan. Turkiyadagi „Yosh turklar" harakatidan ilhomlanib, Buxoroda „Yosh buxoroliklar" partiyasini tuzgan, uning maʼnaviy rahnamosiga aylangan. Doʻsti va maslakdoshi Munzim bilan hamkorlikda buxorolik 70 nafar yosh turkistonliklarni Germaniyaning bir qator oliy taʼlim muassasalariga oʻqishga yuborgan (1922)[2].



Choʻlpon (asl ism-sharifi **Abdulhamid Sulaymon oʻgʻli Yunusov**; 1897-yil, Andijon –1938.4.10, Toshkent) – shoir, yozuvchi, dramaturg , tarjimon, tanqidchi va jamoat arbobi. Dastlab, madrasada (1908-1912), soʻngra rus-tuzem maktabida (1912-1914) o‘qigan. Sharq mumtoz shoirlari asarlarini mutolaa qilish va jadid matbuotini kuzatish yo‘li bilan adabiy, ijtimoiy-siyosiy bilimini oshirgan.

1938-yilda 4-oktabrda Bozsuv bo‘yida qatl qilinadi.

Jadidchilikning asosiy g‘oyalari quyidagilardan tashkil topgan:

- umummilliy ma’rifatni mavqeyini ko‘tarish
- milliy ongni yuqoriga rivojlantirish
- xalqni milliy birlikka erishish
- xalqni milliy mustaqillikka erishish
- mamalakatdda lahon madaniyatini egallash.

Jadidchilikning asosiy maqsadlari quyidagilardan iborat:

-Turkiston xalqlarini o‘rta asrlarga xos qoloqliklardan va diniy xurofotlardan ozod etish shariatni bosqichma-bosqich isloh qilish

-xalqqa ma’rifat ulashish va tarqatish

-Turkistonda maxalliy hukumatni yangi muxtoriyat hukumatiga o‘tkazish uchun kurash

-O‘sha davrning Buxoro va Xiva xonliklarida qo‘nuni bo‘lmish konstitutsiyaviy monarxiya va parlament keyinchalik demokratik respublika tuzumini o‘rnatish orqali ozod va farovon jamiyat qurish

-oșha zamonga xos barqaror milliy valyutani joriy qilish va milliy qo‘shin tuzish.

- Toshkentda, Farg‘onada, Buxoroda, Samarqandda va Xivada hur fikrli va taraqqiyparvar insonllarning ayrim guruhlari tomonidan ochilgan madaniy-ma’rifiy yo‘nalishdagi jamiyat va uyushmalardan jadidchilik harakati shakllantirish.

XIX-asrning oxiri XX-asrning boshlarida siyosiy, madaniy, iqtisodiy jixatdan inqiroz xolatiga tushib qolgan muslamlaka tufayli rivojlanish past darajada bo‘lgan o‘lkada Turkiston ziyolilari chor Rossiyasining mustamlakachilik zulmidan qutulish, o‘z milliy davlatchiligini tuzish, iqtisodyotni va madaniytni taraqqiyot etish, yurt xalqig bilim va ziyo tarqatish choralarini ko‘rish. Bu yo‘nalishda jadidchilik xarakati tsa eng katta rol o‘ynadi.

Jadidchilik g‘oyalari esa XIX asrning 90-yillaridan targala boshladi. Bu xarakat XX asrning 30-yillarining oxirlarigacha yurt ijtimoiy-siyosiy xayotida muxim rol o‘ynadi. Jadidchilik xarakatida quyidagi 3-bosqichda iborat bo‘lgan:

1) XIX asr oxirlaridan 1915-yilgacha - ma'rifatchilik;

2) 1915-yildan 1918 yil fevraligacha - muxtoriyatchilik;

3) 1918-yil fevral oyidan 1920-yillar oxirlarigacha mustabid sovetlar davridagi faoliyati.

Jadidchilik harakati Rossiyaga qaram va ularga mole bo‘lgan musulmon xalqlari orasida dastlab Qrimda XIX asrning 1880-yillarida paydo bo‘ldi. Jadidchilik harakati asoschisi diniy-dunyoviy ilmlarni chuqur egallagan Ismoilbek Gasprali (1851-1914) bo‘lgan. Ismoilbek Gasprali 1884-yilda jadidchilar maktabini tashkil etib, 40-kun mobaynida 12-nafar o‘quvchinng savodini chiqaradi. Uning o‘qitishmetod va usuli «usuli savtiya», ya'ni «yangi usul» nomi bilan shuxrat qozondi. Ismoilbek Gasprali o‘z g‘oyalarini qabul qilgan yangilik tarafdorlari «jadidlar», uning g‘oyalari esa «jadidchilik» nomini oldi. Ismoilbek Gasprali tsa bu sohada yangilik yaniy darslik yaratadi.

Jadidlarning davrining xalq ma'rifati uchun kurash dasturi 3-asosiy yo‘nalishdan iborat bo‘lgan:

1. Yangi usuldagi maktablari tarmog‘ini kengaytirish.

2. Umidli, iqtidorli yoshlarni chet ellarga o‘qishga yuborish.

3. Turli ma'rifiy-ma’naviy jamiyatlar tuzish xamda ziyolilarning kuchli firqasini tashkil etishga qaratilgan uchunchi xokimiyat yani gazetalarni chop etish.

Ushbu reja-dasturni amalga oshirish borasida Maxmudxo‘ja Bexbudiy, Abdurauf Fitrat, Munavvarqori Abdurashidxonov, Ubaydullaxo‘ja Asadullaxo‘jayev, Abdulla Avloniy, Abdulxamid Cho‘lpon va boshqa ziyolilar jonbozlik ko‘rsatishdi. Yangicha o‘qitish tizimi musulmon farzandlariga qisqa vaqt ichida dunyoviy, diniy ta'lim berish reja-dasturi asosida olib borildi. Bu dasturga ko‘ra maktablarda o‘qitish tizimi 2-bosqichdan tashkil topgan. 1-bosqich ibtidoiy qism deb atalib, uning bilim olish yani o‘qish muddati 4-yilni ichiga olgan. 1-bosqichni tamomlagan shogird eski maktabda 10-yil ta’lim olgandan ko‘ra yaxshiroq bilimga ega bo‘lgan.

2-bosqichni tugatgan o‘quvchi arab, fors, turkiy tilda bemalol so‘zlashib, rus tilida erkin gaplasha olganl.

Jadidlarning millatlararo aloqalari juda keng qamrovli bo‘lgan sababli ular Rossiya, Turkiya, Misr va boshqa mamlakatlardagi jadidchilik oqimlari dasturlaridan xabardor bo‘lganlar, o‘zaro safarlar, muloqotlar orqali tajriba almashganlar.

Andijondagi jadidlarning yashirin tashkiloti «Taraqqiyparvar» deb atalib, maxfiy ishlar bo‘yicha politsiya bo‘limining ma'lumotlariga qaraganda, uning raxbarlaridan biri Ubaydulla Xo‘jayev bo‘lgan.

I-Jaxon urushidan keyin jadidlar parlamentar monarxiya uchun kurashgan bo‘lsalar, Rossiyadagi fevral inqilobidan keyin Turkiston jadidlarining «taraqqiyparvarlar» oqimini tashkil qilgan radikal qismi ancha keng qamrovli, bir qator siyosiy talablarni ilgari surdi.

Turkistondagi oktyabr voqealari ularga o‘z maqsadlarini oxirigacha amalga oshirishlariga imkon bermadi. Juda kam faoliyat ko‘rsatgan bu muxtor respublika tugatilishi oqibatida jadidlar ta'qibga uchradilar. Abdurashidxonov

Munavvarqorining guvoxlik berishicha, «Ittixodi taraqqiy», «Milliy ittixod», «Milliy istiqlol» va «Turkiston Milliy Birligi» (raisi Axmad Zakiy Validiy) maxfiy tashkilotlari oʻlkada xokimiyatni qoʻlga olish maqsadida faoliyat yuritgan.

Jadidlarning ayrimlari oʻsh davr tuzumning siyosatiga koʻnikaolmay xorijga oʻtib ketishdilar, qolgan qismi esa Turkistonda mavjud boʻlgan istiqlolchilar xarakatiga qoʻshilib ketdilar.

Buxoro amirligi va Xiva xonligida jadidchilik xarakati Turkistondagi kabi XIX asr oxiri-XX asr boshlarida shakllangan boʻlsa xam bu xududlardagi tarixiy sharoit undagi jadidchilik xarakatiga xam oʻziga xos xususiyatlar baxsh etdi.

ADABIYOTLAR ROʻYXATI:

1. Oʻzbek sovet entsiklorediyasi. 2-jild. T., 1979.
2. Qosimov S. Behbudiy va jadidchilik. „Oʻzbekiston adabiyoti va san'ati", 1990-yil 19,26-yanvar.
3. Qosimov Behbudiy Karvonboshi. „Yoshlik" jurnali, 1990-yil, 1-son.
4. Aliev A. Mahmudxoʻja Behbudiy. T., 1994.
5. Ahmedov S. Oʻlimdan qoʻrqmagan mutafakkir. „Sovet Oʻzbekistoni san'ati", 1989-yil, 2-son.
6. Rizaev Sh. „Padarkush" yohud Samarqand tarixidan lavhalar". „Vatan" gazetasi, 1994-yil, 39-son.
7. N. Toʻxliyev va boshqalar. *Toshkent ensiklopediyasi*. Toshkent: „Oʻzbekiston milliy ensiklopediyasi" davlat ilmiy nashriyoti, 2009 — 784-bet.
8. Oltinbek Olim. *Jadid adabiyoti namoyondalari: Abdulla Avloniy*. „Zabarjad media", 2022 — 432-bet.
9. Politicheskaya jizn russkix musulman do fevralskoy revolyutsii, Oksford, 1987;
10. Fayzulla Xoʻjayev hayoti va faoliyati haqida yangi mulohazalar, T., 1997;
11. Fayzulla Xodjayev. 100 bet, Navoi, 1996;
12. Oʻzbekistonning yangi tarixi, 2kitob [Oʻzbekiston sovet mustamlakachiligi davrida], T., 2000;
13. Eshonov O. E., Fayzulla Xoʻjayev, T., 1973;
14. Hasanov M., Fayzulla Xoʻjayev, T., 1990;
15. Baqoyev M., Fayzulla Xoʻjayevjurnalist va publitsist, T., 1992;
16. Rajabov K, Buxoroga qizil armiya bosqini va unga qarshi kurash, T., 2002.

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Xidoyatova N. Sh.
Qarshi xalqaro universiteti
“Iqtisodiyot va muhandislik” kafedrasi katta o‘qituvchisi

RAQOBATBARDOSHLIK VA AGLOMERATSIYA

Annotatsiya: *Aglomeratsiya - iqtisodiyotning rivojlanishi va raqobatbardoshlik darajasining oshishiga sezilarli ta’sir ko‘rsatadigan jarayondir. Aglomeratsiya sharoitida turli soha vakillari yaqin hududlarda to‘planadi, bu esa resurslardan samarali foydalanish, infratuzilmani rivojlantirish va innovatsiyalarni joriy etish imkonini beradi. Ushbu jarayon raqobatbardoshlikni oshirishda muhim rol o‘ynaydi va iqtisodiy klasterlarning shakllanishiga turtki bo‘ladi.*

Tayanch so‘zlar: *Aglomeratsiya, urbanizatsiya, iqtisodiy o‘sish, sanoat markazlari, transport va logistika, ekologik ta’sir, innovatsion klasterlar, Texnologik parklar, hududiy rivojlanish, ijtimoiy xizmatlar, yashash darajasi, bandlik, raqobatbardoshlik, xorijiy investitsiyalar, yashil shahar loyihalari.*

Khidoyatova N. Sh.
Senior Lecturer
of the Department of Economics and Engineering
Karshi International University

COMPETITION AND AGGLOMERATION

Abstract: *Agglomeration is a process that has a significant impact on the development of the economy and increasing the level of competitiveness. In the conditions of agglomeration, representatives of various industries gather in nearby areas, which allows for the efficient use of resources, development of infrastructure and implementation of innovations. This process plays an important role in increasing competitiveness and stimulates the formation of economic clusters.*

Keywords: *Agglomeration, urbanization, economic growth, industrial centers, transport and logistics, environmental impact, innovative clusters, technology parks, territorial development, social services, standard of living, employment, competitiveness, foreign investment, green city projects.*

Raqobatbardoshlik va aglomeratsiya o‘zaro bog‘liqdir, chunki aglomeratsiya orqali kompaniyalar va mintaqalar o‘z imkoniyatlarini oshirishlari mumkin. Aglomeratsiyalashgan hududlar ko‘pincha resurslardan samarali foydalanadi, raqobatbardosh mahsulot va xizmatlarni ishlab chiqarish imkoniyatlariga ega bo‘ladi va umumiy iqtisodiy rivojlanishga hissa qo‘shadi.

Aglomeratsiya natijasida raqobat kuchayadi va bu rivojlanishni rag‘batlantiradi: kompaniyalar bir-biridan yangi texnologiyalarni o‘rganadi, qo‘shma loyihalar orqali mahsulot va xizmatlar sifatini oshiradi, va iste’molchilarga ko‘proq tanlov imkoniyatlarini yaratadi.

Aglomeratsiyaning raqobatbardoshlikka ta’siri:

Ishchi kuchi va mahorat almashinuvi: Aglomeratsiyalashgan hududlarda yuqori malakali ishchi kuchi osonroq topiladi va bu ishchilarning bir joyda to‘planishi mahorat almashinuvini ta’minlaydi. Ushbu muhit kompaniyalar uchun yangi g‘oyalarni rivojlantirish va yangi yechimlarni topish imkonini yaratadi, bu esa raqobatbardoshlikni oshiradi.

Infratuzilma va resurslarga qulaylik: Aglomeratsiya hududlarida transport va kommunikatsiya infratuzilmasi rivojlangan bo‘ladi, bu esa mahsulot va xizmatlar ishlab chiqarishda samaradorlikni oshiradi. Bu kompaniyalarning raqobatbardoshligini qo‘llab-quvvatlaydi va ularning bozor ulushini oshirish imkonini beradi.

Klasterlash va innovatsiyalar: Aglomeratsiya klasterlarni shakllantirish uchun qulay muhit yaratadi, bu esa innovatsion tadqiqotlar va yangi texnologiyalarning joriy etilishiga yordam beradi. Klasterlash jarayonida kompaniyalar bir-birlaridan o‘rganadilar va raqobatda ustunlikka ega bo‘lishadi.

Mahalliy va xorijiy investorlar uchun jozibadorlik: Aglomeratsiyalashgan hududlar ko‘pincha investorlar uchun jozibador bo‘ladi. Hududda raqobatbardosh bozor va rivojlangan infratuzilma mavjudligi, investorlar uchun xavfni kamaytiradi. Xorijiy investitsiyalar, o‘z navbatida, mahalliy iqtisodiyotning rivojlanishini va raqobatbardoshligini oshiradi.

Aglomeratsiyalashgan hududlar iqtisodiy jihatdan foydali bo‘lib, ular o‘z hududidagi ishlab chiqarish va xizmatlar samaradorligini oshiradi. Shu bilan birga, aglomeratsiya orqali mahalliy va xalqaro bozorlar o‘rtasidagi integratsiya jarayonlari tezlashadi. Bu jarayon o‘z navbatida raqobatbardosh bozorlarda tezkor reaksiyalar va moslashuvchanlikni ta’minlaydi.

Aglomeratsiya va raqobatbardoshlik global iqtisodiyotda asosiy tushunchalar hisoblanadi, chunki ular mamlakatlar, hududlar va sanoatlarning muvaffaqiyati uchun muhim rol o‘ynaydi. Aglomeratsiya — bu kompaniyalar va ishlab chiqarish sektorlarining geografik yaqinlashuvi bo‘lib, u iqtisodiy samaradorlikni oshirish va iqtisodiy resurslardan birgalikda foydalanishni kuchaytiradi. Ushbu jarayon nafaqat hududning iqtisodiy rivojlanishiga, balki uning global raqobatbardoshligiga ham katta ta’sir ko‘rsatadi.

1. Raqobatbardoshlikni oshirish

Aglomeratsiyalashgan hududlarda kompaniyalar yaqin joylashishi tufayli raqobatbardoshlik kuchayadi. Bir xil yoki o‘xshash tarmoqlar yaqin joylashgan holda, korxonalar innovatsiyalarga tez moslashadi va mahsulot sifatini yaxshilashga intiladilar. Bu raqobatning oshishi, iste’molchilar uchun ko‘proq tanlov va yaxshiroq xizmat ko‘rsatish imkoniyatini beradi.

2. Ishchi kuchining mahoratini oshirish

Aglomeratsiya hududlarida ko‘plab kompaniyalar o‘z faoliyatini olib borishi tufayli malakali ishchi kuchiga talab oshadi. Ishchilar bir tarmoqli kompaniyalar orasida o‘z mahoratlarini oshirish imkoniga ega bo‘ladilar va buning natijasida tajriba va bilim almashinuvi sodir bo‘ladi. Bu jarayon ishchi kuchi uchun ham, kompaniyalar uchun ham foydalidir.

3. Innovatsiya va texnologik taraqqiyot

Aglomeratsiya innovatsiya va yangi texnologiyalarni rivojlantirishda juda muhim. Turli kompaniyalar yaqin joylashishi va bir tarmoqli klasterlar shakllanishi natijasida hamkorlik va tajriba almashinuvi sodir bo‘ladi. Bu esa yangi g‘oyalar va innovatsion yechimlarni yaratishga imkon beradi, natijada tarmoqning raqobatbardoshligi oshadi.

4. Xarajatlarni kamaytirish

Aglomeratsiya kompaniyalar uchun transport va logistika xarajatlarini kamaytiradi. Hududiy yaqinlik tufayli xomashyo va tayyor mahsulotlarning etkazib berish jarayoni qisqaradi, bu esa umumiy xarajatlarni kamaytirishga imkon yaratadi. Bundan tashqari, umumiy infratuzilmalar, xizmatlar va resurslar ulashib ishlatilishi hisobiga xarajatlar kamayadi.

5. Mahalliy va xorijiy investitsiyalar uchun jozibadorlik

Aglomeratsiya hududlari xorijiy investorlar uchun ko‘proq jozibador bo‘ladi, chunki ular rivojlangan infratuzilma, yuqori malakali ishchi kuchi va raqobatbardosh bozor imkoniyatlariga ega bo‘ladi. Investitsiyalar mahalliy kompaniyalarga yangi texnologiyalar, moliyaviy qo‘llab-quvvatlash va jahon bozorlariga kirish imkoniyatlarini yaratadi.

6. Iqtisodiy samaradorlik va o‘sish

Aglomeratsiya nafaqat kompaniyalarning, balki hududning umumiy iqtisodiy o‘sishiga ham ijobiy ta’sir ko‘rsatadi. Tarmoq bo‘ylab birgalikda ishlash samaradorlikni oshiradi, ishlab chiqarish quvvatlarini kengaytiradi va bozor imkoniyatlarini kengaytiradi. Shu tarzda, hududning umumiy iqtisodiy o‘sishi uchun asos yaratiladi.

Xulosa

Raqobatbardoshlik va aglomeratsiya birgalikda hududiy va global iqtisodiyotni rivojlantirishda muhim ahamiyat kasb etadi. Kompaniyalar uchun aglomeratsiya orqali resurslardan birgalikda foydalanish imkoniyati yaratiladi va innovatsiyaga qulay muhit paydo bo‘ladi. Shu sababli, mamlakat va mintaqalar aglomeratsiyani rivojlantirish va qo‘llab-quvvatlash orqali iqtisodiy raqobatbardoshligini oshirish uchun imkoniyat yaratadi.

Raqobatbardoshlik va aglomeratsiya bir-biriga chambarchas bog‘liq tushunchalardir. Aglomeratsiya jarayonlari kompaniyalar uchun raqobatda ustunlik yaratish imkonini beradi va iqtisodiyotning o‘sishiga turtki beradi. Aglomeratsiya asosida shakllangan klasterlash va innovatsiyalar jarayoni, kompaniyalarni samaradorlikni oshirishga undaydi.

Foydalanilgan adabiyotlar

1. Porter, M. E. Competitive Advantage of Nations. Harvard Business Review Press, 1990. 40–59 p
2. Marshall, A. Principles of Economics. Macmillan, 1890. 271–289 p
3. Fujita, M., Krugman, P., & Venables, A. J. The Spatial Economy: Cities, Regions, and International Trade. MIT Press, 1999. 101–120 p

4. Storper, M. The Regional World: Territorial Development in a Global Economy. Guilford Press, 1997. 78–95 p
5. Scott, A. J. Regions and the World Economy. Oxford University Press, 1998. 50–68 p

Xojyazova D.SH.
Urganch davlat universiteti
2-kurs geografiya yo'nalishi talabasi, O'zbekiston

ҚУЙИ АМУДАРЁ ТАБИАТИНИНГ ЭКОТУРИСТИК ИМКОНИЯТЛАРИ

Аннотация: *Ushbu maqolada quyi Amudaryo mintaqasining tabiiy sharoitining o'ziga xos xususiyatlari va uning ekoturizmni rivojlantirishdagi ahamiyati ko'rsatilib, kelajakda hududda ekoturizm salohiyatini oshirish va sayyohlar oqimini ko``aytirish bo`yicha tavsiyalar berilgan.*

Kalit so'zlar: *rel'ef, iqlim, yer usti va yer osti suvlari, tuproq, nisbiy balandlik, flora , fauna, to'qay landshafti, baktriya, so'g'd, vizual.*

Xojyazova D.SH.
student of the 2nd stage
of the "Geography" course
Urgench state university

ECOTOURISM OPPORTUNITIES OF THE LOWER AMU DARYA NATURE

Abstract*. This article highlights the unique characteristics of the natural conditions of the Lower Amu Darya region and its importance in the development of ecotourism, and provides recommendations for increasing the potential of ecotourism in the region and increasing the flow of tourists in the future.*

Key words: *Relief, climate, surface and groundwater, soil, relative balance, flora, fauna, natural landscape, bacteria, water, visual.*

Kirish. Tabiat insonning sayohatga chiqishi uchun joylarda turli darajada qulayliklar yaratgan. Har bir tabiiy kompleksda inson organizmiga mavjud tabiiy omillar majmuali ravishda turlicha ta'sir etadi. Tekislik bilan tog' mintaqalarida ta'sir etuvchi tabiiy omillarning majmuasini bir -biriga solishtirib bo'lmaydi. Shularni e'tiborga olib, har bir tabiiy kompleksni ekoturizm nuqtai nazaridan baholash amaliy ahamiyatga ega. Ekoturizm va uning rivojlanishi na faqat o'rganilayotgan hududning ijtimoiy-iqtisodiy sharoitiga bog'liq bo'libgina qolmasdan balki shu hududning tabiiy sharoitiga, unda ekoturistik ob'ektlarning mavjudligiga va ularning geografik o'rniga ham bog'liqdir. Ekoturizmning tabiiy omillariga relg'ef, iqlim, yer usti va yer osti suvlari, tuproq va o'simlik qoplamini hamda hayvonot dunyosini kiritish mumkin.

Ekoturizm uchun qulay sharoitni belgilab beradigan asosiy omillardan biri relg'ef bo'lib, unga tahrif berilganda joyning dengiz sathidan mutlaq va nisbiy balandligiga, o'ydim-chuqurligiga, plastikasiga, parchalanganligiga, yonbag’irlarning turiga, uning qiyaligiga, o’simlik bilan qoplanganligiga, litologik tuzilishi kabi ko’rsatkichlariga e’tiborni qaratish lozim.

Asosiy qism. Hududning ekoturistik imkoniyatlarini aniqlashda va baholashda iqlimiy sharoit muhim o’rin tutadi. Iqlim inson faoliyatiga bevosita tahsir ko’rsatib, ko’p hollarda hududlarda dam olish va sayohatni chegaralaydi.

Yer usti suvlari ham ekoturizm uchun geoekologik muhitni yaratadigan omillardan biridir. Ularning mavjudligi tabiiy muhitning ekoturistik va rekreatsion qiymatini oshiradi.

Tuproq qatlamini ekoturizm nuqtai-nazaridan tahlil qilganda uning xususiyatlariga, sanitar-gigienik holatiga, tabiiy holatining salbiy jarayonlar ta’sirida buzilishi darajasiga e’tibor qaratiladi. O’simliklar olami ham ekoturizmda alohida o’rin tutadi. O’simlik qoplami kislorod bilan ta’minlovchi, asosiy sog’lomlashtiruvchi va rekreatsion omil hisoblanadi.

Shu nuqtai nazardan qaraganda Quyi Amudaryo mintaqasida xam ekologik turizmni rivojlantirish uchun qulay imkoniyatlar mavjud bo’lib, ular

- tabiiy landshaftlarning mavjudligi,
- rekreatsion resurslarga boyligi,
- turli xildagi flora va fauna dunyosi,
- tabiiy va tarixiy yodgorliklarning ko’pligi,
- alohida muhofaza etiladigan hududlarlarning mavjudligidir

Quyi Amudaryo hududidagi imkoniyatlardan samarali foydalanish uchun hududdagi tabiat komplekslarini ekoturistik jixatdan o’rganib chiqish maqsadga muvofiqdir. Hudud yer yuzasi, asosan, tekisliqdan iborat bo’lib, undagi daryo, ko’l, suv omborlar, sug’orish kanallari, dalalar dam olish maskanlari hisoblanadi.[2] Iqlimi esa yil davomida dam olish va ekoturizmning rivojlanishi uchun qulayligi bilan ajralib turadi.

Yozgi dam olish turlaridan hududda cho’milish, quyosh vannalari olish, piyoda yurish, qayiq sporti, baliq ovi, turli xil mevalar terish, qum vannalari olish, ot va tuyada sayr qilishni tashkil qilish mumkin. Qishki mavsumda sport ovchiligi, muz osti baliq ovi, davolanish, salomatlikni tiklash va piyoda sayrlarni tashkil qilish mumkin. Turistlar uchun Amudaryoning o’zaniga yaqin har ikkala sohillarida to’qayzorlar mavjud bo’lib, ular ekoturlar uchun juda qiziqarli noyob landshaft ko’rinishlaridan hisoblanadi. Quyi Amudaryoning o’ng sohilida to’qay landshaftidagi qushlar va hayvonlarni muhofaza qilish uchun Badayto’qay qo’riqxonasi tashkil qilingan [1].

Voha bo’ylab sayyohlarning muayyan yo’nalish bo’yicha tabiat bilan bog’liq bo’lgan dam olishi, sport bilan shug’ullanishi, sog’lomlashishi, ma’rifiy-ma’naviy ishlarni amalga oshirish kabi maqsadlarni ko’zlagan xolda Quyi Amudaryoning janubiy qismi baktriya so’g’d yo’lida Urganch shahridan 70 km uzoqlikda past tekislikda joylashgan Qalajik qal’asi,Urganch shaxridan 21 km g’arbda kat qishloq hududidagi tekislikda joylashgan Kat qal’a, To’rtko’l shahridan 12 km shimoli sharqda joylashgan. Qo’yqirilgan qal’a kabi qadimiy betakror obidalarni ekoturistik marshrut sifatida tanlash mumkin [2].

Xulosa. Har bir xudud o'zining ekoturistik holati, imkoniyatlari va rivojlanish istiqbollari nuqtai nazaridan ajralib turadi. Masalan, Orol va Orolbo'yi rayoni ekologik inqirozli ekoturistik hudud bo'lgani uchun ham unda yuzaga kelgan ekologik inqiroz holati asosiy ekoturistik ob'ekt bo'lib hisoblanadi. Ekoturizmda nafaqat piyoda yoki tuya va otlarda, balki samolyot va vertolyotlar orqali ham amalga oshirish lozim. Zero u masofadan turib katta va tekis maydonni yuqoridan turib vizual kuzatish imkoniyatini beradi. Ekoturizmni rivojlantirish joyning geografik hususiyatlaridan kelib chiqqan tarzda amalga oshirish tabiat va jamiyat o'rtasidagi munosabatlarni uyg'unlashtirishga imkon yaratadi.

Foydalanilgan adabiyotlar

1. Xayitboyev, Abror & Kuvondik, Yarashev & Karimov, Yunus & Nazarov, Maqsud. (2024). Anthropogenic transformation of oasis landscapes in Khorezm Province, Uzbekistan: A geoecological analysis. E3S Web of Conferences. 497. 10.1051/e3sconf/202449702043.
2. A.N.Nigmatov, N.T. Shomurotova O'zbekiston hududini ekoturistik rayonlashtirish masalalari.Toshkent. 2006 y.
3. SH.B.Dusanova. Xorazm vohasida ekoturizmni rivojlantirish istiqbollari. Ilmiy konferentsiya to'plami. Qarshi. 2021 y.

Xoliqov R. Y.
Farg'ona davlat universiteti professori
Saydaliyeva L. M.
2-kurs tayanch daktaranti
O'zbekiston Respublikasi

FAG‘ONA VILOYATI HUDUDLARIDAN ZIYORAT TURIZMIDA FOYDALANISHNING SANITARIYA-EPIDIMIOLOGIYA JIHATLARI

Anatatsiya. *Maqolada Fag‘ona viloyatidagi sakral obyektlarining sanitar-epidimiologik holatini labaratoriya tahlillari asosida o‘rganilib, tegishli xulosalar qilingan.*

Kalit so‘zlar: *Sakral obyekt, sakral landshaft, ziyorat turizmi, sanitar-epidimiologik muhit, muqaddas ziyoratgohlar, muqaddas landshaft*.

R.Y. Khalikov
professor at Fergana State University.
Saydalieva L.M.
2nd year doctoral student.
Uzbekistan

Abstract. *The article studies the sanitary and epidemiological situation of sacred objects in the Fagana region based on laboratory analyses and draws relevant conclusions.*

Keywords: *Sacred object, sacred landscape, pilgrimage tourism, sanitary and epidemiological environment, sacred shrines, sacred landscape.*

Kirish.

So‘ngi yillarda turli tabiiy va gumanitar fanlar tutashuvida ilmiy tadqiqotlarning ko‘pincha yangi yo‘nalishlari shakllanmoqda. Sakral landshaftlar va ulardagi sacral obyektlar ham qadim zamonlargan buyon insonlarning ruhiy, diniy, ma’naviy ehtiyojlarini qondirish bilan birga muqaddas qadamjolar sifatida zamonaviy tadqiqotlarning muhim obyektlariga aylanib bormoqda. Dunyo faniga sakrallik tushunchasi qadimdan mavjud. Bu tushuncha yerda oqil insonning mavjudligi bilan bevosita bog‘liqdir. Sakral tasavvurlar makro va mikrokosm birligini izlab topish maqsadida juda qadim davrlardayoq vujudga kelgan.

Dindor kishilar tabarruk deb hisoblaydigan va sig‘inadigan muqaddas joylar va qadamjolar deyiladi. Jahonning barcha mamlakatlari va xalqlarida bunday obyektlar mavjud. Bunday hududlarni sacral hududlar deb atalib, diniy, me’moriy,obyektlar tabiiy obyektlar (toshlar qoyalar, g‘orlar, buloqlar, daryolar, ko‘llar, daraxtlar) ziyorat turizmining muhim manbalari bo‘libgina qolmasdan, davolovchi, shifobaxsh, ruhiy, tinchlantiruvchi, dam olish va rekreatsiya funksiyalarini ham bajarib kelgan.

Asosiy qism. Respublikamiz hududida turli funksiyalarni bajaruvchi sacral obyektlar qadimiy urf-odatlarimiz, madaniyatimiz, dinimiz negizi sifatida qaraladi.

Respublikamizda turizm salohiyatini shakllantiruvchi muqaddas qadamjolar har tomonlama oʻrganish tadqiq etish sacral obyektlarni ziyoratchilar uchun xavfsizligini ta'minlash dolzarb ahamiyatga egadi. Bu borada Oʻzbekiston Respublikasi Prewzidentining "Turizm sohasini sanitariya-epidimiologik xavfsizlikning kuchaytirilgan rejimi talablariga qatiy rioya qilingan holda rivojlantirishga doir qoʻshimcha chora-tadbirlar toʻgʻrisida" gi PQ.4755-sonli qarori ham ziyorat va turizm ahamiyatiga ega boʻlgan sacral obyektlarni sanitariya-epidimiologik holatini atroflicha oʻrganish, ziyorat qiluvchilarning xavfsizligini va salomatligin ta'minlashga, ziyorat obyektlariga turli yuqumli kasalliklarni tarqalishini oldini olishda muhim koʻrsatma boʻlib xizmat qiladi.

Fargʻona viloyati hududida ham kelib chiqishiga va funksiyalariga koʻra xilma-xil boʻlgan sacral obyektlar mavjud boʻlib, ularning aksariyati diniy, tarixiy,, madaniy yoʻnalishdagi ziyoratgohlar hisoblanadi. E.A,Okladnikovaning (2014) sacral landshaftlarini bajaradigan funksiyasiga koʻra klassifikatsiyasida keltirilgan muqaddas daraxt, koʻl, buloq, tosh koʻrinishidagi tabiiy sacral obyektlarning aksariyati viloyat hududida diniy ehtiyojlarini qondirish bilan birga ma'naviy-ruhiy tiklanish, ayrim kasalliklardan shifo toppish maqsadida foydalaniladi. Bunday koʻproq mavsumiy turdagi ziyoratgohlarning sanitariya-epidimiologik holatini oʻrganish maqsadida Fargʻona va Oltiariq tumanlaridagi buloq suvlari, tuproq va qum na'munalarini olib, Oltiariq tumanidagi sanitariya-epidimiologik osoyishtalik va jamoat salomatligi qoʻmitasi labaratoriyasida tahlildan oʻtkazdik va ular quyidagi natijalarni berdi.

Oltiariq tumani Sanitariya epidemiologik osoyishtalik va jamoat salomatligi bo'limi sizga shuni ma'lum qilib yozadiki, Farg'ona davlat universiteti 11.00.02 iqtisodiy ijtimoiy geografiya yo'nalishi 2-kurs tayanch doktoranti Saydaliyeva Lazokatxonning "Farg'ona viloyatining sakral landshaftlari ulardan turizm va rekreatsiya maqsadida foydalanishning tibbiy geografik asoslari" mavzusidagi dissertatsiya ishi uchun ziyoratgohlardagi tuproq va suv namunalari Oltiariq tumani SEO va JS bo'limi bakteriologik hamda sanitariya-gigienik laboratoriyasiga olib kelib tekshirildi.

Tekshiruv natijalari shuni ma'lum qiladiki:

Satkak buva ziyoratgohi buloq suvi kimyoviy ko'rsatkichlaridan orgonoleptik (xidi, tami, loyqaligi, rangi, cho'kma, tiniqligi) xususiyatlari, PH 8,0 (vodorod ko'rsatkichi), umumiy qattiqligi 8,8mg/ekv.dm, quruq qoldig'l 750 mg/dm va xlorid 65mg/dm³ ko'rsatkichi bo'yicha "Ichimlik suvi" O'zMSt 133:2024 talablariga javob beradi.

Bakterologik ko'rsatkichlari bo'yicha patogen floraga ekish natijalari O'zMSt 134:2024 talabiga javob beradi.

Yettibuloq ziyoratgohi buloq suvi kimyoviy ko'rsatkichlaridan orgonoleptik (xidi, tami, loyqaligi, rangi, cho'kma, tiniqligi) xususiyatlari, PH 8,1 (vodorod ko'rsatkichi), umumiy qattiqligi 5,8mg/ekv.dm, quruq qoldig'I 500 mg/dm va xlorid 40mg/dm³ ko'rsatkichi bo'yicha "Ichimlik suvi" O'zMSt 133:2024 talablariga javob

beradi.
Bakterologik ko'rsatkichlari bo'yicha patogen floraga ekish natijalariga ko'ra suv tarkibida citrobakter tayoqchasi aniqlanganligi sababli O'zMSt 134:2024 talabiga javob bermaydi.
Qiziltepa suvi kimyoviy ko'rsatkichlaridan orgonoleptik (xidi, tami, loyqaligi, rangi, cho'kma, tiniqligi) xususiyatlari, PH 7,9 (vodorod ko'rsatkichi), umumiy qattiqligi 2,0mg/ekv.dm, quruq qoldig'i 200 mg/dm va xlorid 20mg/dm³ ko'rsatkichi bo'yicha "Ichimlik suvi" O'zMSt 133:2024 talablariga javob beradi. Bakterologik ko'rsatkichlari bo'yicha koli titer 333, koli indeks 3 va umumiy mikroblar soni 40 tani tashkil etib O'zMSt 133:2024 talabiga javob beradi.

Mo'yko'l buva ziyoratgohi suvi kimyoviy ko'rsatkichlaridan orgonoleptik (xidi, tami, loyqaligi, rangi, cho'kma, tiniqligi) xususiyatlari, ri, PH 8,1 (vodorod ko'rsatkichi), umumiy qattiqligi 9mg/ekv.dm, quruq qoldig'1 800 mg/dm va xlorid 60mg/dm³ ko'rsatkichi bo'yicha "Ichimlik suvi" O'zMSt 133:2024 talablariga javob beradi.
Bakterologik ko'rsatkichlari bo'yicha koli titer 333, koli indeks 3 va umumiy mikroblar soni 16 tani tashkil etib O'zMSt 133:2024 talabiga javob beradi Do'sti hudo ziyoratgohi suvi kimyoviy ko'rsatkichlaridan orgonoleptik (xidi, tami, loyqaligi, rangi, cho'kma, tiniqligi) xususiyatlari, PH 7,7 (vodorod ko'rsatkichi), umumiy qattiqligi 6,0 mg/ekv.dm, quruq qoldig 1 550 mg/dm va xlorid 50 mg/dm³ ko'rsatkichi bo'yicha "Ichimlik suvi" O'zMSt 133:2024 talablariga javob beradi. Xo'ja ansor buva ziyoratgohi suvi kimyoviy ko'rsatkichlaridan orgonoleptik (xidi, tami, loyqaligi, rangi, cho'kma, tiniqligi) xususiyatlari, PH 7,9 (vodorod ko'rsatkichi), umumiy qattiqligi 6,2 mg/ekv.dm, quruq qoldig'i 600 mg/dm va xlorid 55 mg/dm³ ko'rsatkichi bo'yicha "Ichimlik suvi" O'zMSt 133:2024 talablariga javob beradi.
Zo'raymomo ziyoratgohi suvi kimyoviy ko'rsatkichlaridan orgonoleptik (xidi, tami, loyqaligi, rangi, cho'kma, tiniqligi) xususiyatlari, PH 7,0 (vodorod ko'rsatkichi), umumiy qattiqligi 5,0 mg/ekv.dm, quruq qoldig'i 450 mg/dm va xlorid 35 mg/dm³ ko'rsatkichi bo'yicha "Ichimlik suvi" O'zMSt 133:2024 talablariga javob beradi. Bakterologik ko'rsatkichlari bo'yicha koli titer 250, koli indeks 4 va umumiy mikroblar soni 36 tani tashkil etib, shartli ravishda O'zMSt 133:2024 talabiga javob beradi.
Boboqambar ziyoratgohi daraxt suvi kimyoviy ko'rsatkichlaridan orgonoleptik (xidi, tami, loyqaligi, rangi, cho'kma, tiniqligi) xususiyatlari, PH 7,7 (vodorod ko'rsatkichi) bo'yicha O'zMSt 133:2024 talablariga javob beradi, umumiy qattiqligini 19 mg/ekv.dm yuqoriligi bilan O'zMSt 133:2024 talabiga javob bermaydi.
Boboqambar ziyoratgohidagi artezon quduq suvi bakterologik ko'rsatkichlari bo'yicha koli - titer 333, koli indeks 3 va umumiy mikroblar soni 24 tani tashkil etib O'zMSt 133:2024 talabiga javob beradi.
Tuproq ko'rsatkichlari:
Zilxa qumlari kimyoviy tahlil natijalariga ko'ra tashqi ko'rinishi toza, hidi yo'q, aralashmalar yo'q va namligi 3% ni tashkil etib, GOST 26951-86 talabiga javob

beradi.
Mikrobiologik ko'rsatkichi bo'yicha umumiy mikroblar soni 4 tani tashkil etib, Davlat standarti metodik qo'llanma 1982 talablariga javob beradi. Qambar ota ziyoratgohi tuprog'i kimyoviy tahlil natijalariga ko'ra tashqi ko'rinishi toza, hidi yo'q, aralashmalar yo'q va namligi 3% ni tashkil etib, GOST 26951-86 talabiga javob beradi. Mikrobiologik ko'rsatkichi bo'yicha umumiy mikroblar soni 6 tani tashkil etib, Davlat standarti metodik qo'llanma 1982 talablariga javob beradi.

Mo'yko'l buva ziyoratgohi suvi kimyoviy ko'rsatkichlaridan orgonoleptik (xidi, tami, loyqaligi, rangi, cho'kma, tiniqligi) xususiyatlari, ri, PH 8,1 (vodorod ko'rsatkichi), umumiy qattiqligi 9mg/ekv.dm, quruq qoldig'1 800 mg/dm va xlorid 60mg/dm³ ko'rsatkichi bo'yicha "Ichimlik suvi" O'zMSt 133:2024 talablariga javob beradi.
Bakterologik ko'rsatkichlari bo'yicha koli titer 333, koli indeks 3 va umumiy mikroblar soni 16 tani tashkil etib O'zMSt 133:2024 talabiga javob beradi Do'sti hudo ziyoratgohi suvi kimyoviy ko'rsatkichlaridan orgonoleptik (xidi, tami, loyqaligi, rangi, cho'kma, tiniqligi) xususiyatlari, PH 7,7 (vodorod ko'rsatkichi), umumiy qattiqligi 6,0 mg/ekv.dm, quruq qoldig 1 550 mg/dm va xlorid 50 mg/dm³ ko'rsatkichi bo'yicha "Ichimlik suvi" O'zMSt 133:2024 talablariga javob beradi. Xo'ja ansor buva ziyoratgohi suvi kimyoviy ko'rsatkichlaridan orgonoleptik (xidi, tami, loyqaligi, rangi, cho'kma, tiniqligi) xususiyatlari, PH 7,9 (vodorod ko'rsatkichi), umumiy qattiqligi 6,2 mg/ekv.dm, quruq qoldig'i 600 mg/dm va xlorid 55 mg/dm³ ko'rsatkichi bo'yicha "Ichimlik suvi" O'zMSt 133:2024 talablariga javob beradi.
Zo'raymomo ziyoratgohi suvi kimyoviy ko'rsatkichlaridan orgonoleptik (xidi, tami, loyqaligi, rangi, cho'kma, tiniqligi) xususiyatlari, PH 7,0 (vodorod ko'rsatkichi), umumiy qattiqligi 5,0 mg/ekv.dm, quruq qoldig'i 450 mg/dm va xlorid 35 mg/dm³ ko'rsatkichi bo'yicha "Ichimlik suvi" O'zMSt 133:2024
talablariga javob beradi. Bakterologik ko'rsatkichlari bo'yicha koli titer 250, koli indeks 4 va umumiy mikroblar soni 36 tani tashkil etib, shartli ravishda O'zMSt 133:2024 talabiga javob beradi.
Boboqambar ziyoratgohi daraxt suvi kimyoviy ko'rsatkichlaridan orgonoleptik (xidi, tami, loyqaligi, rangi, cho'kma, tiniqligi) xususiyatlari, PH 7,7 (vodorod 'rsatkichi) bo'yicha O'zMSt 133:2024 talablariga javob beradi, umumiy qattiqligini 19 mg/ekv.dm yuqoriligi bilan O'zMSt 133:2024 talabiga javob bermaydi. Boboqambar ziyoratgohidagi artezon quduq suvi bakterologik ko'rsatkichlari bo'yicha koli - titer 333, koli indeks 3 va umumiy mikroblar soni 24 tani tashkil etib O'zMSt 133:2024 talabiga javob beradi.
Tuproq ko'rsatkichlari:
Zilxa qumlari kimyoviy tahlil natijalariga ko'ra tashqi ko'rinishi toza, hidi yo'q, aralashmalar yo'q va namligi 3% ni tashkil etib, GOST 26951-86 talabiga javob beradi.
Mikrobiologik ko'rsatkichi bo'yicha umumiy mikroblar soni 4 tani tashkil etib, Davlat standarti metodik qo'llanma 1982 talablariga javob beradi. Qambar ota

ziyoratgohi tuprog'i kimyoviy tahlil natijalariga ko'ra tashqi ko'rinishi toza, hidi yo'q, aralashmalar yo'q va namligi 3% ni tashkil etib, GOST 26951-86 talabiga javob beradi. Mikrobiologik ko'rsatkichi bo'yicha umumiy mikroblar soni 6 tani tashkil etib, Davlat standarti metodik qo'llanma 1982 talablariga javob beradi.

Olingan labaratoriya tahlillariga koʻra ziyoratgohlarning sanitariya-epidimiologik holatlari qoniqarli, lekin yilning issiq mavsumlarida ziyoratchilarning koʻplab kelishi tufayli antropogen bosim ortishi, suvlarning va ziyoratgoh hududlarining ifloslanishi, maishiy chiqindilar hisobiga ortib ketishi kuzatiladi.

Xulosalar. Keyingi yillarda sekral obyektlarga boʻlgan qiziqish mamlakatimizda ichki turizmni rivojlantirishiga, muqaddas qadamjolarga esa maishiy xizmat koʻrsatish infratuzilmalarining shakllanishiga olib kelmoqda. Muqaddas qadamjolarga va ular atrofida rekratsiya va turistik obyektlarni qurish avvalo hududlarni sanitariya-epidimiologikholatini majmuali oʻrganishni, ayniqsa suv obyektlari: buloqlardagi suvlarni tuproq yuza qatlamlarini, atmosfera havosini uning ifloslanish koʻrsatgichlarini labaratoriya-manitoring turizmlarini tashkil etish ziyoratchilar va tutash hududlardagi aholi salomatligini saqlashda muhim ahamiyat kasb kasb etadi.

Foydalanilgan adabiyotlar

1.“Respublikaning turizm salohiyatini jadal rivojlantirish hamda mahalliy va xorijiy turistlar sonini yanada oshirishga doir qoʻshimcha chora tadbirlar toʻgʻrisida”gi Oʻzbekiston Respublikasi Prezidentining 26.04.2023 y PQ-135 son qarori.

2. Sanitariya-epidimiologik osoyishtalik jamoat salomatligi qoʻmitasi Oltiariq tumani boʻlimi labaratoriyasi tahlili ma’lumotlari. 2024-yil iyun-iyul.

3. Окладникова Э.А. Сакралний ландшафт: теория И эмпрические исследования: монография.М., 2014 г. 230 с

Xoliqov R. Y.
Farg'ona davlat universiteti professori
Saydaliyeva L. M.
2-kurs tayanch daktaranti
O'zbekiston Respublikasi

SAKRAL HUDUD SAKRAL LANDSHAFT VA SAKRAL GEOGRAFIYA

Anatatsiya: *Maqolada muqaddas joylar sakral hududlar sakral landshaft tushunchasi va sakral geografiyaning asosiy yo'nalishlari bayon etilgan.*
Kalit so'zlar: *Muqaddas qadamjolar, sakral hudud, sakral landshaft, sakral obyektlar, diniy marosiml;ar, sakral geografiya, ziyorat turizmi.*

Khalikov R.Y.
professor at Fergana State University.
Saydalieva L.M.
2nd year doctoral student.
Uzbekistan

Abstract: *The article describes the concept of sacred places, sacred territories, sacred landscape and the main directions of sacred geography.*
Keywords: *Sacred places, sacred territory, sacred landscape, sacred objects, religious rituals, sacred geography, pilgrimage tourism.*

Kirish. Ilmiy manbalarda sakral, hudud sakral landshaft va sakral geografiya kabi tushunchalar diniy ma'naviy, ruhiy, tarixiy madaniy, hududiy kabi tushunchalar bilan birikibkishilarning turmush tarsi, dini ular odatlari bilan bevosita bog'liq bo'lgan ilmiy qarashlarni, tushunchalarni shakllantiradi. Dunyo svilizatsiyasi asrlar mobaynida etnoslarning sakral tushunchalarini, ular odatlari va etiqodlarini saqlab, ularga sayqal berib muqaddas qadamjolarni ko'z qorachig'iday saqlash imkoniyatlarini saqlab keladi. Bugungi kunda xalqlarning rekrsatsiya va turizm ehtiyojlarini qondirishga, turizmni indsturiyaga aylanishiga ham ziyorat turizmining ahamiyati ortib bormoqda.

Asosiy qism. Sakrallik tushunchasi turli xil etnoslar tomonidan o'ziga xos ya'ni "sakral" (lotin.sakre yoki sakra muqaddas, tabarruk, ibodat qilish, sig'inish, marosim, ilohiy, sirli) kabi ma'nolarga ega bo'lgan.

Sakrallik tushunchasi qadimdan mavjud. Bu tushuncha yerda oqil insonning mavjudligi bilan chambarchas bog'liq. Sakral tasavvurlar makro-va mikrokosm birligini izlab toppish maqsadida juda qadim davrlardayoq vujudga kelgan. Ajdodlarimizning ongi muqaddas landshaft, "kuch joyi" oldida sajda qilishdan olamni bir butun tushunishga tomon tadjiriy rivojlanadi. Tabiat bilan hamjihatlikda yashagan inson har bir hududning madaniy landshafti madaniy va tabiiy meros ahamiyatga ega bo'lgan obyekt sifatida noyob qiymatga ega. Madaniy landshaft- tabiat va insonning tadjiriy o'zaro ta'siri, uning sotsial madaniy va xo'jalik faoliyati natijasida shakllangan, tabiiy va madaniy komponentlarning o‘ziga xos barqaror komponentlaridan tashkil topgan hamda barqaror o‘zaro aloqa va o‘zaro aloqa va o‘zaro taqazoda bo‘ladigan tabiiy- hududiy kompleks. Madaniyat tipiga shuningdek sotsial- madaniy va xo‘jalik faoliyatining saviyasiga bog‘liq holda joyning madaniy o‘zlashtirishning turlari va shunga mos holda madaniy landshaftlar shakllanadi. Sakral landshaftlarga madaniy qadriyati muqaddas (ilohiy) deb hisoblanadigan va qadrlash (kult) maqsadining mavjudligi bilan belgilanadigan barcha hududiy komplekslar kiritiladi va ularning shakllanishi inson xo‘jalik faoliyati bilan bog‘liqdir.

Madaniy landshaftdoirasidagi diniy marosimlar (udumlar, rasm-rusumlar) o‘tkaziladigan joylar barcha muqaddas va tabarruk joylar sakral landshaftlardir. Ular muayyan diniy kulbtlarni o‘tkazish, diniy amallarning rivojlanishi, ibodat marosimlarni bajarish tufayli shakllangan va shu maqsadlar uchun mo‘ljallangan. Faoliyatning bu turlarining ta’siri nuqtali sakral joylarning mavjudligi bilan cheklanadi va butun kompleksni band etmaydi. Boshqa hollarda sakral landshaft sakral joyga o‘xshash (Sacred Site) yoki sakral joylar bunday landshaftning semantik markazlari bo‘lib xizmat qilishi mumkin.

Butun geografik hududni –tog‘ni, vodiyni, daraxtzorni, orollarni, qo‘llarni va boshqa shunga o‘xshashlar sakral joylarni qamrab olgan sakral landshaftlarga aynan o‘xshash.

Madaniy landshaftlardagi semantik maydonning asosiy nuqtalari bo‘lgan sakral joylar odatda etiqod amallarining va diniy faollikning markazlaridan iborat bo‘ladi va ular butun landshaft rivojlanishi va uning morfologik xususiyatlarini belgilaydi (Kuleshova, 2009;Lavrenova, 2003).

Sakral landshaftlar diniy (ilohiy)funksiyani bajaradigan tabiiy antropogen geosistemalar bo‘lib ular birinchi navbatda insoniyatning diniy ehtiyojlari bilan bog‘liq bo‘lgan.

Shuningdek aholining muayyan toifasiga mansub kishilarning bunday joylar bilan munosabatda bo‘lishga intilishga sabab bo‘ladigan ziyorat qilinadigan obyektlardir. Hududiy hosilalarning bunday toifasi insoniyat rivojlanishining har bir bosqichda bo‘lgan “muqaddas joylar” tushunchasiga to‘g‘ri keladi va hozirgi barcha dinlarning muxlislari (tarafdorlari) uchun mavjud.

Sayyoramizdagi bunday meroslarni o‘rganish va asrash bilan sakral geografiya (сакралная география, sakral geography) shug‘ullana boshladi. Muqaddas deb hisoblanadigan barcha joylar va narsalar mavjud bo‘lgan landshaftlarni o‘rganadigan sekral geografiya asta-sekin tadqiqotning alohida sohasiga aylanmoqda va unga doir tadqiqotlar dolzarblashib bormoqda. Sakral geografiya – yer yuzasidagi muqaddas toifadagi muayyan obyektlarning o‘zaro munosabatini aniqlash to‘g‘risidagi bilimlar tizimi bo‘lib, u makoniy tasavvurlarning ayrim turlarini – diniy tizimlaridagi makoniy tasavvurlar shakllanishining qonuniyatlarini o‘rganadi. Sakral geografiyada yerning bir xil emasligi –“olamning markazi”, “makonning o'qlari"’va “sakral zonalar” ning mavjudligi to‘g‘risida so‘z yuritiladi.

Sakral geografiya turli xalqlar va dinlarning vakillari muqaddas deb hisoblaydigan joylar va narsalar mavjud bo‘lgan sakral landshaftlarni o‘rganish bilan shug‘ullanadi. Bunday landshaftlar ilohiy kuch irodasi bilan biron-bir hodisa sodir bo‘lgan joylar, barcha zamonlar va etnoslarning buyuk avliyolari va ularning safdoshlari dafn qilingan joylar, yo‘qolgan dinlarning muqaddas joylari, ko‘p yillik ziyoratgohlar va zoxidlik (tarki dunyochilik) obyektlari, shuningdek kuch joylari deb atalmish joylarda tabiatning ko‘rinmas kuchlari yaratgan unikal landshaftlardir.

Sakral geografiya tabiiy, madaniy va tarixiy merosning alohida e’zozlanadigan va muqaddas obyektlari to‘g‘risida tarixiy-diniy bilimlar tizimini o‘rganadigan fan bo‘lib, unda bunday obyektlarning har xil turlari, ularning joylashishi, paydo bo‘lish tarixi va xalqlar hayotidagi ahamiyati, shuningdek ular bilan bog‘liq diniy- marosim amallarining tizimi o‘rganiladi.

O.A.Lavrenovaning ta’riflashicha (2003) sakral geografiya atrof-muhitning belgi sifatida nomoyon bo‘ladigan geografik obyektlar yoki madaniy landshaftning elementlari va ularni ko‘rsatadigan arxitiplar, transtsedent tushunchalar, kategoriyalar va ularga mos bo‘lgan simvollarning belgilar tizimiga aylanishini anglatadi.

Falsafiy ilmiy yondashuvlarning tahlil va sinteziasosida Sakral geografiya konkret tarixiy va geografik makonda borliqning muqaddas an’anaviy nomoyon bo‘lishini o‘rganadi; Sakral geografiyaning umumiy obyekti yagona sakral makonning tarkibiy qismi sifatidagi geografik qobiqdir. Turli kuchlar va ularga mos keladigan jarayonlar, hodisalar va ruhiy-ma’naviy va axborot –energetik saviyadagi o‘ziga xosligidir.   (Shukanova,2012).

Diniy hayoti va faoliyati, umuman olganda diniy sohani hududiy uyushtirish Sakral geografiyaning predmetidir. Bunday uyushtirishning geomokoniy shakllanishining omillari va qonunlari tadqiqotning aniq real obyektlaridir. Geografiya fanlari tizimida rivojlanayotgan sakral geografiyaning vazifalariga muqaddas, alohida qadrlanadigan joylarni, kishilarning muayyan hamjamiyati nazarida ilohiy ahamiyat kasb etadigan diniy yodgorliklarni, muayyan hududda (mamlakatda) diniy vaziyatning shakllanishining tarixiy- geografik jihatlarini, makoniy joylanishi haqidagi tasavvurlarning ayrim turlarini (sistemalarini) – diniy tizimlaridagi tasavvurlar shakllanishining qonuniyatlarini o‘rganish kiradi. Diniy hayotni va faoliyatni, umuman diniy diniy jabhani hududiy sakral sistemalar (HSS) rivojlanishi va geomakoniy uyushtirish omillarining tizimini asoslash, ularning shakllanishi, tuzilmasi va soligining qonunlari va qonuniyatlariniochib berish va asoslash, tushunchalar-termenologik apparatni ishlab chiqish tashkil etadi. Bu shakllarning mazmunini hududiy sakral sistemalar belgilaydi (Shabliy, Visotak, 1993).

Sakral geografiyaning vazifalari jumlasiga shuningdek ichki ziyorat va bilish turizmini rivojlantirish vatanparvarlikni tarbiyalash, kishilarning salomatligini va ma’naviy hayotini yaxshilash kiradi. Shuningdek, uning vazifalaridan biri har bir mamlakatdagi diniy vaziyatni shakllantirishning geografik jihatlarini o‘rganishdan iborat.

Yuqorida ta’kidlagandek, Sakral geografiya makro va mikrokoskom birligini izlab toppish maqsadida juda qadimdayoq yuzaga kelgan. Geografik tadqiqotlar olamning tabiiy – ilmiy tasvirining muhim elementi boʻlib, geografiyaning va umuman fanning har bir bosqichida tadqiqotning turli metodlari va olamni bilishning metodologik orientridir. Shunday yondashuvlardan biri geografik tadqiqotlarni Sakral geografiya fani rivojlanishi bilan qoʻshib (birgalikda) olib borishni taqazo etadi. Uning tarkibiy qismi tarixan sakral geografiya boʻlib,subyekt va muqaddas obyekt oʻzaro aloqasi nuqtai nazaridan makonning turlicha nomoyon boʻlishining idrok etilishini aks ettiradi.

Diniy hayotning geografik jihatlarini oʻrganish mamlakatshunoslik boʻyicha tadqiqotlar kabi juda qadimiy boʻlib, Straban va Gerodot davrlariga borib taqaladi. Hozirgi kunda sakral geografik tadqiqotlarning samarali rivojlanishini tizimli yondashuv asosida amalga oshmoqda.

Xulosa: Sakral obyektlar va sakral landshaftlarning makoniy joylashuvi va funksiyalarini aniqlashda sakral geografiyaning tadqiqot obyektlarini oʻrganish hududiylik tamoyiliga ega boʻlish zarur. Shunga koʻra Yu.Zavgarodniy (2013) Sakral geografiyaning tadqiqot obyekti muqaddas qadamjolarning semantik, tashkiliy tuzilmalari (sakral toposlar) sifatida u yoki bu diniy falsafiy an’analarning yer va osmon oʻtrasidagi oraliq oʻlchamidan iborat deb hisoblanadi.

Sakral geografiyaning asosiy vazifasi sakral obyektlarni hududiy birlashtirish, hosil boʻlishi, funksiyalariga koʻra tabaqalashtirishdan iborat boʻlmogʻi kerak.

Foydalanilgan adabiyotlar

1.Завгородний Ю Сакральная география И Феномен Поломнничества: Гайпое или явное? Электронный портал. – Режим даступа: HttP: || turengious. com.va –дата даступа 28.09.2013

2. Кулешова М.Э. Управление културними ландшафтами И иными обьектами историю културниго наследия в натсионалних парких. из бо сентра охраны дикой природы. 2002-105с

3.Лавренова О.А. Културний ландшафт: отземли к космосу. Ноосферная концепция В.И.Вернадского И панятие култорного ландшафта биосфера. Электронный научный журнал. – 2003. N2

Режим даступа: HttP: | www\nts.ru\boisphere\03-2\Lavven.htm.

Xolmirzayeva M.A. PHD
Mahammadjonova Z. M.
Zahiriddin M. B.
nomıdagı Andijon davlat universiteti
Biologiya yo'nalishi magistranti

BOLALARNI INTELLEKTUAL VA JISMONIY KO'RSATGICHLAR ORASIDAGI BOG'LIQLIKNI TAVSIFLASH

Annotatsiya: *Ushbu maqolada o'qishdagi qiyinchiliklar bilan bog'liq muammolar hamda ularga yechim sifatida keltirilgan tavsiyalar qayd etilgan. Bolalarning faoliyatini o'zgartiruvchi jismoniy mashqlar haqida ham keltirilgan. Bolalarning intellektual va jismoniy ko'rdatgichlari orasidagi farqlar va bog'liqliklar xususida ham qayd etilgan.*

Kalit so'zlar: *faoliyat, jismoniy ko'rsatgich, neyrokorreksion mashq, miya, rivojlanish.*

Kolmirzayeva M.A. PHD
Mahammadjonova Z. M.
Zahiriddin M. B.
Andijan State University
graduate student of Biology

DESCRIBING THE RELATIONSHIP BETWEEN CHILDREN'S INTELLECTUAL AND PHYSICAL INDICATORS

Abstract: *In this article, the problems associated with reading difficulties and the recommendations given as solutions to them are noted. Physical exercises that change children's activities are also mentioned. Differences and connections between children's intellectual and physical indicators are also noted.*

Key words: *activity, physical indicator, neurocorrective exercise, brain, development.*

Hozirgi vaqtda bo'sh o'zlashtiruvchi o'quvchilar soni ortib borayotgani hech kimga sir emas. Ayniqsa, ushbu moyillik ommaviy bog'cha yoshidagi bolalar, boshlang'ich sinf o'quvchilari o'rtasida namoyon bo'lib kelmoqda. Ko'pchilik bolalar maktab ta'limida ayrim muammolarga duch keladilar, asosiy muammolar esa bilimlarni o'zlashtirish jarayoni bilan bevosita bog'liq bo'lib qolmoqda. Maktablarda bilimlar o'quvchiga berilmoqda, lekin natijalar talab darajasida emasligi mazkur ahvolga yanada jiddiy e'tibor qaratishga va zudlik bilan kerakli chora-tadbirlarni amalga oshirishga sabab bo'lmoqda.Bog'cha va maktablarda ishlash jarayonida samarali korreksion metodlarning yo'qligi o'qish bilan bog'liq muammolarning ko'payib borayotganligi va o'zlashtirishi past bo'lgan o'quvchilar sonining ortishiga olib kelmoqda. Ushbu muammolarning kelib chiqishi natijasida turli reabilitatsion va konsultatsion markazlarning sonini ortishiga turtki bo‘lmoqda. Mutaxassislarning ta’kidlashicha, hozirga qadar hammaga ma’qul bo‘lgan an’anaviy pedogogik-psixologik metodlar o‘qishda va korreksion ishlarda o‘z kutgan natijalarini bermayotganligi tufayli yangi metodlarni izlash zarurati paydo bo‘ldi. Ushbu avj olib borayotgan muammolarni tezroq oldini olish va samarali bartaraf etish masalasi bugungi kunning eng dolzarb muammosi bo‘lib qoldi. O‘qishdagi qiyinchiliklar bilan bog‘liq muammolarga kimlar duch kelmoqda? Ular umumiy maktablarda bilim olib kelayotgan oddiy sinf o‘quvchilari. Ular ko‘pincha bir yoki bir necha fandan (asosan og‘zaki) yaxshi natijalarga ega bo‘lishga harakat qiladi. Lekin yozish, o‘qish va matematika borasida sezilarli darajada muammo va qiyinchiliklarga duch kelinmoqda.

Oxirgi yillarda ko‘pgina pedagogik, psixologik tadqiqotlar aynan ta’limdagi qiyinchiliklarning kelib chiqishi va uni bartaraf etish sabablari va mexanizmlarini o‘rganish bilan bog‘liq bo‘lmoqda. Tadqiqotlar natijalari shuni ko‘rsatib turibdiki bolalarning oliy psixik funksiyalarning parsial ya’ni qisman rivojlanishida ortda qolishi bilan bog‘liq sabablarga borib taqaladi. Ushbu muammolarni ishonchli va samarali aniqlashda neyropsixologiya, neyropedagogika alohida ahamiyat kasb etadi. A.R. Luriya va uning izdoshlari tomonidan olib borilgan ishlar natijasida oliy psixik funksiyalarning tuzilishi va uning lokolizatsiyasi faoliyati natijasida o‘qish va yozishni amalga oshirilishi uchun miyaning dasturlash, ixtiyoriy boshqarish (III-blok, miyaning peshana qismi) hamda axborotni qabul qilish, qayta ishlash va saqlash qismi (II-blok miyaning ensa qismi) hamkorligida amalga oshirilishi taqiqotlar natijasida aniqlangan. Bunda miyaning energetik ya’ni miyaning quvvatini ta’minlovchi qismi (I-blok miyaning ustun (stvol qismi)ning ham ahamiyati katta hisoblanadi.

A.R. Luriya o‘z nazariyasida inson miyasini murakkab bir tuzilishga egaligi va u uch blokdan (zonadan) iborat bo‘lib, har bir blok har xil yosh davrlarida va bosqichlarida shakllanishini ta’kidlab o‘tgan. Ular quyidagicha o‘rganiladi: I-blok, energetik yoki miyaning quvvati bloki hisoblanadi. Ushbu miyaning qismi bola ona qornidan boshlab bola 2-3 yoshga to‘lgunga qadar shakllanib, o‘zida retikulyatsion formatsiya va organizmning yoki biror a’zoning hayotiy faollik darajasi hamda tetiklikligi uchun javob beradi.II-blok, axborotni qabul qilish, qayta ishlash va saqlash bloki uch yoshdan boshlab 7-8 yoshlarni o‘z ichiga oladi. Ushbu qismga miyaning ikki yon chakka, bosh orqa yuqori va bosh orqa zonalarini o‘z qamroviga oladi. Ushbu miya qismi psixik faoliyatning operatsion-texnik jihatdan ta’minlash uchun xizmat qiladi.III-blok, dasturlash, ixtiyoriy boshqarish va nazorat bloki 7-8 yoshdan boshlab 12-15 yoshgacha shakllanib, boshning peshana zonasini o‘z ichiga olib, umumiy qilib aytganda inson xulq-atvori va xatti-harakati muvofiqligi uchun javob beradi. Ushbu blokning to‘liq yetilish davri to 20-21 yoshgacha davom etadi. Yuqoridagi ma’lumotlar bizga yozish, o‘qish, matematik vazifalar, og‘zaki nutq va uni tushunish kabi vaziyatlar oliy psixik funksiyalar ya’ni, murakkab funksional tizim bosh miya va uning funksional komponentlariga tayangan holda o‘z faoliyatini amalga oshishi haqida ma’lumot beradi. Fonematik eshitish qobiliyati, tovushlarni ajrata olish, og‘zaki nutq, yozuv va o‘qishni o‘zlashtirish, ko‘rishga oid analiz funksiyasi harf, so‘zlarni tanish, ularni esda saqlash va matnni o‘qishda muhim o‘rin egallaydi. Har bir bolaning psixik rivojlanishi genetik individual tarzda shakllanib, ularning psixik funksiyalarining rivojlanishi uzoq davom etuvchi jarayon bo‘lib, bir funksiya oldinroq boshqalari esa keyinroq shakllanishini hech kimga sir emas. Shu bois bir bolada ko‘rishga, eshitishga oid o‘zlashtirish boshqasida esa muhitni tasavvur qilish imkoniyatlari shakllangan bo‘lib, har bir bolaning faoliyati, harakati hamda intilishi bir-biriga o‘xshamaydi va bularning ba’zilari oldinroq ba’zilari esa keyinroq rivojlanadi. Aynan miyaning ushbu tarkibiy qismi boladagi ustun va zaif tomonlarini kompensatsiya qila olmasligi natijasida ijtimoiy talablarga muvofiq bo‘la olmayotgani, qiyinchiliklarga duch kelayotganini bizga aynan qaysi jihatlariga birinchi navbatda e’tiborni qaratishimiz kerakligini bildiradi.Bu kabi muammolarni oldini olish albatta maktabgacha ta’lim tashkilotlaridan boshlanishi, o‘zining ijobiy natijasini beradi. Bunday muammoli bolalarga kuchliroq motivatsiya, emotsional qiziqtirish (o‘z kuchi va qobiliyatiga undovchi rag‘batlantiruvchi so‘zlar) va vazifalarni miqdorlash sezilarli darajada yordam beradi. Hattoki bunday bolalarga faoliyatni o‘zgartiruvchi vaziyatlar ham foydali hisoblanadi. Faoliyatni o‘zgartiruvchi vaziyatlar jismoniy mashqlar, harakatli o‘yinlar orqali amalga oshirilishi ham mumkin. Maktabgacha va kichik maktab yoshidagi bolalarni intellektual rivojlantirishda neyropedagogik va neyropsixologik bilimlarning o‘rni beqiyos hisoblanadi. Chunki neyropedagogik, neyropsixologik yondashuv bizga oliy psixik funksiyalarning o‘rganib bolalarning kuchli va zaif tomonlarini o‘z vaqtida aniqlash va aniqlangan kamchiliklarni bartaraf etishga, guruh yoki individual tarzda korreksion ishlarni samarali tashkil qilish orqali mavjud muammolarni yaxshilashga yordam beradi.

Neyrokorreksion mashqlar tizimli ravishda to‘g‘ri tashkil etilsa, bolaning intellektual rivojlanishida yutuqlarga erishish mumkin.Neyrokorreksion mashqlarning aksariyat qismi jismoniy mashqlar hamda bolalarning harakatchanlik faolligini oshirishga yo‘naltirilgan mashqlardan iboratligiga e’tibor qaratsak, jismoniy tarbiyaning bola intellektini rivojlantirishda samarali vosita ekanligiga ishonch hosil qilamiz.Ushbu muammoni ijobiy hal etishni ko‘plab omillar, jumladan, jamiyatning ijtimoiy-iqtisodiy, madaniy rivojlanishi va maktabgacha yoshdagi bola shaxsini intellektual rivojlantirishda jismoniy tarbiya, jismoniy mashqlarning ahamiyatliligini ilmiy asoslash zarur.

Hozirgi maktabgacha pedagogikada maktabgacha yoshdagi bolalarni o‘qitish va tarbiyalashning mohiyati haqidagi nazariyotchi va amaliyotchilar ega bo‘lgan bilimlarning to‘liqligi bilan bolaning psixofizik rivojlanishidan xabardorligi o‘rtasida bog‘liqlik mavjud.Rivojlanishning tarixiy bosqichlari va qonuniyatlari maktabgacha yoshdagi bolalarning aqliy rivojlanishida jismoniy tarbiyaning o‘rni borasidagi nazariya va amaliyotni chuqur o‘rganish, tahlil etish, baholash kelgusidagi vazifalarni belgilash imkonini beradi. Jismoniy faoliyatning insonning shakllanishi va rivojlanishida muhim vosita ekanligi P. F. Lesgaft, I. M. Sechenov kabi olimlar tomonidan ham ta’kidlangan. Ularning ta’kidlashicha, inson jismoniy va aqliy jihatdan birlikda va o‘zaro bog‘liqlikda rivojlanadi, shuning uchun jismoniy tarbiyani to‘g‘ri tashkil etilishi yetuk shaxs sifatida shakllanishning omiliga aylanishi mumkin.P.F.Lesgaft “Maktab o‘quvchilari jismoniy tarbiyasi bo‘yicha qo‘llanma” (1888-1901) nomli ikki jildlik fundamental asarida jismoniy tarbiyaning o‘ziga xos tizimini ishlab chiqdi.

FOYDALANILGAN ADABIYOTLAR RO‘YXATI

1. Abdullo Avloniy. Muxtasari tarixi anbiyo va tarixi islom. - T.: Fan, 1994. - 293b.
2. Abdullayeva Sh. A. Sportchilarning tarbiyalanganlik darajasini tashxislash metodlari. - Toshkent: Kamalak, 2002. - 134 b.
3. Abdullayeva Sh. A., Axatova D. A., Sayitov S. S. va boshqalar. Pedagogika. O‘quv qo‘llanma. - T.: Fan, 2004. - 198 b.
4. Abdullayev A. Talaba va sport. - Toshkent: Moliya, 2015. - 168 b.
5. Беспалько В.П. Слагаемые педагогической технологии. - М.: Педагогика, 1989. - 192 с.

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Yuldashev T.R.
Karshi Institute of Engineering and Economics
professor, DSc
Republic of Uzbekistan, Kashkadarya region,
Rakhimov G.B.
Karshi Institute of Engineering and Economics,
associate professor, PhD.
Republic of Uzbekistan, Kashkadarya region
Bekmurodov A.A.
Karshi Engineering-Economics Institute, graduate student
Kashkadarya region
Jabborov N.X.
Karshi Engineering-Economics Institute, graduate student
Kashkadarya region

METHODS OF PREVENTING FOAM IN DEVICES FOR CLEANING GAS FROM NORMIC COMPONENTS

Abstract. *The choice of the technology of purification of natural gas and condensate depends on the contained acidic components. The absorption methods are the most widely used industrial techniques, where alkanolamines are used as absorbents. One of the major problems associated with the use of ethanolamine is increased foaming of the working solution, resulting in the disruption of the process and overrunning of the reagent. The main ways of solving this problem is to use defoaming reagents and purify the active amine solution from the accumulated impurities by filtration. It is proposed to use reagents of brand "Penta" as defoamers, their effective concentrations are determined. The possibility of applying the nanomaterial "Tekhnosorb 1" in the process of purification of the amine solution from the impurities, which will improve the filtration efficiency, is studied.*

Key words: *alkanolamines, absorbent, adsorbent hydrogen sulfide, carbon dioxide, silicon defoaming agents.*

ANALYSIS AND METHODS.

The choice of technology for cleaning natural gases and condensates depends on the acidic components they contain. The most widely used industrial methods are absorption methods, in the implementation of which alkanolamine solutions are used as absorbents. One of the main problems associated with the use of ethanolamine is the increased foaming of the working solution, leading to disruption of the technological process and excess consumption of the reagent. The main ways to solve this problem are the use of defoaming reagents and purification of the working amine solution from accumulated impurities by filtration. It is proposed to use Penta reagents as defoamers, their effective concentrations are determined. The possibility of using the Technosorb 1 nanomaterial in the process of cleaning the amine solution from impurities is studied, which will improve the filtration efficiency.

Compared to other fossil fuels, natural gas is the most widely consumed fuel in the world. The reserves of natural gas are quite large, one-third of them are deposits of sour components. The content of hydrogen sulfide in the gas fields of the system of the Hisar region of the Republic of Uzbekistan is 1.2%, and the component content of the gases supplied to the Mubarak gas processing plant is 1.8%. That is why two different technologies are used for gas purification. In the next period, the strong development of machine building in the industry and the increased demand for electric energy sharply increased the consumption requirements for natural gas raw materials. The high negative impact of the harmful components released from the composition of natural gases during the exploitation of mines on the human body and the environment, the corrosive effect on the equipment, the possibility of poisoning of the catalysts that have been processed, put before the gas industry the problem of cleaning such raw materials in modern ways. As a result of the explosion of the gas well in the field named “25th anniversary of Uzbekistan”today, it is impossible to estimate the impact on the environment, the living population and the animal world.

Methods of purification of natural gases containing acidic components. The traditional absorption purification method for extracting sour gases from natural gases is carried out by means of various sorbents, most often with the help of alkanolamines. The process of cleaning with a solution of absorbents is widely used in the gas industry, and the choice of the composition of solvents depends on technological issues.

A 40% solution of diethanolamine (DEA) is used in Astrakhan and Orenburg large gas processing plants belonging to “Gazprom” industrial JSC. When DEA is used as an absorbent, it provides high and reliable gas purification regardless of the partial pressure of hydrogen sulfide and carbonic acid, the low viscosity of aqueous absorber solutions, the low absorption of hydrocarbons, that is, it guarantees the high quality of sour gases and is considered to be used as a raw material in the extraction and production of sulfur.

RESULTS.

During the purification of natural gases from acidic components, a number of negative effects occur. Serious situations in the process include foaming and corrosion due to the chemical action of the amine solution, which causes a lot of consumption due to the breakdown of the expensive absorbent, and a part of it is removed with the purified gas [1, 15]. Corrosion products of equipment (iron sulfide, iron oxide, sulfur compounds, etc.), amine degradation products when various compounds (mechanical compounds, liquid hydrocarbons, various surfactants (SFM), corrosion inhibitors) enter the solution together with gas is one of the serving reasons [2].

The condition of foaming leads to the malfunction of the device and the deterioration of the quality of the purified gas. In most cases, such defects can be eliminated by adding anti-foam compounds to the solution or by removing foam-forming substances from it. Silicones or high-boiling alcohols are used as antifoam compounds [15]. Di and triethyleneglycols can be included in this quality, in exchange for which foaming does not occur in glycolamine cleaning devices [16].

Currently, silicon organic high molecular compounds (silicone foam extinguisher) are used as the most convenient solution due to their low price and good quality ratio compared to organic foam extinguishers. In our opinion, there are no observable processes with foam formation, which are less effective. These substances are chemically inert at high temperature values, strong and effective, characterized by low surface tension, good spreading coefficient, low environmental impact.

Silicone organic foam suppressant in the form of a polymer mixture with a linear structure (polydimethylsiloxanes: $(CH_3)_3SiO\text{-}[(CH_3)_2SiO\text{-}]nSiO(CH_3)_3$ with various degrees of polymerization - n [3]). Polydimethylsiloxane is an oily, colorless clear liquid with different viscosity and surface tension depending on the degree of polymerization. The main chain of the polymer has an inorganic structure, and the side methyl groups are organic, which generally determines the most complex properties of silicone oils. The polymer does not undergo any reaction during operation, it is well adsorbed in the sediment, that is, the main amount of polydimethylsiloxane introduced in it is deposited together with the sediment, and then it undergoes abiotic decomposition into hydrogen sulfide gas, water and silicon dioxide [4].

Polydimethylsiloxanes are rarely used in their pure form, their mixtures or solutions are more commonly used in organic compounds. Polydimethylsiloxanes are often used in the form of an aqueous emulsion. Its emulsification allows to achieve a significant decrease in the consumption of the main agent at the same efficiency of the foam extinguishing agent.

When a mixture with a complex composition is used as a disintegrant, the guidelines for obtaining a stable mixture are recommended, according to which one of the disintegrants must be well soluble in the organic phase and poorly soluble in water, and the other vice versa, well soluble in water and insoluble in the organic phase. To increase the effectiveness of silicone foam extinguishers, a moderator such as silicon oxide is often added to it. The effectiveness of such foam extinguishers depends on their chemical structure [5] and may be enhanced by introducing COOH, $(CH_2)_2CN$ group, etc., or by additional technological operations, for example, by heat treatment. In order to improve the defoaming properties of silicones, it is recommended to introduce atoms of other elements into their molecules, such as sulfur and boron.

A silicone foam suppressant is made on the basis of polydimethylsiloxane oil, which has the property of quickly spreading over the surface of the liquid. The active silicone ingredient distributed in the foam is mixed with the molecules of SFM on the surface of the bubble. Due to this, due to destabilization and breaking up of bubbles, the veil becomes thinner. Particles of silicon dioxide mix on the surface of the foam bubble, further destabilizing the foam. The bubble of the foam bursts and the trapped air comes out.

The fading of the foam occurs due to the thinning of the curtains. Silicone foam extinguishers instantly spread the liquid on the surface, creating a positive effect. To obtain a positive coefficient, the surface of the foam quencher must be very thin.

A number of organizations are involved in the process of synthesizing reagents with the characteristics of foam suppressors in order to produce them in sufficient quantities. The chemical composition of the products offered by the authors [6-9] is different, but most of the reagents have not been able to take their place in this field due to the properties of cleaning high-sulfur gases.

Defoaming is done by removing the foaming agent from the solution. For this purpose, passing it through a filter, the absorbent solution is quenched or retained in the filter. Activated carbon is used as a filtering agent [10].

Practical experiments show that when billions of cubic meters of gas are processed, a significant amount of impurities accumulates [1]. In this case, a small part of the circulation of the DEA solution enters through the existing filtration units, it is not always technologically efficient, and the carbon adsorbers are quickly filled with tar matter. In this case, the state of regeneration of activated carbon does not occur, that is, it leads to the consumption of additional resources.

An alternative option for adsorption cleaning is extraction [11] or vacuum cleaning [12] technology. The extraction technology was implemented at the Orenburg GPP, and the construction of a vacuum device was considered in the reconstruction project at the Astrakhan GPP.

It is determined that the most active work was carried out to increase the percentage of the relative surface and the marginal volume of the sorption space of macro- and mesoporosities (passing pores). Taking into account this tradition of foreign companies in the purification of amine solutions, a number of modified brands of activated carbons have been developed. SGL Canada's Travis Calgary firm developed this bituminous coal, and French firm Sutclife Speakmen Carbons Ltd developed the 207-A coal brand. It can be seen that the specific mesoporosity surface of AG-3 coal is 33 m^2/g, while in SGL and 207-A coals, this parameter is equal to 950-1050 and 1000-1200 m^2/g, respectively, that is, it is several times larger. As expected, coal grade 207-A has the largest adsorption capacity, followed by coal grades SGL and AG-3, which have a marginal adsorption capacity of 29 and 52%, respectively [13].

DISCUSSION.

It should be recognized that the possibilities of modified activated carbons are limited and to achieve a new quality indicator in increasing the efficiency of filter materials can be achieved only by creating new carbon adsorbent materials - nanomaterials. First of all, their high efficiency is characterized by the fact that the surface area is greatly enhanced - up to 2000 m^2/g, the anisometry and specific structure of the particles, the hydrophobicity and, accordingly, the oleophilicity of the material in relation to non-polar molecules, and the very high activity of the nanostructured complexes [14, 15].

Studies have shown that the reagents Tesil-201, 201A, DEM-VS-97D, Penta 4613 have antifoam properties when used in their pure form. But the property of extending their service life is very low, and the height of the foam is completely restored in a short period of time. In addition, the reagents have low thermal stability, that is, the temperature regimes of the device cannot be allowed. Reagents Penta 470, 480B, 4609 have shown to have satisfactory defoaming properties, so their use in the form of aqueous solutions has resulted in saving reagents. Common to these reagents is the nature of the emulsifier's oxyethyl higher fatty alcohols and modifiers, and in return, mixing of SFM molecules on the bubble surface, film thinning, and bubble disintegration can occur.

Reagnet Penta 470 has been industrially tested, and is currently used in gas scrubbing and pressurization devices, condensate stabilization and ventilation, and sour components in gas processing plant (GPP). It can be used after the modernization of the transmission node of foam extinguishers, ensuring continuous transfer of aqueous solutions of given reagents and automatic transmission of its compounds during foaming.

Based on the available data, in the first approximation, the dependence of the consumption of foam quenching reagents on the circulation of the absorbent and the concentration of the regenerated amine was obtained. In practice, having primary average daily data (the amount of amine circulation, the amount of defoamer and the concentration of regenerated amine), with the help of diagrams, it is necessary to determine the content of defoaming reagents in the amine system of the gas treatment plant in GPP in the first approximation and, apparently, to determine its amount, to prevent foam formation. is considered

Adsorption capacity of “Technosorb 1” sorbent was studied in order to determine the possibility of using new materials in the conditions of GPP. A number of aqueous solutions were prepared for the study of DEA with a mixture of mixtures of different origins, the selection of which was based on the results of the study presented in [14]. Each prepared solution was passed through a stable bed of adsorbent through a real-scale industrial carbon filter analogue. The main indicators of the analysis were the foamability of the solution and the coefficient of surface tension at the boundary of the phase separation.

A non-significant effect on the characteristics of the operation is shown by the regeneration properties of the adsorbent. Regeneration of activated carbon leads to high temperature reprocessing with steam according to regulation. But in this case, the compounds adsorbed on the coal are polymerized, as a result of which the absorption capacity is lost, the carbon filter is not regenerated in the device for cleaning the gas from sour components in GPP, and in necessary cases, a complete replacement is carried out. The obtained results are presented in Table 1.

Table 1

Results of determination of adsorption properties of "Technosorb 1" adsorbent

Model solution	Reduction of foam height, %		Decrease in foam stability, %		Change in surface tension, mN/m	
	AG-3	Technosorb 1	AG-3	Technosorb 1	AG-3	Technosorb 1
1% sulfonol solution	75	86	77	86	1,96	2,25
Degradation product of amine	4	13	58	69	0,84	1,13
Contaminated mixture	75	86	77	86	1,96	2,25

In order to determine the regeneration ability of the "Technosorb 1" adsorbent, a working solution of amine is passed through the layer of the adsorbent before and after regeneration, determining the foam characteristics and the surface tension coefficient.

SUMMARY

When researching experimental test brands of "Penta" reagents into variants, the results of laboratory and experimental-industrial tests of such parameters showed the nature of the emulsifier, as well as its satisfactory characteristics and the possibility of use in temperature regimes in GQIZs. With the help of the obtained connections, it was possible to add the required amount of antifoam to the absorbent solution to prevent it from foaming.

Laboratory research data of Technosorb 1 adsorbent for purification of the working solution of DEA shows the positive dynamics of the basic qualitative characteristics of absorbent solutions during their purification with the help of Technosorb 1 material, i.e., information is provided about the sufficient sorption capacity of the contaminated absorbent and the required pore size for particle capture. Regeneration of "Technosorb 1" adsorbent provides a great opportunity to save resources.

USED LITERATURE

1.ЮлдашевТ.Р., Махмудов М.Ж. Табиий газни нордон компонентлардан абсорбсион усулларда тозалаш технологиялари. // Монография – “Интеллект” нашриёти – 2022- 215 бет.

2.ЮлдашевТ.Р. “Табиий газларни алканоламинлар билан тозалаш технологиясини такомиллаштириш”. // Монография –“Интеллект” нашриёти – 2023- 148 бет.

3. Yuldashev T.R., Makhmudov M.J., Svaykosov S.O. Modern liquidphase methods for gas feed sulfur purification //Science and Yeducation in Karakalpakstan. №3/1 (26) 2022. ISSN 2181-9203 – 31-35 pp.

4. Юлдашев Т.Р., Адизов Б.З. “Табиий газни нордон компонентлардан тозалашда кўпик ҳосил бўлиш муаммолари ва уни ечиш йўллари» //

“Фанватараққиёт” ДУК. Композиционматериаллар – 2023, №2 сон.- 125-128 бет.
5. Юлдашев Т.Р. (2023). Основа оборудования, используемого в процессе очистки газоабсорбционной технологии. *Universum:технические науки,* (5-6 (110)), 20-24 с.
6. Юлдашев Т.Р. (2023). Актуальные проблемы аминной очистки природных газов и пути их использования. *Universum: технические науки*, (4-6 (109)), 24-27 с.
7. Yuldashev, T. R., Makhmudov M, J. (2023). Cleaninng of Natural from Sobe Component. Journal of Siberian Federal University. Engineeng & Technologies, 16(3), 296-306 с.
8. Юлдашев, Т. Р. (2022). Абсорбенты для очистки природных газов от H_2S И CO_2. Theory and Analytical aspects of recent research, 1(10), 72-74 с.
9. Юлдашев, Т.Р. (2022). Оптимизация технологии глубокой очистки природного газа от кислых компонентов. // Models and Methods for increasing the efficiency of innovative research, 2(18), 62-64 с.
10. Юлдашев, Т.Р. (2016). Движение неравновесных буровых растворов в циркуляционной системе скважин. // In реальность-сумма информационных технологий (pp. 265-268) с.
11. Rakhimov, G. B., & Sayfiyev, E. K. (2024). Research of the process of producing alcohols based on by-products obtained in the fischer-tropsch synthesis. *Sanoatda raqamli texnologiyalar*, *2*(03).
12. Raximov, G. A. B. (2024). Qobiq-quvurlardan foydalangan holda issiqlik almashinish uskunasining samaradorligini oshirish uchun konstruksiyani takomillashtirish. *Sanoatda raqamli texnologiyalar*, *2*(03)
13. Rakhimov, G. (2023). Qobiq quvurli issiqlik almashinish qurilmalaridagi issiqlik almashinish samaradorligini gidrodinamik parametlariga ta’sirini o ‘rganish. *Innovatsion texnologiyalar*, *51*(03), 77-86.
14. Rakhimov, G., Kuybokarov, O., & Karshiyev, M. (2024). Research of the catalytic properties of a catalyst selected for the production of high-molecular weight liquid synthetic hydrocarbons from synthesis gas. In *E3S Web of Conferences* (Vol. 498, p. 01008). EDP Sciences.
15. Raximov, G. (2023). Qobiq quvurli issiqlik almashinish qurilmasini konstrusiyasini o ‘zgartirish orqali issiqlik almashinish samaradorligini oshirish. *Sanoatda raqamli texnologiyalar/Цифровые технологии в промышленности*, *1*(2), 172-179.

Yuldashev T.R.
Karshi Institute of Engineering and Economics
professor, DSc
Republic of Uzbekistan, Kashkadarya region,
Rakhimov G.B.
Karshi Institute of Engineering and Economics,
associate professor, PhD.
Republic of Uzbekistan, Kashkadarya region
Bekmurodov A.A.
Karshi Engineering-Economics Institute, graduate student
Kashkadarya region
Jabborov N.X.
Karshi Engineering-Economics Institute, graduate student
Kashkadarya region

INCREASING THE EFFICIENCY OF CLEANING NATURAL GASES FROM SOUR COMPONENTS

Abstract: *The analysis of conditions and criteria for choosing the optimal absorbent for sour gas purification is considered in the article. Various methods of amine cleaning have been considered using mono- and diethanolamine hydrogen sulfide, mercaptans and carbon gas absorbers. It is determined that the effect of preventing foaming of the absorbing solution and the structural properties of the absorber in effective cleaning of chemical reagents has been considered. In work, it is recommended to use a column type absorber. Factors influencing the efficiency and feasibility of amine purification of acid gases are discussed.*
Keywords: *corrosion, degradation, modeling, ion exchange resins, heat-resistant salts, formate, oxalate, acetate, electrodialysis.*

LITERATURE ANALYSIS AND METHODS.

The main process that takes place in amine desulfurization is the absorption of hydrogen sulfide, mercaptans and carbon dioxide in the column apparatus (absorber) provided in mass exchange devices. The type of absorbers and mass exchangers used will depend on the performance of the desulfurizer, the quality of the gas treatment, and the selectivity. A large number of different types of absorbers are designed and manufactured for cleaning processes [1].

In the course of work, the following are determined: the component composition of the expander and sour, raw and purified gases, the composition of the saturated solution in the consumption of the gas to be purified depending on the consumption of the regenerated sour components and the absorber, the dependence on the purification indicator of the main process, hydrogen sulfide, mercaptans and carbon dioxide in the purification of amine sulfur is the absorption occurring in the column apparatus provided in the mass transfer devices.

Performance indicators of the desulfurization device, the quality and selectivity of gas cleaning depend on the type of mass exchangers and absorbers used. Changes in absorbers and gas-solution contact time, specific consumption of absorbers, absorption capacity, regimes of steam consumption and parameters of the process, and the amount of substance formed in the solution during absorption and desorption processes are processed and produced in a large concentration [1, 2] .

Along with hydrocarbons, natural gases contain sour gases, carbon dioxide (CO_2), hydrogen sulfide (H_2S), mercaptans (RSH) and others, which complicates the process of transportation and use of gases under specific conditions. In order to prevent possible complications in processing, transportation and use, a plan of necessary measures aimed at achieving the established regulatory indicators for the composition of unnecessary components in natural gas will be developed in advance. Taking this into account, the main criteria for the selection of gas cleaning process technologies and absorbers are the ability to achieve a defined deep removal of "unwanted" components and to produce the desired products from them.

RESULTS.

A large number of methods and technologies are used in the manufacturing industry, which differ in terms of cleaning agents (absorbers), cleaning indicators of sour components and volumes of raw materials to be processed.

The Shurtan Oil and Gas Production Department is designed for the purpose of processing high-sulfur natural gases (hydrogen sulfide content of 0.08%) that meets the requirements of UzDSt 948 for obtaining commodity gas and obtains SUG (liquefied hydrocarbon gas), stable condensate, and elemental sulfur. Currently, the content of hydrogen sulfide in natural gas raw materials is 0.12-0.14%. The process of removing sour gases is carried out by the adsorption method based on zeolites. In the normal operating modes of the zeolite adsorption treatment plant, the regeneration gases of natural gas saturated with sour gas components (H_2S and CO_2) are formed, which are directed to the ASO-1, 2 amine desulfurization plant. ASO-1,2 device is designed for purification of regeneration gas from sour components (H_2S and CO_2) with diethanolamine absorbent. Products of ASO-2 are purified from sour components during gas regeneration, which is directed to main gasification. An aqueous solution of 20-25% DEA was used as an absorbing solution during the cleaning process. In the process of gas regeneration cleaning, concentrated sour gas is separated, which is directed to the device for the extraction of elemental sulfur with proper oxidation under conditions of variable hydrogen sulfide loading.

In the ASO-2 facility (“Shurtan Oil and Gas Production Department”), diethanolamine as an amine absorbent in the process of gas purification regeneration is characterized by disadvantages, i.e., a high level of corrosion activity, high solvent consumption, a relatively large loss of solvents, high energy consumption for its regeneration process, and Deficiencies such as DEA's relation to properties have been encountered. The main goal of the research is the process of cleaning gas from sour components using amine cleaning methods, and it is required to quickly solve the issues affecting the efficiency of the problems in the process of its operation.

The interaction of H_2S and CO_2 with amines occurs depending on the type of amines. The presence of a substituent on the nitrogen atom depends on the reactivity of the amine.

Compared with MEA and DEA, MDEA (tertiary amine) is more selective in removing hydrogen sulfide, that is, it is usually characterized by the amount of unabsorbed carbon dioxide [2, 3].

Differences in the rate of reaction of H_2S and CO_2 with amines, that is, the mass transfer resistance in the absorption of H_2S with amines is concentrated in the gas phase, and in the absorption of CO_2 - absorption in the liquid. The difference in reaction rates of MDEA with H_2S (instant reaction) and CO_2 (slow reaction) is very fast compared to secondary amines. The effect of the fast reaction with hydrogen sulfide and the slow reaction with CO_2 is used in the selective removal of hydrogen sulfide from the mixture with H_2S methyldiethanolamine. In this case, the absorber must be sized to provide a gas contact time sufficient to practically absorb all hydrogen sulfide, but not sufficient to remove a practical amount of carbon dioxide. The selectivity of the process for hydrogen sulfide increases with decreasing gas-liquid contact time.

DEA is used for non-selective removal of acidic components. Gas purification process with 20-30% DEA solution ensures the necessity of gas purification from H_2S and CO_2, but the disadvantage of DEA is to increase the heat costs in the regeneration of the absorbent and reduce the amount of CO_2 in the product gas [3].

MDEA provides the ability to selectively remove H_2S in the presence of CO_2, thereby increasing the proportion of H_2S in the sour gas. MDEA's advantage is shown as a selective absorber in the treatment of low-sulfur gases where the ratio of H2S to CO_2 is less than 1.

The disadvantage of the selective technology is the increase of CO_2 ballast in the transported commodity gas.

Combined absorption is a positive feature of DEA and MDEA, but creates difficulty in keeping the amines in precise proportions.

Advantages of MDEA over DEA:

- high thermal stability and low corrosion activity of the solution in comparison with DEA;

- H_2S and CO_2 reaction heat is small, that is, the possibility of reducing the amount of heat for the regeneration of the absorbent;

-does not form non-regenerative amides in reaction with carbonic acids and corrosion inhibitors, so amine loss does not occur, solid deposits do not form on the internal surfaces of the heat exchanger;

- due to the low pressure of saturated vapors, the loss of amine due to volatility is reduced;

-The required costs of MEA and DEA are slightly higher than MDEA.

MDEA has great absorption activity against hydrogen sulfide. The slow reaction rate of MDEA with CO_2 can be overcome to a practical extent by adding one or two chemically active primary or secondary amines to form a mixture of amines in water.

In addition, the slow reaction rate of MDEA with CO_2 can be achieved by parameters, constructions, type of plates (nozzles) in the absorber, i.e., a suitable time of its presence in the liquid (contact) is provided. In order to effectively use MDEA to remove the bulk of CO_2, it needs to be in the liquid phase long enough for the CO_2 to react. At lower pressures, the addition of a highly reactive amine enhances the ability of the solution to remove CO_2 [3, 4].

DISCUSSION.

Thus, in the field where MDEA is used, where commodity gas requirements are not met, the use of an amine mixture may improve device performance.

The chemical action reaction takes place in the liquid phase on the contact surfaces of the nozzle (plate) of the absorber, that is, in the contact of the raw materials streams in continuous counterflow: natural gas — from the bottom up and amine solution — from the top down.

In the process of phase contact, H_2S and CO_2 are chemisorbed by forming chemical compounds with liquid absorbers [5,6].

Saturation of amine solutions with sour components regenerates the amine in the evaporation column in the desorber, where the chemical reaction to amine and the decomposition of gases in the absorption of heat (endothermic reaction) take place. The desorption process takes place due to a decrease in pressure and an increase in temperature. In order to ensure a stable mode of operation, anti-foaming agent is introduced into the system. The filtration part of the regenerated amine solution is passed through activated carbon to remove contamination.

The reliability of the gas desulfurization device with amine solutions decreases under the following conditions:

- destruction of amines due to additional reactions and thermal decomposition;
- corrosion of equipment and product transmissions;
- tarnishing;
- foaming in the gas cleaning (drying) system;
- deposition of solid mixtures on the surface of pipes and equipment.

The presence of foaming acceleration in the system leads to the loss of absorbent and deterioration of the quality of the commodity gas. External signs of foam formation are a sudden increase in pressure drop in the column.

Corrosion rate depends on many variables. The corrosion activity of the applied amines is reduced in the following order: MEA, DEA, MDEA.

Corrosion rates are also affected by the relative amounts of SO_2 and H_2S in the sour gas. CO_2 in sour gas is more corrosive than carbon dioxide H_2S. In this case, the concentration of CO_2 and H_2S in the sour gas is not considered an absolute determining parameter, their concentration ratios determine the composition of the boiling amine solution. In addition, corrosion is affected by physical and chemical parameters, and the corrosion process also depends on the type of steel the equipment is made of [7, 8].

The rate of corrosion increases with the increase in temperature and the concentration of CO_2 in the solution, so it is necessary to increase the amount of solution given to filtration when their content increases in the solution.

A protective film is created when there is no erosion of iron sulfide on the surface of the metal. Taking this into account, the most saturated solution is allowed to degas a low content of CO_2 and a high content of H_2S [9, 10, 11].

CONCLUSION

The application technology of composite absorbents used in the purification of natural gases from acidic components has been researched. The component composition of raw and purified gases, the composition of the saturated solution in the consumption of purified gas depending on the consumption of regenerated sour components and absorbers, the dependence of the purification index of the main process was determined.

Accumulation of heat-resistant salts in the absorption system causes problems in the operation of the equipment, i.e. lowering the absorption properties of CO_2 and reducing its physico-chemical properties, as well as increasing the corrosion activity, clogging and erosion of the equipment.

USED LITERATURE

1.ЮлдашевТ.Р., Махмудов М.Ж. Табиий газни нордон компонентлардан абсорбсион усулларда тозалаш технологиялари. // Монография – “Интеллект” нашриёти – 2022- 215 бет.

2.ЮлдашевТ.Р. “Табиий газларни алканоламинлар билан тозалаш технологиясини такомиллаштириш”. // Монография –“Интеллект” нашриёти – 2023- 148 бет.

3. Yuldashev T.R., Makhmudov M.J., Svaykosov S.O. Modern liquidphase methods for gas feed sulfur purification //Science and Yeducation in Karakalpakstan. №3/1 (26) 2022. ISSN 2181-9203 – 31-35 pp.

4. Юлдашев Т.Р., Адизов Б.З. “Табиий газни нордон компонентлардан тозалашда кўпик ҳосил бўлиш муаммолари ва уни ечиш йўллари» // “Фанватараққиёт” ДУК. Композиционматериаллар – 2023, №2 сон.- 125-128 бет.

5. Юлдашев Т.Р. (2023). Основа оборудования, используемого в процессе очистки газоабсорбционной технологии. *Universum:технические науки,* (5-6 (110)), 20-24 с.

6. Юлдашев Т.Р. (2023). Актуальные проблемы аминной очистки природных газов и пути их использования. *Universum: технические науки*, (4-6 (109)), 24-27 с.

7. Yuldashev, T. R., Makhmudov M, J. (2023). Cleaninng of Natural from Sobe Component. Journal of Siberian Federal University. Engineeng & Technologies, 16(3), 296-306 c.
8. Юлдашев, Т. Р. (2022). Абсорбенты для очистки природных газов от H_2S И CO_2. Theory and Analytical aspects of recent research, 1(10), 72-74 с.
9. Юлдашев, Т.Р. (2022). Оптимизация технологии глубокой очистки природного газа от кислых компонентов. // Models and Methods for increasing the efficiency of innovative research, 2(18), 62-64 с.
10. Юлдашев, Т.Р. (2016). Движение неравновесных буровых растворов в циркуляционной системе скважин. // In реальность-сумма информационных технологий (pp. 265-268) с.
11. Rakhimov, G. B., & Sayfiyev, E. K. (2024). Research of the process of producing alcohols based on by-products obtained in the fischer-tropsch synthesis. *Sanoatda raqamli texnologiyalar*, *2*(03).
12. Raximov, G. A. B. (2024). Qobiq-quvurlardan foydalangan holda issiqlik almashinish uskunasining samaradorligini oshirish uchun konstruksiyani takomillashtirish. *Sanoatda raqamli texnologiyalar*, *2*(03)
13. Rakhimov, G. (2023). Qobiq quvurli issiqlik almashinish qurilmalaridagi issiqlik almashinish samaradorligini gidrodinamik parametlariga ta'sirini o 'rganish. *Innovatsion texnologiyalar*, *51*(03), 77-86.
14. Rakhimov, G., Kuybokarov, O., & Karshiyev, M. (2024). Research of the catalytic properties of a catalyst selected for the production of high-molecular weight liquid synthetic hydrocarbons from synthesis gas. In *E3S Web of Conferences* (Vol. 498, p. 01008). EDP Sciences.
15. Raximov, G. (2023). Qobiq quvurli issiqlik almashinish qurilmasini konstrusiyasini o 'zgartirish orqali issiqlik almashinish samaradorligini oshirish. *Sanoatda raqamli texnologiyalar/Цифровые технологии в промышленности*, *1*(2), 172-179.

Yuldasheva A. Q.
FJSTI, Ijtimoiy fanlar kafedrasi assisenti

THE ESTABLISHMENT OF THE INDEPENDENT REPUBLIC OF UZBEKISTAN AND ITS HISTORICAL SIGNIFICANCE

ANNOTATION: *The concept of independence has embodied the hopes, dreams and sufferings of mankind since ancient times. In fact, man, as a creature of nature, always strives for freedom and liberty. He always feels the need to feel free in every way, to live freely, to have a safe marriage. That is why the human history has seen many events of the struggle for freedom, different in form, but similar in essence, in all corners of the globe in different eras.At the end of the 20th century, unprecedented events took place in almost a third of the world. The totalitarian system called socialism, the communist ideology based on violence and repression, has declined. The USSR, whose governor claimed absoluteness to the world and the Earth, fell into a "cliff" both as a society and as a state. The allied republics that were part of it received the status of an independent state in the true sense of the word. The Idea of achieving independence is a legacy of our people. This dream has been passed down from generation to generation and has been reaching us for thousands of years. The first President I. Karimov wrote in his pamphlet "Legal guarantee of our great future" that "the Uzbek nation has been fighting for its own opinion and independence from time immemorial. This is a witness. The truth about the history of our nation should be revealed to the devoted children of our country, who do not go back from their path, example, and word. It is both a debt and a duty for all of us to diligently read the pages of history that we need to know," means to learn from the historical fate of our people and learn from the experience of our ancestors. After all, the long history of our people is a period of constant struggle for freedom and independence.*

KEYWORDS: *Independence, National flag, Cost of arms, Anthem, National identity, Addiction, Science, Great future, Supreme Council*

INTRODUCTION:

Turkestan was a free country for only 376 years in its next one and a half thousand year history (B. Ahmedov). At other times, they lived under the oppression of invaders. It can be seen from this that at all stages of historical development, Turkestan was subjected to various forms of division, its people were humiliated and humiliated by others. The national liberation movements of our people against the oppression of the Greeks and Macedonians, the Arab invasion, the Mongol invasion, and finally the Tsarist colonialism, have remained forever in the pages of history. At the same time, in our recent history, during the years of Soviet power, Uzbekistan's struggles against the centralization, more precisely, during this period, Uzbekistan's struggle to achieve national independence, sometimes openly and sometimes secretly, depending on the historical situation, are increasingly being reported through a number of sources. We are learning more deeply. In a word, our people have always strived to live independent, free, and independent. So, what is Independence itself? What is it based on and what is its essence? First of all, it should be said that independence is the first step towards equality. Because where there is no equality, someone is subordinate to someone else. Where there is silence, vices such as domination and living at the expense of others appear. As a result, the colonialism that we have experienced during the last century and a half will come to the world. The power of the word" equality" lies in the fact that it measures everything, from interpersonal relations to interstate relations, and puts an end to various discriminations or illogical bowing.Independence is the preservation of human dignity and worth through mutual respect, recognition of each other, and respect for each other. So, a universal value that evaluates the entire society and humanity, which comes from the essence of each independent individual, each person! Independence is thinking about the world's problems and a perspective related to one's own destiny without being separated from society. Independence is the ability to live based on a free worldview, free thinking.A person who is able to live independently, to think independently, to determine his own destiny, to trace his own life, easily overcomes conflicts and does not get confused in the crisis of severe problems of the world. From the point of view of every person's mentality and character, this simple fact of life can be compared to the independence of the state in a broad sense. Independence rejects any form of colonialism, oppression, discrimination and violence. At the moment, independence is developing its own principles of development based on the best experiences of world development, and living on the basis of a new, high-quality model of mutual cooperation in determining the fate of a single land, a single space, consistent with universal interests. Means If it does not establish cooperation, mutual solidarity, inter-country, inter-state and inter-regional political, economic and social relations, it may remain in its shell and may not be able to get out of the scope of national limitations. That is why the principles of independence, which have passed through the most difficult experience, remain relevant all the time. Because it is a historical reality that is constantly developing, enriching itself, improving, and affecting the minds and thinking of citizens. Independence is a criterion for conscious living, determining a conscious attitude. At the same time, it is a spiritual-spiritual, educational-ethical phenomenon that requires the strengthening of actions, aspirations and abilities, and constant improvement. This is especially important in the life of the independent countries that broke away from the former union and suffered from colonialism, especially Uzbekistan. Why? During the totalitarian regime, the working people were exposed to the mood of material and intellectual poverty, as the state took upon itself to solve all kinds of big and small issues related to the daily life and prospects of individuals, starting from the country's management system. He only had the right to work. He had become a cog in the mindless machine called labor. You work from morning till night, you get the right to not die of hunger according to your work, that's all. This was a state policy that had the force of law in the former union. Man was just working, just living. He did not feel the urge or the need to bite the core of the great blessing of life, the supreme concept of life. As a result, the feelings of acting intelligently, perceiving reality, building, creating, and creativity were completely extinguished. That is why the development of the country was slowing down and people's standard of living was decreasing.

LITERATURE REVIEW AND METHODOLOGY:

Practical actions for the economic independence and political sovereignty of Uzbekistan by the 90s of the 20^{th} century, a new stage of the protection of human rights and the pursuit of freedom began in socialist countries. The totalitarian state system, which ruled for nearly half a century in Eastern European countries, is facing a crisis, and democratic systems are beginning to settle. The Socialist Federal Republic of Yugoslavia disintegrated, and in its place several independent republics, the Socialist Republic of Czechoslovakia was divided into two, and the sovereign states of the Czech Republic and Slovakia were created. The Federal Republic of Germany and the German Democratic Republic were united, and the socialist system was destroyed in the vast area inhabited by Germans. At the same time, the former USSR disintegrated, and 15 countries that chose the path of independent development were formed in its place.In other words, by this time, the issue of achieving independence in many countries has become a historical process that covers the whole world. Independence of Uzbekistan took place within this comprehensive process. Islam Abdug'aniyevich Karimov said: "People's age-old desire for freedom, independence, happiness, determination to determine their own destiny is the force that drives deep changes in life."By the beginning of the 90s of the 20^{th} century, the realization of this age-old dream of the people in Uzbekistan became the main issue on the agenda. Such a situation has arisen in the country that, on the one hand, will the centralized state based on violence and characterized by administrative command be preserved, or will the sovereignty of the allied republics be ensured in exchange for the deepening of democratic processes? – the issue has become urgent. On the other hand, the leadership of the USSR at that time could not correctly assess the internal situation of the country and could not prevent the growing desire for independence in the national republics. The Supreme Soviet of the USSR, the President and the Government of the USSR could not find a way out of the crisis situation. Thus, at the beginning of the 90s, the relations between the center and the allied republics became tense, and the authority of the central government decreased. Political, economic and economic life remained unchanged. As a result, people's dissatisfaction with the negative situation in all spheres of life increased day by day, and the standard of living began to deteriorate. Production and labor discipline have been lost. This hoi naturally opened the eyes of the people, who could no longer accept the old way of commanding. In short, by this time, life itself began to show that the totalitarian rule, which violated the sovereignty of the republics and human rights, was hopeless. This can be seen in the fruitless steps to transfer the national economy to the market economy and the preparation of the New Union Treaty in the former USSR. It should be said that the issue of transition of the national economy to a market economy in the former Union was mentioned in the decision of the II Diet of People's Deputies in 1987 and in the Government Program aimed at improving the economy, which was discussed at the III session of the

Supreme Soviet in May 1990. Was done. People's deputies, while discussing the Government Program, came to the conclusion that the transition to the market economy is an objective necessity and there is no other way. In the decision of the III session of the Supreme Soviet of the USSR "On the transition to a managed market economy", it was noted that the transition to a market economy is the main content of economic reforms. Therefore, it was decided to process the concept of the Government in this regard based on the opinions of the deputies and to prepare it for September 1, 1990. In the leadership of the USSR, practical work in this direction became intense. On July 25, 1990, the Presidential Council of the USSR heard the information of the Prime Minister about additional measures regarding the transition of the country to the market economy. On July 27 and August 30, 1990, there was a meeting of the President of the USSR with scientists, specialists, representatives of the mass media on the topic of economic reforms. In early September 1990, at the IV session of the Supreme Council of the USSR, N. Ryzhkov gave a speech "On preparation for the transition to a managed market economy and creating stability in the country's national economy." Although it says that an option was developed that took into account the previous opinions of the deputies, the session did not accept the Government Program. An important reason for this was the relative loss of trust in the government among the deputies. At the same time, the Government Program envisioned the preservation of the former Union, as well as the development of the economy in a socialist way. On September 11, 1990, the II session of the Supreme Soviet of the RSFSR adopted S. Shatalin's "500 Days" Program. The following issues were raised in it: Citizens have the right to own property, economic independence, a free consumer market and a free price in it; The right of independent economic activity of the enterprise; Absolute sovereignty of the allied republics; He intended not to lower the standard of living of the population.

RESULTS:

They envisioned the creation of independent states, the development of unlimited private entrepreneurship, the transfer of property from state control, privatization, the abolition of collective farms and state farms, and the creation of farms. This essentially meant abandoning the socialist path of economic development. The third forces are those who support M. Gorbachev's Program. They were looking for a compromise, combining the directions of the two programs mentioned above and the idea of preserving the USSR, not losing the power of centralized administrative command, and using the method of "Shokovaya Terapiya" ("paralysis treatment"). Would advance. The preparation of the new Union Treaty was also aimed at these goals. In particular, proposals to change the name of the country to "Union of Socialist Republics" and "Independent Soviet Republics" and "Union of Independent States" in the new Union Treaty began to be made. Thus, in the social development of the former USSR, three directions – a return to totalitarianism, transformation typical of the world experience, and democratic forces in a socialist direction collided. Naturally, this caused a decline in the socio-political life of the country. In such a conflicting situation, the leadership of Uzbekistan clearly saw the inappropriateness of these directions and independently began to define a unique way to transfer the national economy of the republic to a market economy. First of all, the preparation of the "Concept Policy for the Formation of Economic Independence of Uzbekistan" was started. The concept was prepared in cooperation with the Republican State Planning Committee, the Ministry of Finance, other ministries, departments, research institutes, regions and executive committees of the city of Tashkent. According to it, "The main principles of improving the national economy of Uzbekistan and transition to a market economy" were developed and announced for public discussion on October 17, 1990. At the end of October 1990, the IV session of the Supreme Council of the Uzbek SSR heard the Government's report on this issue. The session of the Supreme Council considered that "the way out of the situation… consists in deepening and accelerating economic reforms on the basis of achieving the economic independence of the republic.".

DISCUSSION:

According to the Government Program, the following have been defined as the main directions for the improvement of the national economy of Uzbekistan and gradual transition to the market economy: Uzbekistan, an independent state: Implements independent social and economic policy coordinated with other republics, self-management of the national economy and self-sufficiency in money, national identity in economic life and cultural life is preserved ensures stay; Independently solves its economic relations with other republics on the basis of equivalence and mutual interest, regulates these relations with mutual contracts and agreements within the framework of the integrated national economic complex of the country; Guarantees the rights of local Soviets to wide development of local self-government, to strengthen its property and financial base; With all the means at their disposal, they help to strengthen the economic rights of labor unions and citizens, and ensure that these rights are protected in every way. Constitutional status was granted by the decision of the Supreme Council of the Uzbek SSR on September 30, 1991. In particular, it states: The Law of the Republic of Uzbekistan "On the Basics of State Independence of the Republic of Uzbekistan" adopted on August 31, 1991 should be given constitutional status. In cases where the current articles of the Constitution of the Republic of Uzbekistan conflict with the provisions of the Law "On the Basics of State Independence of the Republic of Uzbekistan", this Law shall be followed. The provisions of the Law "On the Fundamentals of State Independence of the Constitution of the Republic" which is being prepared by the Constitutional Commission should be followed. In this way, the legal independence of Uzbekistan filled everyone's tongue with joy. At the end of the session, Botir Kasimov, a worker of the production association in Tashkent, People's Deputy of Uzbekistan from the 21st electoral district, said: "I will not hide, there was a lot of talk about independence, but there was no progress when it came to the practical part of the work. Finally, the Supreme State Power of our republic adopted a very important law, a document on state independence. Now it is necessary for us to implement the decision that brought joy and pride to each of us." In this way, the will of independence, which our people fought and strived for for many years, was strengthened by the law.

CONCLUSION:

On the day Uzbekistan was declared an independent state, practical measures were taken to introduce the symbols of the independent state. A special decision was made about the State flag of the Republic of Uzbekistan, a copy of the coat of arms of the Republic and the musical statement of the National Anthem. In it, the expert group of the Constitutional Commission was instructed to continue working on the variants of the State flag, to develop draft laws on the State flag and anthem to the relevant committees of the Supreme Council in cooperation with the creative group of the Constitutional Commission, and to submit them to the next session. After achieving state independence, Uzbekistan should show its image within the framework of international requirements and standards, and for this, it should have state symbols that express all its capabilities and unique aspects. Was Usually, symbols are not just shapes made up of a collection of colors, they should come from the identity of this country and its values, and moreover, they should embody the essence of the state policy[6].

REFERENCES:

1. https://arxiv.uz/uz/documents/slaydlar/tarikh/establishment-of-the-republic-of-uzbekistan-and-its-historical-importance
2. https://docx.uz/document/mustaqil-o-uzbekistan-republikasinin-tashkil-topishi-va-un-tarihiy-amiyati-9d751cb5?lang=uz
3. 2017-2021 йилларда Ўзбекистон Республикасини ривожлантиришнинг бешта устувор йўналиши бўйича Ҳаракатлар стратегияси. – Тошкент: Маънавият, 2017.
4. Ozbekiston tarixi. 3-kitob. Mustaqil Ozbekiston tarixi.T.Sharq. 2011.
5. Новейшая история Узбекистана. Руководителъ проекта и редактор: М.А.Рахимов. – Тошкент: Адабиёт учқунлари, 2018.
6. Ўзбекистон тарихи. Р.Ҳ.Муртазаеванинг умумий таҳрири остида. – Тошкент, 2005.
7. Ўзбекистоннинг янги тарихи. Учинчи китоб. Мустақил Ўзбекистон тарихи. Т.: Шарқ, 2000.

Yuldasheva X.
Assistant
of the Andijan Institute
of Agriculture and Agro Technologies

FRUIT AND VEGETABLE PRODUCTION COOPERATIVE IMPROVEMENT OF MANAGEMENT MECHANISMS

Abstract. *This article highlights the importance of fruit-vegetable cooperatives in the agricultural sector of the economy, issues of improving the management mechanisms of fruit-vegetable cooperatives. Also, the importance of conducting agrarian policy in deepening the reforms aimed at the cultivation of agricultural products and their processing has been shown. The problems of improving the organizational and economic mechanisms in the management of fruit and vegetable cooperatives are shown.*

Keywords. *Cooperation, agriculture, fruit and vegetable products, food products, agrarian policy, improvement, diversification.*

Yuldasheva X.
Andijon qishloq xo'jaligi va agrotexnologiyalar
instituti assistenti

MEVA-SABZAVOT ISHLAB CHIQARISH KOOPERATIVI BOSHQARUV MEXANIZMLARINI TAKOMILLASHTIRISH.

Abstrakt. *Ushbu maqolada meva-sabzavot kooperativlarining iqtisodiyotning agrar sektoridagi ahamiyati, meva-sabzavot kooperativlarini boshqarish mexanizmlarini takomillashtirish masalalari yoritilgan. Shuningdek, qishloq xo'jaligi mahsulotlarini yetishtirish va uni qayta ishlashga qaratilgan islohotlarni chuqurlashtirishda agrar siyosat yuritish muhimligi ko'rsatildi. Meva-sabzavotchilik kooperativlarini boshqarishda tashkiliy-iqtisodiy mexanizmlarni takomillashtirish muammolari ko'rsatilgan.*

Kalit so'zlar. *Kooperatsiya, qishloq xo'jaligi, meva-sabzavot mahsulotlari, oziq-ovqat mahsulotlari, agrar siyosat, takomillashtirish, diversifikatsiya qilish.*

The development of fruit and vegetable growing, which is one of the leading branches of the agro-industrial complex, provides an opportunity to continuously meet the demand of the population for quality food products and industrial enterprises for raw materials. In addition, Uzbekistan is a country with a high potential for the production of fruit and vegetable products. The experience of developed countries in the further development of this sector shows that one of the directions of sustainable development of agriculture is the possibility of organizing modern forms of production in the sector, including the cooperative method of production. Therefore, the organization and development of fruit and vegetable cooperatives is considered as an important strategic direction of increasing the volume of production of fruit and vegetable products, increasing the level of efficiency of the industry, and the rapid and stable development of the industry. A cooperative is an agricultural enterprise established on the basis of voluntary pooling of property shares in order to meet their material and other needs for joint production or other economic activity by producers of agricultural goods . The main goal of establishing a cooperative is to get a lot of income at a low cost, improve the financial situation of producers, enrich the material and technical base of producers with modern agricultural techniques and equipment, and update infrastructure facilities.

Special attention is paid to the formation of cooperative relations in our country. Currently, 38 cooperatives have been established in our country in the direction of cotton and grain production. The number of members of these cooperatives is 327, the area assigned to them is 23.7 thousand hectares. Today, **43 fruit and vegetable cooperatives** have been established in 5 regions, and **1,400 agricultural subjects** are founding members. **916 of** them out of 1,400 subjects There are farms operating on **18,800 hectares. 18** processing enterprises, **15** exporting enterprises, **95** producers of products and **358** other types of agricultural entities **became additional members. In 2021, it is planned to grow about 75.6 thousand tons of** agricultural products by cooperatives .

Organization of fruit and vegetable cooperatives in our republic is recognized as a factor that takes the industry to a new stage of development. There is also a need to improve the management system in fruit and vegetable cooperatives emerging as a new form of production organization. Today, what should be the functions and tasks of the management system of fruit and vegetable cooperatives in order for them to function effectively and achieve high final results? How are the interests of cooperation participants aligned? What are the economic relations between the cooperative and the state and which mechanisms are implemented in priority? It is required to find an effective solution to a number of questions. This, in turn, requires scientific justification of the strategy for the development of agriculture, including fruit and vegetable growing. In addition, the growth of the country's population, the need to ensure and strengthen food security, and increase the export potential of the sector require the establishment and development of cooperative production of fruit and vegetable products. These strategic tasks indicate that it is appropriate to expand the scope of research on the formation of a cooperative system in fruit and vegetable production and finding solutions to its development. In our opinion, the organization of fruit and vegetable cooperatives and the improvement of their effective management are the tasks in the following directions development of a program of measures that fully takes into account the interests of the participants of fruit and vegetable cooperatives, encourages them to develop in cooperation and serves to increase the added value in the cooperative system

↓

improvement of organizational and economic mechanisms of management of fruit and vegetable cooperatives

↓

clearly defining the composition of the fruit and vegetable cooperative management company (main enterprise), its main tasks and functions

↓

improvement of contractual relations between participants of fruit and vegetable cooperatives

At the same time, the establishment of an effective management system in agriculture will help to completely eliminate existing shortcomings in the field, along with the development of cooperation. One of the main and most important stages of planning, which is considered one of the important functions in the management of fruit and vegetable cooperatives, is the selection of cooperative goals. It is important to note that cooperatives have broad objectives in multi-level systems. The main and general purpose of fruit and vegetable cooperatives is determined by its function. In his role, he describes in detail the situation of the fruit and vegetable cooperation and determines the ways to achieve his goals and strategies at each organizational stage. In accordance with the goals of cooperatives, their organizational structure is created, each fruit and vegetable cooperative builds its own structure based on its internal capabilities, and each department and structure in the structure contributes to the realization of the goal of the cooperative. In general, the development of a modern form of management structure is one of the main criteria of management today. In improving the management mechanism of fruit and vegetable cooperatives, special attention should be paid to organizational and economic aspects. Therefore, it is desirable to develop organizational and economic mechanisms of cooperatives in the following directions:

- to identify all the influencing factors and clearly define their sphere of influence; implementation of current and long-term planning of cooperative activities, establishment of the most optimal economic relations between all participants, and achieving preservation of their full economic and legal independence;

- to establish mutual settlements between units and organizations that are part of the cooperative and to take into account their rights and obligations, and take measures to support them from the state rice;

- to ensure the development of fruit and vegetable cooperatives, to establish mutually effective distribution relations, to take into account only the prospects of cooperation development in the distribution of income, and at the same time, to take into account the interests of economic entities within the cooperative; is to establish the contractual relations between the subjects of the fruit and vegetable cooperative and take into account the contribution of each party and the level of development. In addition, it shows that it is necessary to pay special attention to the organizational and economic aspects of the management of fruit and vegetable cooperatives. In addition, it will be necessary to establish mutual cooperation relations, assess the situation and take into account the development of the participants of each cooperative, in order to properly establish the management mechanism of fruit and vegetable cooperatives. In order to achieve this state, the following activities must be carried out: assessment of the state of development of the fruit and vegetable industry in the country and the region and organization taking into account the tradition of reaching its future state;

clearly defining the purpose of the cooperation organization and aligning the goals of all participants with this main goal;

developing a development model of each participant and the complex as a whole and setting criteria in it. It should be taken into account that the organizational and economic mechanisms of management of cooperative activity indicate the need to effectively encourage the development of cooperation between producers of these products in the production, storage, processing and sale of more fruits and vegetables. In addition, fruit and vegetable cooperatives established in Uzbekistan are economically single-branch, that is, more specialized in one of the directions of horticulture, viticulture, vegetable growing or greenhouse complexes, and multi-branch (several has a territory) is operating in specialties. The activities of fruit and vegetable cooperatives and the formation of their management mechanisms are carried out mainly in two main directions.

- the first direction - improvement of cooperations in which the production of fruit and vegetable products is organized within a single or interconnected group of enterprises that independently implement the process from production to sale of fruit and vegetable products and carry out their effective management;

- the second direction - agriculture, which provides crops and advances to agricultural producers for the organization of agricultural work, and buys products at prices agreed between exporters on the basis of guaranteed contracts, under conditions based on certain principles manufacturers, processors, processors. It will consist of improvement of cooperation activities such as "seed-seedling cultivation-harvesting-storage-processing-transportation-delivery to the market" for the organization of production of fruit and vegetable products. The following characteristics can be distinguished as criteria of the organizational form of cooperatives:

• first, their structure, the presence of relationships and the strength of interactions (weak, medium, strong and very strong);

• secondly, the application and use of innovative technologies and the existence of close technological connections;

• thirdly, cooperatives are self-managing and basically self-organizing economic form. Self-management and self-organization in fruit and vegetable cooperatives are based on specific economic interests. The content of these interests is mainly determined by innovative technologies and their technological connections. In the development of cooperatives, chain activities aimed at solving these problems create convenience and benefits for cooperative subjects, as well as for the regional and national economy. In particular, it is important to study the experience of developed foreign countries and to study the legal and regulatory bases adopted for the development of the fruit and vegetable industry in our republic . This system taught our farmers and representatives of the agrarian sector to work in a new, modern way. The new complex of production, which combines the process from seeding to the finished product into a single technological system, opens a wide path to the rapid implementation of scientific achievements and new innovative technologies.

List of references

1. Yuldasheva H.A & Mahmudov A. Factors affecting the economic efficiency of a farm specializing in cotton growing development and innovations in science Internationalscientific-onlineconference.P.107-11
https://doi.org/10.5281/zenodo.7781140

2. Yuldasheva H. & Jo’raboyev M. (2023). RESPUBLIKAMIZDA AGROTURIZMNI RIVOJLANTIRISH IMKONIYATLARI. *Евразийский журнал технологий и инноваций*, *1*(4), 216–223. извлечено от https://in-academy.uz/index.php/ejti/article/view/13441

3. Yuldasheva Xafizaxon, & Xursanova Maftunaxon. (2023). The significance of developing fruit and vegetable cluster in our republic. *Oriental Journal of Academic and Multidisciplinary Research* , *1*(1), 53-56. https://inno-world.uz/index.php/ojamr/article/view/15 (Original work published 2023)

4. Yuldasheva Hafizakhan,. . (2022). Peculiarities of Increasing the Added Value Based on the Improvement of Product Quality in Farms Specializing in Horticulture. *AMERICAN JOURNAL OF SCIENCE AND LEARNING FOR DEVELOPMENT*, *1*(2), 251–257. Retrieved from https://inter-publishing.com/index.php/AJSLD/article/view/782

5. Yuldasheva Hafizaxon &Nosirov Bahodirjon,. Optimizing Cost-Effectiveness in Fruit and Vegetable Agro-Clusters ISSN 2690-9626 (online), Published by “Global Research Network LLC" under Volume: 2 Issue: 10 in December-2021

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6. Yuldasheva Hafizakhan . (2023) «THE IMPORTANCE OF ORGANIZING AN AGROCLUSTER IN FARMS SPECIALIZING IN HORTICULTURE» https://7universum.com/ru/tech
7. Yuldasheva Hafizaxon. (2022). Meva-sabzavotlarni saqlash, qayta ishlash jarayonida yo'qotishlarni oldini olish asosida qo'shilgan qiymatni ko'paytirish yo'llari. Евразийский журнал академических исследований. 2(13) 42-46. EURASIAN JOURNAL OF ACADEMIC RESEARCH. https://doi.org/10.5281/zenodo.7409310
8. Yuldasheva H.A & Nosirov.B.Z, Abdullayev SH (2021). Relevance of development of multiple-profile farms. 516-521 International journal for innovative Engineering and Management Research (IJIEMR)

Zhao Yongfeng
Faculty of Geography and Planning
Jining Normal University
Ulanqab 012000, People's Republic of China
Zheng Hui
Key Laboratory
of Geospatial Big Data Application and Environmental Monitoring
Jining Normal University
Ulanqab 012000, People's Republic of China

EVOLUTION TREND AND INFLUENCE FACTORS OF HUMAN-LAND RELATIONSHIP IN THE YELLOW RIVER BASIN OF INNER MONGOLIA: A CASE STUDY OF HOHHOT, CHINA

Abstract : *Taking Hohhot, a central city in the Yellow River basin of Inner Mongolia, as the case study, this paper constructs a theoretical human-land system coupled with an evaluation system to explore evolutionary trends and influence factors in human-land relations. The results show that: (1) the regional development intensity index and resource and environment level index show a fluctuating upward trend from 2000 to 2022, and the land development intensity is ahead of the resource and environment carrying capacity after 2014; (2) the coupling degree of the human-land system is rapidly improved, and the coupling degree has achieved high-quality coupling since 2003, and the coupling coordination degree has shown a slow rising trend and the high-quality coordination achieved in 2020; (3) The main obstacle factors are total annual electricity consumption, total water supply, total industrial waste gas emission, and natural population growth rate; (4) Accelerate the building of ecological civilization, enhance the carrying capacity of resources and the environment, and optimize the spatial structure of the interaction between human activities and the geographical environment.*

Keywords : *Human-land relationship; Obstacle factors; Yellow River Basin; Inner Mongolia; Hohhot*

The human-land relationship is the interaction between human social activities and the natural geographical environment and is a pair of basic relations accompanied by human development and evolution [1]. Human-land relationship is one of the core issues of geographical research and the eternal theme of human geography [1-3]. In the context of the growing trend of economic globalization and the growing prominence of global environmental issues, the human-land relation territorial system, as the core soul and theoretical cornerstone of geographical research, is an important law for the implementation of global sustainable development strategies and circular economic strategies. The optimal regulation of human-land relationships directly determines the success or failure of global and regional sustainable development [4-8]. With the growing contradictions between humans and land, the search for coordinated development of humans and land in different regions has gradually become a central goal in the study of human-land relations. With the help of models such as DFSR, VSD, PRED, and EF, scholars have constructed two-way index systems and quantified human-land relations with the aim of exploring the degree of coordination and regulation of human-land contradictions in regional human-land relations. Evolutionary trends in human-land relations and their mechanisms of influence have received increasing attention from interdisciplinary disciplines such as geography, environmental science, economics, and management. It is an important strategic direction for the future development of Chinese geographical science to strengthen the study of the evolution of human-land relations in typical regions.

Located in the middle and upper reaches of the Yellow River, the Yellow River basin of Inner Mongolia is an arid and semi-arid region with a typically fragile ecological environment. It is also the core area of the northward open area, the Yellow River basin Economic Belt and the Yellow River basin Ecological Protection Belt, and the core area of the "One Belt, One Road" strategy, the China-Russia-Mongolia Economic Corridor, and the construction of the ecological barrier in northern China. The Yellow River basin of Inner Mongolia is one of the most prominent and complex areas in the fragile ecological environment of western China due to the severe imbalance between social and economic development and natural hydrological and ecosystem processes. The scientific understanding of the interaction relationship between human activities and regional systems is an important basis for the coordinated development of the human-land relationship in the Yellow River basin of Inner Mongolia. Therefore, under the strategic guidance of ecological environment protection and high-quality development in the Yellow River Basin, this paper constructed a comprehensive evaluation index system for the coupled evolution trend of human-land systems in the Yellow River Basin of Inner Mongolia, explored the coupled evolution trend of human-land systems, and used the diagnosis model of barrier factors to identify the main influencing factors in order to alleviate the contra To offer a theoretical framework for encouraging green development and ecological civilization in the region.

2. Research methods and data sources

2.1 Construction of index system

The human-land relationship is the interaction between human activities and the geographical environment. This paper fully combines the previous research basis [6-8] and the natural geographical environment characteristics of the Yellow River Basin of Inner Mongolia and is based on the systematic, dynamic, and operational principles of index selection, starting from the internal relationship between the two subsystems of land development intensity and resource and environment carrying capacity in the human-land system of the basin. A comprehensive system of evaluation indicators for the coupled evolution trends of the human-land system in the Yellow River basin of Inner Mongolia has been constructed; namely, 14 indicators have been selected to reflect the intensity of land development in three subsystems: population scale expansion, economic development, and land development intensity. From the three aspects of resource utilization level, ecological environment pressure, and ecological environment governance, 16 indicators were selected to reflect the resource and environment carrying capacity subsystem (Table 1).

Table 1. Comprehensive evaluation index system of the evolution trend of human-land system coupling

Target layer	System layer	Indicator layer
Land development intensity	Population expansion	Total population, urbanization rate, natural population growth rate, proportion of employment in secondary and tertiary industries at the end of the year
	Economic development Intensity	Gross regional product, per capita gross regional product, fixed asset investment, proportion of secondary and tertiary industry output value, total import and export volume of foreign trade
	Land development intensity	Population density of urban built-up area, total power of agricultural machinery, effective irrigation area, actual paved road area at the end of the year, per capita road area
Resource and environment carrying capacity	Resource utilization level	Total sown area of crops, total grain output, number of livestock stocks at the end of the year, green coverage rate of built-up areas, per capita park green space
	Ecological environmental pressure	Total annual water supply, total annual electricity consumption, industrial wastewater emissions, industrial sulfur dioxide emissions, industrial particulate emissions, industrial waste gas emissions
	Ecological environment management	Afforestation area, urban sewage treatment rate, harmless treatment rate of household garbage, comprehensive utilization rate of industrial solid waste, green land rate of built-up areas

2.2 Research Methods

Based on existing literature [6-8], this paper comprehensively uses coupling degree and coupling coordination degree models to study the coupling evolution trend and influencing factors of the human-land system in the Yellow River Basin of Inner Mongolia during 2000–2022. The index data of the human-land system are all from the Hohhot Statistical Yearbook (2001-2023) and Inner Mongolia Statistical Yearbook (2001-2023). Due to the fact that raw indicators typically have different dimensions and orders of magnitude, extreme value methods were first used to normalize raw data to reduce the interference of random factors and facilitate mathematical statistical analysis. The entropy approach is then used to give objective weights to subsystems and indicators, which are subsequently employed by the integrated linear weighting method to compute the integrated development level of land development intensity as well as resource and environmental carrying capacity. Coupling degree and coupling coordination degree models have been used to identify trends in the coupling evolution of terrestrial systems, and obstacle factor diagnostic models have been used to identify factors affecting the coupling interactions of terrestrial systems in the Hohhot.

3. Result analysis

3.1 Comprehensive evaluation of man-land system

The composite assessment index for land development intensity showed a continuous upward trend, rising rapidly from 0.0219 in 2000 to 0.9414 in 2022, representing an annual growth rate of 3.9980%. The intensity of land development has continued to increase, and population size expansion has shown a significant downward trend since 2020 due to the continued decline in natural population growth rate. The intensity of economic development has long lagged behind the intensity of land development and the expansion of population size, and the gap between the two has narrowed year-on-year since 2020, indicating a well-developed trend.The comprehensive evaluation index of resource and environment carrying capacity showed a fluctuating upward trend, with an annual growth rate of 2.6891%. The level of utilization of resources and energy and the protection of the ecological environment have slowly improved. The resources supported by territorial spatial planning have been efficiently utilized, ecological environment construction and protection have been continuously promoted, and the discharge of various pollutants has been effectively controlled. The pressure of the ecological environment shows a fluctuating downward trend. The comprehensive assessment index for the human-land system shows a fluctuating and continuous upward trend, from 0.01908 in 2000 to 0.8895 in 2022, which comprehensively reflects that the intensity of land development and the carrying capacity of the resources and environment of Hohhot are on a well-co-operative development trend.

3.2 Comprehensive analysis of the degree of coupling in the Human-land system

The time evolution trend of coupling degree showed a change trend of rapid rise, slight fluctuation, and stable development, and the coupling degree increased rapidly from 0.4647 in 2000 to 0.9907 in 2005, and the annual growth rate of coupling degree from 2000 to 2005 reached 8.766%, showed a rapid growth characteristic. From 2005 to 2011, there is a slight upward-downward fluctuation process, and from 2011 to 2022, it remains around 1. Coupling degree evolution process experience: The three stages of antagonism (2000) - high-level coupling (2001-2002) - high-quality coupling (2003-2022), it indicate that Hohhot has continuously strengthened resource and environmental management, changed the mode of economic development, optimized the industrial structure, strengthened the construction of the ecological civilization system, and improved the resource and environmental carrying capacity. The mutual repulsion between the strength of territorial space development and the carrying capacity of resources and environment is small, and the development of coordination and interaction is essentially achieved. Human-land relations are becoming more interconnected, and comprehensive, coordinated, and sustainable development of the region is being promoted.

3.3 Analysis of human-land system coupling coordination degree

The time-varying trend of the coupling coordination degree showed a steady and continuous upward evolution, with the coupling coordination degree rapidly increasing from 0.2978 in 2000 to 0.9423 in 2022, reaching an annual growth rate of 2.8022%. The evolution of coupling coordination degree has undergone five evolution processes: severe coordination (2000), mild coordination (2001-2003), moderate coordination (2004-2007), good coordination (2008-2019), high-quality coordination (2020-2022), showed a spiral development trend. This is closely related to the fact that in recent years, the Yellow River Basin in Inner Mongolia has always adhered to the five development concepts of innovation, coordination, green, open, and sharing, gradually transformed the economic and social development model to green development, and continuously promoted the human-land coordination policies and measures of new-type urbanization, rural revitalization, and high-quality development. However, at present, the Yellow River Basin in Inner Mongolia is still at the primary coupling level of the high-quality human-land system coupling stage, and it is still necessary to continuously improve the resource and environmental carrying capacity, strengthen the construction and protection of the ecological environment, maintain the coupling and coordinated development of the human-land relationship, and promote the orderly evolution of the human-land system to achieve regional sustainable development.

3.4Analysis of influencing factors of human-land system

By using the diagnostic model of obstacle factors, the main obstacle subsystems gradually change from the level of resource utilization, land development intensity, and population expansion to ecological environmental pressure and ecological environmental governance. From 2000 to 2007, the relatively slow process of urbanization produced little pressure on the ecological environment. From 2008 to 2022, as the pace of industrial urbanization continues to accelerate and the pressure of social and economic development on the ecological environment continues to increase, the protection and governance of the ecological environment have lagged behind. Strengthening the construction and protection of the ecological environment will always be a key path to promote the optimal management and regulation of human-land systems.

From the analysis of barrier factors at the factor level of the human-land system, it can be seen that in recent years, among the main barrier factors affecting the coupling coordination degree of the human-land relationship system in Hohhot, the top three obstacle factors in the land development intensity system are: natural population growth rate, fixed asset investment, and total import and export volume of foreign trade; the top 3 barrier factors to resource and environmental carrying capacity are: total annual electricity consumption, total annual water consumption, and total industrial waste gas emissions.

4. Conclusions and Suggestions

4. Conclusion

By constructing a comprehensive evaluation index system for the coupled evolution trend of the human-land systems in the Yellow River Basin of Inner Mongolia and by means of coupling degree models, coupling coordination degree models, and obstacle factor diagnosis models, this paper makes an empirical analysis of the evolution trend of human-land relationships and its influencing factors in Hohhot from 2000 to 2022 and draws the following conclusions: The intensity of land development and the carrying capacity of resources and environment show a trend of synergistic development, showing a continuous and stable synergistic positive influence. The coupling degree is rapidly increasing and has been in a steady development phase of high-quality coupling for a long time; the degree of coupling coordination undergoes five evolutionary stages, including severe coordination, mild coordination, moderate coordination, good coordination, high-quality coordination. The main barriers are total annual electricity consumption, total water supply, total industrial waste gas emissions, and natural population growth rate.

4.2 Suggestions

Scientific and technological innovation is central and key to driving high-quality human-land coordination development in the Yellow River Basin of Inner Mongolia. Accelerate the construction of ecological civilization, promote green and low-carbon development, practice the concept of green development, promote green and low-carbon lifestyle, accelerate the modernization of harmonious coexistence between human-land, and build a beautiful China with harmonious coexistence between human-land; relying on science and technology to strengthen resource conservation and intensive, using the establishment of a systematic system of biodiversity compensation and balance to promote the construction of a beautiful China, ecological restoration as a new economic growth point to promote the construction of ecological civilization, and improve the carrying capacity of resources and environment; to establish a spatial structure for sustainable development, to form a reasonable spatial development pattern, to speed up the construction of an ecological civilization system, to coordinate ecological and environmental relations between regions, to promote coordinated and sustainable regional development, and to optimize the spatial structure for the interaction of human activities with the geographical environment.

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References:

[1] Wu Chuanjun. On the research core of geography: man-land relation regional system [J]. Economic Geography, 1991, 11(3):1-4.
[2]Lu Dadao. Theoretical studies of man-land system as the core of geographical science [J]. Geographical Research, 2002, 21(2):135-139.
[3] Mao Hanying. Mechanism and regulation of regional sustainable development // Lu Dadao. Geographical development and innovation. Beijing: Science Press, 1999:87-90.
[4] Liu Yansui, Xia Jun, Wang Yongsheng, Song Jinxi, Zhao Xinzheng, Liu Xiaoqiong. Coordinated human-earth system and high-quality development in Yellow River Basin [J]. Journal of Northwest University (Natural Science Edition).2022, 52(03): 357-370.
[5] Fu Bojie, Wang Shuai, Shen Yanjun, Cheng Changxiu, Li Yan, Feng Xiaoming, Liu Yanxu. Mechanisms of Human-natural System Coupling and Optimization of the Yellow River Basin [J]. Bulletin of National Natural Science Foundation of China.2021, 35(04):504-509
[6] Zhu Weijun, Han Mei, Wei Danni, ALI Muhammad, Wang Jiawei, Sun Jinxin. Spatiotemporal Evolution and Driving Mechanism of Human-Environment Coordination in the Yellow River Delta [J].Research of Soil and Water Conscrvation.2023, 30(01):1-9.
[7] Cheng Yu, Wang Yaping, Zhang Yuze, Ren Jianlan. The Evolution Trend and Driving Factors of Man-land Relationship about the Yellow River Delta Area [J]. Economic Geography, 2017, 37(2):83-97.
[8] Li Mengcheng, Li Qi, Wang Chengxin, Ding Xiaoming. Temporal and spatial evolution of human land coordinated high-quality development in the Yellow River basin [J]. Journal of Arid Land Resources and Environment, 2022, 36 (2): 1-8.

Zhao Yongfeng
Faculty of Geography and Planning
Jining Normal University
Ulanqab 012000, People's Republic of China
Zheng Hui
Key Laboratory
of Geospatial Big Data Application and Environmental Monitoring
Jining Normal University
Ulanqab 012000, People's Republic of China

THE COUPLING COORDINATION OF TOURISM-ECOLOGICAL ENVIRONMENT-URBANIZATION IN THE YELLOW RIVER BASIN OF INNER MONGOLIA: A CASE STUDY OF BAOTOU, CHINA

Abstract: *with the Yellow River basin of Inner Mongolia baotou as the research object, to construct a system of tourism, the ecological environment, the urbanization comprehensive evaluation index system, using entropy value method and the analysis of coupling coordination model 2000-2022 years, the ecological environment, tourism urbanization system coupling relationship between the coordinated development. The results show that the integrated development index of the tourism, ecological environment and urbanization subsystems is on the rise, with the urbanization index continuing to grow and the tourism and ecological environment index fluctuating. The systems of tourism, ecological environment and urbanization show a change from high coupling and low coordination to high coupling and good coordination, and the degree of coordination steadily develops from mild imbalance to good coordination in time. Due to the impact of COVID-19, the tourism industry has shown clear fluctuations, and the ecological environment is positively correlated with the degree of coupled coordination of the system. Strengthening the governance and protection of the ecological environment and enhancing the endogenous driving force of urbanization are central and key to optimizing and enhancing the coordinated development of people and land in the region.*

Key words*: Inner Mongolia; Yellow River Basin; Tourism; Ecological environment; Urbanization; Coupling coordination*

1. Introduction

As an important part of the tertiary industry, tourism plays an important role in the new-type urbanization construction of tourist destination cities, such as industrial agglomeration, economic structure transformation and upgrading, population structure transformation, city image brand promotion, spatial layout of tourism urbanization, and urban-rural integration development. At the same time, tourism can effectively transform the economic, cultural and ecological value of tourism resources, promote the effective improvement of regional urbanization level, and drive the sustainable development of regional economy, which is an important embodiment of supporting high-quality regional development, and has become a new engine of economic growth in China's new-type urbanization construction period. However, both the development of tourism and the process of urbanization will have an impact on the ecological environment, and the sustainability of the ecological environment will also restrict the sustainable expansion of tourism development and urbanization. Tourism, ecological environment and urbanization have formed a complex system of interaction and mutual influence. The Yellow River Basin in Inner Mongolia is an important tourist destination rich in natural and cultural tourism resources in western China, and the contradiction between human and land caused by the process of tourism urbanization is more prominent. Therefore, in-depth comprehensive evaluation of the system of tourism, ecological environment and urbanization can not only enrich and improve the coupling and coordination theory of related complex systems, but also has important practical value to promote the sustainable development of man-land relationship regional system in the Yellow River Basin of Inner Mongolia.

The study of tourism urbanization in foreign countries began in 1991. Scholar Mullins [1] first proposed the conceptual framework system of tourism urbanization. Western scholars Batty [2], Gladstone [3], T. C. Change [4] and Allen [5] respectively conducted relevant studies on the types, models and effects of tourism urbanization. The research on the relationship between "tourism" and "town" system in domestic academic circles started late, and the research content is divided on the basis of learning from the research paradigm of "tourism urbanization" in foreign countries. In terms of theoretical research, Ma Xuefeng [6], Lu Lin [7], Huang Zhenfang [8] and other scholars paid early attention to the phenomenon of tourism urbanization and focused on the research content of the concept discrimination and driving mechanism of tourism urbanization. Domestic research on tourism, ecological environment and urbanization mainly focus on the analysis and definition of coordination mechanism between the two systems and the spatio-temporal differentiation and evolution trend of coordinated development, and there is still a lack of integration of tourism, ecological environment and urbanization into a unified theoretical framework. Therefore, this paper takes Baotou of the Yellow River Basin in Inner Mongolia as the research area, constructs a coupled coordination evaluation model of tourism- ecological environment-urbanization, and analyzes the evolution characteristics of coupling degree and coupling coordination degree from 2000 to 2022, in order to provide theoretical basis and practical reference for the coordinated development of tourism-ecological environment-urbanization in the Yellow River Basin in Inner Mongolia.

2. Research methods

2.1 Establishment of index system

Based on the principles of scientificity, accuracy and accessibility of data acquisition, this study selects a total of 42 representative indicators by referring to previous relevant research results, and builds a comprehensive evaluation index system of tourism-ecological environment-urbanization system.

Table 1. Comprehensive evaluation index system of tourism-ecological environment- urbanization

Target layer	System layer	Index
Tourism	Tourism Market	Total number of tourists, Domestic tourists, International tourists
	Tourism Economy	Total tourism revenue, Proportion of total tourism revenue in GDP, Domestic tourism revenue, International tourism revenue
	Tourism Industry	Number of employees in the tertiary industry, Number of star-rated hotels, Total number of travel agencies
	Tourism Support	Highway mileage, Passenger turnover, Public transport per 10,000 people, Public toilets per 10,000 people
Ecological environment	Ecological Environment Status	Per capita park green area, Green land rate in built-up areas, Total annual precipitation, Total annual water supply, Total annual electricity consumption
	Ecological Environmental Pressure	Industrial wastewater emissions, Industrial waste gas emissions, Industrial sulfur dioxide emissions, Industrial soot (powder) emissions
	Ecological Environmental Response	Sewage treatment rate, Harmless treatment rate of household garbage, Comprehensive utilization rate of industrial solid waste, Investment in construction projects completed this year, Afforestation area
Urbanization	Economic Urbanization	Per capita gross regional product, Share of gross regional product, GDP of secondary and tertiary industries, Per capita disposable income of permanent urban residents
	Population Urbanization	The proportion of employees in the secondary and tertiary industries, Urbanization rate, Number of employees at the end of the year
	Social Urbanization	Registered urban unemployment rate, Per capita expenditure on education, Number of health technicians, Number of full-time teachers in ordinary secondary schools
	Land Urbanization	Per capita urban road area, Per capita park green area, Green coverage rate of built-up areas

2.2 Source and processing of indicator data

The data in this study were all sourced from Baotou Statistical Yearbook (2001-2023) and Inner Mongolia Statistical Yearbook (2001-2023), so as to ensure the authenticity and authority of the obtained data. In order to eliminate the effect of the differences in the dimensionality of each metric within the subsystems and among the main influences on the results of the calculations, and to ensure the scientificity of the evaluation results, the original data was normalized using the range normalization method in this study.

2.3 Weight calculation

In order to eliminate as much as possible the subjective arbitrariness in the index weighting process, in this paper we adopt the entropy method in the objective weighting method to assign weights to the original indices separately, thus improving the authenticity and accuracy of the quantitative analysis results.

2.4 Construction of coupling coordination degree model

$$c=\left\{\frac{f(x)\cdot g(y)\cdot h(z)}{\left[\frac{f(x)+g(y)+h(z)}{3}\right]^{3}}\right\}^{\frac{1}{3}} \ ; \ D=\sqrt{C\times T} \ ; \ T=\alpha f(\mathrm{x})+\beta \mathrm{g}(\mathrm{y})+\chi(\mathrm{z})$$

According to the relevant research results of the coupling model, ***f(x)***, ***g(y)*** and ***h(z)*** respectively, represent the comprehensive development index of tourism, ecological environment, and urbanization, and ***T*** is the comprehensive development index of the system. ***D*** is the degree of coupling coordination, reflecting the phylogeny level; ***C*** is the degree of coupling, the strength of the interaction between the reaction systems; after thorough consideration, it was decided that the three systems were equally important, and they were assigned =1/2 and $\alpha=\beta=\chi$ =1/3 respectively.

3. Result analysis

3.1 Comprehensive horizontal time series analysis

The integrated development indexes for tourism, ecological environment and urbanization show relatively clear fluctuation trends, with the ecological environment index showing a clear fluctuation feature, fluctuating between 0.3 and 0.6 over a long period of time. The composite index of urbanization showed a steady and continuous upward trend, rising from 0.0552 to 0.9472, an annual growth rate of 3.878 percent. The comprehensive development index of the tourism industry showed an upward trend and a downward trend, from 0.0494 in 2000 to 0.8807 in 2019 and a rapid decline from 2020 to 2022 due to the impact of COVID-19 pandemic. The gap in the composite development index showed a year-on-year trend of increasing volatility, but the tourism sector showed a better trend in the future.

3.2 Timing analysis of the coupling degree

The coupling degree experience of Inner Mongolia's tourism industry, ecological environment and urbanization system from 2000 to 2022 includes three stages: high-level coupling (2000-2003), high-quality coupling (2004-2021) and high-level coupling (2022). The coupling reaches the high-coupling phase in 2000, stays in the high-coupling phase for a long time from 2004 to 2021, and falls back to the high-coupling phase in 2022. The degree of coupling continued to increase from 0.7226 in 2000 to 0.9955 in 2014, and fell to 0.8814 in 2015. The overall trend of the coupling shows a rise in fluctuations-remaining stable-and a slight decrease. The system is in the massive coupling phase for a long time and the subsystems reach a regime of benign resonant coupling and exhibit consistent and ordered structural interaction relations.

3.3 Timing analysis of coupling coordination degree

From 2000 to 2022, the tourism-ecological environment-urbanization system in Inner Mongolia has shown a fluctuating trend of rising and slightly decreasing coupling coordination evolution. From 0.3485 in 2000, it continued to increase to 0.8055 in 2017, followed by a fluctuating decline in 2018. The type experience of coupling coordination degree: there are four evolution processes of coupling coordination degree, including mild disorder (2000-2003), moderate coordination (2004-2011), good coordination (2012-2021), and moderate coordination (2022), and they are in the stage of good coordination evolution for a long time, and show a good development trend. This is comprehensively reflected in the fact that the overall coupling and coordination among tourism, ecological environment and urbanization subsystems in Inner Mongolia has shown a good trend of continuous improvement in the process of continuous optimization and regulation, but there is still a large gap between achieving high-quality coordination.

4. Conclusion and discussion

4.1 Conclusion

In this paper, the comprehensive evaluation index system of tourism, ecological environment and urbanization is constructed comprehensively, and the comprehensive development level and interactive coupling relationship of the three systems of tourism, ecological environment and urbanization in Baotou during 2000-2022 are studied by using the coupling degree model, and the following conclusions are drawn: (1) From the perspective of the comprehensive development level of the system, the comprehensive development index shows a trend of continuous slow fluctuation and rise, and the comprehensive development index of urbanization has a prominent trend of continuous growth. The ecological environment has advanced from 2000-2009, urbanization from 2010-2022, and tourism has lagged for a long time; (2) From the perspective of coupling degree evolution process, the coupling degree evolution process has three stages: high-level coupling (2000-2003), high-quality coupling (2004-2021) and high-level coupling (2022), reflecting that the subsystems of tourism, ecological environment and urbanization have been in the process of collaborative interaction and mutual adaptation for a long time; (3) From the perspective of coupling coordination degree evolution characteristics, coupling coordination type experience: The overall development level of the coupling coordination degree is low, and there is still a big gap from the realization of the high-quality coordination stage. There are four coupling coordination processes, namely mild disorder (2000-2003), moderate coordination (2004-2011), good coordination (2012-2021) and moderate coordination (2022).

4.2 Discussion

Through a comprehensive analysis of the time evolution of the above coupling and coordination degrees, it can be seen that the tourism industry, ecological environment and urbanization system in Inner Mongolia are always in an interactive adaptation process of mutual integration and coordinated development. Tourism, ecological environment and urbanization are closely coupled and interactive. As material carriers of tourism and urbanization development, the ecological environment supports the synergistic and interactive development of tourism and urbanization in terms of the abundance of tourism resources and creates the conditions for spatial scale expansion and spatial pattern evolution of urbanization. The development of the tourism industry can effectively improve regional economic benefits, promote the optimization and upgrading of the industrial structure of tourist destination cities, and promote the process of green new urbanization. Urbanization is an important support for the development of the tourism industry, which can promote the continued growth of the tourism economy, improve the image of the tourism industry, and enhance the quality of the development of the tourism industry. In short, tourism, the ecological environment and urbanization complement each other, promote each other, interact with each other and constrain each other. Realizing the coupling and coordination of the three is crucial to establishing the harmonious coexistence of human-land relations. Improving the efficiency of the utilization of natural resources and strengthening the governance and protection of the ecological environment are central and key to enhancing the system's capacity for coordinated development.

The 2019-2022 COVID-19 pandemic is the main reason for the continuous improvement in the degree of coupled coordination of constrained systems. In addition, through the comparative analysis of the 2000-2022 comprehensive index of tourism, ecological environment and urbanization system, it is found that the lagging coupling coordination type of tourism is more dominant, which can also reflect that the rapid development of social economy is an important premise and foundation for the continuous promotion of urbanization in Inner Mongolia and the rapid growth of tourism demand of urban and rural residents. The sustainable growth capacity of the regional economy and the management and protection of the ecological environment are the main limiting factors that limit the coupling and coordinated development of the system. Tourism will certainly be a new engine for the high-quality development of the regional economy in the future. The coupling coordination of the system is highly positively correlated with the level of development of the ecological environment, with a downward trend with the quality of the ecological environment. Recommendations: strengthen the governance, protection, restoration and improvement of the ecological environment, and effectively promote the overall tourism, ecological environment and urbanization system to a high-quality coordination stage; strengthen the protection and restoration of the ecological environment and improve its carrying capacity; strengthen the internal driving force behind urbanization and foster a balanced relationship between human-land.

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References:

[1]Mullins P. Tourism Urbanization [J].International Journal of Urban and Regional Research, 1991, 15(3):326-342.

[2]Batty M. Cities as fractals Simulating growth and form[C]//Crilly A J, Jones H, eds. Fractals and Chaos. New York: Spring Verilog, 1991:43-69.

[3]GLADSTONE D I. Tourism urbanization in the United State [J].Urban Affairs Review, 1998, 33(1):3-27.

[4]CHANG T C, SIMON M. Urban heritage tourism: the global-local [J].Annals of Tourism Research, 1996, 23(2):284-305.

[5]ALLEN J S, KANG SHOU LU, THOMAS D POTTS. A Gis-based analysis and prediction of parcel land-use change in coastal tourism destination area[C].Presented at the 1999 World Congress on Coastal and Marine Tourism Vancouver, British Columbia. Canada.

[6] MA Xuefeng, Liu Yulin. Urbanization Response to Tourism and Analysis of Its Influencing Mechanism Based on Three Factors in Zhangjiajie[J].Scientia Geographica Sinica,2018,38(8):1346-1356.

[7] Lu Lin, Ge Jingbing. Reflection on the research progress of tourism urbanization [J]. Geographical Research, 2006, 25(04):741-750.

[8] Huang Zhenfang, Wujiang, Hou Guolin. Preliminary probing into tourism urbanization-A case study of metropolitan interlocking region in Yangtze River delta[J].Resources and Environment in the Yangtze Basin, 2020,9(02):160-165.

Zokirov X.
TerDU Tabbiiy fanlar fakulteti Ekologiya
va tuproqshunoslik kafedrasi professori
Saidov M.
TerDU Tabbiiy fanlar fakulteti Ekologiya
va tuproqshunoslik kafedrasi dotsenti
Zayirova D.
TerDU Tabbiiy fanlar fakulteti Ekologiya
va tuproqshunoslik kafedrasi o'qituvchisi

POMIDOR HOSILDORLIGINI OSHIRISHDA MINERAL O'GITLARNING ISHTIROKI (ISSIQXONA MUHITIDA)

Annotatsiya: *Hozirgi kunga kelib pomidorning 1000 dan ortiq turli xil navlari ochiq va issiqxona muhitida yetishtirilib kelinmoqda. Keyingi yillarda respublikamizda sabzavot ekinlari ichida sevib iste'mol qilinadigan pomidor yetishtirishni keng joriy etish va aholini ushbu mahsulot bilan uzluksiz ravishda ta'minlash maqsadida keng qamrovli chora tadbirlar amalga oshirilmoqda. Buning natijasida issiqxona va ochiq muhitda pomidor yetishtirish texnologiyasi takomillashtirilib, sifatli pomidor va yuqori pomidor hosili olishga erishildi.*

Kalit so'zlar: *pomidor, azot, fosfor, kaliy, tuproq muhiti, hosildorlik, o'g'it me'yori,meva sifati, mineral o'g'itlar,issiqxona ,xarorat.*

Zokirov Kh.
is a professor
of the Department of Ecology and Soil Science
of TerSU Faculty of Natural Sciences
Saidov M.
Associate Professor
Department of Ecology and Soil Science
Faculty of Natural Sciences, TerDU
Zayirova D.
is a teacher of the Department
of Ecology and Soil Science, Faculty of Natural Sciences, TerSU

PARTICIPATION OF MINERAL FERTILIZERS IN INCREASE OF TOMATO PRODUCTIVITY (IN GREENHOUSE ENVIRONMENT)

Abstract: *To date, more than 1000 different varieties of tomatoes are cultivated in open and greenhouse environments. In the following years, comprehensive measures are being implemented in order to widely introduce the cultivation of tomatoes, which are loved among vegetable crops, and to continuously provide the population with this product. As a result, the technology of growing*

tomatoes in the greenhouse and open environment has been improved, and quality tomatoes and high yield of tomatoes have been obtained.

Key words: *tomato, nitrogen, phosphorus, potassium, soil environment, productivity, fertilizer rate, fruit quality, mineral fertilizers, greenhouse, temperature.*

Pomidor o‘simligi bo‘z, o‘tloq va o‘tloq-botqoq tuproqlarga ekiladi. Sizot suvlari yuza joylashgan, sho‘rlangan va kislotali (nordon) tuproqlar pomidor uchun unchalik yaramaydi. Cabzavot ekinlari unumdor yerga juda talabchan. O‘tloqi-botqoq, buz tuproqlar xam pomidor yetishtish uchun yetarli darajada oziqaga ega emas. Shuning uchun sabzavot yetishtirishda yer tayorlashga alohida etibor beriladi va kerakli miqdorda organik va mineral o‘g‘itlar solinadi. Ko‘pchilik sabzavot ekinlari uchun (Ph) tuproqning ishkoriyligi 6-6,5 bo‘lgani ma’qul. Tuproqni (Ph ishqoriyligini maxsus asbob bilan o‘lchanadi. Bundan tashqari tuproq g‘ovakli va suvni yaxshi shimib o‘tkazuvchan, o‘zida namni yaxshi saqlaydigan bo‘lishi lozim. Issiqxona tuprog‘ini yaxshi unumdor xolatga keltirish uchun unga organik o‘g‘itlarni (go‘ng, tovuq go‘ngi, torf) va mineral o‘g‘itlar solib yaxshilab yerni xaydash tavsiya etiladi. Organik o’g’itlar tuproq unumdorligini oshiradi. Organik o‘g‘itlar tuproqga solinganda tuproqda mikroorganizmlar yaxshi rivojlanishiga yordam beradi, bu esa o‘z navbatida o‘simlikni tuproqdan oziqani yaxshi o‘zlashtirishiga yordam beradi.

Pomidordan yuqori hosil olish uchun organik o‘g‘itlardan tashqari mineral o‘g‘itlardan xam foydalanish kerak. Mineral o‘g‘itlar hosildorlikni oshirishda asosiy manba hisoblanib ulardan to‘gri foydalanganda hosildorlikni 2-3 baravar oshirishi mumkin.Yer unimdorligi va tuproq tarkibidan kelib chiqqan xolda gektariga 250-300 kg fosfor (R) 150-200 kg kaliy (K) 250-300 kg azotli (N) o‘g‘itlar solish tavsiya etiladi. Fosforli o‘g‘itni 100% kaliyli ugitni 50%ni yerga solib xaydash, azotli o‘g‘itlarni va kaliyli o‘g‘itni qolganini ekin ekishda to hosil yig‘ilguniga qadar berish tavsiya etiladi.

Pomidorni o‘g‘itlash.Pomidorning vegetatsiya davri 110-120 kun bo‘lganligi sababli odatda ko‘chat qilib o‘tqazish yo‘li bilan yetishtiriladi. Ildiz tizimi popuk ildiz bo‘lib, tuproqqa 100-130 sm kirib boradi. Oziqa moddalarning o‘zlashtirilishi butun o‘sish davrida bir tekis bo‘lmay, asosiy qismi meva tugish davriga to‘g‘ri keladi. O‘sish va rivojlanishning dastlabki bosqichlarida azot meyorining oshib ketishi salbiy pomidorning o‘sish qismlarini tez rivojlanishiga, hosil organlarining esa rivojlanishdan orqada qolishiga olib keladi.Azotli o‘g‘itlar meyorining yarmi ko‘chatlar o‘tqazilayotgan paytda, qolgan yarmi esa, ko‘chat o‘tqazilgandan keyin bir oy o‘tgach beriladi. Azotga boy tuproqlarga azotli o‘g‘itlar va go‘ng solish yaxshi samara bermaydi, aksincha, o‘simliklarning kasallikka chidamliligini susaytiradi, mevalar sifatini pasaytiradi.Pomidor hosildorligini oshirish, meva sifatini yaxshilash va hosilning pishishini tezlatishda fosforli o‘g‘itlar muhim ahamiyatga ega. Tuproqda kaliy yetishmasa, assimilyatlarning harakati sekinlashadi, poya juda sekin rivojlanadi, barglarning chekkalari sarg‘ish-jigarrang tusga o‘tadi, buralib, qurib qoladi. Respublikamiz hududidagi aksariyat tuproqlar almashinuvchan kaliy bilan yaxshi ta’minlanganligi sababli, ularda kaliyli o‘g‘itlarning samaradorligi yuqori emas.Sug‘oriladigan bir kg bo‘z tuproq tarkibida 160-200 mg almashinuvchan kaliy bo‘lganda (kam ta’minlangan), bir ga maydonga qo‘llanilgan 100 kg kaliy (K_2 O) hosildorlikni 49 s/ga oshiradi. Quruq modda, qand va vitaminlarlarning miqdori ham sezilarli darajada ko‘payadi. Ko‘chatlarni o‘tqazish bilan bir vaqtda gektariga solinadigan 10 kg azot, 20 kg fosfor va 10 kg kaliy.Qishloq xo‘jaligida ishlatiladigan o‘g‘itlar va ularni qo‘llash nihollarning durkun rivojlanishiga, ildizdan tashqari purkaladigan 2,5% li fosforli o‘g‘it eritmasi mevani tezroq pishib yetilishiga olib keladi. Pomidorning o‘sib-rivojlanishi va hosildorligiga bo‘r, marganes va rux kabi mikroelementlar ijobiy ta’sir ko‘rsatadi. Ayniqsa, bo‘r mevalardagi qand moddasi va S vitamin miqdorini oshiradi. Bo‘r gektariga 3 kg miqdorda solinadi yoki 350 g miqdorida o‘simliklarga purkaladi. Mikroelementlarni to‘la mineral o‘g‘it (NPK) meyorlari bilan birgalikda qo‘llash pomidor hosildorligini sezilarli darajada oshiradi.

Ekishdan oldin va o‘suv davrida organik xamda mineral oziqa moddalarni tuproqqa solish tuproqni agrokimoviy taxlili natijalariga muvofiq amalga oshirilishi lozim. Organik moddalar miqdori 20 foiz atrofida saqlanishi talab etiladi. Buning uchun kuzgi-qishki ekish davri tuproqda asosiy ishlov berishdan oldin xar bir gektar issiqxona maydoniga kamida 200 tonna chirindi lozim bo‘ladi. Tuproq tarkibidagi suvda eruvchi fosfor miqdori xar 100 gr tuproqda 100 mg, nitratli va ammiakli azot miqdori 25-30 mg, suvda eruvchi kaliy 50-60 mg atrofida saqlanishi kerak. Bundan tashqari tuproq tarkibidagi xlor miqdori xar 100 gr tuproqda 0,02 foizdan oshmasligi, magniy 25-30 m, kalsiy esa kamida 100-120 mg bo‘lishi kerak.

Azotli o‘g‘itlarni kaliyli (KNO_3) va kalsiyli (Ca (NO_3)2) selitra shaklidagi berilgani ma’qul. Kaliyli o‘g‘itlarni sulfat kaliy K_2SO_4 shaklida, fosforlilarni esa qo‘sh superfosfat Ca (N_2P0_4)2 shaklida yoki o‘suv davrida yakka aralashmali kaliy fosfat shaklda beriladi. Ekilgan ko‘chatlarning kanop ipli so‘rilarga bog‘lab chiqiladi, bog‘lashda ildiz bo‘g‘izini qattiq siqib qo‘ymaslik, kanopni qattik tortib bog‘lab qo‘ymaslik lozim bo‘ladi. O‘simliklar bitta poya qoldirilib shakl beriladi. Bachki novdalar 6-7 sm dan o‘sib ketmasdan ularni o‘z vaqtida yulib tashlash kerak. O‘simlik uchini xar xaftada kanopli ipga o‘rab turiladi, so‘rini simli qismigacha o‘sgach esa ko‘ndalangiga o‘rab turiladi. Mevalari pisha boshlashi davrida gulshodadan barcha pastki barglarini olib tashlanadi. Bu ishni xar xaftada bir marotaba bajarilib, 1-2 tadan bargi olib tashlanadi. O‘suv mavsumining tugallanishigacha 6-7 xafta davomida o‘simlik uchki qismini yuqoridagi gulshoda tepasida 2 tadan barg qoldirib chimdib turiladi. Mevalar to‘liq yetilib pishmasdan yoki qizil bo‘lib pishgan davrlarda xar xaftada 2-3 marotaba teriladi.

Foydalanilgan adabiyotlar ro’yxati

1.Energo - tejamkor issiqxonalarni qurish va ulardan foydalanish bo‘yicha qo‘llanma Toshkent – 2013 A. E. Shayxov N. Oblomurodov, B. Alimov, U. Axmedov, A. Ashurov, N. Dadaxanova M. Niyozov

2.100 kitob to‘plami Qishloq xo‘jaligida ishlatiladigan o‘g‘itlar va ularni qo‘llash 91-kitob

3. V. Zuyev, O. Qodirxo'jayev, M. Adilov, U. Akramov

Sabza votchilik va polizchilik 0’quv qo'llanma Toshkent 2010
4. M. U. Karimov O’g’it qo’llash тizimi Toshkent-2017

УДК 62-77

Абдирахимов И.Э.
и.о.доцент
Каршинский инженерно-экономический институт
Республики Узбекистан, г. Карши

МОНТАЖ ЦЕНТРОБЕЖНЫХ НАСОСОВ

Аннотация: *В статье рассмотрено монтаж центробежных насосов. При монтаже центробежного насоса без промежуточного вала сначала устанавливают насос и по нему центруют электродвигатель. Насосы небольшой производительности монтируют на общей раме. Это сокращает трудоемкость работ.*

Ключевые слова: *насос, электродвигатель, подшипник, технологические трубопровод, уплотнения, болт, корпус.*

Abdirakhimov I.
Docent
Karshi engineering-economic institute

INSTALLATION OF CENTRIFUGAL PUMPS

Abstract: *The article discusses the installation of centrifugal pumps. During installation of centrifugal pump without intermediate shaft pump is installed first and electric motor is centered on it. Small capacity pumps are mounted on a common frame. This reduces the labor intensity of the work.*

Keywords: *Pump, electric motor, bearing, process pipeline, seals, bolt, case.*

На магистральных трубопроводах для перекачки нефти и нефтепродуктов применяются в основном высокопроизводительные центробежные насосы с приводом от электродвигателей. Техническая характеристика и марки центробежных насосов приведены в табл. 1 [1].

Таблица 1. Техническая характеристика центробежных насосов

Марки насосов	Подача, м^3/ч	Напор жидкости	Скорость вращения, об/мин	Мощность на валу насоса, квт	К.П.Д, %	Условное давление корпуса. кгс/м^2
811Д-10 X 5	320	425	2350	500	73	80
10НД-10 X 2	800	285	2950	720	86	80
12НД-10 X 2	1100	270	2950	930	87	80
16НД-10 X 1	2200	230	3000	1565	87	—
20НД-12 X 1	3000	210	2980	2100	—	—
24НД-14 X 1	4000	216	2980	2440	87	—

24НД-17 X 1	5000	210	2980	3300	—	—
24НД-19 X 1	6000	220	2980	3875	—	—
10НД-10 X 4	750	740	3000	2200	75	—
10Н-8 X 4	500	740	3000	1500	73	—
14Н-12 X 2	1100	370	3000	1500	75	—

В качестве привода центробежных насосов применяются асинхронные или синхронные электродвигатели. Наибольшее распространение нашли асинхронные электродвигатели с короткозамкнутым ротором серии АТД.

Они выпускаются восьми типов и выполняются в трех габаритах:

I габарит-АТД-500, АТД-63О, АТД-800;

II габарит - АТД-1000, АТД-1250, АТД-1600;

III габарит - АТД-2000, АТД-2750 (цифры обозначают мощность электродвигателя в киловаттах). Все электродвигатели работают от сети напряжением 6 кв, имеют скорость вращения 2950 об/мин и высокий к.п.д. (0,93-0,935).

Двигатели серии АТД монтируются в общем зале с насосами, так, как они выполнены во взрывозащищенном исполнении (в их корпусе поддерживается избыточное давление воздуха 50-70 мм вод. ст., что предотвращает попадание внутрь загазованного, воздуха). Из синхронных применяются электродвигатели серии СТМ в нормальном исполнении с замкнутым циклом вентиляции, со специальным воздухоохладителем. Эти двигатели монтируют в отдельном зале, отгороженном от насосного зала герметичной промежуточной стеной.

Электродвигатели СТМ-750-2 и СТМ-1500-2 выполняются на общей фундаментной плите с возбудителями, а GTM-2500-2, СТМ-4000-2, СТМ-6000-2 - на отдельных фундаментных плитах под статор, под подшипники электродвигателя и под возбудитель.

Перед установкой на фундамент производят рас консервацию и ревизию насосов. Корпуса подшипников промывают керосином, насаживают полумуфты на концы промежуточного вала и валов насоса электродвигателя. При монтаже центробежных насосов с промежуточным валом применяют следующую схему установки агрегата [2].

Ставят на фундамент электродвигатель и выверяют его в горизонтальной и вертикальной плоскостях. Смещение главных осей электродвигателя в горизонтальной плоскости от проектных не должно быть более 10 мм. При выверке в вертикальной плоскости определяют совпадение фактической высотной оси с проектной. Смещение не должно превышать 10 мм, а уклон - 0,15-0,20 мм. Между опорной поверхностью фундамента и подошвой фундаментной плиты для подливки оставляют зазор 40-80 мм.

Устанавливают промежуточный вал и центруют его по концу ротора электродвигателя. Горизонтальность промежуточного вала проверяют уровнем. При установке промежуточного вала между его торцами и торцами ротора электродвигателя оставляют зазор не менее 5 мм. Устанавливают и центруют насос по промежуточному валу.[3]

Горизонтальность насоса проверяют уровнем, устанавливаемым на шейке вала переднего подшипника. Торцевой зазор между полумуфтами насоса и промежуточного вала должен быть 5 мм.

После того как будут установлены все три узла агрегата, к насосу подсоединяют предварительно отпрессованные водой технологические трубопроводы и производят окончательную центровку. За базу принимают насос. Выверив и процентировав электродвигатель, равномерно затягивают фундаментные болты. После этого монтажные плиты вместе с регулировочными болтами заливают цементным раствором. Применяют обычно раствор следующего состава: 1 часть быстротвердеющего цемента БТЦ марки 400 или 500 и 1,5 части крупнозернистого песка. Водоцементное соотношение принимают равным 0,55.[4]

Синхронные двигатели большой мощности поступают на монтажную площадку в большинстве случаев в разобранном виде и монтируют их в такой последовательности. Вначале по главным осям фундамента устанавливают фундаментную плиту и выверяют ее в горизонтальной и вертикальной плоскостях. После выверки затягивают фундаментные болты. Для фиксации установленных под плиту клиньев и подкладок их сваривают вместе и приваривают коротким швом к фундаментальным плитам электродвигателя. На выверенную фундаментную плиту устанавливают статор электродвигателя и выверяют его в горизонтальной и вертикальной плоскостях. Перед вводом ротора в статор тщательно проверяют их состояние и продувают их сжатым воздухом. Шейки ротора очищают от консервационной смазки.[5]

Выполняя такелажные работы при сборке и разборке электродвигателей, необходимо следить, чтобы стропы не касались поверхностей скольжения на роторе (шейка вала, поверхности под уплотнения) и лобовых частей обмотки статоров. При вводе и выемке ротора пользуются удлинителями (оправками), крепящимися к концу вала со стороны приводного механизма. До ввода ротора со стороны возбудителя собирают подшипник, затем ротор стропят за середину и центруют его ось с осью статора. Горизонтальное перемещение ротора в статор производят плавно, без толчков. Когда удлинитель выйдет из статора, производят перестройку, во время которой один конец ротора будет опираться на собранный подшипник, а другой - на деревянные поперечные подкладки. Переставив строп на конец удлинителя, подтягивают ротор в осевом направлении до его рабочего положения, т.е. до совпадения вертикальных магнитных осей статора и ротора. Затем, опустив ротор на деревянные подкладки, заводят вкладыш подшипника со стороны приводного механизма и опускают ротор на оба вкладыша.

После сборки электродвигателя и выверки, его положения окончательно центруют агрегат. Сначала центруют ротор электродвигателя к ротору насоса (через промежуточный вал), затем якоря возбудителя к ротору электродвигателя. Рамы и фундаментные плиты установленного и при центрованного агрегатов подлежат подливке цементным раствором.

При монтаже центробежного насоса без промежуточного вала сначала устанавливают насос и по нему центруют электродвигатель.

Насосы небольшой производительности монтируют на общей раме. Это сокращает трудоемкость работ.

Насосы большой производительности с электродвигателями серии АТД устанавливают на отдельных рамах, причем электродвигатель устанавливают не на раме, а на двух монтажных плитах. Для облегчения выверки электродвигателя и улучшения его центровки с насосом монтажные плиты устанавливают на фундаменте на болтах-домкратах (регулирующих болтах). Монтажные плиты имеют резьбовые отверстия, куда ввинчиваются регулировочные болты. Чтобы головки болтов не вдавливались в бетон фундамента, их упирают на металлические подкладки. По окончании монтажных работ производят наладку и опробование центробежных насосов.

При производстве наладочных работ насос вскрывают, вынимают ротор и проверяют состояние всех узлов. Для нормальной работы насоса должны быть установлены номинальные радиальные зазоры в уплотнениях (диафрагмах).

Величина радиального зазора в уплотнениях между вращающимся кольцом и не вращающимся в пределах 0,20-0,25 мм. При сборке торцевых уплотнений необходимо проверить качество уплотняемых поверхностей и пружины. Уплотняемые поверхности вращающейся и неподвижной втулок должны быть тщательно притерты. Когда ротор устанавливают в корпус насоса, необходимо, чтобы пружина уплотнения не задевала корпус [3].

Установив ротор в корпус, проверяют полный осевой разбег ротора, сдвинув его до отказа в сторону упорного подшипника. Разбег должен быть в пределах 8-12 мм, чтобы между вращающимися частями ротора и корпусом насоса оставался зазор 4-6 мм. Такой зазор предотвращает поломку насоса из-за неточностей при сборке или попадания вместе с нефтью механических примесей. Измерив величину полного осевого разбега, определяют ширину шайбы, устанавливаемой между упорным подшипником и буртом вала. Ширину шайбы принимают равной, а/2 - (0,10÷0,15), где а - полный осевой разбег (в мм).

Использованные источники:

1. Титов В.А. Монтаж оборудования насосных и компрессорных станций. – М.: Недра, 1989 44

2. Бухаленко Е.И. и др. Монтаж и обслуживание нефтепромыслового оборудования. М. Недра, 1994.

3. Абдирахимов,И.Э. (2021). Деэмульгирование нефтеводяных эмульсий. Universum: технические науки, (4-3 (85)), 72-75.

4. Абдирахимов, И.Э., & Алиев, Ж. Ш. (2020). Технология бурения многоствольных скважин. Международный академический вестник, (2), 97-100.
5. Шерматов, Б. Э., Мансурова, М.С., Ялгашев, Э.Я., Курбанов, Э.Н., Исматов, Д. Н., & Абдирахимов, И. Э. (2018). Влияние состава газа на измерение объема проходящий через сужающее устройство. Точная наука, (28), 13-22.

Абдувахобова Д.Э.
и.о. доцента
Джизакский политехнический институт.

МОРФОЛОГИЧЕСКИЕ РЕСУРСЫ РУССКОГО ЯЗЫКА

Аннотация: *Настоящая статья посвящена исследованию креативного потенциала русской грамматики в таких типах современной речи, для которых характерно творческое использование языковых средств**:** разговорной, художественной, газетно-публицистической, эпистолярной, художественно-публицистической, научно-публицистической, рекламной**;** во всем своеобразии присущих им лексико-грамматических средств выражения.*
Ключевые слова: *креативный потенциал, язык, речь, потенциал.*

Abduvakhobova D.E.
Acting Associate Professor
of the Jizzakh Polytechnic Institute

MORPHOLOGICAL RESOURCES OF THE RUSSIAN LANGUAGE

Abstract: *This article is devoted to the study of the creative potential of Russian grammar in such types of modern speech, which are characterized by the creative use of linguistic means: colloquial, artistic, newspaper and journalistic, epistolary, artistic and journalistic, scientific and journalistic, advertising; in all the originality of their inherent lexical and grammatical means of expression.*
Keywords: *creative potential, language, speech, potential.*

Грамматика - глубинный языковой ярус. Известно, что она представляет собой строго организованную систему, развивающуюся по своим внутренним законам. Но эта сложнейшая система обнаруживает и подвижность, и гибкость, обусловленные многочисленными случаями асимметрии формы и содержания, которые являются благодатной почвой для эмоциональной и эстетической актуализации.

В то же время грамматические формы устойчивы, и это обусловливает борьбу консервативной тенденции (устойчивости) с факторами языковой эволюции (стремление к экономии, аналогии и регулярности). Противостояние ярко выраженной тенденции к устойчивости, обеспечивающей стабильность грамматики, с тенденцией к заполнению в речи «пустот», или лакун (антиномия системы и нормы), часто разрешается в пользу говорящего, который в той или иной степени осознанно стремится творчески использовать возможности системы, нарушая предписания нормы, как отраженной в кодификации, так и принятой в узусе.

Известно, что наиболее благоприятной средой для любого исследования являются лексика и словообразование («из нескольких тысяч морфем, существующих в морфологической системе русского языка, можно образовать гораздо большее количество слов, чем их содержится во всех словарях вместе взятых» (Кузнецова, 1989, с. 18), однако творческие импульсы характерны также для морфологии и синтаксиса. Конечно, морфология сдерживается узусом в большей степени, чем словообразование и лексика, но и для нее рамки узуса - общепринятых реализаций (возможно, неоднозначно отраженных в кодификации) - часто оказываются тесны.

Таким образом, не только кодификация, но и узус ограничивают свободу выбора говорящего, накладывая запрет не только на те или иные лексемы, но и на грамматические формы. Потребности живой речи заставляют постоянно «бороться» с этими ограничениями, и в условиях современной вербальной свободы острота этой борьбы усиливается. В области морфологии это проявляется, например, в «настойчивой» коррекции формообразования тех или иных слов.

Однако грамматические (в рамках грамматических категорий) и лексико-грамматические (в рамках лексико-грамматических разрядов) инновации - всего лишь один из способов актуализации грамматических значений - такого употребления грамматической формы, которое делает ее информационно, экспрессивно (прагматически) или эстетически значимой. Эстетические возможности таких элементов морфологической системы, как род и число существительных, категория времени глагола, формообразование в рамках лексико-грамматических разрядов прилагательных многократно рассматривались как особая эстетическая ценность поэтической и художественной речи.

Особое место в формировании предложенной концепции принадлежит книге В.В. Виноградова «Русский язык (грамматическое учение о слове)» (Виноградов 1947), в которой глубокий анализ грамматических форм и категорий, сопровождается примерами из художественных, поэтических, фольклорных, а в некоторых случаях - и разговорных текстов.

Наиболее детальный и глубокий анализ выразительных возможностей морфологических средств в поэтическом тексте представлен в работах И.А. Ионовой, в которой показано, что морфологические свойства языка используются как материал создания грамматических фигур в так называемой безобразной поэзии (Ионова, 1990, с.30), что позволило выявить грамматические фигуры и в исследуемых типах речи.

В рамках предложенного описания принципиальное значение имеет проблема соотношения поэтической и разговорной речи. Ученые сделали вывод о том, что «общие закономерности функционирования вторичных значений в разговорной и поэтической речи, наличие общих зон морфологической транспозиции, а также конкуренции и нейтрализации позволяют говорить о некотором сходстве между разговорной и поэтической речью, хотя обычно подчеркивается различие между ними. Это сближение в области периферии грамматических категорий не является случайным и объясняется общностью некоторых коммуникативных установок, снятием запретов, высоким уровнем экспрессивности, которая в одном случае проявляется как оценочность, в другом - как метафоризация» (Ремчукова, 2000, с. 90). Именно поэтому в рамках предложенного описания данные типы речи не противопоставляются, а сопоставляются: обращение к фактам поэтической речи используется для подтверждения принципиальной возможности того или иного образования в разговорной речи, и наоборот.

В исследовании разговорная модификация литературного языка рассматривается не только как язык бытового, повседневного общения, но и как речь представителей определенной языковой культуры, для которой характерно в той или иной степени выраженное творческое начало. Так, языковая игра чаще, чем в поэтическом тексте, становится здесь средством создания комических, а не эстетических эффектов, но нередко можно наблюдать и последние.

Отмечает возможность более широкого взгляда на вариативность и А.А. Зализняк в связи с проблемой представления в грамматическом словаре видовых коррелятов: «Для глаголов, помимо собственно вариантности парадигм отмечается также несколько иное соотношение, а именно, синонимия двух глаголов, которым в противоположном виде соответствует один и тот же глагол; таковы, например, *приготавливать* и *приготовлять*. В отличие от собственно вариантности, морфологический состав глаголов-синонимов различен. В настоящем словаре, однако, не проводится формального различия между собственно вариантностью и синонимией в рамках корреляции по виду» (Зализняк, 1980, с. 9).

Высокий экспрессивно-прагматический потенциал таких грамматических категорий, как род существительных, вид и залог глагола, определяется их сложным характером и отражает морфолого-словообразовательный аспект русской грамматики. С этой точки зрения уникальна категория вида русского глагола, развитие которой демонстрирует постепенный переход от словообразования к словоизменению и «борьбу» между ними.

Использованные источники:

1. Глазунова О. И. Грамматика русского языка в упражнениях и комментариях, 2-е изд. –СПб., 2011.
2. Абдувахобова Д.Э. Взаимоотношения подростка со сверстниками: умеет ли он дружить? Innovations in technology and Science Education. 2022.
3. Кадырова М.К. Познавательные мотивы подростка в процессе обучения. Молодой учёный. 2015-7.-614
4. Кадырова М.К. Особенности периода взросления подростка. Молодой ученый 2016 - 999-1002 стр.
5. Эргашев У.Э. Мотивы учения в подростковом возрасте. Молодой учёный.2015 -7.-702
6. Кадырова М.К. Основные принципы медиации по разрешению конфликта. Ученый 21 века.

7. Абдувахобова Д.Э. Использование ИКТ в образовании – важный фактор развития информационного общества. Экономика и социум. 2023
8. Абдувахобова Д.Э. Использование информационно коммуникативных технологий в процессе обучения иностранным языкам. 155-158. 2022
9. Зияева М.Ф. Таълим жараенида маънавий-маърифий ишларни самарали ташкил этиш йуллари, шакл, метод ва воситалари. Образование и инновационные исследования. Межд. Науч. журнал 2021
10. Ким Н.В. Психологические закономерности процесса обучения. Экономика и социум,879-882,2023.
11. Калдыкозова С.Е. Формирование у учащихся представлений об изучение языка. Gospodarka I innowacje. 44,122-128, 2024

Абдувохидов И.Қ.
Ассистент
АДТИ
Эгамбердиев С.А.
Ассистент
НамМТИ

ИККИЛАМЧИ ПОЛИЭТИЛЕНТЕРЕФТАЛАТДАН БИСГИДРОКСИЭТИЛЕНТЕРЕФТАЛАТ СИНТЕЗИ ВА УНИНГ АСОСИДА ОЛИНГАН БИРЛАМЧИ ПОЛИЭТИЛЕНТЕРЕФТАЛАТНИНГ ЎРТАЧА МОЛЕКУЛЯР МАССАСИНИ АНИҚЛАШ.

Аннотация: *Ушбу мақолада иккиламчи полиэтилентерефталатдан ҳамда саноат усулида олинадиган бисгидроксиэтилентерефталатнинг физик-кимёвий тахлили, ҳамда улар асосида олинган бирламчи полиэтилентере фталат олинган. Олинган бирламчи полиэтилентерефталатнинг ўртача малекуляр массасини хисоблаш усуллари келтирилган.*

Калит сўзлар: *алкоголиз маҳсулоти, бисгидроксиэтилентерефталат, ЯМР-спектр, полиэтилентерефталат, технологик хоссалари.*

Abduvokhidov I. K.
Assistant
ADTI
Egamberdiev S.A.
Assistant
NamMTI

SYNTHESIS OF BIS(HYDROXYETHYL) TEREPHTHALATE FROM SECONDARY POLYETHYLENE TEREPHTHALATE AND DETERMINATION OF THE AVERAGE MOLECULAR MASS OF THE PRIMARY POLYETHYLENE TEREPHTHALATE OBTAINED FROM IT

Annotation: *This article presents a physicochemical analysis of secondary polyethylene terephthalate and bis(hydroxyethyl) terephthalate obtained by industrial methods. It also discusses the synthesis of primary polyethylene terephthalate based on these materials. Methods for calculating the average molecular weight of the synthesized primary polyethylene terephthalate are provided.*

Keywords: *alcoholic products, bis(hydroxyethyl) terephthalate, NMR spectrum, polyethylene terephthalate, technological properties.*

Бугунги кунда дунёда полиэтилентерефталат полимерини ишлаб чиқариш ҳажми 130 млн. тоннагача ортди. Полиэтилентерефталатнинг 27%, тоннаси полимер қадоқлар – бутилкалар ишлаб чиқаришда, 65% га яқини полэстер тола олишда 3 % бошқа сохаларда қўлланилади. Ушбу миқдордаги полимер буюмлари фойдаланилгандан сўнг шунча миқдорда полимер чиқиндилари ҳосил бўлади. Бу борада уларни фойдали хом-ашѐга айлантириш, қайта ишлаш усулларини яратишга қаратилган илмий ишлар алохида ахамиятга эга. Дунёда ва Республикамизда кенг тарқалган поликонденсацион полимер чиқиндиларидан бири полиэтилентерефталат (ПЭТ) сақлавчи қадоқлардир.

Юқоридаги маълумотлар асосида полиэфир толалари йилдан йилга ўсишини сақланиши яна бир бор ушбу йўналишда ишлар олиб боришимизга асос бўла олади.

Ўзбекистонда йилига тахминан 65 минг тонна ПЭТ қадоқловчи (бутилка, флакон) пластик идишлар ишлатилади. Ҳар бир Ўзбекистон фуқаросига тахминан 165 кг маиший чиқинди тўғри келади. Республикада 10 га яқин заводларда ПЭТ бутилка қолдиқ маҳсулотларга қайта ишлов бериш билан шуғулланиб келмоқда. Улардан бири PET Recycling Group. Бу компания майдаланган ПЭТ (флекса) ва гранула ишлаб чиқармоқда [1]. Бу чиқинди маҳсулот синтетик тола ишлаб чиқариш учун идеал хом ашё манбасидир.

Шу билан бирга ҳозирда Самарқанд вилоятида ишлаб чиқариш ҳажми 10 минг тонна/йилига бўлган ПЭТ бутилкаларни флексага айлантириб ва ПЭТ гранула хом ашёси асосида синтетик (PET POY) полиэстер толаси ишлаб чиқарилмоқда. Ушбу чиқарилган иплар ёрдамида турли текстил материаллар олишда хизмат киляпди.

Адабиётлардан ва олимлар томонидан олиб борилаётган тадқиқотлардан ПЭТ синтез қилишнинг асосий хом-ашёси сифатида иккиламчи полиэтилентерефталатни этиленгликол билан алкоголиш маҳсулоти бўлган бисгидроксиэтилентерефталат (БГТФ) ҳисобланади. Юқоридаги баён қилинган маълумотларни инобатга олиб, 2016 йилдан бери Тошкент кимё-технология институти Т.Р. Абдурашидов номидаги Юқори молекулали бирикмалар ва пластмассалар технологияси кафедраси олимлари профессор Магрупов бошчилигида иккиламчи полиэтилентерефталатни этиленгликол билан алкоголизлаб БГТФ олиш устида изланишлар олиб борилаяпди [2].

Олдинги тадқиқотларимизда биз ИПЭТни алкоголизлаб БГТФ олиш шароитлари, уларга таъсир қилувчи омиллар (реакция давомийлиги, катализатор миқдори ва тури), маҳсулот тузилиши, БГТФ чиқиш унумига таъсир қилувчи омилларни кўриб чиқилган эди ва ҳозирда ушбу жараённи такомиллаштириш устида тадқиқотлар олиб борилаяпди. Олиб борилган тадқиқотлар натижасида қуйидаги хоссаларга эга бўлган бисгидрок-сиэтилентерефталат ҳосил бўлган эди (1-жадвал).

1-жадвал

Номи	Суюқланиш ҳарорати, °С	Ўрта молекуляр масса	Гидроксил сони, %
БГТФ ИПЭТ асосида	109-110	261	13,3

1-жадвалдан кўриниб турибдики БГТФни хоссалари умумий хоссаларига тўғри келяпти. Шуларни инобатга олиб, кейинги босқич тадқиқотларимизни олинган БГТФ асосида бирламчи полиэтилентерефталат синтез қилишга шароитларини ўрганиш, саноат усулида полиэтилентерефталат синтез қилиш ва уларни технологик хоссаларини солиштиришга қаратилди.

Дастлабки тадқиқотларни [3] адабиётнинг 142 бетида келтирилган 24-чи расм қўрилмасини йиғишдан бошланди ва ушбу қўрилмада диметилтерефталатдан (ДМТФ) бисгидрокситерефталат синтез қилиш усули ўзлаштирилди ҳамда олинган маҳсулотни хоссаларини аниқлади ва уни иккиламчи ПЭТ асосида олинган БГТФ билан солиштирилди (2-жадвал).

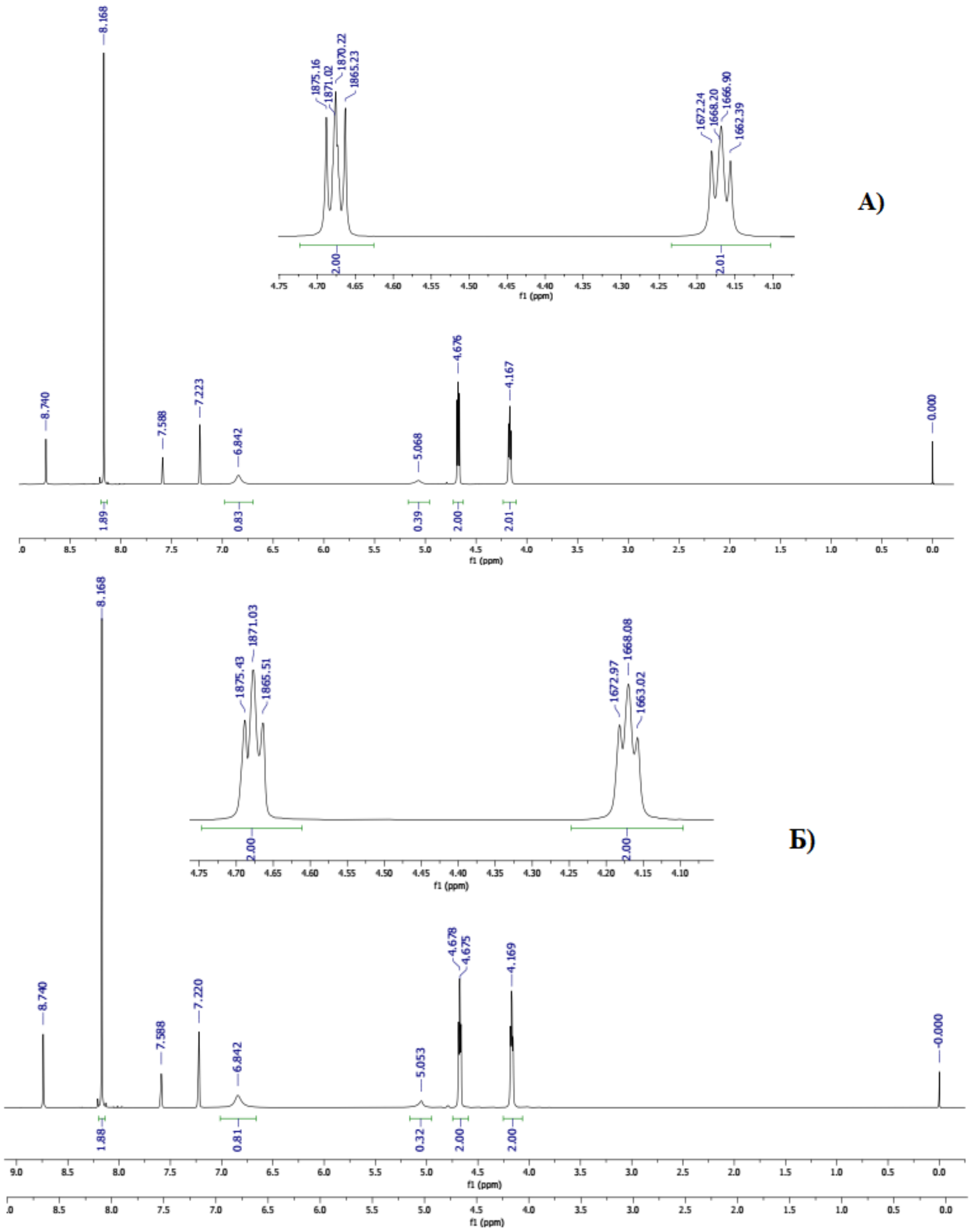
2-жадвал

№	Номи	Суюқланиш ҳарорати, °С	Ўрта молекуляр масса	Гидроксил сони, %
1	БГТФ ДМТФ асосида	109-112	231/241	
2	БГТФ ИПЭТ асосида	109-110	261/245	13,3

2-жадвалдан кўриниб турибдики, саноат усулида синтез қилинган БГТФ нинг физик-кимёвий хоссалари иккиламчи ПЭТ асосида синтез қилинган БГТФ физик-кимёвий хоссалари бир бири билан мос келиши аниқланган.

Сўнгра синтез қилиб олинган бис-(2-гидроксиэтилен) терефталатнинг ядро магнит резонанс (ЯМР) ёрдамида структура тузилишини ўргандик.

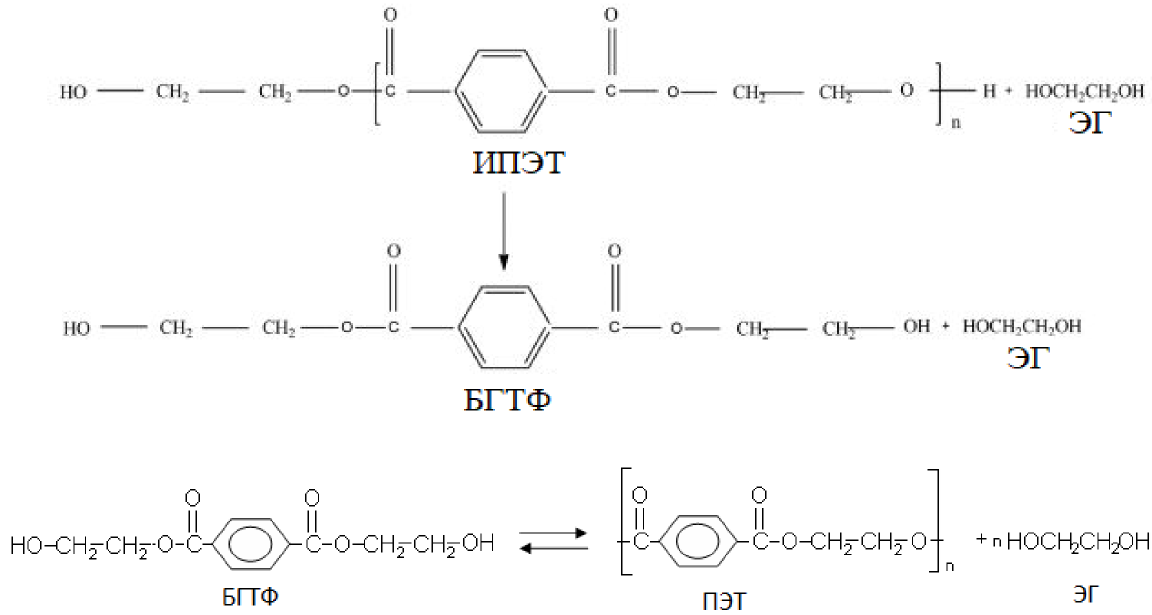
Бис-(2-гидроксиэтилен) терефталатнинг ЯМР спектри қуйидаги 1–расмда келтирилган.



1- Бис-(2 -гидроксиэтилен)терефталатларнинг ЯМР спектри а) ИПЭТ асосида; б) ДМТФ асосида.

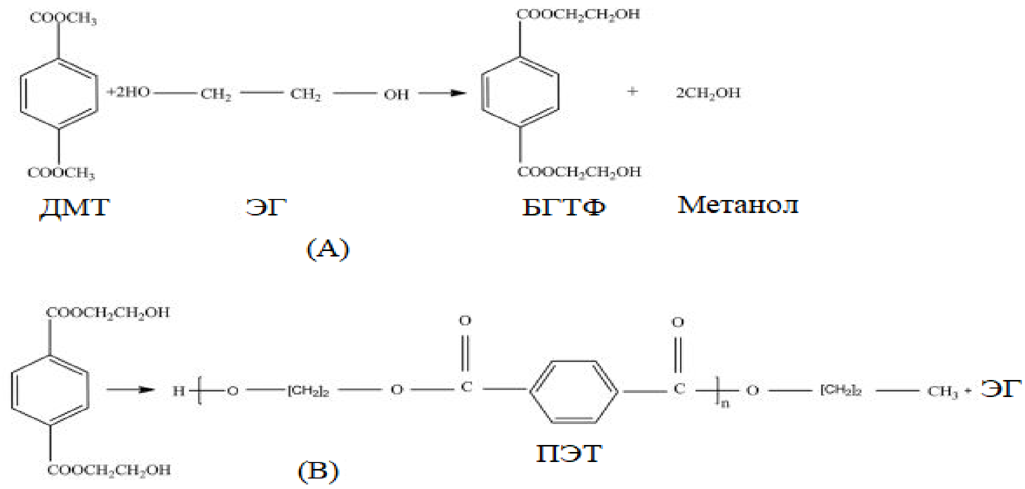
ЯМР спектри, сигналлар 1, 2, 3 ва 4 деб белгиланган ароматик ҳалқанинг протонларига тегишли (dH=8,11 ppm, s, 4H), гидроксил гуруҳлари (dH= 4,96 ppm, t, 2H), метиленлар (-CH_2–) –OH гуруҳларига улашган (dH= 3,53 ppm, m, 4H), метиленлар (-CH2–) га улашган - COO гуруҳлари (dH= 4,33 ppm, t, 4H), соҳаларда кузатилди. Бундан шундай хулоса қилиш мумкинки, иккиламчи полиэтилентерефталат ва ДМТ асосида синтез қилинган БГТФ ларнинг ЯМР спектрлари бир –бирига яқинлигини кўриш мумкин[3].

Навбатдаги тадқиқотимизда алкоголиз маҳсулотидан олинган БГТФ асосида полиэтилентерефталат синтез қилишга эришдик ва уларнинг физик-кимёвий хоссаларини ўргандик. Ушбу жараёнларнинг реакция тенгламалари қуйида келтирилган:



2-расм. БГТФ асосида полиэтилентерефталат синтез қилиш услублари.

Олинган натижаларини саноатда олинадиган БГТФ ва унинг асосидаги полиэтилентерефталатнинг хоссалари билан солиштирилди.



3-расм ДМТ асосида полиэтилентерефталат синтез (периэтерификация) қилиш механизми

Олинган натижалар 3- жадвалида келтирилган.

3-жадвал

Олинган БГТФ ва улар асосида синтез қилинган ПЭТ ни хоссалари

№	Номи	Суюқланиш ҳарорати, °С	Ўрта молекуляр оғирлиги (г/мольъ)	Гидроксил сони, %
1	БГТФ ДМТФ асосида	109-112	231	13,8
2	БГТФ ИПЭТ асосида	109-110	261	13,3
3	Тоза ПЭТ	253-258	29510~42657	
4	Иккиламчи ПЭТ	220-238	19952	
5	БГТФ (ДМТФ) асосида ПЭТ	239-247,13	22838	
6	БГТФ асосида ПЭТ	245-248,1	23896	

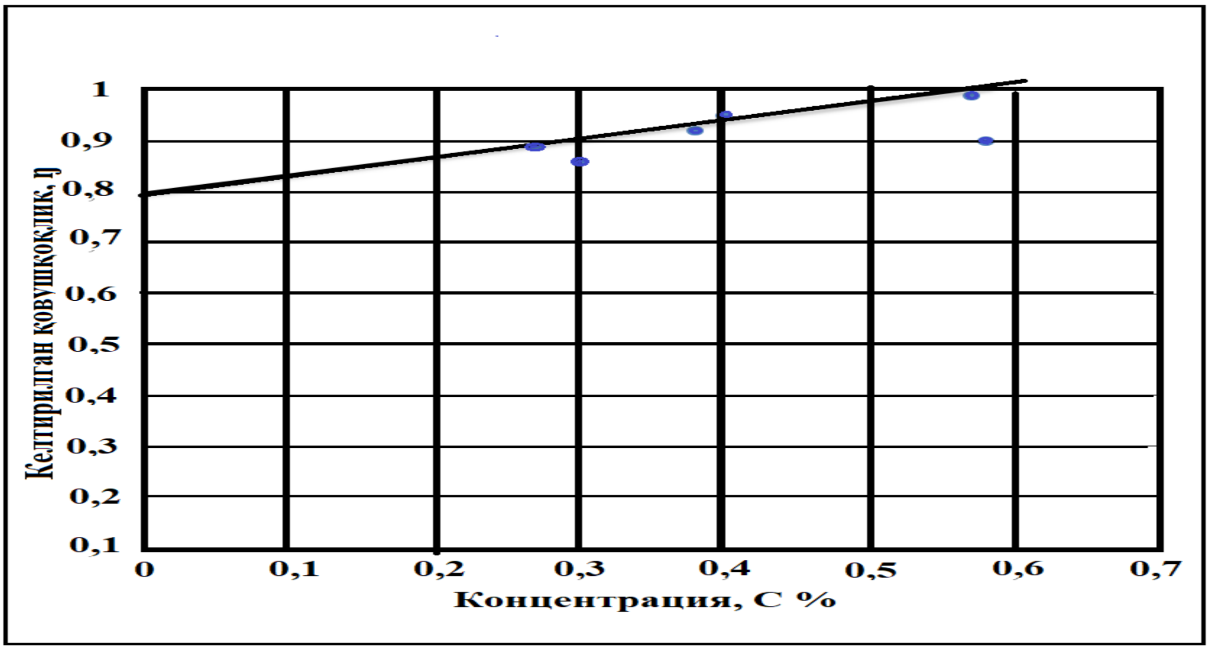
Синтез қилиб олинган полиэтилентерефталатнинг характеристик қовушқоқлиги вискозиметрик усул ёрдамида аниқланди. Олинган полиэтилентерефталатнинг 60/40 дихлоретан/фенолдаги 1 % ли суюлтирилган эритмаси тайёрланди ва капилярининг диаметри 1.31 мм бўлган вискозиметр ёрдамида характеристик қовушқоқлиги аниқланди[4]. Олинган натижалар қуйидаги 4–жадвалда келтирилган.

4–жадвал

Полиэтилентерефталатнинг 60/40 дихлоретан/фенолдаги суюлтирилган эритмасининг ўтиш вақти ва қовушқоқликлари

№	Эритма концентрацияси, %	Эритманинг ўтиш вақти, сек	$\eta_{нис} = t_1/t_0$	$\eta_{сол} = t_1/t_0 - 1$	$\eta_{кел} = \eta_{сол}/C$	$\eta_{лог} = \ln\eta_{нис}/C$	$[\eta]$
1	0 (эритувчи)	25	–	–	–	–	–
2	0,5	41.4	1.65	0.65	0.65	1	0.8
3	0,25	40.15	1.6	0.6	0.72	0.83	
4	0,125	37.6	1.5	0.5	0.7	0.71	
5	0,0625	36.25	1.45	0.45	0.75	0.6	

Олинган натижалар асосида эритманинг характеристик қовушқоқлиги ва эритманинг концентрацияси орасидаги боғлиқлик графиги тузилди ва қуйидаги 4–расмда келтирилган.



4-расм. Полиэтилентерефталат учун келтирилган қовушоқлигининг концентрацияга боғлиқлик графиги

Юқорида келтирилган Марк-Кун Хаувинк тенгламасига мувофиқ полимернинг ўртача молекуляр массаси аниқланди. полиэтилентерефталат учун К ва α нинг қийматлари ŋ= 0,8 ва (1) формула қуйидагича кўринишга келади:

$$lg\,M = \frac{lg\,\eta - lg\,К}{\alpha};\ \text{буерда}\ К = 1{,}7\cdot10^{-4};\ \alpha = 0{,}83 \qquad (1)$$

$$\mathrm{lgM} = \frac{\lg 0{,}8\text{-}(1{,}7*10^{-4})}{0{,}83}$$

$$\mathrm{Mr} = 10^{\,4.42} = 26302\ \text{г/молъ}$$

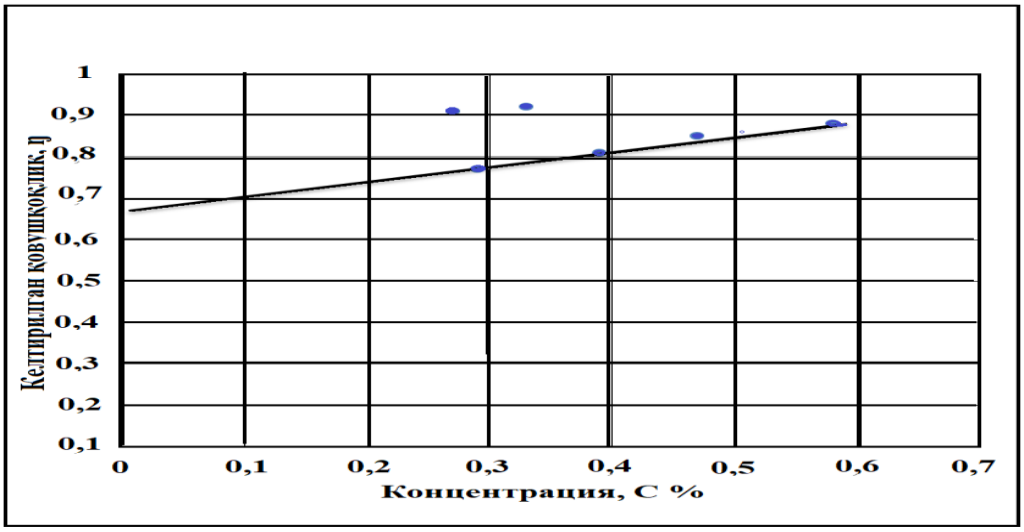
Ҳисоблаш натижасида полиэтилентерефталатнинг ўртача молекуляр массаси 26302 г/молъга тенг эканлиги аниқланди.

Бис-(2-гидроксиэтилен) терефталат асосида олинган Полиэтилентерефталатнинг 60/40 дихлоретан/фенолдаги суюлтирилган эритмасининг ўтиш вақти ва қовушқоқликлари

5-жадвал

№	Эритма концентрацияси, %	Эритманинг ўтиш вақти, сек	$Ƞ_{нис} = t_1/t_0$	$Ƞ_{сол} = t_1/t_0-1$	$Ƞ_{кел} = Ƞ_{сол}/C$	$Ƞ_{лог} = \ln Ƞ_{нис}/C$	[Ƞ]
1	0 (эритувчи)	5.8	–	–	–	–	–
2	0,5	8.91	1.54	0.54	0.54	1	0.67
3	0,25	8,51	1.47	0.47	0.57	0,83	
4	0,125	8.17	1.4	0.4	0.56	0,71	
5	0,0625	7.96	1.37	0.37	0.6	0,625	

Олинган натижалар асосида эритманинг характеристик қовушқоқлиги ва эритманинг концентрацияси орасидаги боғлиқлик графиги тузилди ва қуйидаги 5–расмда келтирилган.



5–расм. Бис-(2-гидроксиэтилен) терефталат асосида синтез олинган полиэтилентерефталатни келтирилган қовушоқлигининг концентрацияга боғлиқлик графиги.

Юқорида келтирилган Марк-Кун Хаувинк тенгламасига мувофиқ полимернинг ўртача молекуляр массаси аниқланди. полиэтилентерефталат учун К ва α ŋ= 0,67 ва (1) формула қуйидагича кўринишга келади[5]:

$$lg\,M = \frac{lg\,\eta - lg\,K}{\alpha}; \text{ буерда } K = 1{,}7 \cdot 10^{-4}; \ \alpha = 0{,}83 \qquad (1)$$

$$lgM = \frac{lg\ 0{,}67 - (1{,}7 * 10^{-4})}{0{,}83}$$

$$Mr = 10^{4.33} = 21838 \text{ г/молъ}$$

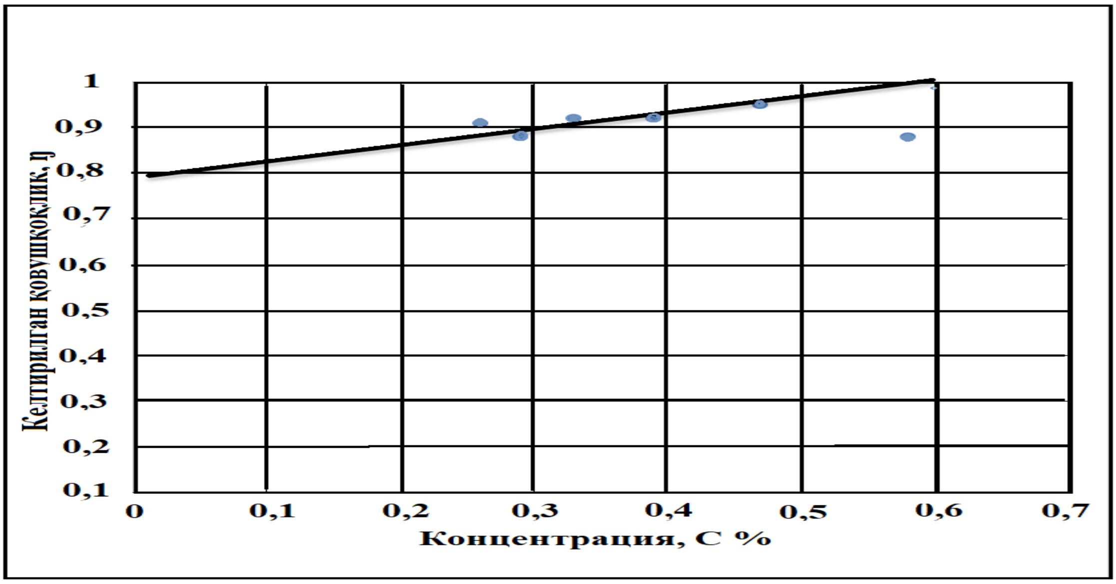
Ҳисоблаш натижасида Бис-(2-гидроксиэтилен) терефталат асосида олинган полиэтилентерефталат нинг ўртача молекуляр массаси 21838 г/молъга тенг эканлиги аниқланди.

6-жадвал

Диметилтерефталат асосида олинган Полиэтилентерефталатнинг 60/40 дихлоретан/фенолдаги суюлтирилган эритмасининг ўтиш вақти ва қовушқоқликлари

№	Эритма концентрацияси, %	Эритманинг ўтиш вақти, сек	$\eta_{нис} = t_1/t_0$	$\eta_{сол} = t_1/t_0-1$	$\eta_{кел} = \eta_{сол}/C$	$\eta_{лог} = \ln\eta_{нис}/C$	[η]
1	0 (эритувчи)	5.43	–	–	–	–	–
2	1	8.56	1.58	0.58	4.8	0.12	0.79
3	0.83	7.89	1.45	0.45	4.5	0.1	
4	0.71	7.56	1.39	0,.39	4.7	0.83	
5	0,62	7.43	1,37	0,37	5.7	0.648	

Олинган натижалар асосида эритманинг характеристик қовушқоқлиги ва эритманинг концентрацияси орасидаги боғлиқлик графиги тузилди ва қуйидаги 6–расмда келтирилган.



7-расм. Диметилтерефталат асосида олинган полиэтилентерефталат учун келтирилган қовушоқлигининг концентрацияга боғлиқлик графиги

Юқорида келтирилган Марк-Кун Хаувинк тенгламасига мувофиқ полимернинг ўртача молекуляр массаси аниқланди. полиэтилентерефталат учун К ва α нинг қийматлари ŋ= 0,79 ва (1) формула қуйидагича кўринишга келади:

$$lg\,M = \frac{lg\,\eta - lg\,K}{\alpha}; \text{буерда } К = 1{,}7\cdot 10^{-4};\ \alpha = 0{,}83 \qquad (1)$$

$$\text{lgM}= \frac{\lg 0{,}79 - (1{,}7 * 10^{-4})}{0{,}83}$$

$$Mr = 10^{4.43} = 26915 \text{ г/моль}$$

Ҳисоблаш натижасида Диметилтерефталат асосида олинган полиэтилентерефталат нинг ўртача молекуляр массаси 26915 г/мольга тенг эканлиги аниқланди.

Синтез қилинган намуналарни характеристик қовушқоқлиги келтирилган Марк-Хувин тенгламалари асосида аниқланилди. Аниқланган кўрсатгичлар 7-жадвалда келтирилган.

7-жадвал

Синтез қилинган ПЭТ ва саноат намуналарини технологик хоссалари

Номи	Кўрсатгичлар		
	Характеристик қовушқоқлик, [η]	Ўртача молекуляр оғирлиги г/моль	Зичлик, г/см^3
Бирламчи ПЭТ	0,91	42657	1.394
Иккиламчи ПЭТ	0,63	19952	1.248
ДМТФ асосида ПЭТ	0,73	23865	1.284
БГТФ асосида ПЭТ	0,68	21896	1.278

7- жадвалдан кўриниб турибдики, олиб борилган тадқиқотлар шуни кўрсатдики, иккиламчи полиэтилентерефталат этиленгликол билан алкоголизлаб, олинган бирламчи полиэтилентерефталатнинг физик-кимёвий хоссалари, бирламчи ПЭТ ва анъанавий усулларда олинадиган ПЭТлар билан солиштирилганда уларнинг физик-кимёвий хоссалари яқинлиги аниқланди. Олинган натижалар ўзини аниқлиги ва қайтарувчанлиги билан ўз тасдиғини топди.

Шундай қилиб, иккиламчи полиэтилентерефталат этиленгликол билан алкоголизлаб, айнан бисгидроксиэтилентерефталат ҳамда уларни димерлари ҳосил бўлиши аниқланди. БГТФ ни ҳосил бўлиши ва чиқиш унумига қўлланилаётган катализатор, алкоголиз давомийлиги тўғридан тўғри таъсир кўрсатилиши аниқланди ва улар асосида олинган бирламчи ПЭТни анъанавий усулларда олинадиган ПЭТ билан солиштирилди. Синтез қилинган ПЭТ технологик хоссалари аниқланиб, олинган натижалар ўзини аниқлиги ва қайтарувчанлиги билан ўз тасдиғини топди. Келгуси тадқиқотларимиз БГТФдан ПЭТ синтез қилиш шароитларини такомиллаштириш ҳамда тола олиш учун ярокли ПЭТ синтез қилишга қаратамиз.

АДАБИЁТЛАР

1. От бутылки к бутылке: как в Узбекистане перерабатывает пластик. “ЛИВЕНЬ.Living Asia”.http: // living asia. online / category / stories.
2. Angel B. Polyester Fibres. The 23RD PCI Consulting Group European Polyester Industry Conference, 3 October, Berlin. Available at: https://www.plastics.ru/pdf/journal/2015/ 12/PET.pdf. (01.02.2016).
3. Masardi N., G.S.I. PET market Overviev. CREON, Moskva. Available at: http://arpet.ru/material/4824. (accessed 18.02.2015).

4. Абдувохидов И.Қ., Хошимов Қ.Н., Жураев А.Б. Бисгидрокситерефталат олиш шароитларини ўрганиш. Материалы. Республиканская научно – техническая конференция. Ресурсо – и энергосберегающие, экологически безвредные композиционные и нанокомпозиционные материалы, ТГТУ им. И. Каримова, - С.88-89.
5. А.П. Григорьев, О.Я. Федотова Лабораторный практикум по технологии поликонденсационных пластических масс. Учебн. пособие для химико-технологических специальностей вузов. М., «Высш. школа», 1971. 232 с.
6. Казицын Л. А., Куплетска Н. Б. Применение УФ -, ИК -, ЯМР и масс-спектроскопии в органической химии. М., Изд-в Моск. ун-та, 1979, 240 с.
7. Торопцева, К.В. Белогородская, В.М.Бондоренко. «Лабораторный практикум по технологии высокомолекулярных соединений». – Л: Химия.1972. 415с.

Абдуғаниев О.И., г.ф.д.
география кафедраси доценти
Фарғона давлат университети

ЕР ТУЗИШ ИШЛАРИДА ЭКОЛОГИК КАРКАС ЭЛЕМЕНТЛАРИНИ ЛОЙИҲАЛАШТИРИШ

***Аннотация**. Бугунги кунда ижтимоий-иқтисодий ва сиёсий жиҳатдан жамиятнинг барча соҳаларини барқарор ривожланишини таъминланганлик кўрсаткичи экологик муаммоларни ҳал этилганлик даражаси билан белгиланмоқда. Шу боис, бу масалалар ечимида биологик ва ландшафт хилма-хиллигини сақлаб қолиш ва экологик барқарорликни таъминлашга асос бўлувчи экологик каркасни яратишга алоҳида эътибор қаратилмоқда. Мақолада ердан фойдаланиш тузилмасини таҳлил қилиш ва антропоген юкни баҳолаш орқали экологик каркас элементларини лойиҳалаштириш ҳамда табиат-қўриқхона фондини кенгайтириш имкониятларини аниқлашнинг назарий ва амалий жиҳатлари тахлил қилинган.*

***Калит сўзлар**: ер тузиш, экологик каркас, муҳофаза этиладиган табиий ҳудудлар, барқарор ривожланиш, экологик хўжалик-ҳолат, табиат-қўриқхона фондини.*

Abduganiev O.I., g.f.d.
Associate Professor of the Department of Geography
Ferghana State University

DESIGNING ELEMENTS OF ECOLOGICAL NETWORK IN LAND MANAGEMENT WORKS

***Annotation**. Today, the socio-economic and political level of sustainable development of all spheres of society is determined by the level of solving environmental problems. Therefore, when solving these issues, special attention is paid to the creation of an ecological framework, which is the basis for preserving biological and landscape diversity and ensuring environmental stability. The article analyzes the theoretical and practical aspects of designing elements of the ecological framework and determining the possibilities of expanding the natural reserve fund by analyzing the structure of land use and assessing the anthropogenic load.*

***Keywords**: land management, ecological framework, protected natural areas, sustainable development, ecological and economic condition, natural reserve fund.*

Жамият манфаатларини қондиришда муҳим бўлган моддий неъматларни яратишда ер ресурсларининг аҳамияти каттадир. Шу боис, иқтисодиётнинг барча тармоқларини янада барқарор ривожланишини таъминлаш мақсадида мавжуд ердан фойдаланиш тузилмасини экологик мақсадларни ҳисобга олган ҳолда такомиллаштиришга алоҳида эътибор қаратилмоқда. Ер тўғрисидаги қонунчиликнинг асосий вазифалари ҳозирги ва келажак авлодларнинг манфаатларини кўзлаб ердан илмий асосланган тарзда, оқилона фойдаланиш ва уни муҳофаза қилишни, тупроқ унумдорлигини тиклаш ва оширишни, табиий муҳитни асраш ва яхшилашни, хўжалик юритишнинг барча шаклларини тенг ҳуқуқлилик асосида ривожлантириш учун шароит яратишни, юридик ва жисмоний шахсларнинг ер участкаларига бўлган ҳуқуқларини ҳимоя қилишни таъминлаш мақсадида ер муносабатларини тартибга солишдан, шунингдек бу соҳада қонунийликни мустаҳкамлашдан шу жумладан коррупцияга оид ҳуқуқбузарликларнинг олдини олишдан иборат.

Ўзбекистон Республикаси Ер кодексининг (2021) 12-моддасида «Ер тузиш ерлардан фойдаланиш ва уларни муҳофаза қилишни ташкил этишга, ер ресурсларини ҳисобга олиш ва баҳолашга, қулай экологик муҳитни вужудга келтиришга ва табиий ландшафтларни яхшилашга, ер тузишнинг ҳудудий ва ички хўжалик режаларини тузишга қаратилган тадбирлар тизимини ўз ичига олади» деб белгилаб қўйилган. Ер тузиш Ўзбекистон Республикаси Вазирлар Маҳкамасининг, маҳаллий давлат ҳокимияти органининг топшириғига ёки юридик ва жисмоний шахсларнинг талабномаларига мувофиқ Ўзбекистон Республикаси Қишлоқ хўжалиги вазирлиги ҳамда Давлат солиқ қўмитаси ҳузуридаги Кадастр агентлигининг органлари томонидан амалга оширилади. Ер тузиш истиқболга мўлжалланган, лойиҳалаш олдидан, хўжаликлараро ҳамда ички хўжалик ер тузиш турларига бўлинади [1]. Истиқболга мўлжалланган ва лойиҳалаш олдидан амалга ошириладиган ер тузишга қуйидагилар киради:

1) республика ва унинг минтақаларининг ер-сув ресурсларидан фойдаланиш ҳамда уларни муҳофаза қилиш чизмаларини ишлаб чиқиш;

2) туманлар ва вилоятларнинг ер тузилиши чизмаларини ишлаб чиқиш;

3) тупроқ унумдорлигини ошириш, ерлардан оқилона фойдаланиш ва уларни муҳофаза қилиш билан боғлиқ истиқбол режаларини, республика миқёсидаги ва ҳудудий дастурларни ишлаб чиқиш;

4) муҳофаза этиладиган табиий ҳудудларнинг жойлашиши ва чегаралари белгиланишини асослаш.

Ўзбекистон Республикасида ер фонди ерларидан фойдаланишнинг белгиланган асосий мақсадига кўра қуйидаги тоифаларга бўлинади: 1) қишлоқ хўжалигига мўлжалланган ерлар; 2) аҳоли пунктларининг (шаҳарлар, посёлкалар ва қишлоқ аҳоли пунктларининг) ерлари; 3) саноат, транспорт, алоқа, мудофаа ва бошқа мақсадларга мўлжалланган ерлар; 4) табиатни муҳофаза қилиш, соғломлаштириш ва рекреация мақсадларига мўлжалланган ерлар; 5) тарихий-маданий аҳамиятга молик ерлар; 6) ўрмон фонди ерлари; 7) сув фонди ерлари; 8) заҳира ерлар.

Ердан оқилона фойдаланиш ва уни муҳофаза қилиш билан боғлиқ чора-тадбирларни белгилашда биринчи навбатда ҳудудларнинг иқтисодий ривожланиши истиқболлари ҳисобга олинган ҳолда амалга оширилади. Бу эса, барқарор ривожланиш доирасида ҳудудларни режалаштириш ёндашувларига бироз зид эканлигини кўрсатади. Масалан, ер фонди таркибида фақат битта тоифадаги (табиатни муҳофаза қилиш, соғломлаштириш ва рекреация мақсадларига мўлжалланган) ерлар қатъий экологик мақсадга эга бўлиб (асосан, муҳофаза этиладиган табиий ҳудудлар), уларнинг майдони бошқа ер тоифаларига нисбатан кичик майдонларни ташкил этади.

Ҳозирги кунда Фарғона водийсининг Ўзбекистон республикасига қарашли маъмурий-ҳудудий бирликлари бўйича МЭТҲларни I, II, III ва IV тоифаларининг улуши Наманган вилоятида 1, 5 %, Фарғона вилоятида 0.2 % Андижон вилоятида 0.0 % га тенг бўлиб, минтақани барқарор ривожланишни таъминлаш учун табиат-қўриқхона фондига тегишли ер тоифаларини экстенсив кенгайтириб бориш талаб этилади [2; 3]. Шунингдек, муҳофаза этиладиган табиий ҳудуд(МЭТҲ)лар бир-бирлари билан боғланмаган бўлиб, бошқа ер тоифалари билан изоляция қилинган «орол»лар шаклида учрайди. Мазкур ер тоифаси мустақил равишда Фарғона водийсида экологик барқарорликни, барқарор ривожланишни ҳамда биологик ва ландшафт хилма-хиллиги(БЛХ)ни оптимал даражасини таъминлай олмайди. Шу боис, ўрмон фонди, сув фонди ва заҳира ерлари зиммасига бир қатор экологик функцияларни юклаш орқали экологик каркасни яхлитлигини ҳамда оптимал майдон катталигини таъминлашга эришиш мумкин.

Экологик каркасни шакллантиришда биринчи навбатда ҳудудни экологик-функционал жиҳатдан районлаштириш, яъни ердан фойдаланиш тузилмасини таҳлил қилиш асосида каркас элементларини аниқлаш талаб этилади [10; 11]. Турли даражадаги экологик каркаснинг элементлари географик тизим ҳисобланади. Чунки, элементлар ўртасидаги функционал алоқадорлик ҳудудий яхлитликни ҳосил қилади. Ҳар бир элемент муайян функцияни бажариш имкониятига эга бўлиб, бир-бирини тўлдиради ҳамда табиий, экологик, ижтимоий ва иқтисодий жараёнлардаги барқарорликни бир маъромда ушлаб турувчи яхлит тизим сифатида намоён бўлади [4; 5; 6].

Юқорида белгиланган мақсад ва вазифаларни муваффақиятли амалга ошириш, асосан, табиат хилма-хиллигини сақлаб қолиш ва муҳофаза қилишга йўналтирилган янги ёндашувларга боғлиқ бўлиб қолмоқда. Бундай ёндашувлардан бири экологик-хўжалик ҳолатни баҳолаш концепцияси бўлиб, унда инсоннинг хўжалик фаолияти билан табиат ўртасидаги муносабатларнинг уйғунлашган оптимал шаклини яратиш ва қўллаб-қувватлаш каби вазифалар белгиланган [7].

Барқарор ривожланиш концепцияси асосида ер тузиш соҳасини экологик такомиллаштириш масалалари экологик хўжалик-ҳолат(ЭХҲ)ни баҳолаш ва уни оптималлаштириш билан боғлиқ тадқиқот ишларида ўз аксини топган [6; 8]. Бироқ, тадқиқотчилар томонидан ер тузиш ишларида ҳудудларнинг табиий, экологик ва иқтисодий-ижтимоий хусусиятларни ҳисобга олган ҳолда МЭТҲларнинг тизимини шакллантириш муаммоси етарли даражада кўриб чиқилмаган. Ер тузиш ерлардан фойдаланиш ва уларни муҳофаза қилишни ташкил этиш, ер ресурсларини ҳисобга олиш ва баҳолаш, қулай экологик муҳитни сақлаш ва табиий ландшафтларни яхшилашга қаратилган ягона давлат сиёсатини амалга ошириш ҳамда ер тузишнинг ҳудудий ва ички хўжалик режаларини тузишни таъминловчи мажмуали тадбирлар тизимини ўз ичига олади.

Ўзбекистон Республикасининг ер тузиш соҳасига оид қонун хужжатлари етарли даражада ландшафт экологияси тамойилларига асосан такомиллаштирилмаган. Бундай вазият геоэкология соҳасига оид назария билимларни амалиётга жорий этишда ўзига хос муаммоларни келтириб чиқаради. Масалан, ЎзРнинг «Муҳофаза этиладиган табиий ҳудудлар тўғриси»даги онунининг 4-моддасида «МЭТҲлар биологик, ландшафт ранг-баранглигини таъминлаш ва экологик мувозанатни сақлаб туриш учун мўлжалланган яхлит экологик тизимни ташкил этади» деб, белгилаб қўйилган. Лекин, МЭТҲлар тўғрисидаги қонунда ва бошқа меъёрий хужжатларда экологик каркаснинг ҳуқуқий асоси келтирилмаган.

ЭХҲнинг моҳияти маъмурий-ҳудудий бирликлар доирасида иқтисодиётнинг турли соҳаларида ландшафт режалаштириш дастурига мос келадиган фойдаланиш турини жорий этиш орқали барқарор геоэкологик ҳолатни сақлаб қолиш билан белгиланади. Шу боис, ландшафтлар ёки маъмурий ҳудудий бирликлар доирасида антропоген босим кўрсаткичларини таҳлил қилишда ҳудуднинг ЭХҲни аниқлаш энг муҳим кўрсаткичлардан бири ҳисобланади. Чунки, ЭХҲ ландшафтнинг табиий имконияти билан антропоген босим ўртасидаги ўзаро нисбатни акс эттиради. Шу боис, ЭХҲ концепциясида асосий эътибор, маъмурий-ҳудудий бирликлар доирасида ер фондининг тоифа ва турларига мос ҳолда, антропоген юк даражасини таҳлил қилиш орқали ер тузиш соҳасини экологик жиҳатдан такомиллаштиришга йўналтирилган. Шунингдек, унда инсоннинг ҳаёти ва фаолиятидаги барқарорликни таъминлашда муҳим бўлган экологик каркасни яратиш бош мақсад сифатида сингдирилган [2; 7; 8].

БЛХни сақлаш ва ундан барқарор фойдаланиш, табиий экологик тизимларнинг таназзулга учраш суръатларини пасайтириш, камёб ва йўқолиб бораётган турларни қайта тиклаш, экологик хавфсизликни таъминлаш каби муаммолар ечими бевосита МЭТҲлар тизимини ривожлантириш билан боғлиқдир. Барча ер тоифалари ва турларидан фойдаланиш кўламидаги ўзгаришлар динамик хусусиятга эга бўлиб, бу жамиятнинг ижтимоий-иқтисодий ривожланишига мос ҳолда ҳамда ўзига ҳос объектив сабабларга кўра юз бериб туради. Шунинг учун, янги МЭТҲларни ташкил этиш жараёнида ердан фойдаланиш тўғрисидаги қонун хужжатларида белгиланган ер тоифалари ва турларини минтақа бўйича оптимал нисбатини аниқлаш зарурдир [9, 10]. Чунки, ер ва ер ресурсларидан фойдаланишни тартибга солувчи қонун хужжатларида табиат-қўриқхона фондини ташкил этувчи ер турлари тўғрисида ягона ёндашувлар мавжуд эмас.

Экологик каркас концепциясини амалга оширишда ландшафтли режалаштириш дастури алоҳида аҳамиятга эга бўлиб, унинг асосида ер тоифалари ва турлари бўйича экологик-хўжалик ҳолатини баҳолаш ишлари амалга оширилади. Экологик каркас таркибига киритилган ер тоифалари ва турлари мамлакат ер фондининг махсус ер тоифаси ҳисобланмайди. Ер турларини экологик каркас таркибига киритилиши улардан хўжалик мақсадида фойдаланишни тўлиқ тўхтатишни англатмайди. Балки, ЭХҲни баҳолаш натижаларига кўра айрим ер тоифаси ва турларидан фойдаланиш бўйича муайян чекловларни белгилаш ёки муайян ер турларини кенгайтириш ва қисқартириш бўйича таклифлар ишлаб чиқилади. ЭХҲни баҳолаш бўйича дастлабки методик ёндашувлар Б.И.Кочуров, Ю.Г.Иванов ва В.А.Лобковскийлар томонидан ишлаб чиқилган [2, 7, 8]. Ушбу методик ёндашувлар ердан фойдаланиш ва унинг таркибини оддий ўзгаришини эмас, балки ер тоифалари ва турларини экологиялаштириш учун асос бўлади. Бу эса, ер тузиш ишларида минтақада экологик хавфсизликни таъминлаш, БЛХни сақлаб қолишда муҳим бўлган объект ва ҳудудларда хўжалик фаолиятини чеклаш ҳамда МЭТҲлар тизимини ташкил этишни илмий жиҳатдан асослашга имкон беради.

ЭХҲ концепцияси бўйича баҳолаш билан боғлиқ методик ёндашувларни бир қатор тадқиқотчилар ривожлантириб бораётганлигини кўриш мумкин. Масалан, Т.В.Краснова (2007) экологик-хўжалик мувозанатнинг энг оптимал шаклларидан бири сифатида табиий ландшафтларга туташиб ва уйғунлашиб кетган қишлоқлар тизимини ажратиб кўрсатган [2; 3]. Фарғона водийсида ЭХҲни сақлаш ва қишлоқ хўжалигида рентабелликни таъминлаш учун анъанавий ердан фойдаланиш шаклларини тиклаш ҳамда янги МЭТҲларни ташкил этиш орқали экологик каркасни шакллантириш мумкин. Экологик-хўжалик ҳолатдаги барқарорлик ҳар-бир маъмурий туман ёки табиий-географик районнинг табиий ҳимояланиш даражасига боғлиқдир. Бу кўрсаткични Фарғона водийсидаги табиат-қўриқхона фондини ташкил этувчи ер турлари, яъни МЭТҲлар, табиий ландшафтларнинг хилма-хиллиги, урочище даражасидаги муҳофаза зоналари, табиий ўрмонлар ва турли катталикдаги «қўриқ»лар белгилаб беради.

Антропоген юк даражаси билан ландшафтнинг табиий имконияти ўртасидаги ўзаро нисбатни баҳолаш орқали ҳудуднинг экологик ҳолатини қандай даражада (маъқул ёки маъқул эмас) эканлигини аниқлашимиз мумкин. Бундай режалаштириш дастурига кўра, барча тоифадаги ердан фойдаланувчиларнинг мазкур ҳудудда фаолият кўрсатишлари мақсадга мувофиқ келиш-келмаслиги, антропоген босим кўрсаткичи ва миқдорига кўра аниқланади. Ландшафтли режалаштиришда ижтимоий-экологик омиллар билан бир қаторда иқтисодий омилларни ҳам кўриб чиқиш мақсадга мувофиқдир. Бу борада антропоген таъсир кўлами юқори бўлган Фарғона водийси мисолида минтақанинг табиий-аграр имконияти ва геоэкологик-хўжалик жиҳатдан зўриқиш даражасини баҳолаш методлари ишлаб чиқилган.

Экологик каркас ташкил этишдан мақсад маҳаллий даражадан тортиб минтақавий кўламгача бўлган оптимал ЭХҲни таъминлашдан иборатдир. Бу борада дастлаб минтақавий даражадаги МЭТҲлар тизимининг таркибини кенгайтириш ва такомиллаштиришга эътибор қаратилади, яъни ер фонди таркибини хўжаликдаги эҳтиёжларга ҳамда табиатни муҳофаза қилиш нуқтаи назарига кўра оптималлаштириш талаб этилади.

Б.И.Кочуров (2003, 2004) геоэкосоциотизимда ердан фойдаланиш турлари ва тоифалари учун қуйидаги улушни таклиф этади: қишлоқ хўжалиги аҳамиятига эга ерлар (қишлоқ аҳоли пунктлари билан)–22.5%; саноат ва транспорт аҳамиятига эга ерлар–2.5%; шаҳарлар майдони–5%; ўрмон ва сув фонди ерлари, қўриқхона, миллий боғ, буюртма қўриқхоналари, рекреацион зоналар ва бошқа табиатни муҳофаза қилиш аҳамиятига эга ерлар–70% [7; 8]. Шундай қилиб, экологик каркасда дастлаб маҳаллий кўламдаги экологик инфратузилмаларнинг интеграцияси ва бирлашуви рўй беради. Натижада, туман, вилоят, минтақа ва мамлакат миқёсида экологик барқарорлик шаклланиб боради. Бундай ёндашувнинг энг муҳим жиҳати табиий муҳитнинг сифатини яхшилаш ва геоэкологик муаммоларни олдини олиш учун ердан фойдаланиш турлари бўйича мавжуд антропоген босимни қайтадан тақсимлашда намоён бўлади.

Ҳудуддаги табиат қўриқхона фондининг улуши, табиий ҳимояланиш даражаси ва заҳира ерлар экологик каркасни шакллантиришда муҳим аҳамиятга эгадир. Шунинг учун, тадқиқотда табиатни муҳофаза қилиш ҳамда ер ресурсларидан оқилона фойдаланиш бўйича тизимли чора-тадбирларни ишлаб чиқиш ва амалиётда қўллаш асосий вазифалардан бири сифатида белгиланган. Мазкур муаммоларни ҳал этиш йўналишларидан бири, яъни табиий-ҳудудий комплексларни сақлаб қолиш, БЛХни муҳофазасини таъминлаш ва уларни тиклаш, экологик ҳолатни оптималлаштириш учун Фарғона водийсининг маъмурий-ҳудудий бирликлари бўйича ер тузиш ишларини илмий жиҳатдан асослаш талаб этилади. Жамият томонидан геокомплексларга белгиланган ёки юклатилган ижтимоий-иқтисодий ва экологик функциялар ердан фойдаланиш тузилмасида ўз аксини топади. Табиатдан фойдаланиш тури ва уни кўлами ҳудуднинг табиий ресурс салоҳияти ва имкониятига мос келса, ишлаб чиқариш жараёнидаги натижаларнинг самарадорлиги ҳам юқори бўлади. Акс холда, олинган даромаднинг катта қисми экологик хавфсизлик ва барқарорликни таъминлашга сарф бўлади.

Адабиётлар рўйхати

1. Ўзбекистон Республикасининг Ер Кодекси. ЎРҚ-708-сонли Қонун. 2021 йил 16 август. https://lex.uz/acts/152653

2. Абдуғаниев О.И., Комилова Т.Д., Турдибоева Ш.Ҳ. Минтақа экологик-хўжалик мувозанатини баҳолашнинг геоэкологик йўналишлари // Ўзбекистон география жамияти ахбороти, 56-жилд. -Тошкент, 2019. -Б. 26-32.

3. Абдуганиев О.И.. Муҳофаза этиладиган табиий ҳудудлар тизимини такомиллаштириш ва улардан фойдаланишнинг геоэкологик асослари (Фарғона вилояти мисолида) // Г.ф.д. (DSc) илм. дар. олиш учун тақдим. эт. дисс. –Т., 2023. –291 б.

4. Аҳмадалиев Ю.И. Ер ресурсларидан фойдаланиш геоэкологияси. – Т.: Fan va texnologiya, 2014. – 340 б.

5. Елизаров А.В. Экологический каркас – стратегия степного природопользования // Степной бюллетень. – 1998. – Вып. 2–4. – С. 76–91.
6. Колбовский Е.Ю. Культурный ландшафт и экологическая организация территории регионов (на примере Верхневолжья): Автореферат … д-ра геогр. наук / -В., 1999. -50 с.
7. Кочуров Б.И. Современное землеустройство и управление землепользованием в России // Устойчивое развитие сельского хозяйства и сельских территорий. Зарубежный опыт и проблемы России. – Москва, 2005. – С. 323–324.
8. Кочуров Б.И., Марунич Н.А., Хазиахметова Ю.А., Краснов Е.В. Экологически сбалансированная структура земель и энергоэффективность ведения лесного хозяйства в Приднестровье // География и природные ресурсы. 2017. №4. – С. 197-202.
9. Bouwma I.M., Jongman R.H.G. & Butovsky R.O. (eds) (2002). The Indicative Map of Pan-European Ecological Network - technical background document. (ECNC Technical report series).
10. Jongman, R.H.G. 2012. Ecological networks: a society approach forbiodiversity conservation. In: Marschall, I., Gather, M., Mьller, M.(Eds.) Proceedings of the 1st GreenNet Conference, 31st of Jan. 2012: “The Green Belt as a European Ecological Network – strengths andgaps”, -P. 3–12.
11. Miklós L. et al., Ecological Networks and Territorial Systems of Ecological Stability. © Springer International Publishing AG, part of Springer Nature, 2019. -152 p.

Абдужалилова Н.А.
Ассистент
кафедра «Узбекского языка и литературы»
Андижанский государственный медицинский институт

ФОРМИРОВАНИЕ ВРАЧЕБНЫХ КАЧЕСТВ СТУДЕНТОВ МЕДВУЗА НА ИСТОРИЧЕСКИХ ПРИМЕРАХ

Аннотация: *в данной статье анализируется позиция автора, что одним из главнейших условий, от которых в значительной степени зависит успех всей работы по самовоспитанию врача, является максимальная самокритичность. Только выработавший ее обретает способность видеть себя как бы со стороны, объективно оценивать свои способности и возможности.*

Ключевые слова: *врачебные качества, профессия врача, квалифицированный специалист, самовоспитание, ответственность.*

Abdujalilova N. A.
Assistant
of the Department of Uzbek Language and Literature
Andijan State Medical Institute

FORMATION OF MEDICAL QUALITIES OF MEDICAL UNIVERSITIES STUDENTS ON HISTORICAL EXAMPLES

Abstract: *This article analyzes the author's position that one of the main conditions on which the success of all work on the self-education of a doctor largely depends is the maximum self-criticism. Only the one who has developed it acquires the ability to see himself as if from the outside, to objectively assess his abilities and capabilities.*

Key words: *medical qualities, profession of a doctor, qualified specialist, self-education, responsibility.*

Молодому врачу нужно думать обо всем, что наблюдаешь, слышишь, изучаешь. Настойчиво думать о своей будущей деятельности. Конечно, еще и теперь встречаются люди, которые не затрудняют себя «бесплодными» размышлениями, для которых весь смысл существования заключается в обеспечении интересов своего собственного маленького «я». Обычно они лишены широких интересов, безразличны к высоким целям избираемой профессии и, что хуже всего, равнодушны к другим людям. Большое счастье, что их сравнительно редко привлекает профессия врача: она кажется им слишком хлопотливой и «невыгодной» [2,15].

Равнодушие к людям и их страданиям – качество не совместимое с благородной профессией врача. Это, пожалуй, единственный недостаток, который нельзя исправить обычными приемами воспитания. Все же прочие можно преодолеть, а нужные врачу положительные качества выработать, если будут искреннее желание и настойчивость. И если уже на студенческой скамье начать думать об этом.

Подобного рода «думание», собственно говоря, и составляет основу сложной внутренней работы по самовоспитанию. Трудна эта работа, но ее нужно выполнять каждому квалифицированному специалисту, который по-настоящему любит свое дело.

Одним из главнейших условий, от которых в значительной степени зависит успех всей работы по самовоспитанию врача, является максимальная самокритичность [4, 56]. Только выработавший ее обретает способность видеть себя как бы со стороны, объективно оценивать свои способности и возможности. Стать суровым судьей самого себя – это большое достижение в деле самовоспитания.

Не меньшее значение в формировании врача имеет выработка устойчивой привычки и любви к систематическому упорному труду. Врачебная работа очень трудоемка, и, чтобы добиться успеха, нельзя ограничивать ее строго отмеренным временем «от и до». Работе нужно отдавать себя всего, руководствуясь старинным правилом: «То, что нужно сделать в будущем, сделай сегодня, а то, что нужно сделать сегодня, – сделай сейчас».

Какие качества специфически врачебного характера должен всячески развивать в себе и постоянно совершенствовать будущий врач? Главнейшими из них можно считать: сознание величайшей ответственности, наблюдательность, любовь к своей профессии, мужество и решительность, оптимизм [1, 12].

Ответственность за свои действия, за свою работу – качество, обязательное для любой профессии. Но в деятельности врача она приобретает особый характер. Зависит это от того, что ни одна профессия не имеет такого близкого, конкретного отношения к самому важному и сокровенному для человека: его жизни и смерти. Вследствие этого врачебная ответственность становится не только наиболее высокой и почетной, но и наиболее тяжелой.

Врачу вверяется самое драгоценное – жизнь, здоровье и благополучие людей. Он несет ответственность не только перед отдельным больным, его близкими, его коллективом, но и перед обществом в целом, перед государством. Поэтому всякий врач не имеет права быть безответственным.

Пожалуй, ни одна профессия не может похвалиться таким обилием письменных документов – наставлений, правил, законоположений, определявших на протяжении тысячелетий внешние и внутренние качества, а также особенности поведения, которыми должны обладать представители врачебной профессии. Конечно, эти критерии изменялись в различные исторические эпохи, но суть оставалась неизменной: требования к физическим, моральным и интеллектуальным свойствам врача, а также к его профессиональной ответственности всегда были повышенными.

В «Книге жизни» (Аюверда), включающей данные о древней медицине Индии, имеется такое наставление: «Врач, который желает иметь успех в практике, должен быть здоров, опрятен, скромен, терпелив. Речь его должна быть тихая, приятная и обнадеживающая. Он должен обладать чистым, сострадательным сердцем, строго правдивым характером, спокойным темпераментом, отличаться величайшей умеренностью и целомудрием, постоянным стремлением делать добро».

В те далекие времена, когда появилось это наставление, существовали и определенные законоположения, регулирующие профессиональную работу врача. В древнем Вавилоне, как можно видеть из свода законов Хаммурапи (почти 2000 лет до нашей эры), врач за неудачное лечение не только должен был уплатить очень высокий денежный штраф, но и рисковал подвергнуться широко применявшимся в то жестокое время наказаниям.

Большое влияние на формирование представлений о качествах, которыми должен обладать врач, оказали сочинения, вышедшие из школы величайшего врача древней Эллады Гиппократа (460-377 гг. до н.э.), в первую очередь «Клятва», «Закон», «О враче», «О благоприятном поведении». Содержащиеся в них глубокие мысли Гиппократа, этого гениального наблюдателя человеческих существ, на протяжении многих столетий служили мерилом высоких принципов врачебной профессии и во многом сохранили свое значение и до наших дней.

Гиппократ высоко оценивал обязанности врача по отношению к больному: «Чисто и непорочно буду я проводить свою жизнь и свое искусство … В какой бы дом я ни вошел, я войду туда для пользы больного, будучи далек от всего намеренного, несправедливого и пагубного … Что бы я ни увидел или ни услышал касательно жизни больного, что не следует когда-либо разглашать, я умолчу о том, считая подобные вещи тайной …»

На уроках английского языка студенты-медики читают и осмысливают следующие строки из «Клятвы Гиппократа»: “I shall enter any house for the good of the patient, I shall not do my patient any harm” – these are the words from Hippocrates Oath and they must not be only words for medical students, they must become the motto of their life. A good doctor must give all his knowledge, all his abilities, all his talent and all his time to people, to the protection of their health».

Гиппократ требовал от врача лучших проявлений человеческого характера: «Пусть он будет человеком прекрасным и добрым, значительным и человеколюбивым. Он должен быть справедливым при всех обстоятельствах …» («О враче»). Уже на первом курсе в английских текстах есть аналогичные строки: “A good doctor must have not only deep knowledge of medicine and experience, he must love people and have a kind heart. To treat people is not an ordinary trade, it is a great art. It is one of the professions which requires a real calling for it.”

Положения Гиппократа на протяжении веков были широко известны во врачебном мире, и торжественное обязательство выполнять их стало традиционным.

Таким образом, одним из главнейших условий, от которых в значительной степени зависит успех всей работы по самовоспитанию врача, является максимальная самокритичность. Только выработавший её обретает способность видеть себя как бы со стороны, объективно оценивать свои способности и возможности. Знание медицинской терминологии, латинских афоризмов и крылатых выражений античности повышают грамотность врача, способствую лучшему пониманию учебного материала и грамотному ведению диалогической речи.

Использованные источники:

1. Буранова Н.Ш. «Новая педагогическая технология «Тонкие и толстые вопросы» на уроках внеклассного чтения”. Статья в журнале “Universum: психология и образование”. Выпуск 8 (86), 2021 http://7universum.com/ru/psy/archive/category/886
2. Буранова Н.Ш. Исследовательская активность учащихся на уроках литературы–М.: Internauka, 2020, No. 41 - 96 p. https://www.internauka.org/journal/science/internauka/170
3. Галиев.Р.Г., Буряков Р.Т., Галиева Э. И. и др. Современные походы в подготовке врачей-стоматологов//Современные тенденции развития педагогических технологий в медицинском образовании.
4. Лихтерман Л. Г. Что такое клиническое мышление. Размышления опытного врача. Медицинская газета № 41 2000г.
5. Соколов. И. М. Эволюция мотивации в процессе обучения студентов в медицинском университете. Возможность ее повышения / И. М. Соколов, Н. А. Железнякова, Н. П. Лямина, Е. Я. Гафанович // Современные проблемы науки и образования, 2015.

Абдукаххаров А.А.
старший преподаватель
Алмалыкский филиал
Ташкентский государственный
технический университет имени Ислама Каримова
Маматкулов Р.Ш.
ассистент
Алмалыкский филиал
Ташкентский государственный
технический университет имени Ислама Каримова

МЕТОДЫ ВОССТАНОВЛЕНИЯ ИЗНОШЕННЫХ ДЕТАЛЕЙ МЕТОДАМИ НАПЛАВКИ

Аннотация: *В статье дано определение по восстановлению и упрочнению изношенных деталей. Наплавочные работы применяются чаще всего при ремонте изношенных или повреждённых поверхностей деталей. Рассмотрены некоторые способы наплавки, дана сравнительная таблица по производительности методов.*

Ключевые слова: *наплавка, ручная дуговая наплавка, наплавка под флюсом, плазменная наплавка, вибродуговая наплавка, область применения наплавочных работ*

Abdukakhkharov A.A.
senior lecturer
at the Almalyk branch of the Tashkent State
Technical University named after Islam Karimov
Mamatkulov R.Sh.
Assistant
of the Almalyk branch of the Tashkent State
Technical University named after Islam Karimov

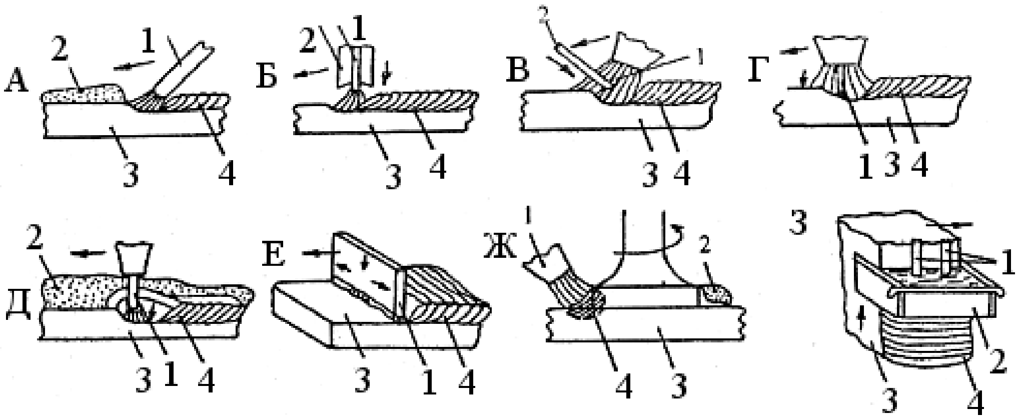
METHODS FOR RESTORING WORN PARTS BY SURFACING METHODS

Abstract: *The article gives a definition for the restoration and strengthening of worn parts. Surfacing works are most often used to repair worn or damaged surfaces of parts. Some surfacing methods are considered and a comparative table on the performance of the methods is given.*

Key words: *surfacing, manual arc surfacing, submerged arc surfacing, plasma surfacing, vibration arc surfacing, area of application of surfacing works*

Наплавка – процесс нанесения покрытия на рабочие или изношенные поверхности слоя металла или сплава с различными свойствами: твёрдостью, износостойкостью, жаропрочностью и другие.

Наплавку металла при помощи дуговой сварки применяют для восстановления изношенных деталей. Для этого на поверхность изделия наносят металл, накладывая его слоями, обладающими необходимыми физико-механическими свойствами. Для этого применяют различные виды сварки, в том числе и ручную дуговую с плавящимся или неплавящимся электродом.



Основные способы наплавки плавлением:

А — угольным электродом (1), расплавлением сыпучего наплавочного сплава (2);
Б — покрытым электродом (1) или легирующим покрытием (2);
В — неплавящимся вольфрамовым электродом (1) в инертных газах с задействованием присадочного прутка (2);
Г — плавящимся электродом (1) в защитном газе;
Д — сварка плавящейся проволокой (1) под флюсом (2);
Е — лентой плавящейся (1) в защитном газе (под флюсом);
Ж — струей плазмотрона (1) с наложенным или спеченным из порошков наплавочного материала (2);
З —плавящимся электродом (1) с перемещаемым медным ползуном (2), наплавляемая деталь (3); наплавленный слой (4)

Основным достоинством ручной дуговой наплавки является простота и универсальность метода, возможность выполнения сложных наплавочных работ в труднодоступных местах. К недостаткам относят низкую производительность, загазованность в месте производства работ, сложность получения необходимого качества наплавленной поверхности.

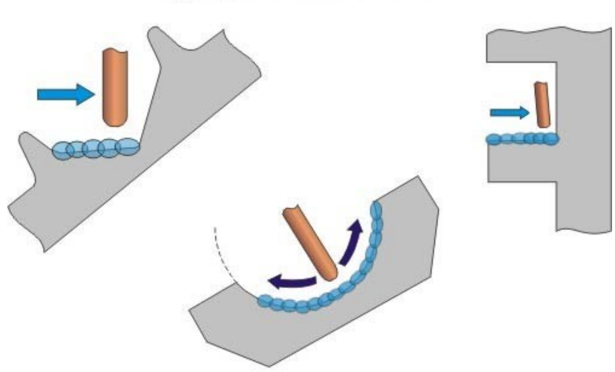
Наплавку плавящимся электродом ведут по той же технологии, что и обычную сварку. Перед наплавкой поверхность тщательно зачищают, следя особенно за тем, чтобы не осталось жировых пятен и коррозии. Электроды подбирают, исходя из условий эксплуатации наплавляемой поверхности. Для этого применяют как обычные сварочные электроды, предназначенные для сварки легированных сталей, так и специальные наплавочные электроды, обладающие заданными свойствами. Для наплавки износостойких поверхностей применяют порошковые проволоки с заданным химическим составом. В качестве источников питания для сварочной дуги используют серийные выпрямители и сварочные трансформаторы.

Для наплавки на поверхность металла наносят сварочные валики, покрывая всю плоскость слоем наплавленного металла. Валики наносят поочередно, перекрывая предыдущий на ⅓ его ширины. Для того чтобы увеличить ширину валиков, их можно накладывать поперечными колебаниями, так же как это делают для увеличения сварочного шва. Валики можно накладывать и с некоторыми промежутками один от другого, с последующей наплавкой валиков в промежутках. Промежуточные валики накладывают после снятия шлака с ранее наложенных валиков и тщательной их зачистки.

В отличие от соединительной сварки наплавка имеет некоторые особенности, связанные с тем, что химический состав наплавленного металла существенно отличается от химического состава основного металла. Выходом из сложившейся ситуации может служить тщательный подбор состава плавящихся электродов, которые способны создать требуемую структуру и химический состав наплавленного слоя. Если это сделать не удается, то прибегают к другим методам наплавки: наплавке неплавящимся электродом с расплавлением слоя сыпучего наплавляемого сплава, нанесение легирующих примесей в виде порошков, паст или брикетов, наплавлением в среде защитных газов и т.д. Для этого применяют методы наплавки на автоматическом и полуавтоматическом сварочном оборудовании, на особенностях которого мы остановимся в соответствующих разделах данной книги[2].

При наплавке любым из указанных методов важно, чтобы основной металл проплавлялся минимально, чтобы были сведены к минимуму остаточные напряжения, деформации и припуски на последующую обработку.

ДУГОВАЯ НАПЛАВКА



НАПЛАВКА РУЧЬЕВ ПРОКАТНЫХ ВАЛКОВ

Наплавка твердых сплавов

Материалы для наплавки

Наплавкой называют процесс наплавления на поверхности изделия слоя металла для изменения размеров или придания специальных свойств (твердости, антикоррозионности, износоустойчивости и т. д.). Наплавка может выполняться металлическими штучными электродами, стальной наплавочной проволокой (лентой) и твердыми сплавами.

Твердыми сплавами называют сплавы карбидо- и боридообразующих металлов —хрома, марганца, титана, вольфрама и других с углеродом, бором, железом, кобальтом, никелем и пр. Они могут быть литыми и порошковыми.

К литым твердым сплавам относится прутковый сормайт, поставляемый в виде стержней диаметром 6—7 мм и длиной 400—450 мм, содержащий 25—31% хрома, 3—5% никеля, 2,5-3,3% углерода, 2,8—3,5% кремния, до 1,5% марганца, до 0,07% серы и 0,08% фосфора, остальное — железо, а также другие сплавы. Литые твердые сплавы применяют для наплавки штампов, измерительного инструмента, деталей станков и механизмов, работающих в условиях интенсивного износа. Наплавку ведут ацетилено-кислородным пламенем, угольным электродом, а также вольфрамовым электродом в среде аргона.

К порошкообразным твердым сплавам относятся сталинит и сормайт. Порошкообразный сталинит содержит 24—26% хрома, 6—8,5% марганца, 7—10% углерода, до 3% кремния, до 0,5% серы и фосфора, остальное — железо.

Металлические электроды для дуговой наплавки изготовляют по ГОСТ 10051—75, согласно которому электроды классифицируются в зависимости от химического состава и твердости наплавленного металла.

Виды наплавки

В настоящее время в промышленности используется большое количество различных видов наплавки.

Ручная дуговая наплавка. Наплавка выполняете металлическими плавящимися одиночными электродами, пучком электродов, лежачими пластинчатыми электродами, трубчатыми электродами, дугой прямого и косвенного действия и трехфазной дугой[3].

Наплавку электродами можно выполнять во всех пространственных положениях. Она выполняется путем последовательного наложения валиков, наплавляемых при расплавлении электрода, на поверхность изделия. Наплавляемая поверхность при этом должна быть чистой (зачищена до металлического блеска). Поверхность каждого наложенного валика и место для наложения следующего валика также тщательно зачищают от шлака, окалины и брызг. Для получения сплошного монолитного слоя наплавленного металла каждый последующий валик должен перекрывать предыдущий на 1/3 — 1/2своей ширины.

Толщина однослойной наплавки составляет 3—6 мм. Если необходимо наплавить слой толщиной более 6 мм, перпендикулярно первому наплавляют второй слой валиков. При этом первый слой валиков должен быть тщательно очищен от брызг, окалины, шлаковых включений и других загрязнений.

Дуговая наплавка под флюсом

По способу выполнения может быть автоматической или полуавтоматической, а по количеству применяемых проволок — одноэлектродной и многоэлектродной. Применяемые для наплавки под флюсом наплавочные проволоки по конструкции разделяют на сплошные и порошковые, а по форме — на круглые и ленточные[2].

Дуговая наплавка в защитных газах вольфрамовым (неплавящимся) и проволочным металлическим (плавящимся) электродом. Для защиты дуги используют аргон, азот, водород и углекислый газ. Производительность труда при наплавке оценивают массой или площадью (размерами) наплавленного металла.

Вибродуговая наплавка

Эта наплавка является разновидностью электрической дуговой наплавки металлическим электродом и выполняется путем вибрации электрода. Амплитуда вибрации находится в пределах от 0,75 до 1,0 диаметра электродной проволоки.

Электрошлаковая наплавка

Отличительной особенностью этого способа наплавки является высокая производительность, при которой могут быть достигнуты не только десятки, но и сотни килограммов наплавленного металла в час. Наплавка производится с принудительным формированием металла за один проход. Электроды применяются практически любого сечения: прутки, пластины и т. п. Глубину проплавления основного металла можно регулировать в широких пределах.

Наплавка открытой дугой

Для этой цели применяют порошковую проволоку с внутренней защитой, которая позволяет расширить область применения механизированной износостойкой наплавки. При наплавке этой проволокой применение флюса или защитного газа не требуется, поэтому способ отличается простотой и маневренностью и создается возможность восстановления деталей сложной формы, глубоких внутренних поверхностей, деталей малых диаметров и пр. В настоящее время имеются различные конструкции аппаратуры, а также разработана технология упрочения деталей широкой номенклатуры. Расход проволоки составляет 1,15—1,35 кг на 1 кг наплавленного металла. Производительность при полуавтоматической наплавке повышается в 2—3 раза по сравнению с наплавкой штучными электродами.

Плазменная наплавка

При плазменной наплавке источником тепла является высокотемпературная сжатая дуга, получаемая в специальных горелках. Большое применение получили плазменные горелки с дугой прямого действия, горящей между неплавящимся вольфрамовым электродом и наплавляемым изделием. Иногда применяют горелки комбинированного типа, в которых от одного электрода одновременно горят две дуги —прямого и косвенного действия.

Присадочным материалом при этом способе наплавки служит проволока, лента, порошок и пр. Практический интерес представляет прежде всего наплавка с присадкой мелкозернистого порошка. В этом случае применяется плазменная горелка комбинированного типа. Порошок при помощи транспортирующего газа подается из питателя в горелку и там вдувается в дугу. За время пребывания в дуге большая часть порошка успевает расплавиться, так что на наплавляемую поверхность попадают уже капельки жидкого присадочного материала.

Технология наплавки

Перед началом наплавки устанавливают высоту наплавочного слоя. Перед наплавкой, как и перед сваркой, поверхность, подлежащая наплавке, должна быть очищена от грязи, ржавчины, окалины, масла и влаги. При наложении первого слоя наплавки стремятся каждый предыдущий валик перекрывать на 25—30% его ширины, сохраняя при этом постоянство его высоты.

При необходимости увеличить высоту наплавочного валика, производят наплавку следующего валика, очистив перед наплавкой наплавленный слой от неметаллических включений и шлака, образованных при наложении предыдущего слоя.

В зависимости от марки металла наплавка может производиться без подогрева изделия и с предварительным подогревом. Основными требованиями, предъявляемыми к качеству наплавки, являются: надежное сплавление основного металла с наплавленным; отсутствие дефектов в наплавленном металле; идентичность свойств наплавленного металла[4].

Надежное сплавление наплавки с основным металлом обеспечивается подбором силы тока, что для наплавочных установок с постоянной скоростью подачи электрода соответствует подбору скорости подачи проволоки или ленты.

Заключение: Способ восстановления размеров изношенных деталей необходимо выбирать в зависимости от условий эксплуатации. Это способствует не только восстановить рабочие функции деталей, но и при подборе соответствующего материала покрытия способствует значительному увеличению ресурса работы деталей. Уменьшаются материальные и финансовые расходы на ремонт оборудования.

Использованные источники:

[1]. Восстановление деталей машин напылением и наплавкой (1987) А.И. Сидоров

[2]. Эргашев Махмуд, Якубов Лазизхон Эргашхонович, Рауфов Лазизбек Мухиджон Угли, Хожибекова Шохида Миродиловна, Абдукаххоров Абдуазиз Абдулазизхон Угли ОПРЕДЕЛЕНИЕ ПРОЧНОСТИ СЦЕПЛЕНИЯ ТОНКИХ ПОКРЫТИЙ С ОСНОВНЫМ МЕТАЛЛОМ: ОБЗОР МЕТОДОВ И ЭКСПЕРИМЕНТЫ // Universum: технические науки. 2024. №5 (122). URL: https://cyberleninka.ru/article/n/opredelenie-prochnosti-stsepleniya-tonkih бращения: 28.10.2024).

[3]. M.Ergashev, D.S.Fazilov, A.A.Abdukaxxarov, F.A.Abdukarimova Tog'-kon texnikalarini ta'mirlashda yeyilgan detallarni qayta tiklashning samarali usullari // Science and Education. 2023. №2. URL: https://cyberleninka.ru/article/n/tog-kon-texnikalarini-ta-mirlashda-yeyilgan-detallarni-qayta-tiklashning-samarali-usullari

[4]. Fazilov Dusmurat Saydivaliyevich, Mamatqulov Rustam Sharip o'g'li, Kenjayev To'ymurod Nematulla o'gli, Abdukaxxarov Abduaziz Abdulazizxon o'g'li Boyitish fabrikalari jihozlarining yeyilish sabablari // "Science and

Education" Scientific Journal. April 2024 / Volume 5 Issue 4 https://openscience.uz/index.php/sciedu/article/view/6899

Абдуллаев А., д.э.н., профессор
Андижанский машиностроительный институт
Ахмаджанов А. А.
старший преподаватель
Андижанский машиностроительный институт

ПРОБЛЕМА КОНКУРЕНТНОЙ СТРАТЕГИИ РАЗВИТИЯ ПРЕДПРИЯТИЯ

Аннотация: *В статье рассмотрены алгоритм стратегического управления национальной экономикой, внешняя среда национальной экономики, конкурентные рыночные отношения, возникающие в современном мировом хозяйстве, система саморазвития, определяемая регулированием компаний и их деятельности. государством, изучены пути повышения эффективности использования ресурсов в текущей деятельности и сделаны предложения.*

Ключевые слова: *продукт, рынок, компания, фирма, сеть, позиция, анализ, качество, стратегия, рынок, сегмент, технология, конкуренция, конкурентоспособность, инновации, наука и технологии, склад, субъект, процесс.*

Abdullaev A.
Professor
Andijan Mechanical Engineering Institute
Akhmadzhanov A.A.
Head lecturer
of Andijan Mechanical Engineering Institute

THE PROBLEM OF COMPETITIVE STRATEGY FOR ENTERPRISE DEVELOPMENT

Abstract: *The article examines the algorithm of strategic management of the national economy, the external environment of the national economy, competitive market relations arising in the modern world economy, the system of self-development determined by the regulation of companies and their activities. state, studied the ways of increasing the efficiency of resource use in current activities and made proposals.*

Keywords: *product, market, company, firm, network, position, analysis, quality, strategy, market, segment, technology, competition, competitiveness, innovation, science and technology, warehouse, subject, process.*

При выборе конкурентной стратегии следует учитывать следующие основные положения:

1. Конкурентная стратегия должна обеспечивать закрепление имеющихся у предприятия конкурентных преимуществ и завоевание новых;

2. Стремление быть лидером во всех сферах конкурентной борьбы;

3. Конкурентная стратегия должна формулироваться с учетом жизненного цикла производимого и реализуемого на рынке товара. Это положение особенно важно поскольку наблюдается общая тенденция сокращения жизненного цикла товара, увеличение ассортимента товаров, повышение скорости смены технологии, изменение демографических характеристик рынка, изменение политической ситуации в стране и т.п., что осложняет оценку сроков начала внедрения новой стратегии и периода её использования;

4. Конкурентную стратегию необходимо выбирать с учетом оценки возможности её реализации кадровым потенциалом предприятия;

5. Борьба с главными конкурентами должна целенаправленно вестись за платежеспособный спрос потенциальных групп покупателей. Поэтому основной смысл конкурентной борьбы заключается не только в действиях против предприятий соперников, но и в завоевании конкурентных потребителей пользующихся услугами конкурентов;

6. Конкурентная стратегия должна формироваться не только сверху (т.е. по инициативе высшего руководства предприятия), но и снизу, вовлекая и рядовых работников. Эффективность реализации стратегии во многом зависит от ясного понимания всем персоналом предприятия стратегической ориентации.

Обоснование и выбор конкурентной стратегии развития коммерческого предприятия осуществляется на основе полученных прогнозов развития целевых рынков, которые заняты выпуском данного вида продукции, оценки потенциальных рисков, проведенного анализа финансово-хозяйственного состояния и достигнутого уровня эффективности управления предприятием, а также анализа сильных и слабых сторон его деятельности.

Формирование конкурентной стратегии поведения предприятия на рынке предусматривает определение таких параметров, как:

• регион, в котором предполагается осуществлять сбыт продукции, степень географической дифференциации сбыта;

• доля целевого рынка, которую предполагается занять;

• группа потребителей, для которых предполагается организовать сбыт продукции;

• базовая ценовая стратегия (лидерство по затратам или издержкам, дифференциация, доминирование в данной нише и т.д.);

• вид конкурентной стратегии.

Производственные, сбытовые, финансовые, кадровые и иные стратегии предпринимательских фирм непременно разрабатываются и осуществляются посредством конкуренции. Вместе с тем сама конкурентная форма предпринимательских действий также является объектом и инструментом стратегического управления. Стратегии конкурентного поведения включают:

•стратегическое поведенческое целеполагание компании как единого, целостного субъекта предпринимательства, посредством которого компания проявляет основополагающие деловые интересы к представителям внутрифирменной и внешней среды своего бизнеса;

•комплекс долговременных действий (воздействие, противодействие) компании по отношению к представителям среды своего бизнеса, которые признаются ее стратегическим окружением, т. е. осуществляют деятельность в стратегических областях бизнеса этой компании, прямо либо опосредованно соприкасаясь с нею.

Содержание и форма предпринимательского бизнеса вполне сочетаются на стратегическом (равно как и на тактическом или ситуационном) уровне деятельности. Материалом (контентом) при разработке и реализации стратегий конкурентного поведения служат упоминавшийся элементы предпринимательства.

Компетентная выработка стратегии конкурентного поведения, а также последующий контроль за отражением этой стратегии в оперативных действиях предпринимательской фирмы являются специфичной и существенно важной задачей внутрифирменного менеджмента начиная с его самого верхнего эшелона.

Стратегия конкурентного поведения является базисом арсенала инструментов деятельности каждого конкурента. Не имея стратегии, компания не в состоянии формировать прагматически мотивированные установки на те или иные действия и тем самым положительно влиять на улучшение дел внутри компании и на состояние внешней среды своего бизнеса. Без стратегии конкурентные действия неизбежно приобретают хаотичный характер, что, в конечном счете, оборачивается утратой конкурентных преимуществ, снижением конкурентоспособности фирмы и подрывом ее конкурентного потенциала.

В процессе конкурентного поведения прагматически мотивированные субъекты профессионального бизнеса стремятся к реализации целей, каждая из которых имеет разные структурные уровни содержания. Наиболее глубокий уровень содержания конкурентных целей субъектов бизнеса следует определить как стратегический уровень цели или как стратегическую цель конкурентного поведения.

Субъекты предпринимательского бизнеса создаются, действуют и ликвидируются под влиянием центробежной и центростремительной тенденций развития современной системы бизнеса. Они одновременно реализуют свой деловой суверенитет и доказывают свою потребительскую, функциональную и общественную ценность. Поэтому на самом существенном, основополагающем уровне одного своего конкурентного целеполагания субъекту бизнеса следует прагматически ответить на вопросы о том, для деятельности в какой именно конкурентной среде он создан и как ему отстоять свой деловой суверенитет в данной среде.

Ключевые стратегические установки, составляющие остов стратегического конкурентного целеполагания компаний, непременно отражают намерения данных компаний либо устранить конкурентов, либо интегрироваться с ними, цивилизованно разойтись, либо осуществить иные действия.

Технологическая база конкурентного поведения, действительно, формируется вокруг методов и форм конкурентных действий. Но нельзя забывать о том, что, реализуя с помощью методов конкуренции отношение к стратегическим соперникам, предприниматели рассматривают методы конкуренции, тем более ее формы, лишь как технологию соперничества. Выбирая методы конкурентных действий, субъекты профессионального бизнеса стремятся не Столько ослабить соперников, но и укрепиться в собственных позициях, предстать в глазах потребителей, поставщиков и общественности в наиболее привлекательном свете, заставить конкурентов считаться с собой.[80]

Поэтому ключевые стратегические установки на конкурентное поведение концентрируются непосредственно не вокруг затрат и результатов производства как таковых, а именно вокруг конкурентного позиционирования, в том числе противостояния конкурентам с помощью манипуляций с издержками, ценами и другими инструментами ценовой и неценовой конкуренции. Следует согласиться с определением И. В. Головина: «Конкурентная стратегия является целостной системой, включающей две подсистемы: интернальную и экстернальную. Интернальная подсистема содержит описание путей достижения желаемого состояния компании по отношению к конкурентам с точки зрения внутренней организации бизнеса. Экстернальная подсистема содержит описание совокупности возможных подходов и действий по отношению к соперникам, необходимых для сохранения и усиления собственных позиций в конкурентной борьбе».[81]

Конкурентное преимущество может быть определено как стратегическое в том случае, если оно обладает следующими признаками:

- оно возникает именно в тех областях бизнеса, которые признаются в качестве основных и самой фирмой, и ее внешним окружением;
- обусловленность конкурентного преимущества достижениями компании в сфере осмысления динамики рыночных предпочтений;
- повышенное внимание к данному конкурентному преимуществу со стороны внешнего окружения фирмы;
- устойчивость данного преимущества во времени;
- отсутствие у конкурентов очевидных возможностей «перебить» данное преимущество.

Именно с созданием, удержанием и усилением субъектами предпринимательского бизнеса таких преимуществ либо с их полным

[80] Ламбен Ж.Ж. Стратегический маркентинг. Европейская перспектива. СПб. Наука, 1996 С. 341
[81] Головин И.В. Разработка конкурентных стратегий. М.: Маркет ДС, 2004. С. 15.

выходом из бизнеса и связано явление стратегической конкурентной мотивации действий данных факторов.

Таким образом, компетентные действия большинства субъектов предпринимательского бизнеса по обеспечению стратегических конкурентных преимуществ охватывают основные виды деятельности фирмы (так называемые стратегические области бизнеса) — то, ради чего фирма создавалась изначально. Данные действия имеют теоретически (а зачастую и экспериментально) обоснованный характер, они направлены на широкое и долговременное признание компании внешней средой и на формирование позитивных отличий данной компании, которые являются недоступными для конкурентов.

Поэтому успешные стратегии конкурентного поведения компетентных субъектов предпринимательского бизнеса обязательно обладают следующими признаками: основательность, мотивированность, теоретическая непротиворечивость, адекватность динамике рыночных ожиданий, устойчивость, долговременность, отличие от стратегий соперников.

Предпринимательским фирмам необходимо определить стратегические области деятельности (виды, специализированные разновидности и направления диверсификации бизнеса) для того, чтобы выявить, чем именно данная фирма должна и может в принципе заниматься (немедленно или в какой-то перспективе), а какими видами деятельностей не стоит заниматься ни при каких обстоятельствах.

В крупном бизнесе, который, как правило, всегда имеет диверсифицированный характер, выделяется основной вид (профиль) деятельности фирмы — так называемое стратегическое ядро бизнеса. Такое выделение имеет важное стратегическое значение для формирования разумной системы видов профессиональной деятельности компании.

Общая стратегическая основа бизнеса любой компании проявляется прежде всего в наличии стратегического ядра бизнеса данной компании, вокруг которого выстраивается система всей ее деятельности. Содержание такого ядра со временем может меняться в условиях, когда иные виды предпринимательской деятельности окажутся под влиянием различных причин стратегически более важными для обеспечения жизнедеятельности компании.

Субъекты предпринимательского бизнеса должны определить свое стратегическое конкурентное окружение. При этом необходимо выяснить отличительные признаки и тех субъектов внешней среды, с кем компания будет непосредственно соприкасаться, и тех, с кем столкновение возможно лишь в форме связей с общественностью (PR).

Чрезвычайно важное значение имеет компетентный выбор компанией стратегических клиентов (другими словами — стратегических сегментов), т.е. потребителей продукции и услуг компании, чьи предпочтения в дальнейшем будут иметь определяющее значение для обеспечения жизнедеятельности компании.

Не менее важное значение имеет определение состава стратегических поставщиков (партнеров по цепочкам ценности) и выстраивание отношений с ними. Стратегические установки на коммуникации с поставщиками включают задйния на вхождение в наиболее важные для компании цепочки ценностей, а также использование таких цепочек для обеспечения роста собственных конкурентных преимуществ за счет возможностей и конкурентного потенциала партнеров и для обеспечения различных форм доминирования над партнерами вплоть до полной монополизации цепочек.

Вступая на рынок, субъекты предпринимательского бизнеса должны быть готовы к различным ударам и опасностям, которые подстерегают их со стороны конкурентов. Стратегическими следует признать не просто самых опасных, самых конкурентоспособных и самых сильных соперников компании, но и тех из них, действия которых уже направлены или, согласно прогнозным оценкам, обязательно будут направлены непосредственно против данной компании в сгтпатегических областях ее бизнеса.

Именно с такими конкурентами у фирмы возникают стратегические конфликты. К реальному или предполагаемому наличию таких конфликтов, как и к рискам, обусловленным их просеканием (так называемым стратегическим рискам), руководство фирмы всегда должно быть готово, если оно всерьез рассчитываем на успешную реализацию стратегических целевых установок.

Действия стратегических конкурентов всегда нацелены против коммуникаций предпринимательской фирмы со своими стратегическими клиентами и партнерами Стратегическое противостояние охватывает поэтому борьбу субъектов предпринимательского бизнеса именно за данные категории потребителей и партнеров, а также за внимание наиболее влиятельных руководителей органов власти и управления. Проигрыш в такой борьбе означает стратегический провал фирмы, выигрыш — ее стратегический успех.

Следующим стратегическим детерминантом конкурентного поведения субъектов бизнеса является определение его дифференцированной предпринимательской функции в реально складывающейся конкурентной среде.

В соответствии со своей функциональной дифференциацией каждая компания определяет, как именно она намерена осваивать избранную стратегическую область бизнеса. Данное явление можно охарактеризовать как стратегическую функциональную дифференциацию поведения профессиональных конкурентов.

Стратегическая конкурентная мотивация является, с одной стороны, переплетением мотивов конкурентного поведения, направленного против своего стратегического конкурентного окружения, с другой следствием функциональной предпринимательской дифференциации конкурентов, а с третьей – системой реализации стратегических целей компании.

Стратегии конкурентного поведения:

•либо базирующиеся на замещении мотивов (например, в тех случаях, когда наивысшими стратегическими мотивами руководство компании полагает мотив азарта, мотив комфортности, мотив промежуточной выгоды, мотив внешнего успеха);

•либо вытекают из не вполне реалистических и эмоциональных оценок уровня своей конкурентоспособности и конкурентоспособности своего окружения.

Такие стратегии имеют иррациональный характер, они наблюдаются в действиях лишь некомпетентных или малокомпетентных субъектов предпринимательского бизнеса, вознамеривающихся сделаться профессиональными конкурентами.

Стратегическое управление конкурентными действиями для любого субъект предпринимательского бизнеса начинается с формирования целевых стратегических установок. Оно включает обоснование и решение следующих задач:

•создание, воспроизведение и последовательное укрепление стратегического конкурентного потенциала фирмы по сравнению с потенциалом других фирм в разрезе дифференцированных функциональных групп последних, включая накопление и развитие знаний, навыков, умений и опыта совершения, конкурентных действий;

•обеспечение реальной конкурентоспособности фирмы на уровне, позволяющем осуществлять намечаемые конкурентные действия в отношении внешнего окружения, в том числе создание угроз внешнему окружению и обеспечение безопасного развития собственного бизнеса на основе противодействия угрозам извне;

•определение стратегических полей конкуренции и стратегическое планирование конкурентных действий; определение коридоров стратегического маневрирования в процессе соперничества на избранных полях;

•анализ и предугадывание стратегических установок конкурентов; определение путей и способов использования конкурентных преимуществ представителей внешнего окружения фирмы в ее собственных интересах, а также способов распознавания и «перехвата» стратегий представителей внешнего окружения;

•формирование и применение идеологии стимулирования (стратегического стимулирования) сотрудников компании на участие в совершении конкурентных действий в отношении стратегического конкурентного окружения;

•определение состава и уровня стратегических конкурентных позиций фирмы в избираемых (стратегических) областях бизнеса, которые могли бы обеспечить данной предпринимательской фирме положительное решение вопроса о выживании;

•определение и установление системы инструментов стратегического контроля исполнения принятых стратегических установок структурными и функциональными подразделениями фирмы (стратегический контроллинг);

•определение условий и порядка изменения стратегических целевых конкурентных установок.

Прагматическая стратегия конкурентного поведения здравомыслящих и стремящихся быть компетентными субъектов бизнеса всегда опирается на наличие в их распоряжении стратегического конкурентного потенциала. Под ним следует понимать совокупность ресурсов, имеющих стратегическое значение (их иногда называют стратегическими ресурсами предпринимательской фирмы), и совокупность собственно конкурентных потенций фирмы.

Использованные источники:

1. Указ Президента РУз. Ш.М. Мирзиёева. Стратегия развития нового Узбекистана на 2022-2026 гг.
2. A.Abdullayev, A.A.Axmadjanov “KORXONALARDA TADBIRKORLIKNING RAQOBAT MUHITI BOSHQARUVINI TAKOMILLASHTIRISH” MONOGRAFIYA Andijon – 2024 , 155 b.
3. .Akhmadzhanov A. A., Arslonova G. A. Key success factors in the competition //ISJ Theoretical & Applied Science. – 2023. – Т. 8. – №. 124. – С. 169-175.
4. Абдуллаев А.М. Совершенствование методологических проблем инновационного предпринимательства РУз. Т.: LESSON PRESS, 2022, 961с.
5. Абдуллаев А.М. Теория и практика предпринимательской конкуренции. Т.: Фан ва технология, 2021, 534с.
6. Анисимов О.С. Стратегическое управление: проблемы теории. М.2005.
7. Ансофф И. Стратегическое управление. М. 1989.
8. Анчишкин А.И. Прогнозирование роста социологической экономики. М.1973.
9. Лифиц И.М. Теория и практика оценки конкурентоспособности товаров и услуг. М. 2004.
10. Портер М.Е. Конкурентное преимущество. М. 2005.
11. Назаров Ш.Х. Методологические аспекты повышения конкурентоспособности регионов. Т.: 2014, - 212 с.
12. Царев В.В. Оценка конкурентоспособности предприятий. М.: 2008.

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Абдулхаев Ж. Ж.
старший преподаватель
кафедры «Охраны труда».
Андижанский машиностроительный институт
Узбекистан, Андижан

ОСОБЕННОСТИ ПРОЕКТИРУЕМЫХ ДОРОГ И ЭКОЛОГИЧЕСКОЕ СРАВНЕНИЕ ЭКОНОМИЧЕСКИХ ПРОЕКТОВ СТРОИТЕЛЬСТВА ВЫСОКОСКОРОСТНЫХ ДОРОГ

Аннотация: *Оглашен проект постановления Президента «Об утверждении Стратегии развития автомобильных дорог Республики Узбекистан на 2020-2030 годы».*

Основной целью стратегии является развитие и совершенствование сети автомобильных дорог, направлений, подходов и механизмов улучшения характеристик их эксплуатации, которые служат стабильному и быстрому развитию экономики, укреплению обороноспособности и усилению экономика. обеспечение безопасности республики, повышение уровня жизни населения.

Ключевые слова: *Транспорт, Население, топливо, резерв, автодорога, битум, озеленение, реконструкция.*

Abdulhaev J. J.
Senior Lecturer
of the Department of Labor Protection.
Andijan Machine-Building Institute
Uzbekistan, Andijan

FEATURES OF DESIGNED ROADS AND ECOLOGICAL COMPARISON OF ECONOMIC PROJECTS FOR THE CONSTRUCTION OF HIGH-SPEED ROADS

Annotation: *The draft of the President's decision "On approving the highway development strategy of the Republic of Uzbekistan in 2020-2030" was announced.*

The main goal of the strategy is*-the directions, approaches and mechanisms of development and improvement of the road network, improvement of their operation characteristics, which will contribute to the stable and rapid development of the economy, the strengthening of the defense capability and economic security of the republic, and the increase in the standard of living of the population. determine.*

Key words: *Transport, Population, fuel, reserve, highway, bitumen, greening, reconstruction.*

В Узбекистане влияние дорог на природную среду еще недостаточно изучено и оценено. В странах Западной Европы, за исключением Америки, доля дорожного движения в загрязнении окружающей среды колеблется от 25 до 85%. Автомобили выбрасывают в атмосферу более 200 химических веществ.

Значительная часть вредных компонентов топлива скапливается на поверхности дороги и прилегающих территориях. Радиус их воздействия по свинцу составляет 100...200 м, по азотистым соединениям - 50 м. Другая часть загрязняющих веществ (например, тяжелые металлы) попадает в речную систему через канавы и дренажные системы с поверхностными и грунтовыми водами, ухудшая качество озер и водохранилищ, воды и донных отложений. Хлориды проникают в почву глубже, чем другие соединения, а наиболее токсическое действие на живые организмы оказывают соединения тяжелых металлов: свинца, кадмия, хрома и др.

Не допускается прокладка дорог через охраняемые территории, входящие в состав государственных заповедников и заповедников, памятников природы и культуры. Дороги следует строить вдоль рек, озер и других водоемов вне отведенных для них охранных зон. Дороги должны строиться вне санитарных зон в районах расположения санаториев, домов отдыха, пансионатов и других рекреационных объектов.

По возможности автомобильные дороги, проходящие через лесные массивы, расчищаются и противопожарные, с использованием границ предприятий следует прокладывать без учета категории лесозащиты и данных экологических обследований. Для обеспечения естественной вентиляции необходимо учитывать направление преобладающих ветров.

На дорогах в населенных пунктах необходимо обеспечить организованный сбор воды с поверхности дороги и последующий ее сброс в места, препятствующие загрязнению водных источников.

Дороги, построенные для объезда населенных пунктов, должны располагаться со стороны изгиба, чтобы защитить жителей от выбросов газа и шума транспорта. Учитывая генеральный план развития поселения, между шоссе и застройкой должна быть буферная зона.

При превышении допустимых санитарных норм уровня транспортного шума при прокладке магистрали, как правило, принимаются специальные меры шумозащиты: проектируется дорога на земляных работах, устанавливаются земляные ограждения и ограждения, защищающие от шума; осуществляется озеленение территорий. Все это способствует значительному снижению уровня шума до пределов, регулируемых санитарными нормами.

Строительные нормы и правила строительства автомобильных дорог предусматривают защиту полей от эрозии и заиления, заболачивания, нарушения растительности и дернового покрова; вопросы гидрологического режима стока воды и нарушения уровня естественных подземных вод при определении мест прохождения водотоков и выборе конструкции и материалов для устройства дорожных одежд. При использовании промышленных отходов (гранулированного шлака, золы, золошлаковых смесей, белитовой глины) необходимо учитывать их агрессивность и токсичность для природной среды.

Для нестабильных и особо чувствительных экологических систем (почвы, насыщенные замерзшей водой, болота, зоны затопления, оползневые склоны) проектом должны быть предусмотрены мероприятия, обеспечивающие минимальное нарушение экологического баланса.

Благодаря ровности дороги и покрытия количество вредных выбросов для грузовых автомобилей снижается на 13 процентов, для легковых автомобилей – на 9 процентов. Оптимизация транспортных потоков и сокращение заторов могут снизить расход топлива и выбросы до 60 процентов для грузовых автомобилей и до 50 процентов для легковых автомобилей.

Качество и экологическая безопасность дорог достигается строгим соблюдением технологического процесса приготовления асфальтобетона, содержание битума в котором не должно превышать 4,7%. При таком соотношении в атмосферу не выделяются токсичные вещества. Битумная эмульсия – один из основных компонентов асфальтобетона. За счет добавления битумной эмульсии в базовую массу обеспечивается текучесть асфальтобетона. Эмульсия окружает компоненты минерального наполнителя, объединяет его в монолит, и поверхностный слой становится износостойким. При этом уменьшается размер микрочастиц, которые рвутся колесами и падают на окружающие поля, леса и крыши домов.

Дорожная сеть городов и сельских поселений разграничена красными линиями и представляет собой территорию, предназначенную для движения транспортных средств и пешеходов, прокладки инженерных коммуникаций, размещения зеленых насаждений и шумозащитных устройств, установки устройств технической информации и организации дорожного движения.

Основной целью строительства и реконструкции улиц и дорог является не только улучшение пропускной способности автотранспорта, отделение транзита и грузов от жилых домов, но и повышение уровня благоустройства городской территории и улучшение окружающей городской среды.

Критериями линейного развития дорожной сети являются следующие условия:

обеспечение удобства остановок общественного пассажирского транспорта для пешеходов (центральная зона 300...400 м, средняя зона 400...500 м, периферийная зона 500...600 м);

обеспечение быстрого перераспределения потоков трафика при выходе из строя отдельных участков сети.

Технические решения по проектам новых и реконструируемых улиц и дорог должны приниматься на основе технико-экономических обоснований и экологической экспертизы. Проектное решение должно обеспечивать:

нормальная скорость, проходимость и безопасность движения расчетных потоков транспортных средств и пешеходов по указанной категории улиц и дорог;

эффективная и экологически чистая работа транспорта (снижение уровня негативного воздействия транспорта на городскую среду, расход топлива);

надежность, долговечность и высокие технические решения транспортных и пешеходных маршрутов, транспортных устройств и сооружений;

защита соседних построек от дорожного шума и загазованности.

Технические решения по строительству и реконструкции улиц и дорог включают дренаж, экологические требования, использование экологически чистых материалов дорожных покрытий и другие мероприятия, обеспечивающие.

Оценка воздействия на окружающую среду и оценка экологических последствий реализации улично-дорожных проектов базируются на следующих ключевых факторах:

уровень загрязнения воздуха такими компонентами, как сажа, окись углерода, углеводороды, диоксид азота, бенз(а)пирен, соединения свинца;

уровень звука и вибрации;

степень возможного загрязнения почвы тяжелыми металлами и солями;

уровень загрязнения сточных вод.

Экологическая оценка дается по красным линиям улиц и дорог и линиям прилегающих к ним зданий. Для первого этапа строительства (при обеспечении приоритета) и полной загрузки магистральных улиц и дорог расчеты следует производить с учетом их категорий. При оценке воздействия транспорта на окружающую среду следует учитывать существующее фоновое загрязнение окружающей среды и наличие других источников воздействия.

Заключения:

Дороги – это состояние настоящего времени и условие благополучия общества в будущем, развитие и совершенствование сети автомобильных дорог, улучшение их эксплуатационных характеристик, которые способствуют стабильному и быстрому развитию экономики, укреплению обороноспособности и экономической безопасности республики, повышения уровня жизни населения, определяющие направления, подходы и механизмы.

Дальнейшее развитие благоустройства и архитектурно-ландшафтного дизайна автомобильных дорог общего пользования, а также разработка мероприятий по снижению негативного воздействия на окружающую среду от транспортных загрязнений и выбросов на территориях, прилегающих к автомобильным дорогам.

Использованные источники:

1. Abdulxayev, Javoxir. (2023) Oziq-ovqat chiqindilarini qayta ishlash uchun sm (samarali mikroorganizmlar) texnologiyasi. *Theoretical aspects in the formation of pedagogical sciences,* 2 (13), 71-74

2. Абдулхаев, Ж. Ж., (2023) Воздействие экотуризма на природу. *GOLDEN BRAIN, 1(15),* 156-160.

3. Декоративные деревья и кустарники с фитоцитарными свойствами и способы их размножения. Ж.Ж Абдулхаев, СС Абдурахмонов, (2022) Science and innovation 1 (D2), 71-74.
4. Использование декоративных медоносных растений. укрепление кормовой базы для пчеловодств. а. А Тохтабоев, Ж Абдулхаев (2022) Экономика и социум, 679-681.
5. Farg'ona vodiysini rivojlanish tarixi va shakllanish omillari atrof-muhitni boshqarishning qishloq xojaligi tizimi. abdulxayev, javoxir. (2023) ijodkor o‘qituvchi ilmiy-uslubiy jurnal.
6. Maishiy chiqindilarni qayta ishlash va muqobil energiya manbalarini olish. Abdulxayev, Javoxir. (2023)

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Агеев А.А.
старший преподаватель
кафедра «Техносферная безопасность и управление качеством»
Самарский государственный технический университет

ОБУЧЕНИЕ ПО ИСПОЛЬЗОВАНИЮ И ПРИМЕНЕНИЮ СРЕДСТВ ИНДИВИДУАЛЬНОЙ ЗАЩИТЫ

Аннотация: *В настоящей статье рассматривается вопрос об организации обучения работников, применения средств индивидуальной защиты. Кто проводит обучение работников. Особенности обучения работников, по использованию средств индивидуальной защиты.*

Ключевые слова: *СРЕДСТВА ИНДИВИДУАЛЬНОЙ ЗАЩИТЫ, ОБУЧЕНИЕ, ПРИМЕНЕНИЕ, ВЫДАЧА, ХРАНЕНИЕ.*

Ageev A.A.
Senior Lecturer of the Department
"Technosphere Safety and Quality Management"
Samara State Technical University

TRAINING ON THE USE AND APPLICATION OF PERSONAL PROTECTIVE EQUIPMENT

Abstract: *This article discusses the issue of organizing employee training and the use of personal protective equipment. Who conducts employee training. Features of employee training on the use of personal protective equipment.*

Keywords: *PERSONAL PROTECTIVE EQUIPMENT, TRAINING, APPLICATION, ISSUANCE, STORAGE.*

Согласно Постановлению Правительства РФ от 24.12.2021 N 2464 «О порядке обучения по охране труда и проверки знания требований охраны труда» (далее – Правила) работники, которым необходимо использование (применению) средств индивидуальной защиты (далее – СИЗ) подлежат обучению.

СИЗ предназначены для защиты работников от вредных факторов производства, травм, профессиональных заболеваний и излучений. Например, такими СИЗ могут быть средства для защиты рук и ног, изоляционные и изолирующие костюмы, страхующие экипировки и средства индивидуальной защиты органов дыхания.

Основываясь на Правила обучение сотрудников по использованию и применению СИЗ могут осуществлять как сам работодатель, так и у аккредитованного на оказание таких услуг организации и индивидуального предпринимателя. Если с последними все понятно, то как организовать обучение работников внутри организации.

Обучение сотрудников внутри организации начинается с обучения не менее двух человек, которые будут проводить обучение работников подлежащих работе с СИЗ. Далее подготовить документы для проведения обучения и проверки знаний работников, например, приказ о создании комиссии по проверке знаний работников.

Также необходимо утвердить программу обучения по СИЗ. В программу входят такие разделы как изучение нормативно – правовой базы в области обеспечения сотрудников СИЗ, управление рисками выявленных опасностей, требования к порядку подготовки СИЗ, требования предъявляемые к использованию СИЗ во время работы, требования к порядку их проверки исправности СИЗ.

Говоря о порядке подготовки СИЗ, следует отметить, что СИЗ должны соответствовать размерам работника, а также характеру проведения работ. СИЗ должны быть в чистом и исправном состоянии.

Рассматривая требования предъявляемые к использованию СИЗ во время работы, то работники должны правильно использовать выданные им СИЗ.

К требованиям по порядку проверки исправности СИЗ относится, например, что выданная шлем – маска соответствует размеру головы или убедиться в том, что противогазная коробка исправна.

Практическая часть должна быть в количестве не менее 50% от общего количества часов обучению и применению СИЗ. Для отработки теоретических и практических навыков учебный кабинет должен быть оснащен методическими материалами, информационно – справочными системами, оборудование и тренажеры, устройства для проведения проверки знаний.

Анализируя выше изложенное и в связи с тем, что новые работники должны закончить обучение в течение 60 календарных дней, можно сделать вывод о том, что обучение внутри организации является наиболее приоритетным способом обучения работников, по ряду причин:

- не нужно искать стороннюю организацию или индивидуального предпринимателя по использованию и применению СИЗ;
- возможность оперативного привлечения комиссии к работе по обучению новых сотрудников;
- уверенность в качестве обучения новых сотрудников, в результате чего уменьшится количество несчастных случаев при работе с СИЗ, так как престиж и рейтинг организации будет напрямую зависеть от качества обучения работников.

Использованные источники:

1. Постановление Правительства РФ от 24.12.2021 N 2464 (ред. от 12.06.2024) «О порядке обучения по охране труда и проверки знания требований охраны труда» [Электронный ресурс]. Режим доступа: URL: https://www.consultant.ru/ ; (дата обращения 05.11.2024)

2. Приказ Минтруда России от 29.10.2021 N 766н "Об утверждении Правил обеспечения работников средствами индивидуальной защиты и смывающими средствами" [Электронный ресурс]. Режим доступа: URL: https://www.consultant.ru/. (дата обращения 05.11.2024)

Азизов И.Р., PhD, доцент
кафедра «Управление бизнесом и предпринимательство»
Высшая школы бизнеса и предпринимательства при Кабинете Министров Республики Узбекистан

ТРАНСФОРМАЦИЯ ПАРЛАМЕНТСКОЙ ДИПЛОМАТИИ УЗБЕКИСТАНА НА ПРИМЕРЕ ВЗАИМООТНОШЕНИЙ СО СТРАНАМИ АЗИАТСКО-ТИХООКЕАНСКОГО РЕГИОНА

Аннотация*:Последние несколько лет ознаменованы усилением парламентской дипломатии Республики Узбекистан, в рамках которой Олий Мажлис активно развивает межпарламентские связи.*

В статье основное внимание уделено двустороннему межпарламентскому сотрудничеству с ведущими странами-партнёрами в Азиатско-Тихоокеанском регионе, включая Китайскую Народную Республику, Республику Корея и Японию. В статье анализируются основные направления межпарламентской работы, такие как обмен опытом, взаимодействие в экономических проектах, продвижение совместных инициатив и участие в международных форумах.

Сделан вывод, что использование парламентской дипломатии как инструмента международной политики способствует укреплению экономических и культурных связей Узбекистана с партнёрами в регионе, что, в свою очередь, способствует интеграции страны в международное сообщество.

Ключевые слова*: парламентская дипломатия, Олий Мажлис, межпарламентское сотрудничество, международные организации, Парламентская ассамблея ОБСЕ, Азиатско-Тихоокеанский регион, Китай, Корея, Япония, внешняя политика, Узбекистан.*

Azizov I.R., PhD
Associate Professor
of the Department of Business Management and Entrepreneurship
Higher School of Business and Entrepreneurship under the Cabinet of Ministers of the Republic of Uzbekistan

TRANSFORMATION OF PARLIAMENTARY DIPLOMACY IN UZBEKISTAN ON THE EXAMPLE OF RELATIONS WITH THE COUNTRIES OF THE ASIA-PACIFIC REGION

Abstract:*The last few years have been marked by the strengthening of parliamentary diplomacy of the Republic of Uzbekistan, within the framework of which the Oliy Majlis is actively developing inter-parliamentary relations.*

The article focuses on bilateral inter-parliamentary cooperation with leading partner countries in the Asia-Pacific region, including the People's Republic of

China, the Republic of Korea and Japan. The article analyzes the main areas of inter-parliamentary work, such as the exchange of experience, interaction in economic projects, promotion of joint initiatives and participation in international forums.

It is concluded that the use of parliamentary diplomacy as an instrument of international policy helps to strengthen the economic and cultural ties of Uzbekistan with partners in the region, which, in turn, contributes to the country's integration into the international community.

Key words: *parliamentary diplomacy, Oliy Majlis, interparliamentary cooperation, international organizations, OSCE Parliamentary Assembly, Asia-Pacific region, China, Korea, Japan, foreign policy, Uzbekistan.*

Введение (Introduction)

За последние пять лет Олий Мажлис Республики Узбекистан продемонстрировал значительный рост активности в сфере внешней политики, уделяя особое внимание развитию парламентской дипломатии. Эта деятельность направлена на продвижение интересов страны на мировой арене, укрепление международного авторитета, развитие двусторонних и многосторонних отношений, а также обмен опытом с парламентами других стран и международными организациями. Принятие Концепции парламентской дипломатии в 2020 году стало значительным шагом к институционализации и стратегическому развитию межпарламентского сотрудничества [1]. В статье рассматриваются достижения парламентской дипломатии Узбекистана на примере взаимодействия со странами Азиатско-Тихоокеанского региона (АТР).

Методы (Methods)

Анализ основывается на официальных данных Олий Мажлиса, в том числе ежегодных отчетов палат парламента, протоколах двусторонних и многосторонних встреч, а также информационных сообщений агентства УЗА, связанных с межпарламентским сотрудничеством. Были использованы:

- Постановления Кенгашей палат Олий Мажлиса;
- Результаты межпарламентских встреч, меморандумы и соглашения;
- Статистические данные о визитах и совместных мероприятиях за период 2017–2021 гг.;
- Примеры успешных двусторонних и многосторонних проектов.

Особое внимание уделено взаимодействию Узбекистана с парламентами Китая, Республики Корея и Японии.

Результаты (Results)

1. Парламентская дипломатия с Китаем

Межпарламентские отношения между Сенатом Олий Мажлиса Республики Узбекистан и Всекитайским собранием народных представителей

(ВСНП) Китайской Народной Республики (КНР) получили свое начало в 2007 году [2].

За последние годы в динамике двусторонних межпарламентских отношений произошла заметная активизация, возобновились контакты двух стран по парламентской линии. Этому, в большей степени, способствовало открытая, конструктивная и прагматичная внешняя политика Руководства республики.

За годы сотрудничества стороны на регулярной основе осуществляли обмен визитами делегаций для изучения опыта парламентской деятельности, в том числе, в рамках участия в работе различных международных конференций и парламентских организаций.

5 мая 2017г. совместным решением Сената и Законодательной палаты ОМ РУ создана Межпарламентская группа Олий Мажлиса по сотрудничеству со Всекитайским собранием народных представителей Китайской Народной Республики. (состав обновлен 10 июня 2020г). Сопредседателем узбекской части межпарламентской группы является первый заместитель Сената ОМ С.Сафаев, сопредседатель китайской части – председатель Комитета по международным делам и межпарламентским связям Чжан Есуй [3].

Задачи межпарламентской группы состоят в создании благоприятных законодательных и правовых условий для наращивания узбекско-китайского сотрудничества, обмене конкретным опытом законодательного обеспечения реформ для реализации целей и задач в области экономического и социального развития.

В последние годы повестку дня узбекско-китайских межпарламентских встреч определяют вопросы реализации инфраструктурных и инвестиционных проектов в рамках глобальной китайской инициативы «Один пояс, один путь».

В частности, 24-27 апреля 2019г. Президент Республики Узбекистан Ш.М.Мирзиёев по приглашению Председателя КНР Си Цзиньпина принял участие с докладом в работе второго Международного форума «Один пояс, один путь». Состоялись встречи с Председателем КНР Си Цзиньпинем, а также с Председателем Постоянного комитета Всекитайского Собрания Народных Представителей (ПК ВСНП) Ли Чжаньшу что стало значимым событием в межпарламентском сотрудничестве. По итогам визита принят План практических мероприятий («Дорожная карта») [4].

Для реализации пункта Плана практических мероприятий («Дорожной карты») достигнутых в ходе двусторонних встреч в рамках второго Международного форума «Один пояс, один путь» в части, касающейся Сената Олий Мажлиса 9-12 сентября 2019г. организован визит делегации Всекитайского собрания народных представителей (ВСНП) во главе с зампредседателя Комитета по сельскому хозяйству и работе в деревнях Ли Чуньшеном для участия на узбекско-китайской конференции на тему: «Опыт КНР в реформировании сельского хозяйства и возможность его применения в Республике Узбекистан» [5]. В рамках визита на встрече с первым заместителем Председателя Сената Олий Мажлиса РУ С.Сафоева с Ли Чуньшеном были обсуждены вопросы выполнения договоренностей Глав государств об обмене опытом реформирования и развития экономики и дальнейшего продвижения сотрудничества Олий Мажлиса с ВСНП.

Также 18-23 ноября 2019г. был организован визит узбекской делегации во главе с Председателем Комитета Сената Олий Мажлиса по вопросам международных отношений, внешнеэкономических связей, иностранных инвестиций и туризма с целью обсуждения вопросов дальнейшего расширения межпарламентского сотрудничества и изучения опыта КНР по управлению свободными экономическими зонами [6]. В ходе поездки состоялись встречи с заместителем комитета по международным делам Всекитайского собрания народных представителей (ВСНП) Чжан Чжицзюном и членами ВСНП, вице-председателем Постоянного комитета Собрания народных представителей г.Циндао Ванг Кюи.

Таким образом узбекско-китайские межпарламентские связи призваны укрепить двухсторонние отношения, расширить каналы взаимодействия и усилить взаимопонимание по вопросам национального и международного развития.

2. Сотрудничество с Республикой Корея

Межпарламентские связи Кореи и Узбекистана имеют длительную историю, контакты представителей палат парламентов двух стран носят регулярный характер.

Так, в 1995 г. в Национальной Ассамблее Республики Корея создана парламентская Ассоциация дружбы «Корея – Узбекистан» [7].

С 2005 г. действует Межпарламентская группа Олий Мажлиса Республики Узбекистан по сотрудничеству с Национальной Ассамблеей Республики Корея (руководитель – первый заместитель Председателя Сената Олий Мажлиса С.С.Сафоев) [8].

Крупными мероприятиями в рамках межпарламентского обмена в последние годы стали визиты в Узбекистан: Спикера Национальной Ассамблеи Чон Сэ Гюна (сентябрь 2017 г.), делегации во главе с депутатом Национальной Ассамблеи, председателем женского совета Демократической партии «Тобуро» Бэк Хе Рён (август 2019 г.) [8].

А также руководителя Межпарламентского дипломатического форума по сотрудничеству с парламентами стран СНГ, депутата Национальной Ассамблеи Чу Ми Э (сентябрь 2019г.).

В августе 2019 г Республику Корея посетила председатель Сената Т.Нарбаева [9].

Узбекские парламентарии осознают, что диалог с Национальной Ассамблей Республики Корея является одним из ключевых составляющих сотрудничества между нашими странами. Он оказывает непосредственное влияние не только на углубление взаимного доверия, но и на расширение партнерства в политической, торгово-экономической и гуманитарной областях.

Исходя из этого, узбекская сторона акцентировала свое внимание на следующих аспектах двухстороннего сотрудничества:

1) обеспечение содействия и контроля парламентов двух стран в практической реализации договоренностей, достигнутых в рамках состоявшихся встреч Президентов Узбекистана и Кореи.

2) развитие контактов между регионами наших стран. Регионы Узбекистана заинтересованы в привлечении передовых корейских технологий и ресурсов для развития отраслей экономики и промышленности. В этом контексте важно отметить необходимость активизации обменов делегациями между регионами двух стран для налаживания и укрепления контактов между ними. В этой связи актуальным является проработка вопроса организации Форума регионов под эгидой Сената Олий Мажлиса Республики Узбекистан и Национальной Ассамблеи Республики Корея.

3) изучение опыта Кореи по осуществлению парламентского контроля, формам и методам эффективного парламентского контроля за деятельностью органов государственной власти в целях обеспечения ими законов, государственных программ социально-экономического и общественно-политического развития. Реализация программ обмена опытом в сфере правового обеспечения реформ и политической модернизации. Узбекская сторона также заинтересована в изучении корейской системы выборов в органы местной власти;

5) оказание взаимной поддержки в рамках работы международных парламентских организаций, к примеру Межпарламентского союза;

6) дальнейшее развитие правовой базы двусторонних отношений, прежде всего, в сфере торгово-экономического и инвестиционного сотрудничества.

3. Взаимодействие с Японией

Узбекистан придает большое значение дальнейшему развитию сотрудничества с Японией. Важным направлением двусторонних связей является углубление межпарламентского диалога.

За годы сотрудничества стороны на регулярной основе осуществляли обмен визитами делегаций для изучения опыта парламентской деятельности, в том числе, в рамках участия в работе различных международных конференций и парламентских организаций.

В рамках межпарламентского сотрудничества в 1994г. в парламенте Японии была образована «Японская парламентская лига дружбы с Узбекистаном». С 2002г. руководителем группы является заместитель Премьер-министра Японии, министр финансов – депутат Палаты представителей Т.Асо [10].

В 2010г. была образована Группа по сотрудничеству «Олий Мажлиса Республики Узбекистан – Парламент Японии». Действующий состав Группы обновлен 5 марта 2018 года Постановлением Кенгаша Сената Олий Мажлиса

Республики Узбекистан за № ПК-304–III. Руководителем группы является первый заместитель Председателя Сената Олий Мажлиса Республики Узбекистан С.Сафоев.

в Токио проведены два заседания межпарламентского форума «Узбекистан - Япония».

Важно отметить, что существенной диверсификации подверглись сферы взаимного сотрудничества. Так, в настоящее время в круг взаимных интересов вошли вопросы гендера, межрегионального сотрудничества, продвижения идей просвещённого ислама и укрепления партнёрства в сфере паломнического и молодежного туризма.

С учетом актуальности дальнейшего развития двустороннего сотрудничества с Парламентом Японии, а также в целях реализации задач, вытекающих из основных положений Стратегии Узбекистан -2030 наиболее представляющим важность для РУ, могут быть следующие направления сотрудничества:

– Проработка вопроса подписания Меморандума о сотрудничестве между Олий Мажлисом РУ и Парламентом Японии;

– Осуществление межпарламентского диалога по вопросам ускорения ратификации двусторонних документов (по мере подписания), предусматривающих взаимодействие в различных сферах, а также совместного их мониторинга;

– Обмен опытом в сфере парламентской деятельности, в т.ч. по налаживанию сотрудничества между Институтом парламентский исследований при Законодательной палате Олий Мажлиса и аналитическими подразделениями парламента Японии.

Обсуждение (Discussion)

Развитие парламентской дипломатии Узбекистана в АТР показывает, что парламент является не только законодателем, но и важным инструментом внешнеполитической стратегии. Взаимодействие с Китаем, Кореей и Японией демонстрирует широкий спектр возможностей, включая:

1. Углубление политических и экономических связей.
2. Совместные инфраструктурные и инвестиционные проекты.
3. Обмен опытом в законодательной деятельности и парламентском контроле.
4. Укрепление гуманитарных связей.

Заключение (Conclusion)

Парламентская дипломатия Узбекистана активно развивается, особенно в Азиатско-Тихоокеанском регионе. Использование таких инструментов, как межпарламентские группы, визиты делегаций и совместные мероприятия, способствует укреплению международных позиций страны. В будущем следует продолжать углубление диалога с парламентами стран АТР, уделяя внимание созданию систематизированных и долгосрочных механизмов сотрудничества.

Использованные источники:

1. Постановление Кенгаша Законодательной палаты Олий Мажлиса Республики Узбекистан и Кенгаша Сената Олий Мажлиса Республики Узбекистан № 481-IV/ ПК-132-IV от 25 сентября 2020 г. “Об утверждении Концепции парламентской дипломатии Республики Узбекистан”
2. Постановление Кенгаша Сената Олий Мажлиса Республики Узбекистан «О деятельности Сената Олий Мажлиса Республики Узбекистан в 2010 году» 144-II от 30.12.2010 г.
3. Совместное постановление Кенгаша Законодательной палаты Олий Мажлиса Республики Узбекистан и Кенгаша Сената Олий Мажлиса Республики Узбекистан «О создании межпарламентской группы Олий Мажлиса Республики Узбекистан по сотрудничеству с Всекитайским Собранием Народных Представителей Китайской Народной Республики» № 339-IV/ПК-73-IV от 10.06.2020 г.
4. Постановление Президента Республики Узбекистан «О мерах по реализации договоренностей, достигнутых в ходе визита на высшем уровне в Китайскую Народную Республику» ПК-4308 от 04.05.2019 г.
5. https://www.uzdaily.uz/ru/obsuzhdeny-vozmozhnosti-primeneniia-v-strane-opyta-kitaiskoi-narodnoi-respubliki-po-reformirovaniiu-agrarnoi-sfery/
6. Веб-сайт Сената Олий Мажлиса Республики Узбекистан// https://old.senat.uz/ru/lists/view/711
7. Веб-сайт посольства Республики Узбекистан в Республике Корея// https://www.uzbekembassy.in/moon-jae-in-development-of-uzbekistan-the-development-of-korea/
8. Совместное постановление Кенгаша Законодательной палаты Олий Мажлиса Республики Узбекистан и Кенгаша Сената Олий Мажлиса Республики Узбекистан «О создании межпарламентской группы Олий Мажлиса Республики Узбекистан по сотрудничеству с Национальной Ассамблеей Республики Корея» № 327-IV/ПК-61-IV от 10.06.2020 г.
9. Веб-сайт Сената Олий Мажлиса Республики Узбекистан// https://old.senat.uz/ru/lists/view/394
10. Веб-сайт Президента Республики Узбекистан// https://president.uz/ru/3156

Азимов У. А., ф.ф.б.ф.д., PhD.
Озиқ-овқат технологияси ва мухандислиги
Халқаро институти доценти

ЎЗБЕКИСТОН ТАРАҚҚИЁТИДА ЁШЛАРНИНГ АКСИОЛОГИК ОНГИНИ РИВОЖЛАНТИРИШНИНГ ИЖТИМОИЙ АҲАМИЯТИ

Аннотация: *Ушбу мақолада Ўзбекистон тараққиётининг янги босқичида ёшлардаги аксиологик онгни илмий-фалсафий аспектларини ўрганиш ўтмиш – бугунги кун – келажак спектри йўналишини англашда аҳамиятли эканлиги, ёшлар масаласи доирасида ҳар қандай муаммоларни ўрганиш ҳар бир зиёли инсон, ҳар бир ватанпарварнинг бурчи ҳақидаги фикрлар баён этилган.*

Калит сўзлар: *тараққиёт, аксиология, аксиологик онг, тараққиётнинг янги босқичи, демократик қадриятлар тизими, умуминсоний қадриятлар, таълим тизими.*

Azimov U. A., Doctor of Philosophy PhD
Associate Professor
of the International Institute of Food Technology and Engineering

AXIOLOGICAL REVELATION AND SOCIAL ACHIEVEMENT OF YOUTH IN UZBEKISTAN

Abstract: *In this article, at the new stage of Uzbekistan's development, the study of the scientific-philosophical aspects of the axiological consciousness of young people is important in understanding the direction of the past-present-future spectrum.*

Key words: *development, axiology, axiological consciousness, new stage of development, system of democratic values, universal values, educational system.*

Ўзбекистон тараққиётининг янги босқичида ёшларнинг келажак фаолиятида аксиологик онгнинг ижтимоий аҳамиятини тўлиқ англанишига эришиш, ижтимоий талаб ва мажбуриятларга масъулиятли муносабатни қарор топтиришнинг ижтимоий-фалсафий омилларини ўрганиш муҳим аҳамиятга эга. Айниқса, тараққиётнинг янги босқичига қадам қўяётган мамлакатимизда ёшлардаги аксиологик онгни илмий-фалсафий аспектларини ўрганиш ўтмиш – бугунги кун – келажак спектри йўналишини англашда аҳамиятлидир. Ёшлар масаласи доирасида ҳар қандай маммоларни ўрганиш ҳар бир зиёли инсон, ҳар бир ватанпарварнинг бурчи, тарихий миссиясидир.

Ёшлар ҳам жамиятда яшар экан, шу жамиятдаги ўзгаришларни, янгиликларни таҳлил қилиб, ўзлари ҳам қайсидир соҳада қандайдир янгиликни яратиб из қолдиришга интилиши заруриятга айланиши табиий ҳол бўлмоғи керак. Улар ўз имкониятларини воқеликка айлантириш учун қадам ташлар экан, жамиятнинг янги тараққиёт босқичида ёшларнинг демократик қадриятлар тизимига аксиологик муносабатини ривожлантириш ишлаб чиқариш соҳасини янада такомиллаштиришда устуворлик касб этади. Тадқиқотчилар тўғри таъкидлаганидек, "ёшларнинг ғоявий тарбиясида инсонпарварлик, миллатпарварлик ва ватанпарварлик каби фазилатлар фақат конкрет-амалий ҳаракатлар орқали муайян мазмун ҳамда аҳамиятга эга бўлиши мумкинлигига ҳам эътибор қаратиш даркор. Шундай шароитда турли деструктив кучлар, тоталитар мафкуралар таҳдиди барҳам топишига имкон яралади. Бунинг учун таълим тарбияни инсонпарварлаштирган ҳолда унинг миллий мафкура билан узвий алоқадорликда ривожланишини таъминлаш зарур"[82]. Бу эса жамият тараққиёти иқтисодий, сиёсий, ҳуқуқий, маънавий-маърифий, маданий жиҳатларини ўзида қамраб олади. Жамиятда яшовчи ёшлар ана шу соҳаларда фаоллик кўрсатиши ҳаётий заруриятдир.

Назаримизда, биз ёшлар тарбияси билан шуғулланганимизда асосий эътиборни уларнинг касбий тайёргарлигини ўстиришга, маънавий энергиясини шакллантиришга, қонунларга риоя қилишликка даъват этишга қаратамиз. Тарбиянинг энг муҳим вазифаси ёшларни ҳозирги куннинг муаммолари ҳақида мустақил фикрлашга ундашдан, янги ижтимоий-иқтисодий тузумда шахсий фаолиятни ташкил қилишни режалаштириш, мазкур жараёнларни умуминсоний қадриятлар билан уйғун ҳолда амалга оширишдан иборат бўлиши лозим.

Ёшларда шахс ва жамият манфаатлари уйғунлигини таъминлашга оид билимларни ўстиришнинг мақсад ва вазифалари қуйидагилардан иборат:

-ёшларга жамиятнинг янги тараққиёт босқичида ижтимоий-иқтисодий ислоҳотларнинг пировард мақсади халқ хоҳиш-иродасини ифода этиш эканлигини чуқур сингдириш. Бунинг учун шахс манфаати, унинг ҳуқуқ ва эркинликлари, самарали меҳнати, ташаббускорлиги давлат томонидан ҳимоя қилиниши ва кафолатланишига доир назарий билимларни шакллантириш зарур. "Халқ билан мулоқот ва инсон манфаатлари йили деб эълон қилинган 2017 йилда "Инсон манфаатлари ҳамма нарсадан улуғ" деган ғоя асосида ҳар ким эркинлик ва шахсий даҳлсизлик ҳуқуқига эга экани, жиноят содир этишда айбланаётган шахснинг айби судда аниқ бўлмагунча у айбдор ҳисобланмаслиги тўғрисидаги конституциявий нормаларни амалда таъминлаш бўйича зарур чоралар кўрилди"[83].

-шахс ва жамият манфаатларининг уйғунлиги жараёнини ўстиришда ижтимоий адолат ўрнатувчи тузумнинг амалий фаолиятига объектив баҳо бериш кўникмаларини шакллантириш керак. Жамиятни янгилашнинг муҳим мезони – манфаатларни инобатга олиш, тартибга солиш, улар орқали бошқариш билан боғлиқ эканлигини бугунги ижтимоий-амалиёт аниқ ва равшан исботлаб қўйди. Ўзбекистон Республикаси Конституциясида "давлат

[82] Базаров О. Х. Талаба-ёшлар маънавий-ахлоқий онгини шакллантиришнинг ижтимоий-фалсафий асослари. Фалсафа фанлари бўйича фалсафа доктори (PhD) диссертацияси автореферати. Тошкент 2019. – Б 20.
[83] Мизиёев Ш.М. Халқимизнинг розилиги бизнинг фаолиятимизга берилган энг олий баҳодир. 2-жилд. –Тошкент: Ўзбекистон. –Б.7-9.

халқ иродасини ифода этиб, унинг манфаатларига хизмат қилади. Халқ давлат ҳокимиятининг бирдан бир манбаидир”, дейилишида ҳам шахс манфаатларининг устуворлиги таъкидланади.

-ёшларда шахс ва жамият уйғунлигига доир билимларни шакллантиришда уларнинг сиёсий-ҳуқуқий онгини ўстиришга қаратилган фанлар, дарс машғулотлари салмоғини ошириш лозим. Шахс ва жамият манфаатларининг ҳуқуқий жиҳатлари тўғрисида билимларга эга бўлиш, давлатлараро манфаатлар тўқнашувининг сиёсий муносабатларга таъсирини ўрганиш ҳам ёшлар дунёқарашига таъсир кўрсатади. Агар халқлар ҳаётини манфаатлар идора этиши, фуқаролар фаолияти заминида манфаатлар туриши ҳисобга олинса, манфаатлар ижтимоий тараққиёт омили эканлиги табиийдир. Жамият ривожланиши давомида ижтимоий жараён билан бирга, шу тараққиётга монанд тарзда ижтимоий онг ҳам ўзгариб боради. Тарихий тараққиёт таъсиридаги бундай ўзгаришлар шахс ва жамият ўртасидаги алоқада, шунингдек, кишиларнинг мавжуд муайян ижтимоий муҳитга муносабати мазмунида ҳам ўз ифодасини топади[84]. Шу боис ёшларнинг ҳуқуқий-сиёсий онгини ўстиришга қаратилган педагогик жараёнлар орқали уларда жамият олдидаги масъулиятни, бурчни ҳис қилишга оид кўникмаларни шакллантириш мумкин. Бу орқали турли ҳил таҳдидларга қарши туриш мумкин бўлади. Зеро, “бугун миллатларнинг ўзига хослигини барбод қилиб уларнинг онги, дунёқараши ва қалбини эгаллашга қаратилган кучларнинг асосий ҳужуми миллий руҳиятни заифлаштиришга қаратилаётгани бежиз эмас. Айни пйтда, миллий руҳиятнинг инқирозга юз тутиши миллатнинг нафақат онги, маънавияти ва ахлоқий жиҳатдан қашшоқлашувига, шунингдек, моддий жиҳатидан ҳам ўзгаларга карам ҳолатга тушиб қолишига олиб келади”[85].

-ёшларда шахс манфаатлари билан жамият манфаатлари, инсон манфаатлари билан башарият манфаатлари ўртасидаги уйғунликка эришиш орқали ҳаётий муаммоларни самарали ечиш мумкинлигига педагогик амалиётда аргументлаш орқали ишонтириш лозим. Зеро, жамият манфаати, умумбашарият манфаати ижтимоиётнинг муайян инъикоси бўлиб, шахслар – инсонлар манфаатидан бошланади. Шунинг учун ҳам, мамлакатимизда “инсон манфаатлари ҳамма нарсадан улуғ” деган ғоя асосида катта ишлар амалга[86] оширилмоқда. Шахснинг тарихдаги ўрнини, ижтимоий-сиёсий мавқейини тиклаш орқали жамиятнинг иқтисодий, ижтимоий ва сиёсий салоҳияти юзага келади. Инсон манфаатларининг оқилона инобатга олиниши орқали эса, умумбашарий қадриятлар ривожланади. Шахс манфаати билан жамият манфаатининг, фуқаролар манфаати билан давлат манфаатининг муштарак ривожланишида, жамият тараққиётида инсон омилининг ўсиш ҳолати намоён бўлади. Шу боис таълим-тарбия жараёнида шахс ва жамият

[84] Назаров Қ, Пахрутдинов Ш, Жўраев Т, .Жалилов А, Саидолимов С. Миллий манфаатлар ва раҳбар масъулияти. –Тошкент: Давлат ва жамият қуриш қурилиши Академияси нашриёти. 2007. –Б. 17.

[85] Отамуродов С. Глобаллашув: миллатни асраш масъулияти. –Тошкент: Ўзбекистон. 2018. –Б.131.

[86] Мирзиёев Ш.М. Халқимизнинг розилиги бизнинг фаолиятимизга берилган энг олий баҳодир. 2-жилд. – Тошкент: Ўзбекистон. –Б.7.

манфаатлари муштараклигига доир ғоявий таъсир восталаридан унумли фойдаланиш орқали ёшларда ватанпарварлик, фидойилик, садоқатлилик ҳамда ҳалоллик фазилатларини шакллантириш керак. Бунинг учун бугунги кунда ёшлар турли хил ахборот хуружларидан огоҳ бўлиши, ҳар бир масалага ўз милллий манфаатларимиздан келиб чиқиб ёндаша олиши керак[87].

-ёшларга ижтимоий-гуманитар фанлар орқали шахс ва жамият манфаатлари муштараклигининг бузилиши ижтимоий беқарорликни келтириб чиқаришини, турғунликнинг ҳосил бўлишини, ишлаб чиқарувчи кучлар билан ишлаб чиқариш муносабатлари ўртасидаги уйғунликнинг бузилишини, оқибатда иқтисодий парокандалик, ижтимоий инжиқлик, маънавий таназзул каби оқибатлар келиб чиқишини аниқ мисоллар ва тарихий фактлар орқали тушунтириш лозим.

-олий таълим тизими ёшларида таълим-тарбия воситасида инсон манфаатларининг оддий чегараланган, юзаки, баъзан сохта манфаатларга айланиб қолишининг сабабларини ўргатиш ва ёшларда юксак инсоний манфаатлар усуворлигини таъминлашнинг педагогик технологияларини яратиш зарур.

Хулоса ўрнида шуни айтиш мумкинки, таълим тизими ёшларни манфаатлар диалектикасини англашларига ундаши, муносабатларда манфаатлар мавжудлигини тушунтириши, таълим-тарбия орқали шахсий манфаатларни жамият манфаатларидан устун қўймасликларини, уларнинг муштараклигини ҳамда ўзаро алоқадорликда ижтимоий тараққиётга пойдевор бўлишига доир билимларини мустаҳкамлаши лозим. Ёшларда шундай ёндашувни шакллантириш лозимки, жамият манфаати тушунчаси қиёфасиз куч эмас, хусусий манфаатларнинг умумий манфаатларга ўсиб чиқиш диалектикасини реал инъикоси бўлиши керак. Умумий манфаатлар хусусий манфаатлар мажмуаси эканлигини аниқлаш жамиятниг сиёсий идора қилишда тўғри йўл танлашига имкон беради. Умумий манфаатлар табиатида кўпчилик эҳтиёжини, ихтиёрини, амалий фаолиятини мужассамлаштириш жамият ривожининг бош йўлини аниқ белгилашга шароит яратади. Шундай экан, ёшларда шахс ва жамият манфаатлари уйғунлигига доир билимларни ўстириш уларда ижтимоий тараққиётнинг ўзгарувчанлик ҳолатига мослашишга, ижтимоий эҳтиёжнинг йўналишини тушунишга, бўлажак кадрларда бозор иқтисодиёти қонуниятларини англашларига ёрдам беради.

Адабиётлар рўйхати:

1. Базаров О.Х. Талаба-ёшлар маънавий-ахлоқий онгини шакллантиришнинг ижтимоий-фалсафий асослари. Фалсафа фанлари бўйича фалсафа доктори (PhD) диссертацияси автореферати. Тошкент 2019.
2. Мирзиёев Ш.М. Халқимизнинг розилиги бизнинг фаолиятимизга берилган энг олий баҳодир. 2-жилд. –Тошкент: Ўзбекистон. –Б.7-27.
3. Назаров Қ, Пахрутдинов Ш, Жўраев Т, .Жалилов А, Саидолимов С. Миллий манфаатлар ва раҳбар масъулияти. –Тошкент: Давлат ва жамият қуриш қурилиши Академияси нашриёти. 2007. –Б. 20.

[87] Қуронов М. Бизни бирлаштирган ғоя. –Тошкент: Ғофур Ғулом. 2016. –Б.175.

4. Қуронов М. Бизни бирлаштирган ғоя. –Тошкент: Ғофур Ғулом. 2016. –Б.175.
5.Рафиқова Д., Азимов У. ТАЪЛИМНИ МОДЕРНИЗАЦИЯЛАШ ВА ТАЪЛИМ СИФАТИНИ ОШИРИШ //Экономика и социум. – 2021. – №. 2-2 (81). – С. 167-169.
6.Rafikova D. et al. Preparing to innovative activity: Problem solving //AIP Conference Proceedings. – AIP Publishing, 2023. – Т. 2789. – №. 1.
7.Azimov U., Umurzakov A. HIERARCHY OF VALUES AND PERSONAL VALUES //Экономика и социум. – 2021. – №. 1-1 (80). – С. 354-355.
8. А.А.Мадаминов. ACTUAL PROBLEMS OF YOUTH SOCIALIZATION IN THE CONTEXT OF GLOBALIZATION. Экономика и социум. 2019. №4(59). 62-64стр.
https://www.iupr.ru/_files/ugd/b06fdc_0d8e3a360c514eab84f18bb092e3a7fb.pdf?index=true

Акабирходжаева Д. Р., ф.-м. к.т.н.
доцент УМЕД
Абдуллаев А. А.
студент магистратуры
кафедра ВЭД
Университет мировой экономики и дипломатии

ВЛИЯНИЕ СОВРЕМЕННЫХ ТЕХНОЛОГИЧЕСКИХ ИННОВАЦИЙ НА РАЗВИТИЕ МИРОВОГО ФИНАНСОВОГО РЫНКА

Аннотация:*Сегодня международные финансовые рынки становятся не только катализатором глобального экономического роста, но и спектром непредсказуемых проблем и возможностей. Наличие технологических революций всегда определяло и влияло на развитие финансового сектора, определяя его способность адаптироваться к новым условиям и изменениям. Сегодня среди современных инноваций технический прогресс занимает центральное место в трансформационных изменениях на международных финансовых рынках, создавая возможности для эффективности и инновационных решений. Цель исследования – определение теоретических, концептуальных и практических основ воздействия технологических инноваций на мировую финансовую систему в условиях развития международного финансового рынка. Для достижения поставленной цели в исследовании определена сущность понятий «технологические инновации» и «международный финансовый рынок», а также систематизированы основные виды современных технологических инноваций. Исследование включает выявление современных типов технологических инноваций на международном финансовом рынке (технологии блокчейн, искусственный интеллект финтех-платформ, электронные деньги и цифровые валюты, краудфандинг и PR-проекты). В исследовании предложена собственная точка зрения авторов на этапы развития и становления технологических инноваций на международном финансовом рынке, а также дана оценка развития современных технологических инноваций на финансовом рынке, включая прогнозы на будущее.*

Ключевые слова: *блокчейн, финтех-платформы, краудфандинг, искусственный интеллект, банковское дело, финансовые рынки, глобальная экономика, развитие, инновации.*

Akabirxodjaeva D.R.
Phys.-Math. Ph.D.
Associate Professor UWED
Abdullaev A.A.
Master's student
of the Department of Foreign Economic Activity
of the University of World Economy and Diplomacy

THE IMPACT OF MODERN TECHNOLOGICAL INNOVATIONS ON THE DEVELOPMENT OF THE GLOBAL FINANCIAL MARKET

Abstract:*In the contemporary era, the global financial landscape is evolving not just as a driver of worldwide economic expansion but also as a mix of unforeseen challenges and prospects. The advent of technological advancements has consistently shaped and influenced the evolution of the financial industry, affecting its capacity to adjust to new circumstances and shifts. Presently, technological advancements are at the forefront of transformative shifts in the global financial arena, fostering opportunities for enhanced efficiency and creative solutions. The objective of this research is to explore the theoretical, conceptual, and practical implications of technological advancements on the global financial ecosystem within the backdrop of the international financial market's evolution. To accomplish this objective, the research delineates the core definitions of "technological innovation" and "international financial market," and categorizes the principal categories of contemporary technological innovations. The research encompasses the identification of the latest forms of technological innovations within the international financial market, such as blockchain technologies, artificial intelligence in fintech platforms, electronic money and digital currencies, and crowdfunding and project-based fundraising initiatives. The research presents the authors' perspective on the progression and genesis of technological innovations in the international financial market, alongside an evaluation of the contemporary technological innovations in the financial sector, including projections for the future.*

Keywords: *blockchain, fintech platforms, crowdfunding, artificial intelligence, banking, financial markets, global economy, evolution, innovation.*

Введение

Сегодня технологический прогресс стремительно меняет мир. Финансовая система является одним из важнейших инфраструктурных компонентов экономического общества, находящегося под сильным влиянием инноваций. Технологические изменения меняют способы взаимодействия экономических обществ с финансами, деньгами и инвестициями, создавая новые возможности (Оядейи, 2023).

Актуальность темы исследования заключается в том, что современный международный финансовый рынок претерпевает серьезные изменения в связи с быстрым развитием технологий и инноваций. Использование технологических инноваций, таких как блокчейн, искусственный интеллект и финтех-решения, меняет традиционные способы финансовых транзакций, торговли и управления активами. Поэтому будущее финансового рынка во многом зависит от того, как подобные технологические инновации будут интегрированы и применены. Они способны обеспечить высокую эффективность и надежность финансовых операций, расширить доступ к финансовым услугам для широкого круга людей, создать новые возможности для инвесторов и бизнеса. Однако в то же время такие технологические инновации создают новые проблемы и риски, такие как кибербезопасность, конфиденциальность данных и регулирование международного финансового рынка для адаптации к его инновациям.

Цель исследования – установить теоретические, концептуальные и практические основы функционирования технологических инноваций на международном финансовом рынке и определить их влияние на мировую финансовую систему.

Для достижения поставленной цели в процессе обучения решались следующие задачи:

1. Рассмотрена сущность понятий «технологические инновации» и «международный финансовый рынок» и систематизированы основные виды современных технологических инноваций.
2. Рассмотрена эволюция технологических инноваций в процессе формирования международного финансового рынка.
3. Оценивается и прогнозируется развитие технологических инноваций на финансовом рынке на перспективу.
4. Определены основные тенденции, указывающие на его дальнейшее развитие.

Анализ литературы

Многие авторы и ученые изучали теоретические и практические аспекты технологических инноваций на мировом финансовом рынке. Так, О. Аль Касасбе и др. (2023) анализируют и оценивают, как новые финансовые технологии и инновации влияют на глобальный финансовый ландшафт, функционирование финансовых рынков и взаимодействие финансовых институтов. Авторы определяют ключевые аспекты и тенденции влияния финтеха на мировую финансовую систему, включая цифровые платежи, рынки криптовалют, краудфандинг, финтех-инфраструктуру и многое другое. Они также оценивают потенциальные выгоды и риски, возникающие от внедрения финтех-инноваций в финансовый сектор, и обсуждают тенденции развития в этом контексте.

Исследование, проведенное С.М. Алави и др. (2022), анализирует влияние финансовых инноваций и качества институтов на финансовое развитие на развивающихся рынках. По заключению авторов, наличие и успешное внедрение финансовых инноваций может положительно повлиять на уровень финансового развития таких регионов, в том числе на развитие новых финансовых продуктов, технологий и подходов к финансовым услугам, способствующих финансовому и экономическому росту. заключение.

Автор Эбрахими М. (2023) исследует факторы успеха бизнес-моделей в индустрии финансовых технологий, включая инновации, эффективность производства, потребительский спрос, конкурентные преимущества и другие ключевые аспекты. В нем также представлены рекомендации по созданию бизнес-моделей, способных добиться успеха на международном финансовом рынке.

Гольдштейн (2023) исследует роль информации в функционировании финансовых рынков, подчеркивая их ключевую роль в распределении ресурсов и влияние текущих тенденций, таких как революция финансовых технологий, на обработку и передачу информации. В исследовании рассматриваются возможные изменения в характере обмена информацией в будущем.

Методология

Исследование проводится с целью определения теоретических, концептуальных и практических основ технологических инноваций на международном финансовом рынке и определения их влияния на мировую финансовую систему. В связи с быстрым ростом технологических возможностей возникает необходимость детального понимания и анализа влияния инноваций на финансовый сектор. Понимание этих изменений не только помогает прогнозировать будущие рыночные тенденции, но также помогает финансовым учреждениям и регуляторам разрабатывать стратегии, направленные на оптимизацию эффективности и стабильности финансовой системы в условиях быстрого технологического развития.

В данном исследовании экономико-статистические методы были использованы для анализа и прогнозирования динамики основных показателей технологических инноваций. Применение этого метода позволило оценить международные расходы на блокчейн-решения на период с 2017 по 2021 год с учетом роста этого сектора и спрогнозировать их в миллиардах долларов США на 2024 год. Этот метод также использовался для оценки размера рынка искусственного интеллекта (ИИ) в финансовом секторе в 2021 году и прогноза до 2032 года. Кроме того, экономические и статистические методы использовались для оценки и анализа использования финтех-технологий во всем мире.

Использование диаграмм и графиков позволяет визуализировать сложные изучаемые явления, процессы и закономерности. В контексте исследования технологических инноваций на мировом финансовом рынке диаграммы помогают выявить динамику таких технологических инноваций, как блокчейн, финтех и искусственный интеллект.

Методы анализа, синтеза и сравнения. Метод анализа позволяет комплексно рассмотреть и систематизировать основные виды технологических инноваций на мировом финансовом рынке, а метод сравнения и синтеза – сформировать основные этапы и характеристики развития технологических инноваций на мировом финансовом рынке. .

Для критического анализа полученных данных были использованы методы индукции и дедукции, что позволило определить основные тенденции будущего мирового финансового рынка.

Результаты

Международный финансовый рынок представляет собой совокупность всех финансовых инструментов, услуг и операций между различными странами и финансовыми учреждениями. Это основная часть мировой финансовой системы, оказывающая большое влияние на мировую экономику. В контексте международного финансового рынка технологические инновации играют важную роль в изменении методов финансовых операций, управления рисками и финансовых услуг (Фейен, 2021).

Следовательно, технологические инновации влияют на трансграничные финансовые операции, помогают повысить эффективность и безопасность международных финансовых операций и влияют на мировую экономику и торговлю.

Технологические инновации прошли долгий путь, поэтому в Таблице 1 представлено мнение авторов о сроках внедрения технологических инноваций на мировом финансовом рынке (Таблица 1).

Таблица 1

Этапы и особенности развития ИМИ на мировом финансовом рынке

№	Период	Характеристики развития	Примеры
1	Начальный этап – до середины 20 века – появление технологических новинок.	На этом этапе финансовые операции были почти полностью физическими, инновации были ограничены, а основными финансовыми инструментами были деньги и ценные бумаги.	Бумажные деньги, векселя, облигации, золото и серебро
2	Этап электронной обработки (середина 20 века – начало 21 века):	Появление электронных вычислительных систем и технологий обработки данных позволило автоматизировать финансовые операции, внедрить электронные торговые площадки и электронные платежные системы.	На этом этапе появились такие инновации, как международные банковские системы и системы карточных платежей.

3	Интернет и финтех-технологии (начало XXI века – наши дни)	Развитие Интернета и цифровых технологий способствовало появлению финтех-стартапов и новых инноваций в финансовом секторе.	Технология блокчейн, цифровые валюты, искусственный интеллект, машинное обучение и расширенный анализ данных
4	Будущий период	Будущее технологических инноваций на мировом финансовом рынке будет определяться дальнейшей цифровой трансформацией, ростом влияния искусственного интеллекта, развитием цифровых валют, усилением кибербезопасности и распространением глобальных финтех-экосистем.	Улучшенная и усовершенствованная технология блокчейна, цифровые валюты, искусственный интеллект и многое другое.

Таким образом, периодичность технологических инноваций на мировом финансовом рынке отражает существенные изменения в финансовом секторе за последние столетия. Начав с традиционных финансовых операций, которые в основном осуществлялись физически, современный финансовый рынок трансформировался благодаря технологическим инновациям. Развитие вычислительных систем, электронных платежных систем и финтех-решений открыло новые возможности для эффективности и удобства финансовых услуг. Ожидается, что в будущем влияние цифровых технологий, таких как искусственный интеллект, блокчейн и цифровые валюты, на мировой финансовый рынок будет продолжать расти. Он облегчает и ускоряет финансовые операции, расширяет доступность финансовых услуг и меняет парадигму финансовых услуг. Технологические инновации будут продолжать менять финансовый мир, затрагивая все аспекты мирового финансового рынка (Taherdoost. 2023).

Технологические инновации, такие как блокчейн, оказывают значительное влияние на трансграничные финансовые транзакции. Они помогают повысить эффективность и безопасность таких операций, что, в свою очередь, оказывает существенное влияние на мировую экономику и торговлю. В то же время, как показано на рисунке 1, анализ данных международных расходов на блокчейн-решения с 2017 по 2021 год с прогнозом в миллиарды долларов США на 2024 год показывает, что развитие этих технологий активно и необходимо. В 2024 году он может достичь 19 миллиардов долларов США. (Глобальные расходы на блокчейн, 2022 г.).

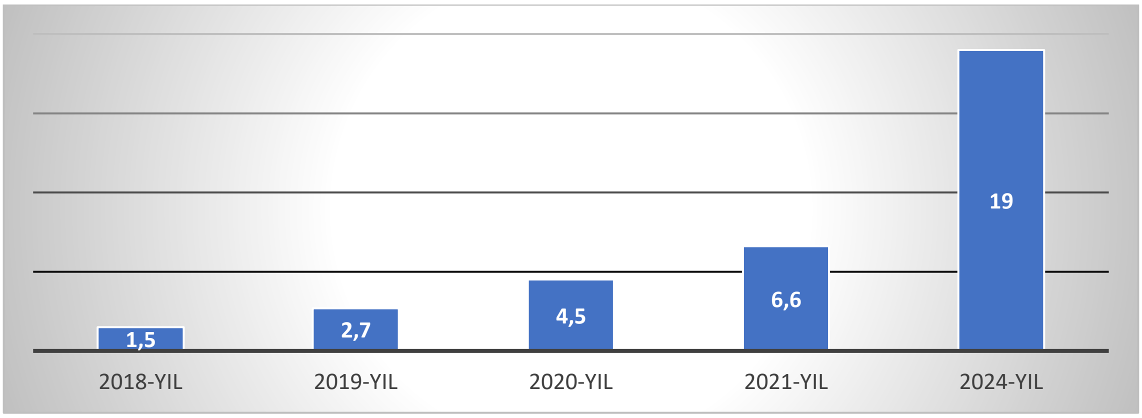


Рисунок 1. Международные расходы на блокчейн-решения с 2017 по 2021 год с прогнозом до 2024 года. (млрд долларов)[88]

Использование ИИ на финансовом рынке приобретает все большее значение, поскольку вместе эти технологии помогают решать сложные проблемы. Вместе с использованием технологий блокчейна они создают мощную среду, влияющую на развитие инноваций и эффективность финансовых услуг и операций в мире.

В 2022 году мировой рынок генеративного искусственного интеллекта в сфере финансовых услуг составил 924,12 млн долларов (рисунок 2). По прогнозам, к 2032 году эта сумма достигнет 11 220,84 миллиона долларов США с ожидаемым ростом на 28,36% в период с 2023 по 2032 год.

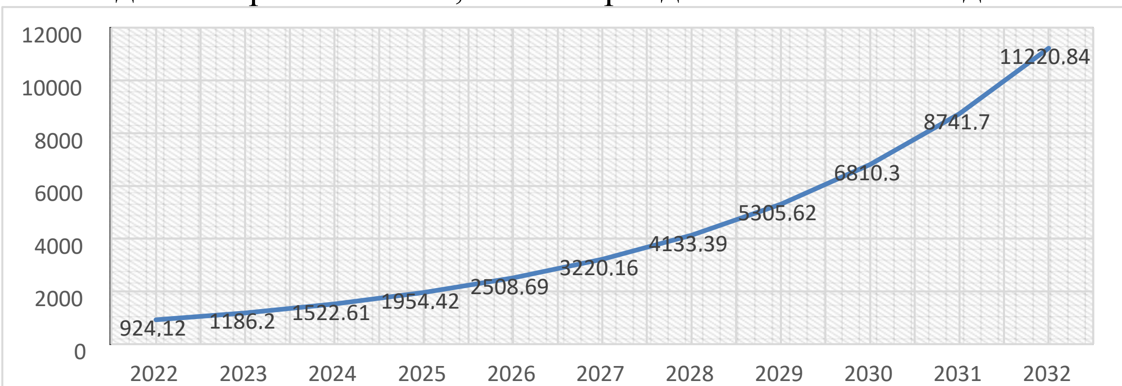


Рисунок 2. Использование искусственного интеллекта на мировом финансовом рынке с прогнозами от 2022 до 2032 гг. (млрд долларов)[89]

Рынок финансовых технологий (fintech) в настоящее время переживает бурный рост. По данным Global Fintech Market Research, в 2018 году стоимость рынка составила $127,66 млрд. По прогнозам, к 2026 году он вырастет до 324 миллиардов долларов, что представляет собой совокупный годовой темп роста (CAGR) около двадцати пяти процентов.

Fintech использует передовые технологии для предоставления финансовых услуг, таких как мобильные платежи и одноранговое кредитование. Как правило, финтех-компании — это стартапы, целью которых

[88] https://www.statista.com/statistics/800426/worldwide-blockchain-solutions-spending/
[89] https://www.statista.com/statistics/1449285/global-generative-ai-in-financial-services-market-size/

является предложить более эффективные и удобные варианты, чем традиционные финансовые услуги.

На рисунке 3 показана динамика доходов мировой финтех-индустрии с 2017 по 2027 год..

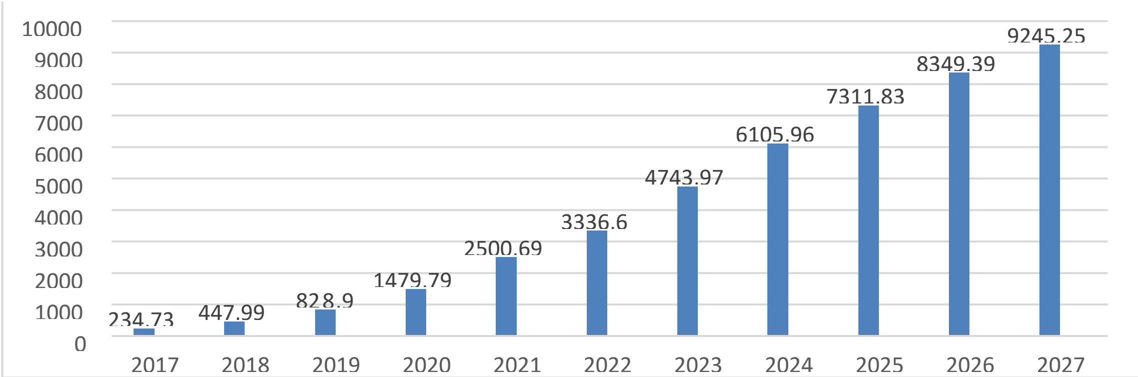


Рисунок 3. Динамика доходов мировой финтех-индустрии с 2017 по 2027 год. (млрд долларов)[90]

Обсуждение

Прогнозирование и выявление технологических инноваций, которые потенциально могут повлиять на финансовый сектор в будущем, является сложной задачей из-за динамизма и быстрых темпов технологического развития. Эта проблема связана с необходимостью адаптации финансовой системы к меняющемуся технологическому ландшафту.

Анализ технологических инноваций на финансовом рынке показал, что такие технологии, как блокчейн, финтех и искусственный интеллект, оказывают существенное влияние на глобальные финансовые операции и экономику в целом. Например, блокчейн помогает повысить эффективность и безопасность трансграничных финансовых транзакций, что влияет на мировую экономику и торговлю. Анализ данных о международных расходах на блокчейн-решения показывает, что в 2024 году эти расходы, как ожидается, достигнут 19 миллиардов долларов, что подтверждает активное развитие этой технологии. Мировой рынок генеративного искусственного интеллекта в сфере финансовых услуг достигнет $924,12 млн в 2022 году. Прогнозы показывают, что эта сумма может увеличиться до 11 220,84 миллиона долларов к 2032 году с ожидаемым годовым темпом роста в 28,36 процента в период с 2023 по 2023 год. Рынок финансовых технологий (fintech) также демонстрирует впечатляющий рост, который, как ожидается, достигнет 324 миллиардов долларов к 2026 году. Такие технологии стали основными факторами развития международной экономики и служат созданию новых возможностей в финансовом секторе. Динамика их развития указывает на перспективы предпринимателей и экономического роста в целом.

[90] https://www.statista.com/statistics/1384016/estimated-revenue-of-global-fintech/

В исследовании Аль Касасбе и др. (2023) обнаружили, что различные новые цифровые технологии, такие как блокчейн и криптовалюты, активно используются участниками финансового рынка, что приводит к изменениям в организации финансовых учреждений. Подобные изменения имеют как положительные, так и отрицательные последствия. Мнение авторов согласуется с подходом, согласно которому развитие финтех-технологий требует регулирования и сотрудничества для обеспечения стабильности и безопасности финансового сектора (Крегель и Савона, 2020; Кумар и Каур, 2023). Однако, учитывая стихийность процесса трансформации, трудно предсказать последствия, а потому не всегда можно заранее определить его результаты. (Фейен и др., 2021; Эбрахими, 2023). Таким образом, можно согласиться с мнением авторов о непредсказуемости развития инновационных технологий в будущем.

Результаты помогли понять эволюцию финансовых технологий, показав активное развитие и потенциал таких технологий, как блокчейн и искусственный интеллект, как важных катализаторов глобальных финансовых изменений.

Эти технологии открывают новые возможности в финансовом секторе, способствуя эффективности и безопасности трансграничных финансовых транзакций, влияющих на мировую экономику и торговлю. Прогнозы показывают впечатляющий рост в сферах искусственного интеллекта и финансовых технологий, которые становятся важными факторами развития международной экономики.

В отличие от предыдущих исследований, данный анализ фокусируется на конкретных технологических тенденциях и их влиянии на финансовый сектор с учетом прогнозируемого развития этих технологий в будущем.

Практическое значение этих результатов заключается в том, чтобы внести вклад в разработку стратегий управления, регулирования и технологических инноваций для достижения более стабильной и эффективной финансовой системы. Это можно использовать для улучшения качества финансовых услуг, повышения безопасности и развития новых возможностей для предпринимателей и глобального экономического роста.

Выводы и предложения

Современные технологические инновации совершают революцию на финансовом рынке, открывают новые перспективы и влияют на его эволюцию. В исследовании проанализирована природа технологических инноваций и их влияние на международный финансовый рынок. Путем систематизации основных видов современных технологических инноваций было определено, что искусственный интеллект, блокчейн, кибербезопасность и другие технологии будут определять эволюцию этого рынка.

В исследовании проанализирована эволюция технологических инноваций в формировании международного финансового рынка и влияние современных технологий на его формирование. Представленный взгляд открывает возможности для изучения влияния этих нововведений на функционирование международных финансовых систем.

В статье оценивается текущий уровень технологических инноваций на финансовом рынке и прогнозы на будущее. Отмечается, что искусственный интеллект, блокчейн и другие новые технологии окажут существенное влияние на финансовую отрасль. Например, бурное развитие ожидается до 2030 года.

Выявлены основные тенденции, свидетельствующие о дальнейшем развитии финансового рынка за счет использования искусственного интеллекта, блокчейна, кибербезопасности и других инноваций. Ожидается, что эти технологии изменят способ работы финансовых рынков и принесут существенные изменения в банковскую, финансовую и инвестиционную отрасли.

Предложения для будущих исследований:

За последние десятилетия технологические инновации в сфере финансов существенно изменили мировую финансовую систему. Этому процессу способствовало внедрение передовых информационных технологий, изменивших деятельность и взаимодействие участников мирового финансового рынка. Технологические инновации проникли во многие аспекты финансового сектора, включая онлайн-платежи, цифровые валюты, финансовую аналитику, кредитование, инвестирование и многое другое. Подобные нововведения открыли новые возможности для всех участников финансового рынка по использованию финансовых услуг и оптимизации финансовых операций. Однако влияние этих технологических инноваций на мировую финансовую систему остается открытым вопросом и требует дальнейших исследований. Несмотря на свои значительные преимущества, технологические инновации создают новые проблемы и риски, включая кибербезопасность, нормативно-правовую среду и экономическую стабильность. Переход к цифровой среде может потребовать инвестиций в новые технологии, навыки и обновленное законодательство. Дальнейшие исследования могут включать анализ нормативно-правовой базы, определение оптимальных стратегий для банков и финансовых учреждений в контексте цифровой среды, а также изучение социального воздействия технологических инноваций на финансовую доступность и стабильность глобальной финансовой системы. Будущее финансового сектора обширно и сложно, и дальнейшие исследования помогут нам лучше понять этот переход и разработать стратегии для успешного управления им.

Использованные источники:

1. Ahmadjonov, O., Abdullayev, A., Mamayusupov, M., & Umarjonov, O. (2021). Raqamli iqtisodiyotda boshqaruv muammolari. Science and Education, 2(10), 636-642.

2. Axadjon o‘g‘li, A. A. (2023). RAQAMLI IQTISODIYOTNING RIVOJLANISHDAGI O ‘RNI. Qo ‘qon universiteti xabarnomasi, 271-273.

3. Al Kasasbeh, O., Khasawneh, O., & Alzghoul, A. (2023). The real effects of fintech on the global financial system. International Journal of Professional Business Review, 8(3), 01-12. e01725
4. Axadjon o‘g‘li, A. A., & Murotovich, M. F. (2023). RIVOJLANAYOTGAN MAMLAKATLARDA RAQAMLI IQTISODIYOT SIYOSATI. QO ‘QON UNIVERSITETI XABARNOMASI, 294-298.
5. Alawi, S. M., Abbassi, W., Saqib, R., & Sharif, M. (2022). Impact of Financial Innovation and Institutional Quality on Financial Development in Emerging Markets. J. Risk Financial Manag., 15(3), 115. https://doi.org/10.3390/jrfm15030115
6. D Akobirkhodjaeva. (2017). Information-coomunication technologies in education of youth: national and foreign experience. International Relations: Politics, Economics, Law 2017 (2), 9.
7. Akabirkhodjaeva, D. (2019). INFORMATION AND COMMUNICATION TECHNOLOGIES AS A FACTOR OF FUNDAMENTAL CHANGES IN THE EDUCATIONAL PROCESS OF UWED. International Relations: Politics, Economics, Law, 2019(1), 78-85.
8. Akabirxodjayeva, D. R. (2021). IQTISODIYMOLIYAVIY MASALALARNI MODELLASHTIRISH VA ELEKTRON JADVALLARDA YECHISH. Scientific progress, 2(1), 1438-1444.
9. Акабирходжаева, Д. Р., & Калмуратова, Ш. А. (2022). РЕГУЛИРОВАНИЕ ТЕНЕВОГО БИЗНЕСА В РЕСПУБЛИКЕ УЗБЕКИСТАНЕ ПРИ ПОМОЩИ НАЛОГОВ. Science and innovation, 1(A4), 10-15.
10. Ebrahimi, M. (2023). Business Models in Financial Technologies. In Mainstreaming Cryptocurrency and the Future of Digital Finance (pp. 118-137). https://doi.org/10.4018/978-1-6684-83688.ch005
11. Feyen, E., Frost, J., Gambacorta, L., Natarajan, H., & Saal, M. (2021, July). Fintech and the digital transformation of financial services: Implications for market structure and public policy. Bank for International Settlements. ISSN 1682-7651.
12. Goldstein, I. (2023). Information in Financial Markets and Its Real Effects. Review of Finance, 27(1), 1-32. https://doi.org/10.1093/rof/rfac052
13. Kregel, J. A., & Savona, P. (2020). The impact of technological innovations on money and financial markets (Public Policy Brief No. 150). Levy Economics Institute of Bard College. ISBN 978-1-936192-66-3. Retrieved from http://hdl.handle.net/10419/251474
14. Kumar, T., & Kaur, S. (2023). Evolution of Fintech in the Financial Era. In M. Naved, V. Ajantha Devi, & A. Kumar Gupta (Eds.), Fintech and Cryptocurrency (Chapter 1). Retrieved from https://doi.org/10.1002/9781119905028.ch1
15. Oyadeyi, O. (2023). Financial development, interest rate pass-through, and interest rate channel of monetary policy. Cogent Economics & Finance, 11(1), Article 2209952. https://doi.org/10.1080/23322039.2023.2209952

Акбарова Л. У., и.о. доцента
кафедра Транспортная экономика
Ташкентский транспортный университет

ЦИФРОВАЯ ЭКОНОМИКА НА ТРАНСПОРТЕ

Аннотация. *в статье исследована роль цифровых технологий в экономике, уровень использования специальных программных средств и интернет-технологий на транспорте в сравнении со средними значениями по предпринимательскому сектору экономики. Рассмотрены перспективы развития цифровой экономики на железнодорожном транспорте.*

Ключевые слова: *цифровая экономика, цифровые технологии, специальные программные средства, транспортная инфраструктура, железнодорожный транспорт, инновации, «цифровая железная дорога».*

Akbarova L. U.
Acting Associate Professor
of the Department of Transport Economics
Tashkent Transport University

DIGITAL ECONOMY IN TRANSPORT

Abstract. *The article examines the role of digital technologies in the economy, the level of use of special software and Internet technologies in transport in comparison with the average values in the entrepreneurial sector of the economy. The prospects for the development of the digital economy in rail transport are considered.*

Keywords: *digital economy, digital technologies, special software, transport infrastructure, rail transport, innovation, "digital railway".*

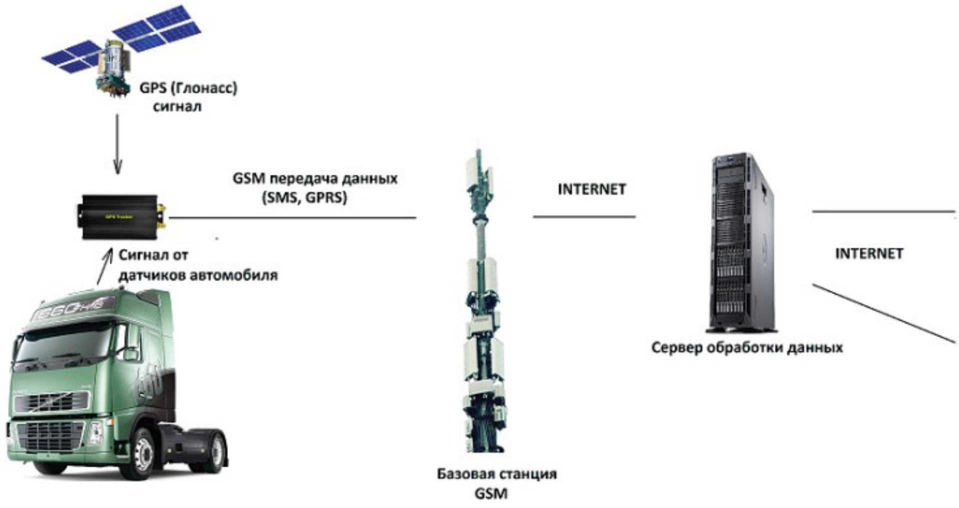
В Послание Президента Республики Узбекистан Шавката Мирзиёева Олий Мажлису и народу Узбекистана Стратегия пространственного развития страны с целью сбережения народа Узбекисатана, повышения благополучия и качества жизни граждан включает развитие городов и других населенных пунктов, связанность которых должна быть «прошита» современными коммуникациями. Основу коммуникаций составляют магистральные транспортные инфраструктуры страны, требующие комплексного плана модернизации и расширения с использованием собственных цифровых платформ и технологий, совместимых с глобальным информационным пространством. Узбекистан должна стать не только ключевым логистическим транспортным узлом планеты, но и одним из мировых центров хранения, обработки, передачи и защиты информационных массивов. В проекты развития транспортной инфраструктуры следует закладывать возможности технологической революции, позволяющие совместить инфраструктуру с беспилотным транспортом, цифровой морской и воздушной навигацией, организовать с помощью искусственного интеллекта логистику.

Таким образом, в Послании Президента Республика Узбекистан впервые определены векторы научно-образовательного, технического и технологического прорыва в транспортной сфере. Следует отметить, что транспорт как обслуживающая система входит составной частью в экономику страны. Развитие и реализация цифровой транспортной экономики должны соответствовать программе «Цифровая экономика Узбекистана», утвержденной распоряжением Правительства Республика Узбекистан от 28 июля 2017 г. № 1632-р. Настоящая Программа исходит из того, что цифровая экономика представляет собой хозяйственную деятельность, в которой ключевым фактором производства становятся данные в цифровой форме, что позволяет практически формировать информационное пространство с учетом, например, спроса потребителей транспортных услуг, предложений перевозчиков и характеристик транспортных инфраструктур. При этом показатели производственной деятельности транспортной сферы должны быть унифицированы, по нашему мнению, по метрологии и совместимы при интегрировании, взаимодействии и координации работы видов транспорта в различных сегментах.

Указанная Программа определяет общие условия реализации цифровой экономики по сферам деятельности, дает перечень основных сквозных цифровых технологий и предусматривает создание условий для появления новых платформ и технологий с соответствующими разделами и «дорожными картами»

Реализация цифровой транспортной экономики возможна при консолидации науки, образования, бизнеса и государства, что требует креативного развития существующих и создания новых сквозных цифровых платформ и технологий. Среда, необходимая для развития платформ и технологий, эффективного взаимодействия субъектов транспортного рынка и отраслевой экономики, включает нормативно-правовую базу, информационную структуру, кадры и образование, информационную безопасность и интероперабельность. Единый цифровой контур для пользователей транспортных услуг обеспечит эффективное взаимодействие участников перевозочного процесса, что повысит конкурентоспособность страны, качество жизни граждан, обеспечит экономический рост и национальный суверенитет.

Целевым результатом функционирования цифровой транспортной экономики является соблюдение баланса между спросом и предложением транспортных услуг и логистики доставки грузов и пассажиров на основе космического мониторинга перевозок.



Наиболее востребован и восприимчив к цифровой экономике, по нашему мнению, автомобильный транспорт (АТ), особенно пассажирский общественный транспорт, формирующий главным образом комфортность городской среды, выступающий показателем обновления и гармоничного пространственного развития страны. Отметим, что предлагается повсеместно внедрить валидацию транспортных карт (возможность пользоваться при пересадках единой картой) и спутниковую навигацию общественного транспорта с использованием системы ГЛОНАСС, что позволит обеспечить регулярность движения общественного транспорта и даст возможность пассажирам спланировать поездки.

В основу алгоритма прикладных исследований и создания единого цифрового контура для пользователей транспортных услуг по видам транспорта закладываются существующие платформы и технологии, интегрированные на получение эффективного целевого результата с учетом стратегии развития вида транспорта.

В качестве примера системного подхода к реализации цифровой экономики целесообразно рассмотреть АТ в связи с Распоряжением Правительства Республика Узбекистан от 28 апреля 2018 г. № 831-р «Об утверждении Стратегии развития автомобильной промышленности Республика Узбекистан на период до 2025 года» и Указом Президента Республика Узбекистан от 7 мая 2018 г. «О национальных целях и стратегических задачах развития Республика Узбекистан на период до 2024 года», в котором к числу приоритетных направлений стратегического развития отнесены безопасные и качественные автомобильные дороги (БКД) и цифровая экономика.

Совокупность перевозочных средств, выпускаемых автопромом РФ, и БКД должны обеспечить качественное и эффективное функционирование АТ посредством внедрения цифровых технологий и платформенных решений с использованием возможностей как единого федерального оператора мониторинга АТ по всем индикаторам подключенных автомобилей.

Для разработки цифровой экономики в области пассажирских автомобильных перевозок необходима их сегментация по специфике перевозок. По видам сообщений внутренние (внутригосударственные) перевозки пассажиров и багажа автобусами общего пользования классифицируют в городском, пригородном, междугородном и сельском сообщении. По назначению (особенностям перевозок) различают перевозки общего назначения, экскурсионные, туристские, школьные, служебные, вахтовые и специальные (по заказам предприятий, организаций и населения).

Перевозки общего назначения, социально значимые, определяющие возможности жизнедеятельности поселений, осуществляются автобусами общего пользования в различных видах сообщений по маршрутным расписаниям. Предусмотрено, что расписание составляется для каждого остановочного пункта маршрута регулярных перевозок, в котором предусмотрена обязательная остановка автобуса. При этом автобусы оборудуются аппаратурой спутникового навигационного мониторинга, обеспечивающего диспетчеризацию и регулярность перевозок, а также интерактивность движения автобусов на маршрутах для цифровых сервисов (смартфонов и планшетов) пассажиров.

Разработка цифровой экономики в области грузовых автомобильных перевозок базируется на регистрации загруженности и дорожного трафика грузового подвижного состава, перевозящего тяжеловесные, крупногабаритные и особо опасные грузы.

В развитии АТ и автомобильных дорог сложилась парадоксальная диспропорция. По данным Федерального дорожного агентства «Росавтодор» автодорожная сеть страны по темпам развития в три раза отстает от автомобильного парка. Состояние дорог может не соответствовать реальным осевым нагрузкам движущегося АТ. Это становится причиной преждевременного разрушения автомобильных дорог, для компенсации ущерба введена система взимания платы (СВП).

Концессионное соглашение между УзАвтойул и ООО «РТ-Инвест Транспортные системы» (РТИТС) основано на СВП «Платон» в счет возмещения вреда, причиняемого автомобильным дорогам общего пользования федерального значения транспортными средствами, масса которых превышает максимальный разрешенную — 12 т. Кроме того, развернуты системы автоматизированных стационарных постов весогабаритного контроля (СПВК) с функцией фотовидеофиксации на контролируемых автомобильных дорогах. Полученные по СВП «Платон» средства используются для приведения в нормативное состояние и обеспечения необходимого уровня безопасности движения на дорожной сети федерального значения. Практика использования СВП «Платон» показала ее эффективность.

В настоящие время компания-оператор системы «Платон» (РТИТС) и АО «ГЛОНАСС» разрабатывают национальную цифровую телематическую платформу в сфере АТ на основе создаваемого совместного предприятия. Представляется разумным распространить опыт контролируемого трафика с федеральных дорог на региональные, чтобы реализовать софинансирование развития региональных дорог по механизму государственно-частного партнерства в рамках приоритетного направления стратегического развития Республика Узбекистан «Безопасные и качественные автомобильные дороги».

Однако, что принципиально важно, необходимо сменить акценты взимания платы из области «в счет возмещения вреда» в область уплаты налога за пользование дорогами, т. е. взимать плату за качество автомобильных дорог, обеспечивающее инновационные транспортные технологии, надежную, безопасную, экономичную, гарантированную логистику доставки грузов и пассажиров с предоставлением сервисных услуг. При этом не исключается взимание дополнительной платы за причинение вреда автомобильным дорогам в случае превышения допустимых значений параметров АТ.

Для оптимизации совместимости взаимодействующих объектов в комплексном развитии автомобильно-дорожной отрасли необходима, по нашему мнению, разработка единого технического регламента (стандарта), гармонизированного с международным стандартом АТ, как основы для проектирования и производства грузовых автотранспортных средств и их эксплуатации во внутреннем и международном сообщениях, а также для проектирования, строительства и реконструкции автомобильных дорог и искусственных сооружений в соответствии с требованиями Транспортной стратегии Республика Узбекистан на период до 2030 г.

При этом может быть заложена конструктивная эквивалентность грузовых автотранспортных средств для обращения по дорогам всех категорий без разрушающего эффекта дорожного полотна и мостовых сооружений независимо от осевой нагрузки по критерию допускаемого удельного давления, который используется при производстве тяжеловозов для перевозок особо тяжеловесных неделимых грузов по обычным автомагистралям и мостам.

Высшей ступенью инновационного развития автомобильно-дорожной отрасли и самым востребованным инновационным объектом в сфере транспорта в ближайшее время должно стать создание наземных беспилотных транспортных средств и применение на транспорте беспилотных технологий, включая повсеместное внедрение интеллектуальных транспортных систем.

Предложенные инновационные системные подходы в развитии автомобильно-дорожной отрасли могут стать платформой для формирования принципов цивилизованных взаимоотношений владельцев и пользователей автомобильных дорог, для создания инновационного климата в областях, обеспечивающих эффективное функционирование, качественное развитие отрасли согласно Транспортной стратегии Республика Узбекистан на период до 2030 г.

Общность транспортных проблем и единство цифровых показателей работы позволяют адаптировать инновационные разработки в области цифровой инфраструктуры по видам транспорта к условиям любой страны, ее регионов и поселений. При этом важное значение имеют национальные приоритеты в разработке базовых документов, определяющих единую государственную стратегию цифровизации различных видов транспорта. Унификация требований к платформам и технологиям, аппаратному и программному обеспечению цифрового транспорта необходима для совместимости, взаимодействия и координации работы видов транспорта в логистических бизнес-процессах. Это определяет новую национальную парадигму (модель) управления и развития транспортной сферы РФ, которая должна быть представлена в виде национальной программы «Цифровой транспорт и логистика» Правительством Республика Узбекистан до 1 октября 2018 г. для рассмотрения на заседании Совета при Президенте Республика Узбекистан по стратегическому развитию и приоритетным проектам.

Использованные источники:

1. Kushakova, M. N., & Salimov, I. (2023). Requirements to the specialist of the Digital Economy. *Conferencea*, 22-28.
2. Кушакова, М. Н. (2023). Этапы распространения высоких цифровых технологий в предприятиях. *Экономика и социум*, (5-1 (108)), 595-598.
3. Kushakova, M. N. (2023). New priorities for the development of the digital economy in Uzbekistan. In *E3S Web of Conferences* (Vol. 402, p. 08039). EDP Sciences.
4. Kushakova, M. N. (2022). Management methods for rail transport service personnel. *Экономика и социум*, (10-1 (101)), 881-883.

Алланов К. А., к.г.н.
доцент кафедры географии
Термезский государственный университет
Чариев А.К.
старший преподаватель кафедры географии
Термезский государственный университет

МЕСТО И РОЛЬ НАУЧНЫХ ШКОЛ В РАЗВИТИИ НАУКИ «ЭКОНОМИЧЕСКАЯ И СОЦИАЛЬНАЯ ГЕОГРАФИЯ»

Аннотация. *В данном исследовании освещаются научные школы, представляющие собой комплекс знаний, направленных на раскрытие различных идей, концепций, теорий и представляющие собой кропотливую трудовую деятельность, осуществляемую учеными и научно-исследовательскими организациями.*

Также раскрывается многогранность понятия «Научная школа», а также развитие шести классификаций «Научных школ» и их типов в зависимости от уровня, признание «Научных школ» в рамках экономической и социальной географии: научные школы, признанные в мировой науке; признанные на региональном или национальном уровне научные школы; определяются научные школы, признанные в конкретном высшем учебном заведении.

Ключевые слова. *Научная школа, научные теории, формирование научных школ, исследования, известный учёный, научное учреждение, высшее образование, признанные научные школы, фундаментальные и прикладные исследования.*

Allanov K. A.
Associate Professor, Department
of Geography Termez State
University, PhD
Chariyev A.K.
senior lecturer department
of Geography of Termez
state university

THE PLACE AND ROLE OF SCIENTIFIC SCHOOLS IN THE DEVELOPMENT OF THE SCIENCE "ECONOMIC AND SOCIAL GEOGRAPHY"

Annotation. *This article highlights scientific schools, which are a complex of knowledge aimed at revealing various ideas, concepts, theories, and represent painstaking work carried out by scientists and research organizations.*

The versatility of the concept of "Scientific School" is also revealed, as well *as the development of six classifications of "Scientific Schools" and their types depending on the level, the recognition of "Scientific Schools" within the framework of economic and social geography: scientific schools recognized in world science; regionally or nationally recognized scientific schools; scientific schools recognized in a particular higher education institution are determined.*

Key words. *Scientific school, scientific theories, formation of scientific schools, research, famous scientist, scientific institution, higher education, recognized scientific schools, fundamental and applied research.*

Введение. Развитие общества невозможно представить без развития науки, в этом смысле во всех странах мира науке уделяется особое внимание. В данной статье даны значение научных школ, некоторые соображения, связанные с понятием «научной школы», а также ее научное и социальное описание, основанное на существующих мнениях в этой области.

Президент Республики Узбекистан Шавкат Мирзиёев в своем Послании Парламенту 29 декабря 2020 года заявил, что естественные науки являются фундаментальной основой создания открытий и технологий, и в последующие годы он особо затронул вопрос восстановления давно заброшенных в Узбекистане научных школ и интеграции их в мировую науку. На основе мнений главы нашего государства в этом обращении проводятся исследования ученых, внесших значительный вклад в развитие науки экономической географии, их научного наследия, созданного ими научно-творческого наследия и великих научных и практических достижений. Значение созданных ими научных школ оправдывает актуальность темы. [2].

В ходе развития любой науки внутри этих направлений формируются определенные научные направления и различные научные школы, которые играют важную роль в развитии этой науки. В развитии географической науки, особенно экономической и социальной географии, вклад ученых, работавших в этой области, и созданных ими научных школ несопоставим.

Основная часть. Вопрос о научных школах специально изучается в зарубежных странах, особенно экономическими географами Узбекистана, и ими созданы всемирно известные теории по этому поводу.

Перспективы науки всегда были неразрывно связаны с развитием ведущих научных школ. Такая ситуация особенно характерна для XXI века, когда все области мировой науки достигают своих высоких результатов. Любые научные проблемы требуют сотрудничества ученых, формирования команды исследователей. [1].

В таких условиях значение научных школ становится чрезвычайно важным. Состав научных школ воплощает уникальные традиции науки нашей республики. Следует отметить, что в большинстве стран научные школы связаны с организационными структурами государства, но это не формируется как непосредственная структура государства, а является признанием научного сообщества, иными словами, это неформальное общество ученых определенного направления.

Научные школы представляют собой комплекс научной деятельности в определенном направлении и представляют собой общественные объединения, действующие на основе принципа взаимного единства и взаимообогащения. Понятие «научная школа» многогранно и имеет свои различные трактовки и определения. Научная школа рассматривается как один из типов научного сообщества, особая форма воплощения научной деятельности.

Доктор географических наук Р.У. Рахимбеков, бывший профессор ТашГУ (ныне УзМУ), ученый, занимавшийся формированием, природой, характером и содержанием научных школ, дает по этому поводу следующее определение: *"Научная школа - общепризнанная, положившая основу в одну из областей науки, развившая ее, имеющая богатые научные идеи, ведущая научные исследования в определенном направлении под руководством талантливого, известного ученого и творческое объединение поколения единомышленников, проводивших исследования в этом направлении в разные периоды [4]*.

Научным школам важно понимать суть своих научных исследований, роль и участие в них членов коллектива, и чтобы каждый исследователь работал в гармонии с общей научной деятельностью. Анализ процессов возникновения научных школ позволяет классифицировать их формы следующим образом:

1) научно-педагогическая школа, направленная на подготовку будущих исследователей;

2) группа ученых, совместно реализующая исследовательскую программу, выбранную или созданную под руководством руководителя научной школы - коллектив исследователей;

3) новое направление в науке, связанное с возникновением определенных взглядов, формируемых группой ученых и коллективом исследователей;

4) научные сотрудники, защитившие диссертацию под руководством известного ученого и имеющие ученую степень кандидата и доктора наук.

Понятие «Научная школа» многогранно, и анализ показывает, что широкое признание получили в основном 3 трактовки этой категории:

-официальное объединение, научно-образовательные структуры различного уровня (университет, факультет, кафедра, научно-исследовательское учреждение, научная лаборатория);

-научный коллектив, не входящий в структурный состав вуза или научно-исследовательского учреждения;

-направление в науке, воплощающее интересы группы исследователей;

Исследователь О. Грезнева разработала следующие 6 классификаций научной школы:

1.По типу общения представителей научной школы: научный поток, научная группа, независимая институция;

2.По статусу научной идеи: экспериментальная, теоретическая;

3.По охвату исследуемой области науки: в узкой области, комплексная;

4.По функциональному направлению создаваемых знаний: фундаментальная, практическая;

5. По форме организации деятельности студентов: на основе индивидуальной или коллективной формы организации научно-исследовательской работы;

6. По уровню расположения: национальная, местная, частная [5].

Типы научных школ по их уровню[4]

Важной функцией таких школ является подготовка поколения заместителей в области науки - молодых исследователей, а в процессе приобретения ими ученых степеней и званий научные школы развиваются и гармонизируются. Ведущие учёные стремятся воспитать единомышленников как в научном, так и в философском плане из молодёжи, только приходящей в науку.

Формирование крупных научных школ длительный и трудный процесс. В условиях вуза решение данной проблемы определяется ориентацией коллектива на решение как образовательных, так и научных задач во взаимовоплощенном состоянии.

Среди официальных условий существования научных школ можно отметить следующие:

-лидер научной школы должен иметь яркого учёного, широко признанного научным сообществом;

-наличие уникального подхода, отличного от существующих подходов, принятых и практикуемых в данной сфере;

-постоянная поддержка интереса к области науки на основе статей, семинаров и конференций.

Большое влияние на создание научной школы оказывают не только качества, необходимые для научной деятельности в руководителе, но и умение сплотить вокруг себя творческий коллектив. Руководитель занимает несколько функциональных позиций.

Во-первых, он «дизайнер-организатор» школы. Это помогает членам команды оценить свою работу со стороны.

Во-вторых, лидер выступает одновременно в двух аспектах, то есть и как наставник, и как партнер.

Важность научной школы объясняется тем, что она одновременно выполняет функции инициатора научных идей, их пропагандиста и популяризатора, подготовки молодых ученых на основе защиты ученых степеней. Иными словами, основной характеристикой научной школы является то, что она известна в научном сообществе, имеет высокий уровень, уникальное направление исследований, имеет научную репутацию, имеет собственные научные традиции, обеспечивается преемственность поколений. Научная школа воплощает в себе функции создания знаний (исследования), их популяризации (коммуникации), подготовки ученых, достойных ранга научного сообщества.

С точки зрения признания научных школ в рамках науки экономической и социальной географии можно выделить следующие:

1.Научные школы, признанные в мировой науке. Примером к этому может являтся созданная во времена бывшего союза «Районная научная школа», в центре которой находились учёные географического факультета МГУ, профессора Н.Н.Баранский и Н.Н. Колосовский. В этой научной школе разработаны такие понятия, как «Экономический регион», «Специализация», «Региональные производственные комплексы». Именно с их помощью осуществляются и внедряются научно-практические разработки государственного значения (экономические районы, региональные производственные комплексы и т.п.) по рациональной региональной организации экономики огромной страны на основе существующих факторов - природных ресурсов, трудовых ресурсов, транспорта и потребительских факторов.

2.Академические школы, признанные на региональном или национальном уровне. Если говорить о научных школах в области экономической и социальной географии в Узбекистане, то ее основателем является доктор географических наук, профессор Николай Васильевич Смирнов. «Научная школа городской географии», учредитель профессор Зиявутдин Мухитдинович Акрамов, доктор географических наук; «Научная школа агрогеографии», учредитель профессор Абдусами Солиевич Солиев, доктор географических наук, сюда можно отнести, например, «Научную школу экономической и социальной географии». Стоит отметить, что эти научные школы не ограничиваются Узбекистаном или Центральноазиатским регионом, но и получили признание и подняты до уровня Союза. Среди них представители научной школы профессора А.С. Солиева (около 50 докторов и кандидатов наук), ее научная и практическая значимость, новые, современные направления экономической и социальной географии - социогеографические исследования и разработки - занимают важное место. особое место среди них. Эта научная школа имеет особое значение не только благодаря основанию новых научных направлений, но и территориальному охвату и широте географии. Поэтому среди представителей этой научной школы можно увидеть граждан Китайской Народной Республики, Российской Федерации, Казахстана, Кыргызстана и Таджикистана. В настоящее время они эффективно работают в различных сферах экономики [3].

3.Академические школы, признанные в конкретном высшем учебном заведении. В то же время существуют и другие формы объединения научных школ. К другим объединениям относятся творческие коллективы кафедр и научных проектов, научные лаборатории, общественные объединения специалистов и ученых. Их можно разделить на следующие уровни: «Признанные научные школы», «Известные научные школы», «Развивающе научные школы», «Научные школы, начинающие формироваться».

Научные школы, по сути, отражают деятельность общества, но в науке они называются по имени учёного, являющегося основателем школы. Правильно также иметь в виду ученых, подготовленных ученым научной школой. При этом справедливо говорят, что «он прошел школу такого-то ученого».

При оценке деятельности научной школы учитываются защищенные диссертационные работы, цитирование научных работ членов школы, наличие общих идей и ценностей, которых придерживаются члены школы. Целостность деятельности научной школы, непрерывность исследований обычно характеризуются продолжением, развитием и обогащением научной темы, заложенной руководителем школы в научных трудах студентов.

Одним из важных показателей научной школы является разносторонность исследований, проводимых ее членами. Использование количественных показателей при определении конкретных сторон научной школы, отличающих ее от других, позволяет сделать лишь общие выводы. Поэтому необходим комплексный подход к оценке аспектов, касающихся научной школы, ее уникальности.

Заключение. Подводя итог, можно сказать, что в годы независимости, и особенно в Новом Узбекистане, Президент нашей страны – лично Ш.Мирзиёев – уделял большое внимание развитию науки, дальнейшему расширению сети высших учебных заведений в нашей республике, и подготовке высококвалифицированных кадров. В этом несопоставимы роль и значение сформировавшихся к этому периоду национальных научных школ.

Практически все научно-исследовательские и высшие учебные заведения имеют научные школы. Материалы о деятельности многих образовательных и научных учреждений, представленные через Интернет, показывают, что научные школы различных форм имеют для общества особое значение как неотъемлемые звенья общего эволюционного развития науки. На этом этапе суть дела заключается в выяснении того, какие из них будут более эффективны в реализации целей и задач конкретного учреждения или университета. В начале своей научной карьеры исследователь должен присоединиться к научной школе, определить и утвердить тему своего исследования и проводить ее в координации с учеными школы. Исследователь своими исследованиями способствует деятельности научной школы и в то же время служит признанию потенциала научной школы как признанного специалиста и эксперта в избранной научной области.

Научные школы своими научными теоретическими и практическими разработками приобретают определенное научное и практическое значение в экономике страны, закладывают основу современного научного направления и в конечном итоге служат прочной основой для формирования, развития и совершенствования рациональной отрасли и региональной структуры экономики страны, а кроме того, служат опорой в подготовке всококвалифицированных кадров. На их основе научные исследования по их формированию и развитию, выводы и заключения о них имеют важное научное и практическое значение.

Использованные источники:

1.Abdunazarov H. M. et al. Issues of human economic activity and environmental protection //Экономика и социум. – 2020. – №. 11. – С. 23-26.
2.Allanov Q. A., Choriev A. Q. Effects on the Location and Development of the Production Forces of the South Surkhan Reservoir. Middle European Scientific Bulletin, 11. – 2021.
3.Erdonov M. N. et al. Bbb and swot-analysis //methods in teaching the subject of" geographical federation of brazil" in world geography. – 2020. – Т. 8. – №. 11.
4.Алланов К. А., Чориев А. К. Роль угольной промышленности в социально-экономическом развитии сурхандарьинской области республики узбекистан //Экономика и социум. – 2023. – №. 6-1 (109). – С. 624-630.
5. Алланов К. А., Чориев А Вопросы эффективного использования водных ресурсов в засушливых регионах и развития садоводства (на примере сурхандарьинской области) "экономика и социум" №1(116) 2024 с.729-733
6. Umarova, M. H., & Turaev, Q. (2021). Names of Places Related to Religious Tourism and their Origin. Middle European Scientific Bulletin, 12, 371-373. Retrieved from
7. Umarova M.H, Erdanov M.N, Xolmatov Z.M, Turaev Q.T. American Journal of Social and Humanitarian Research, Vol. 2 No. 4 (2021): AJSHR Article Published : Jun 19, 2021.
8. Umarova M. H., To'rayev Q. T. Din-ziyorat turizmi bilan bog’liq bo’lgan joy nomlari va ularning kelib chiqishi // за публикацию в международном научно-практическом журнале «Экономика и социум» № 6(85) 2021

9. Tokhirovich , T. K. ., Mamarasulovna , T. Z. ., & Maxmaniyozovich , X. Z. . (2022). The Role and Importance of Tourism in the Regions . Miasto Przyszłości, 24, 431–433. Retrieved from
10. Алланов К. А., Чориев А Загрязнение атмосферного воздуха и его влияние на здоровье населения северо-восточных районов сурхандарьинской области- "Экономика и социум" 2022/1/9 2/914-919.
11.Абдуназаров Х. М., Ниёзов Х. М. Проблемы развития отраслей промышленности южного узбекистана //Экономика и социум. – 2023. – №. 12 (115)-1. – С. 893-900.
12.Эсанов Н.А Перспективы использования технологий «умный город» в экономическом и социальном развитии города термез //Экономика и социум. – 2023. – №. 2 (117)-1 2024
13. Алланов К. А , Чариев А. К, Некоторые географические аспекты современного процесса урбанизации "Экономика и социум" №4(119)-1 2024

Амирқулов З. Н.
Тошкент давлат иқтисодиёт
университети мустақил изланувчиси

КОРХОНАЛАРДА МЕҲНАТ УНУМДОРЛИГИ КЎРСАТКИЧЛАР ТИЗИМИНИ ТАКОМИЛЛАШТИРИШ

Аннотация. *Мақолада корхоналарда меҳнат унумдорлиги кўрсаткичлар тизимини такомиллаштириш – иқтисодий ривожланишнинг муҳим омилларидан бири сифатида кўрсатилган. Меҳнат унумдорлигини ошириш, ишлаб чиқариш самарадорлигини ва корхона рақобатдошлигини таъминлаш учун асосий шартдир. Ушбу мақолада, меҳнат унумдорлиги кўрсаткичларини аниқлаш, баҳолаш ва такомиллаштириш усуллари кўриб чиқилади. Корхоналарда амалга ошириладиган самарали бошқарув тизими, мутахассисларнинг малакалари ва замонавий технологияларни жорий этиш, меҳнат унумдорлигини оширишга катта таъсир кўрсатади. Меҳнат шарт-шароитларини яхшилаш, мотивация механизмларини такомиллаштириш ва инновацион ечимларни татбиқ этиш, унумдорликни оширишнинг асосий йўналишларидир. Шунингдек, тадқиқот натижалари, корхоналардаги меҳнат унумдорлигини баҳолаш учун янги кўрсаткичлар тизимини ишлаб чиқишни таклиф этади. Чунки меҳнат унумдорлигини такомиллаштириш орқали иқтисодий ўсишни таъминлашда муҳим ахамиятга эга бўлади.*

Калит сўзлар*: Меҳнат унумдорлиги, корхона самарадорлиги, ишлаб чиқариш самарадорлиги, меҳнат шарт-шароитлари, бошқарув тизими, мотивация механизмлари, инновацион ечимлар, меҳнат кўрсаткичлари*

Amirkulov Z.
Independent student
of Tashkent State University of Economics

IMPROVING THE SYSTEM OF LABOR PRODUCTIVITY INDICATORS IN ENTERPRISES

Abstract*. The article shows the improvement of the system of indicators of labor productivity in enterprises as one of the important factors of economic development. Increasing labor productivity is the main condition for ensuring production efficiency and enterprise competitiveness. This article examines methods of determining, evaluating and improving labor productivity indicators. The effective management system implemented in enterprises, the skills of specialists and the introduction of modern technologies have a great impact on increasing labor productivity. Improvement of working conditions, improvement of motivation mechanisms and implementation of innovative solutions are the main directions of increasing productivity. Also, the results of the research suggest the development of* *a new system of indicators for evaluating labor productivity in enterprises. Because improving labour productivity is important in ensuring economic growth.*

Keywords: *Labor productivity, enterprise efficiency, production efficiency, working conditions, management system, motivation mechanisms, innovative solutions, labour indicators*

Корхонанинг ишлаб чиқариш кўрсаткичлари ўсишининг энг муҳим омиллари ишлаб чиқарилаётган маҳсулотларнинг юқори рақобатбардошлиги, шунингдек, модернизация қилинган товар-хом ашё парклари, кичик ва катта тоннажли контейнерлар, ишлаб чиқарилган маҳсулотларни сақлаш ва қадоқлаш тизимлари, турли хил тушириш ва юклаш комплексларини ўз ичига олган яхши ишлаб чиқилган ишлаб чиқариш инфратузилмаси ҳисобланади. . Кейинчалик самарали ишлаб чиқариш тизимини шакллантириш ва умуман компания ишини оптималлаштириш учун муайян таъмирлаш ишларини бажариш жараёнида тўлиқ ишлаб чиқариш тциклларини таъминлайдиган механик таъмирлаш мажмуалари катта аҳамиятга эга. Бундан ташқари, зарур хом – ашё (материаллар) ва эҳтиёт қисмларни ишлаб чиқаришдан бошлаб, кейинчалик таъмирлаш мақсадларида фойдаланишгача бўлган таъмирлаш ишларини тўлиқ таъминлаш.

Корхона эътибор қаратиши керак бўлган асосий йўналишлар:

1. мавжуд ишлаб чиқариш қувватларини ривожлантириш ва модернизация қилиш;
2. Замонавий, рақобатбардош, сифатли маҳсулотлар ишлаб чиқариш;
3. Замонавий технологиялардан фойдаланиш;
4. Ишлаб чиқариш жараёнларини автоматлаштириш;
5. Янги брендли маҳсулотларни ишлаб чиқиш;
6. Ташқи муҳитга зарарли таъсирларни камайтириш.

Бундан ташқари, корхона ишлаб чиқариш кўрсаткичларининг ўсиши ва компанияни оптималлаштиришнинг асосий омиллари янги қувватларни ишга тушириш ва ишлаб чиқаришнинг мумкин бўлган тўхтаб қолишлари ва тўхтаб қолиш хавфини камайтиришга қаратилган чора-тадбирларни ташкил этиш билан боғлиқ. Ишлаб чиқариш кўрсаткичларининг ўсишига ресурсларни самарали тақсимлаш (бу, ўз навбатида, ҳам қиммат, ҳам қиммат бўлмаган фаолиятни амалга оширишга асосланади), хом ашёнинг меъёрий истеъмолига ўтиш, энергия ресурсларини самарали ташкил этиш таъсир қилади. .

Корхонанинг ишлаб чиқариш тизими хом ашё ва ресурслардан самарали фойдаланиш бўйича умумий сиёсатни шакллантиришга имкон берадиган, маҳсулот сифатини оширишга ёрдам берадиган, шунингдек ходимларни рағбатлантирадиган маълум тамойиллар, ишини яхшилашга интилиш, стандартлар ва қоидалар тўпламини ўз ичига олади. Корхонанинг ишлаб чиқариш тизими қуйидаги блокларни ўз ичига олади:

1. Ходимларнинг қобилиятларини ривожлантириш учун блок (ўқитиш);
2. Фикрлаш ва хулқ-атвор блоки (корпоратив маданият);

3. Техник блок;
4. Корхонани бошқариш жараёни блоки.

Корхонанинг ишлаб чиқариш тизимининг энг муҳим мақсадларидан бири бу блокларни ягона интеграциялашган тизимга бирлаштириш, бу йерда корхона ходимлари ва корхонада қўлланиладиган технологиялар уйғун равишда ўзаро таъсир қилади. Ушбу мақсад одамлар иштирок этадиган замонавий технологик жараёнларни техник ва ташкилий нуқтаи назардан мукаммалликка интилиш билан оптималлаштириш кераклигини англатади. Шундай қилиб, корхонанинг самарали ишлаб чиқариш тизимининг асосий омилларига ходимларнинг маълум кўникмалари ва билимларининг мавжудлиги, бу кейинги ўқитиш ва ривожланишни амалга ошириш имконини беради, махсус корпоратив маданият (яъни тўғри хулқ-атворни шакллантиришни тавсифловчи) киради. Корпоратив маданият корхонанинг барча даражаларига таъсир қилишини, шу жумладан маълум натижаларга эришиш учун уларни замонавий техник воситалардан фойдаланишга рағбатлантириш орқали таъсир қилишини таъкидлайди, техник ёрдам (шу жумладан, бир қатор жараёнлар); стандартлар, асбоблар , ишлаб чиқариш ускуналари, технологиялари ва бошқаларни оптималлаштиришга қаратилган такомиллаштирилган амалиётлар, усуллар, техникалар киради.

Корхонанинг юқори самарали ишлаб чиқариш тизими корхонанинг асосий эҳтиёжларини белгилайдиган техник модель асосида шакллантирилади, улар орасида юқори малакали кадрларга бўлган эҳтиёжни, шу жумладан. бошқарув тизими ҳам иштирок этади. Тегишли технология ("Lean Manufacturing") ва “Six Sigma” (Олти Сигма методологияси)нинг замонавий контсепциялари корхона бошқарувини ташкил этишда юқори натижаларга эришиш имконини беради. Ишлаб чиқаришни модернизация қилиш жараёни, шунингдек, корхонанинг асосий ишлаб чиқариш қувватларини кўп босқичли рақамлаштириш ва ишлаб чиқариш жараёнларининг назорат қилиш ва такрор ишлаб чиқариш даражасини статистик баҳолашни ўз ичига олади.

Ишлаб чиқаришда самарадорликни ошириш ва меҳнат унумдорлигини ошириш учун статистик таҳлил (Олти Сигма методологияси), ишлаб чиқариш жараёнларининг асосий кўрсаткичларининг оптимал қийматларини танлаш, назорат қилиш асосида ишлаб чиқариш жараёнларининг технологик кўрсаткичларига маълум ўзгаришлар киритиш керак. Бу жараён МЕС тизимида ва мақсадли қийматларни белгилаш ҳисобига амалга ошириладиган СПС модулида амалга оширилади. Ишлаб чиқариш жараёнларининг статистик таҳлили корхона ичида ҳам, ундан ташқарида ҳам “етказиб берувчи/истеъмолчи” каби муносабатлар тизимига асосланади. Ушбу турдаги таҳлил ишлаб чиқарилаётган маҳсулотларнинг сифат кўрсаткичларини режалаштириш ва прогноз қилиш билан боғлиқ бир қатор саволларга жавоб беришга имкон беради (масалан, ишлаб чиқариш жараёнларининг имкониятлари потенциал харидорларнинг эҳтиёжларини қандай қондириш мумкинлигини аниқлаш имконини беради).

"Олти Сигма" - бу ишлаб чиқариш жараёнининг энг муҳим омилларини аниқлаш ва аниқлаш имконини берадиган статистик таҳлил усулларига асосланган дизайн методологияси, бу эса ўз навбатида:

- маҳсулот сифат кўрсаткичларини яхшилаш;
- ҳосилдорлик даражасини ошириш;
- хом ашё, материаллар ва энергия ресурсларидан самаралирок фойдаланиш.

Олти Сигма методологияси ишлаб чиқариш муаммоларини ҳал қилишнинг замонавий, юқори самарали усулларини ишлаб чиқадиган, шунингдек, корхона жараёнларини бошқаришнинг модернизацияланган тизимларини шакллантирадиган бошқарув ходимлари ва мутахассисларни ҳар томонлама тайёрлаш соҳасидаги ноёб воситадир. "Олти Сигма"дан фойдаланиш "Кичик босқичларда такомиллаштириш" моделидан фойдаланишга нисбатан корхонанинг янада барқарор ва жадал ривожланишига ёрдам беради (бу номувофиқлик даражасини 70% га камайтириш орқали таъминланади). Олти Сигма методологиясининг асосий омиллари орасида:

1. Корхонани модернизация қилиш аввал ишлаб чиқилган лойиҳалар асосида амалга оширилади;
2. Муайян вақт ичида фақат битта аниқ муаммони ҳал қилишга урғу берилади;
3. Олти Сигма-дан фойдаланиш муддати чекланган (3-6 ой);
4. Эксперт гуруҳи таркибига турли фаолият соҳаларидаги бир қатор мутахассислар киради;
5. Олти Сигма методологиясининг асосий объекти - мижоз ва унинг эҳтиёжлари;
6. Ишлаб чиқариш жараёнларини модернизация қилиш мезонларга эришиш орқали амалга оширилади;
7. Ҳар қандай қарорлар кичик пул инъекциялари асосида шаклланади;
8. Модернизация жараёни статистик маълумотларни доимий таҳлил қилиш билан амалга оширилади;
9. Илгари иқтисодий кўрсаткичларнинг ўсишига ёрдам берган техника ва усуллардан фойдаланиш истаги.

Шуни таъкидлаш керакки, асосий иқтисодий кўрсаткичлар жараённинг асосий кўрсаткичлари (CPI)деб аталадиган нарсаларни ўз ичига олади. Ушбу кўрсаткичлар технологик жараённинг асосий кўрсаткичларига тегишли бўлиб, улар ходимларни рағбатлантириш усуллари ва амалга ошириш ўртасида тўғридан-тўғри боғлиқлик мавжудлиги сабабли меҳнат унумдорлиги самарадорлигини ошириш жараёнида корхона ходимларини рағбатлантиришга имкон беради; жараённинг асосий кўрсаткичлари; муайян технологик жараёнлар параметрларига мувофиқ шакллантирилган муайян мақсадли ва вақт оралиғида технологик жараёнларнинг самарадорлик кўрсаткичларини таҳлил қилиш; технологик режимни ташкил этишнинг ўзига хос хусусиятларига таъсир қилиш (билвосита ёки тўғридан-тўғри) ва бошқалар.

Юқори технологик CPI қуйидагиларни англатади:

- маҳсулотларнинг юқори рақобатбардошлиги ва умуман корхонанинг ишлаб чиқариш самарадорлиги;
- корхонада ишлаб чиқаришни модернизация қилиш жараёнида шакллантирилган узоқ муддатли мақсадларни амалга ошириш;
- Ушбу мақсадларни сменали ишлаб чиқариш ходимларининг мақсадлари билан боғлаш имконини берадиган каскадли узоқ муддатли мақсадлар тизимини шакллантириш (шу жумладан: технологик жараённинг асосий параметрлари бўйича ишлаш, технологик режимни ташкил этишнинг ўзига хос хусусиятларига таъсир қилиш, технологик режимни амалга ошириш). ишлаб чиқариш режаси, ресурслар, материаллар, хом ашё ва бошқалардан самарали фойдаланиш).

Замонавий ишлаб чиқариш шароитлари технологик тараққиётни такомиллаштиришнинг янги, самаралироқ ёндашувлари ва усулларини ишлаб чиқиш зарурати билан белгиланади. Бундай усуллар корхона ривожланишининг янги даражаларига эришишга ёрдам беради, потенциал мижозлар билан барқарор ва қулай ўзаро муносабатларга олиб келади ва умуман компания ишини оптималлаштиради. Ишлаб чиқарилган ва сотилаётган маҳсулотлар сифатига янги (юқори) талаблар тез ўсиб бораётганлиги сабабли , нафақат маҳсулотнинг юқори рақобатбардошлигини доимий равишда сақлаб туриш, балки корхонанинг ривожланишини яқин ва узоқ муддатли келажакда прогноз қилиш ҳам жуда муҳимдир. Масалан, ушбу вазифаларни амалга ошириш (рақобатбардошликни сақлаш ва самарали прогнозлаш учун) корхонада "Маҳсулдорлик ташаббуси" усулини қўллаш орқали осонлаштирилиши мумкин. Ушбу усулнинг асосий мақсади меҳнат ресурсларидан фойдаланиш жараёнида олинган натижаларни таҳлил қилиш, шунингдек уларни жаҳон ишлаб чиқарувчилари кўрсаткичлари билан таққослашдир. "Маҳсулот унумдорлигини ошириш ташаббуси" усулидан фойдаланиш нафақат корхонанинг маълум бир вақтнинг ўзида қайси даражасини аниқлашга, балки келажакда ривожлантириладиган соҳаларни, улар қанчалик самарали ва истиқболли бўлишини аниқлашга имкон беради. . Ва бу, ўз навбатида, компанияни оптималлаштириш масаласини ҳал қилади.

Ушбу усулнинг самарадорлигини ошириш учун корхона бўлинмалари доирасида даврий равишда қиёсий таҳлил ўтказиш керак. Қиёсий таҳлил корхона бўлинмаларида меҳнат зичлигининг жорий кўрсаткичларини ҳисоблаш ва таққослашга, ходимлар тизимининг мақсадли сонини ўрганишга ва бошқарув тизимининг меъёрлари ва параметрларининг ўзига хос хусусиятларини ҳисобга олишга асосланади. корхона. Қиёсий таҳлилни қуйидаги йўналишларда ўтказиш тавсия этилади:

1. Ходимлар томонидан қўллаб-қувватланадиган ускуналар сони;
2. Оператор томонидан қайта ишланган сигналлар сони;
3. Ускунанинг узоқлиги ва бошқалар.

Қиёсий таҳлил натижаси баҳолашда ифодаланади, бу эса, ўз навбатида, маълум бир стандартга (масалан, замонавий, тўлиқ автоматлаштирилган ва модернизация қилинган корхона) прогноз қилиниши керак. Стандарт билан таққослаш меҳнат зичлиги кўрсаткичларини, шунингдек, "Ҳосилдорликни ошириш ташаббуси" асосида чора-тадбирлар мажмуини амалга ошириш усулларини аниқлаш имконини беради. Бундан ташқари, таҳлил бир қатор йўналишлар бўйича чора-тадбирларни амалга ошириш бўйича босқичма-босқич дастурни ишлаб чиқиш имконини беради, улар орасида қуйидагилар ажралиб туради:

- турдош мутахассисликлар бўйича мутахассислар тайёрлаш (бу йўналиш турдош касблар бўйича тажрибани ўтказишни назарда тутади, бу эса лавозимларни алмаштириш омилини қоплаш учун мутахассислар захирасини шакллантириш имконини беради);
- давомат кўрсаткичларини шакллантириш ва алмаштириш коэффициенти (одатдагидек, ҳеч қандай қоидабузарликларсиз ва ускуналарнинг ишламай қолиши билан амалда ишлаган сменаларнинг қиёсий аспектида ишлайдиган ходимларнинг кўрсаткичларини таҳлил қилишни ўз ичига олади);
- бошқарув фаолиятини модернизация қилиш (қоида тариқасида, у бўйсуниш иерархиясини қисқартириш йўли билан амалга оширилади, шу билан бирга назорат қилиш сифати яхшиланади ва жавобгарлик даражаси ошади; масалан, бошқарув фаолиятини модернизация қилишнинг намоён бўлиши мумкин. бир нечта бўлинмаларнинг алоқаси бўлиши);
- хизмат кўрсатиш кўламини кенгайтириш (ишлаб чиқариш ишлари ҳажми ва меҳнат фаолияти интенсивлигининг ошиши билан таъминланган);
- технологияларни ишлаб чиқиш ва уларни амалиётга татбиқ этиш (янги, кучлироқ ишлаб чиқариш ускуналарини олиш, ишлаб чиқариш ва технологик жараёнларни автоматлаштириш ва модернизация қилишда намоён бўлади);
- ходимлар фаолиятини оптималлаштириш (кадрлар вазифаларидан асосий бўлмаган ишларни истисно қилиш: тушириш, юклаш, тозалаш ва бошқалар).

Шундай қилиб, ишлаб чиқаришда меҳнат унумдорлигини оширишнинг энг муҳим омиллари қаторида технологик жараёнларни такомиллаштириш, шунингдек, инсон ресурсларига бўлган эҳтиёж бор. Шуни таъкидлаш кераккки, меҳнат унумдорлигини ошириш усулларини қўллаш жараёнида корхонада ишчилар сони камаяди, меҳнат фаоллиги кўрсаткичи эса тез ўсиб боради.

Фойдаланилган адабиётлар:

1. Ўзбекистон Республикаси Президентининг 2022 йил 28 январдаги ПФ – 60–сон "2022–2026 йилларга мўлжалланган Янги Ўзбекистоннинг тараққиёт стратегияси" фармони. // https://www.lex.uz/docs/5841063
2. Abdurakhmanov K.Kh., Zokirova N.K. New challenges and priorities of the labor market development in Uzbekistan. Journal Revista Espacios. Vol. 40

(Number 10) Page 14. «ESPACIOS» №10/ Caracas, Venezuela. ISSN: 0798 1015/ Number 10, 2019.
3. З.Б. Ирматова Корхоналарда меҳнат унумдорлигини ифодаловчи кўрсаткичлар ва уларни аниқлашни такомиллаштириш йўллари “Иқтисодиёт ва инновацон технологиялар” илмий электрон журнали. № 1, январ-феврал, 2015 йил
4. Rajabov S. et al. Tasavvurli, umumiy-tasavvurli va raqamli-tasavvurli qoidalarni tahlil //Science and Education. – 2024. – Т. 5. – №. 5. – С. 262-268.
5. Rajabov S. TASAVVURLI, UMUMIY-TASAVVURLI VA RAQAMLI-TASAVVURLI QOIDALARNI TAHLILI //Raqamli iqtisodiyot va axborot texnologiyalari. – 2024. – Т. 4. – №. 1. – С. 113-119.
6. Абдуллаев М. ORGANIZATION OF WASTE PROCESSING IN SOLVING ENVIRONMENTAL PROBLEMS IN UZBEKISTAN //Nordic_Press. – 2024. – Т. 1. – №. 0001.
7. Qobilov A. et al. ASSOTSIATIV QOIDALAR VA BOZOR SAVATLARINING TAHLILI //Raqamli iqtisodiyot va axborot texnologiyalari. – 2023. – Т. 3. – №. 3. – С. 115-120.
8. Rajabov S. B. et al. Social mining and it is development stages //Science and Education. – 2023. – Т. 4. – №. 4. – С. 1342-1345.
9. Oybek o‘g’li O. N., Urinovich K. A., Baxtiyorovich R. S. RAQAMLI IQTISODIYOT SHAROITIDA SOLIQLAR VA BOSHQA MAJBURIY TOLOVLARNI AMALGA OSHIRISHDA RAQAMLI TEXNOLOGIYALARDAN FOYDALANISH //Архив научных исследований. – 2022. – Т. 5. – №. 5.
10. Ziyadullayevich S. A., Mirzaliev S. M., Bakhtiyorovich R. S. IMPROVING THE PROGRESSES OF WASTE PRODUCTS PROCESSING THE AUTOMATED MANAGEMENT SYSTEM //Galaxy International Interdisciplinary Research Journal. – 2022. – Т. 10. – №. 5. – С. 372-381.
11. Mirzarakhimova A., Abdulakhatov M. Analysis of Healthcare Services in the Digital Economy //Proceedings of the 7th International Conference on Future Networks and Distributed Systems. – 2023. – С. 410-414.
12. Abdulakhatov M. M., Avlokulova S. S. TECHNOLOGY OF SEARCH ORGANIZATION IN VIRTUAL E-SHOPS WITH IMAGE RECOGNITION //Архив научных исследований. – 2022. – Т. 2. – №. 1.
13. Kobilov A., Abdulakhatov M., Jaloliddinova M. PECULIARITIES OF THE USE OF ARTIFICIAL INTELLIGENCE IN THE EDUCATIONAL PROCESS //Raqamli iqtisodiyot va axborot texnologiyalari. – 2021. – Т. 1. – №. 3. – С. 32-37.
14. Nigmanov A. U. XITOY SANOAT TARMOQLARIDA ENERGIYA SAMARADORLIGINI OSHIRISH TAHLILI //XXI Asr: Fan va ta’lim masalalari (XXI Век: Вопросы науки и образования). – 2024. – Т. 1. – С. 146-162.
15. Нигманов А. У. и др. ERKIN IQTISODIY ZONALARDA INVESTITSIYA FAOLIYATINI AMALGA OSHIRISHNING ASOSIY YONALISHLARI //ГЕОГРАФИЯ: ПРИРОДА И ОБЩЕСТВО. – 2020. – Т. 1. – №. 2.

Арисланов А. С., т.ф.ф. д., доцент
Наманган муҳандислик-технология институти.
Шамшидинов И.Т., т.ф.д.
профессор
Наманган муҳандислик-қурилиш институти.
Ўсаров Н. Б.
9б-22 талабаси
Наманган муҳандислик-технология институти

МАГНИЙ СУЛЬФАТ ВА МАГНИЙ СУЛЬФАТ БИЛАН АММОНИЙ НИТРАТ ИШТИРОКИДА КИСЛОТАЛАР АРАЛАШМАСИНИНГ ЮҚОРИ МЕЪЁРИДА ТРИКАЛЬЦИЙФОСФАТНИ ПАРЧАЛАШ ЖАРАЁНИНИ ТАДҚИҚ ҚИЛИШ

Аннотация: *Мақолада фосфат кислотани сульфат кислотага қисман алмаштириш орқали магний сульфат ва магний сульфат билан аммоний нитрат иштирокида кислоталар аралашмасининг юқори меъёрида трикальцийфосфатни парчалаш жараёнини тадқиқ қилиш баён этилган.*

Калит сўзлар: *трикальцийфосфат, фосфат кислота, сульфат кислота, апатит, магний сульфат, аммоний нитрат, фосфорит, сувда эрувчан шакли, кислоталар аралашмаси меъёри, ажралиш коэффициенти, мақбул технологик кўрсаткичлар.*

Arislanov A.S., PhD, associate professor
Namangan Institute of Engineering and Technology.
Shamshidinov I. T.,
professor,
Namangan Institute of Engineering and Construction.
Osarov N. B.,
student of 9b-22,
Namangan Institute of Engineering and Technology

RESEARCH ON THE PROCESS OF DECOMPOSITION OF TRICALCIUM PHOSPHATE IN THE PRESENCE OF MAGNESIUM SULFATE AND AMMONIUM NITRATE IN THE PRESENCE OF A MIXTURE OF ACIDS AT A HIGH RATE

Abstract: *The article describes the research of tricalcium phosphate decomposition process in the presence of magnesium sulfate and ammonium nitrate with magnesium sulfate by partial replacement of phosphoric acid with sulfuric acid.*

Key words: *Tricalcium phosphate, phosphoric acid, sulfuric acid, apatite, magnesium sulfate, ammonium nitrate, phosphorite, water-soluble form, acid mixture rate, separation coefficient, acceptable technological indicators.*

Дунёда ишлаб чиқарилаётган фосфорли ўғитлар апатит ва фосфорит концентратлари асосида олинади, уларнинг захираси эса йилдан-йилга камайиб бормоқда, ишлаб чиқаришга паст навли, жумладан юқори карбонатли хомашёларни қамраб олиб, улардан фойдаланган ҳолда таркибида кальций ва олтингугурт бўлган фосфорли ўғитлар олиш бўйича илмий-тадқиқот ишлар олиб борилмоқда. Бу борада қишлоқ хўжалиги ишлаб чиқаришини сульфатларнинг сувда эрувчан шакли бўлган фосфорли ўғитлар билан таъминлаш учун қуйидаги йўналишлар бўйича: сульфатларнинг сувда эрувчан шакли билан таркибида кальций бўлган азот-фосфорли ўғитлар олиш усулларини ишлаб чиқиш, фосфат кислотани сульфат кислотага қисман алмаштиришни мақбул технологик кўрсаткичларни аниқлашга алоҳида эътибор қаратилмоқда.

Кислоталар аралашмаси меъёрининг таъсирини тадқиқ қилиш учун концентрацияси 29,30% P_2O_5 бўлган фосфат кислотадаги 20% P_2O_5 ни сульфат кислотага алмаштирилган ҳамда таркибида магний сульфат (2% MgO), шунингдек магний сульфат (2% MgO) ва аммоний нитрат (1%) бўлган кислоталар аралашмасидан фойдаланилди. Кислоталар аралашмасининг меъёри трикальцийфосфатни парчалаш учун керак бўладиган стехиометрик миқдорга нисбатан 100%, 150% ва 200% этиб танланди. Олинган натижалар 1-жадвалда келтирилган.

1-жадвал

Таркибида магний сульфат, шунингдек магний сульфат ва аммоний нитрат (1%) бўлган кислоталар аралашмаси меъёрининг бўтқа кимёвий таркибига таъсири

№	Кўрсаткичлар	Бўтқадаги компонентларнинг миқдори, оғ. %					
		аммоний нитратсиз			аммоний нитрат билан		
1.	Кислота аралашмалари меъёри	100	150	200	100	150	200
2.	ЭФКдаги P_2O_5 нинг бошланғич концентра-цияси, %	29,30			29,04		
3.	ЭФКдаги SO_3 нинг бошланғич концентра-цияси, %	7,69			7,63		
4.	Бўтқадаги миқдори:						
	P_2O_5 (умум.), %	34,02	33,23	32,43	33,80	33,03	32,36
	P_2O_5 (ўзл.), %	33,74	33,09	32,36	33,58	32,96	32,31
	P_2O_5 (с.э.), %	31,53	31,33	30,70	31,60	31,45	30,91
	SO_3 (умум.), %	5,49	8,09	8,60	5,46	8,04	8,57
	SO_3 (с.э.), %	1,44	3,24	3,51	1,55	4,04	4,38
	CaO (умум.), %	15,48	12,91	10,29	15,38	12,83	10,27
	CaO (сув.эр.), %	3,37	4,17	3,40	3,91	4,33	3,72
	MgO %	1,27	1,42	1,51	1,27	1,41	1,49
	намлик, %	26,14	32,89	36,12	25,88	32,73	35,94
5.	$(P_2O_{5ўзл.}:P_2O_{5умум.})\times100$, %	99,18	99,58	99,78	99,35	99,79	99,85

6.	$(P_2O_{5с.э.}:P_2O_{5умум.})\times100$, %	92,68	94,28	94,67	93,49	95,22	95,52
7.	$P_2O_{5ўзл.}$бўйича $К_{парч.}$, %	97,87	98,72	99,19	98,31	99,34	99,42
8.	Сувли эритмага CaO бўйича $К_{ажр.}$, %	21,77	32,30	33,04	25,42	35,75	36,23
9.	SO_3 ни сувли эритмага ажралиш даражаси, %	26,23	40,05	40,81	28,39	50,25	51,11

Олинган маълумотлардан кўриниб турибдики, кислоталар аралашмаси меъёрининг ортиши билан P_2O_5 барча шаклларининг миқдори камайиб боради, эркин P_2O_5 миқдори эса ортади. Масалан, таркибида магний сульфат (2% MgO) бўлган кислоталар аралашмасидан фойдаланилганда $P_2O_{5умум.}$ миқдори 100% меъёрда 34,02% дан 150% меъёрда 33,23% гача, 200% меъёрда эса 32,43% гача камаяди. Таркибида 1% дан магний сульфат ва аммоний нитрат бўлган кислоталар аралашмасидан фойдаланилганда бу кўрсаткичлар мос ҳолда 33,80%, 33,03% ва 32,36% ни ташкил этади. Кислоталар аралашмаси меъёрининг ортиши бўтқадаги SO_3 умумий ва сувда эрувчан шаклларининг ҳам ошишига олиб келади.

Таркибида магний сульфат (2% MgO) бўлган кислоталар аралашмасидан фойдаланилганда SO_3 умумий шаклининг миқдори 100% меъёрда 5,49% дан 150% меъёрда 8,09% гача ва 200% меъёрда эса 8,60% гача ортади. Таркибида 20% P_2O_5 бўлган бошланғич термик фосфат кислотага 1% миқдорда аммоний нитрат қўшилганда, 20% P_2O_5 ни сульфат кислотага алмаштирилганда ва магний сульфат (2% MgO) қўшилганда SO_3 умумий шакли миқдорини мос равишда 5,46% дан 8,04% гача ва 8,57% гача оширади. Кислоталар аралашмасининг меъёри ортиши билан бўтқадаги кальций оксиднинг миқдори сезиларли даражада камаяди ва кислоталар аралашмасида магний сульфат (2% MgO) бўлганда унинг миқдори 15,48-10,29% ни ва магний сульфат (2% MgO) ва аммоний нитратлар бўлган кислоталар аралашмасида эса 15,38-10,27% ни ташкил этади.

Кислоталар аралашмасида магний сульфат бўлганда эса P_2O_5 сувда эрувчан шаклининг умумий миқдорига нисбати 92,68-94,67% ни, магний сульфат ва аммоний нитрат иштирокида эса 93,49-95,52% ни ташкил этади. Бунда кислоталар асралашмасининг 100, 150 ва 200% меъёрларида $К_{парч.}$ мос равишда 97,87% дан 98,72% ва 99,19% гача ортади. Аммоний нитрат иштирокида эса $К_{парч.}$мос ҳолда 98,31%, 99,34% ва 99,42% ни ташкил этади.

Бундай шароитда SO_3 ни суюқ фазага ажралиш коэффициенти кислоталар аралашмасида магний сульфат иштирок этганда 26,23-40,81%, магний сулфат ва аммиакли селитра иштирок этганда эса 28,39-51,11% ни ташкил этади.

Кислотада магний сульфат ҳамда магний сульфат ва аммоний нитрат иштирок этганда кальций оксидининг суюқ фазага ажралиш коэффициенти мос равишда 21,77-33,04% ва 25,42-36,23% ни ташкил қилади. 2-жадвалда магний сульфат, магний сульфат ва аммоний нитрат иштирок этганда кислоталар аралашмаси билан трикальцийфосфатни парчалаш учун стехиометрик миқдорга нисбатан 100, 150 ва 200% кислоталар аралашмаси меъёри бўйича олинган бўтқалар қуритилгандан сўнг олинган маълумотлар келтирилган .

2-жадвал

Таркибида магний сульфат, шунингдек магний сульфат ва аммоний нитрат (1%) бўлган кислоталар аралашмаси меъёрининг маҳсулотлар кимёвий таркибига таъсири

№	Кўрсаткичлар	Компонентларнинг миқдори, оғ. %					
		аммоний нитратсиз			аммоний нитрат билан		
1.	Кислота аралашмалари меъёри	100	150	200	100	150	200
2.	ЭФКдаги P_2O_5 нинг бошланғич концентрация-си, %	29,30			29,04		
3.	ЭФКдаги SO_3 нинг бошланғич концентрация-си, %	7,69			7,63		
4.	Маҳсулотдаги миқдори:						
	P_2O_5 (умум.), %	45,67	48,59	49,70	44,52	48,37	49,65
	P_2O_5 (ўзл.), %	45,48	47,69	49,60	44,29	47,64	49,59
	P_2O_5 (сув.эр.), %	42,43	45,84	47,12	41,97	46,14	47,52
	SO_3 (умум.), %	7,37	11,83	13,18	7,19	11,75	13,03
	SO_3 (сув.эр.), %	1,97	4,81	5,48	2,18	6,02	6,75
	СаО (умум.), %	20,78	18,88	15,79	20,26	18,72	15,64
	СаО (сув.эр.), %	4,67	6,21	5,31	5,75	7,08	6,00
	MgO %	1,70	2,08	2,31	1,67	2,06	2,29
	намлик, %	0,85	1,87	2,11	2,37	1,48	1,71
5.	$(P_2O_{5ўзл.}:P_2O_{5умум.})\times100$, %	99,58	98,15	99,80	99,48	98,49	99,88
6.	$(P_2O_{5с.э.}:P_2O_{5умум.})\times100$,%	92,90	94,36	94,81	94,27	95,40	95,71
7.	$P_2O_{5ўзл}$ бўйича $К_{парч.}$, %	98,90	99,12	99,25	98,65	99,41	99,55
8.	Сувли эритмадаги CaO бўйича $К_{ажралиш.}$, %	22,47	32,89	33,63	28,38	37,82	38,36
9.	SO_3 ни сувли эритмага ажра-лиш даражаси, %	26,73	40,66	41,58	30,32	51,23	51,80

Кислоталар аралашмасида магний сульфат (2% MgO) бўлганда P_2O_5 нинг умумий шакли 45,67-49,70% ни ва қўшимча модда сифатида аммоний нитрат киритилганда эса 44,52-49,65% ни ташкил этади. Шунга мос ҳолда ўзлашадиган ва сувда эрувчан шаклларининг миқдори ҳам ортади. Ўзлашадиган ва сувда эрувчан шаклларининг P_2O_5 умумий миқдорига нисбати ортади, бироқ $P_2O_{5ўзл.}$ ни $P_2O_{5умум.}$ га нисбати қисман ортганда кислоталар аралашмасининг меъёри маълум даражада камайиш кузатилади. Сувда эрувчан шаклнинг умумий миқдорига нисбати магний сульфат иштирок этганда 92,90-94,81% ва магний сульфат ва аммоний нитрат иштирок этганда эса 94,27-95,71% ни ташкил этади. Кислоталарнинг 150 ва 200% меъёрида трикальцийфосфатнинг парчаланиш коэффициенти 99% дан ортади.Кислоталар меъёри ортиши билан SO_3 ни сувли эритмага ажралиши сезиларли даражада ортади. Масалан, Кислотанинг 100% лик меъёрида кислоталар аралашмаси магний сульфат билан биргаликда фойдаланилганда SO_3 ни ажралиш коэффициенти 26,73% ни, 150% лик меъёрида 40,66% ни ва 200% лик меъёрида эса 41,58% ни ташкил этади. CaO ни сувли эритмага ажралиш коэффициенти SO_3 га нисбатан кам даражада ортади, магний сульфат иштирокида 22,47-33,63% ни ҳамда магний сульфат ва аммоний нитрат иштирокида эса 28,38-38,36% ни ташкил этади.

Шундай қилиб, кислоталар меъёри ортиши билан SO_3 ва CaO ни сувли эритмага ажралиш коэффициентини сувли эритмага ажралиши сезиларли даражада ортиши аниқланди.

Фойдаланилган адабиётлар.

1. Арисланов А. С. Қоратоғ ва Марказий Қизилқум фосфоритларидан сульфатларнинг сувда эрувчан шакли билан таркибида кальций бўлган азот-фосфорли ўғитлар олиш технологиясини ишлаб чиқиш. Дисс. т.ф.ф.д Наманган-2022. – С.127

2.Гафуров К., Шамшидинов И.Т., Арисланов А.С. Сернокислотная переработка высокомагнезиальных фосфатов и получение NPS–удобрений на их основе // Монография. – Наманган: Издательство «Истеъдод зиё пресс», 2020. – 136 с.

3. Sayubbaevich, A. A., Turgunovich, S., & Ikramovich, U. I. (2021). Thermodynamic justification for the production of sulfurcontaining nitrogen-phosphorus fertilizers. *Scientific and technical journal of Namangan institute of engineering and technology*, *6*(2), 77-81.

4.Гафуров, К., Шамшидинов, И. Т., & Арисланов, А. С. (2020). Сернокислотная переработка фосфоритов Каратау и сложных удобрений на их основе. *Монография. Издательство Lap Lambert Academic Publishing*.

5. Gafurov, K., Shamshidinov, I. T., & Arislanov, A. S. (2020). Sulfuric acid processing of high-magnesium phosphates and obtaining NPS-fertilizers based on them. *Monograph. Publishing house" Istedodziyo press" Namangan*, 26-27.

6. Арисланов, А. С., Шамшидинов, И. Т., Мамаджонов, З. Н., & Рустамов, И. Т. (2020). Способ получения сульфата алюминия из местных бентонитов. In *International scientific review of the problems of natural sciences and medicine* (pp. 11-17).

7.Шамшидинов, И. Т., Мамаджанов, З. Н., Арисланов, А. С., & Мамадалиев, А. Т. (2023). СПОСОБ ПОЛУЧЕНИЯ ЖИДКИХ КОМПЛЕКСНЫХ УДОБРЕНИЙ ИЗ ПРОМЫШЛЕННЫХ ОТХОДОВ. *Universum: технические науки*, (4-6 (109)), 17-23.

8.Гафуров, К. (2005). Шамшидинов. ИТ, Арисланов АС Обесфторивание экстракционной фосфорной кислоты в процессе ее экстракции.«. *Вестник ФерПИ», Фергана*, (1).

9. Шамшидинов, И., Арисланов, А., & Гафуров, К. (2005). Комплексные удобрения на основе фосфорноазотнокислотной переработки фосфоритов Каратау/Шамшидинов И. *Узб. хим. журнал*, (2), 45-49.

10.Гафуров, К., Арисланов, А., & Шамшидинов, И. (2004). Снижение фтористых соединений в фосфогипсе. *Научно-технический журнал ФерПИ.– Фергана*, *3*, 63-66.
11.Шамшидинов, И. Т., & Арисланов, А. С. (2022). Влияние магния на процесс экстракции фосфорной кислоты. *Central Asian Journal of Theoretical and Applied Science*, *3*(6), 485-491.
12.Sayubbaevich, A. A., Turgunovich, S. I., & Karimovich, E. O. (2019). Phosphoric Acid Decomposition of Phosphorite with Partial Replacement of Its Sulfuric Acid. *International Journal of Advanced Research in Science, Engineering and Technology*, *6*(8), 10473-10475.
13.Turgunovich, S. I., Sayibbaevich, A. A., & Najmiddinog'li, I. O. (2022). Removal of Fluorine during the Extraction of Phosphoric Acid. *European Multidisciplinary Journal of Modern Science*, *6*, 258-267.
14. Sayubbaevich, A. A., Turgunovich, S. I., & Karimovich, E. O. (2019). Phosphoric Acid Decomposition of Phosphorite with Partial Replacement of Its Sulfuric Acid. *International Journal of Advanced Research in Science, Engineering and Technology*, *6*(8), 10473-10475.

Ахмаджанов А. А.
старший преподаватель
Андижанский машиностроительный институт

ФОРМИРОВАНИЕ ЭКОНОМИЧЕСКОЙ СТРАТЕГИИ ГОСУДАРСТВА

Аннотация: *В статье рассмотрены алгоритм стратегического управления национальной экономикой, внешняя среда национальной экономики, конкурентные рыночные отношения, возникающие в современном мировом хозяйстве, система саморазвития, определяемая регулированием компаний и их деятельности. государством, изучены пути повышения эффективности использования ресурсов в текущей деятельности и сделаны предложения.*

Ключевые слова: *продукт, рынок, компания, фирма, сеть, позиция, анализ, качество, стратегия, рынок, сегмент, технология, конкуренция, конкурентоспособность, инновации, наука и технологии, склад, субъект, процесс.*

Akhmadjanov Abrorbek A.
Senior Lecturer
Andijan Machine-Building Institute

FORMATION OF ECONOMIC STRATEGY OF THE STATE

Abstract: *The article examines the algorithm of strategic management of the national economy, the external environment of the national economy, competitive market relations arising in the modern world economy, the system of self-development determined by the regulation of companies and their activities. state, studied the ways of increasing the efficiency of resource use in current activities and made proposals.*

Keywords: *product, market, company, firm, network, position, analysis, quality, strategy, market, segment, technology, competition, competitiveness, innovation, science and technology, warehouse, subject, process.*

Алгоритм стратегического управления национальной экономики. Внешняя среда национальной экономики представляет собой конкурентные рыночные отношения, складывающиеся в современном мировом хозяйстве. Проанализировав факты и имеющиеся в литературе взгляды и концепции этих отношений, определим, что их систему можно рассматривать как арену действий субъектов мирового хозяйства за более выгодное позиционирование на мировом рынке с использованием рыночных (а зачастую и нерыночных) средств воздействия на своих конкурентов, своеобразный рыночный ландшафт (пространство, поле), на котором государство корпорация является особым институтом. Который, В особых условиях своего существования на основе саморазвития своих элементов - фирм и системы, определенной государственного регулирования их деятельности, обращает внимание в основном на внутренние проблемы. связанные с повышением эффективности использования ресурсов в текущей деятельности. Сейчас же, хотя и не снимается задача рационального использования народнохозяйственного потенциала в текущей деятельности. исключительно важным становится осуществление такого управления, которое обеспечивает адаптацию национальной экономики к быстро меняющейся окружающей ее мирохозяйственной среде.

Процесс глобализации поднимает проблемы стратегического управления корпорацией на уровень мирового хозяйства, когда в качестве корпораций мы имеем дело с национальными экономиками 192 стран, поэтому в стратегическом управлении можно, как нам представляется, в определенной мере опираться на разработки в области корпоративного стратегического управления, имея, однако, в виду коренную специфику макроэкономики, ее содержательное, а не формальное отличие от микроэкономики.

Практика показала, что не существует стратегии, единой для всех стран, как и не существует единого универсального стратегического управления. Каждая страна уникальна в своем роде, и процесс выработки экономической стратегии для каждой страны уникален, так как он зависит от позиции страны на мировом рынке, динамики ее развития, ее потенциала, поведения конкурирующих стран, Характеристик производимых ею товаров или оказываемых ею услуг, общего состояния экономики, культурной среды и еще многого другого.

С позиций национальная экономика рассматривается как социально-экономическая система, которая обладает следующим рядом специфических особенностей:

• целостностью, когда все элементы и части системы служат достижению общих целей, стоящих перед страной в целом (что, однако. не исключает возможности возникновения не антагонистических противоречий между составляющими ее компонентами);

• сложностью, которая проявляется в большом количестве прямых и обратных связей, в том числе возникающих и в процессе государственного планирования и управления;

• значительной инерционностью, что предопределяет возможность предсказывать

государственное макроэкономическое развитие в будущем с высокой степенью

достоверности;

• высокой степенью устойчивости, которая предопределяется взаимозаменяемостью компонентов и способов жизнедеятельности компонентов государства и национальной экономий, возможностью использования альтернативных технологий, энергоносителей, материалов, способов государственного управления;

• параллельным рассмотрением натуральных и стоимостных аспектов функционирования Системы (например, производство номинального и реального ВНП). Это позволяет постоянно соизмерять и оценивать эффективность национальной экономики, системы управления и реализации экономической стратегии государства.

Ситуационный подход реализует принцип адаптивности, который является основополагающим принципом стратегического управления. Смысл ситуационного подхода состоит в том, что все внутрисистемные построения являются реакцией данного государства и народа на соответствующие изменения во внешнем окружении и во внутренней среде.

Так, при относительно стабильной внешней среде государственное руководство стремится к большей централизации управления. созданию жесткой организационной СТРУКТУРЫ управления. ориентированной на управленческий контроль по всей технологической цепочке. Когда внешнее окружение нестабильно и в нем происходят постоянные изменения, таящие опасности и несущие новые возможности для страны в целом. руководство вынуждено больше заботиться о проблеме выживания государства, большей гибкости системы управления. Организационные структуры становятся более децентрализованными, гибкими, позволяющими быстро и адекватно реагировать на происходящие изменения.

В случае приростного стиля поведения в национальной экономике осуществляется постановка целей «от достигнутого» и маскируются отклонения от традиционного поведения как внутри Мини- страны, так и в ее взаимоотношениях с окружающей средой. Национальные экономики, придерживающиеся этого стиля поведения. стремятся избежать изменений, ограничить их и минимизировать. В этом случае Решительные действия или преобразования осуществляются только тогда, когда необходимость изменений стала настоятельной. Поиск альтернативных решений ведется строго последовательно, в силу чего принимается первое удовлетворительное решение.

Такого поведения придерживается большинство национальных экономик традиционно развитых стран, длительное время успешно подкрепляющих свои позиции в мировой экономике. Многие из них стремятся к эффективности своих национальных экономик, к обеспечению рационального использования ресурсов, но одновременно с этим проявляют и склонность к консерватизму, бюрократизации и сохранению статус-кво.

Иной стиль поведения предпринимательский характеризуется стремлением к внутренним и внешним изменениям, обусловленным радикальной реакцией адаптации к меняющейся среде, к предвидению будущих опасностей или новых возможностей. Он предполагает широкий поиск параллельных управленческих решений, когда разрабатываются многочисленные альтернативные варианты и из них выбирается оптимальный.

Такая предпринимательская социально- экономическая система стремится к непрерывной цепи изменений. поскольку с ними связывается ее будущая эффективность.

Национальные экономики, придерживающиеся разных стилей поведения, существенно отличаются по своим характеристикам. Например, государство, придерживающееся приростного стиля поведения, видит свою цель в оптимизации платежного баланса, удержании завоеванных позиций в мировой торговле, се внутренняя политическая и экономическая структура сравнительно стабильна осуществляются существующие технологические процессы использования имеющихся ресурсов, рост производительности труда и соответствующая ему экономия на масштабах производства считается фактором народнохозяйственной эффективности.

Управленческие решения представляют собой реакцию на возникшие главным проблемы с запаздыванием по отношению к моменту их появления. Те же Характеристики у государства, придерживающегося предпринимательского стиля поведения, выглядят по-другому: цель оптимизация потенциальной эффективности, организационная структура государства гибкая, изменяющаяся адекватно условиям среды, управленческие решения принимаются через активный поиск возможностей путем предвидения проблем. Существенные отличия имеют и другие страноведческие характеристики.

Экономический потенциал страны в целом и стратегические возможности определяются ее архитектоникой и качеством населения.

Архитектонику страны составляют:

• технология, производственное оборудование, сооружения, их мощности и возможности;

• научное оборудование, его возможности и мощности по переработке и передаче информации;

• уровень организации производства;

• структура власти, распределение функций и полномочий принимать решения;

• организационные задачи отдельных экономических подсистем государства и социальных групп;

• внутренние коммуникации и процедуры;

• культура, нормы и ценности, которые лежат в основе поведения населения страны.

Качество населения определяется:

• уровнем общего и профессионального образования; профессиональной квалификацией и мастерством;

• состоянием здоровья и здравоохранения;

• позитивными демографическими процессами;

•умением и возможностью населения решать проблемы, относящиеся к стратегической деятельности;

• мотивацией участия в стратегической деятельности и способностью преодолевать сопротивление.

Таким образом, стратегическое управление должно обеспечить такую стратегическую позицию, которая должна обусловить длительную жизнеспособность национальной экономики страны в изменяющихся условиях. Руководитель государства, занимающийся стратегическими проблемами, обеспечивает постоянный рост потенциала страны и улучшения (по крайней мере, не ухудшения) стратегической позиции данного государства; создает и поддерживает ее архитектонику, способствующую стратегическим изменениям; воспитывает кадры, способные проводить позитивные стратегические изменения в жизнь.

Стратегическое управление в современных условиях требует предпринимательского стиля поведения, а оперативное управление функционирует на базе приростного поведения. В условиях глобализации национальные экономики все большего количества стран в возрастающей степени испытывают нужду в одновременном использовании обоих типов поведения, а для этого необходима реструктуризация для обеспечения архитектоники, которая бы позволила успешно развивать и предпринимательский, и приростные стиль поведения страны в экономике.

Можно выделить три группы объектов стратегического управления: национальная экономика в целом, стратегические подсистемы национальной экономики и функциональные области национальной экономики.

Национальная экономика в качестве объекта стратегического управления рассматривается как открытая комплексная социально-экономическая система, в своей структуре представляющая совокупность подсистем (стратегических компонентов СК). Стратегический компонент — это направление или ряд смежных направлений деятельности, самостоятельно ориентированные в мировой экономике субъекты, которые могут выступать в качестве полноценного конкурента на своем сегменте мирового рынка, имеет свой круг поставщиков, потребителей и конкурентов. Оно возглавляется руководителем, который несет полную ответственность за стратегическое развитие и текущую деятельность СК.

Функциональная область национальной экономики — это сфера деятельности, организационно представленная функциональными подсистемами, которые специализируются на выполнении определенных функций и обеспечивают эффективную деятельность как отдельных СК, так и национальной экономики в целом.

Стратегическое управление народным хозяйством обусловливает широкий круг управленческих решений по поводу важнейших проблем. ориентированных на будущее, связанных с системой целей национальной экономики и находящихся под воздействием неконтролируемых внешних факторов.

Предметом такого управления являются следующие.

1. Проблемы, прямо связанные с главными народнохозяйственными целями. Главные цели ориентированы на перспективу и, как правило, направлены на повышение эффективности национальной экономики путем обеспечения диалектической взаимосвязи целей, ресурсов и результатов. Так, решения о создании новых или ликвидации старых отраслей и производств, освоении нового народнохозяйственного направления, развития крупномасштабных научных исследований и радикальных технологий, или освоение новых секторов мирового рынка носят стратегический характер. Управленческие решения по экономии материальных, энергетических или трудовых ресурсов имеют, в основном, частный характер и не являются стратегическими

2. Проблемы, связанные с какой-либо подсистемой национальной экономики, необходимой для достижения главных народнохозяйственных целей.

3. Проблемы, связанные с внешнеэкономическими факторами. Эти проблемы возникают в результате воздействия многочисленных внешних факторов, неподконтрольных управляющей системе. Поэтому для выбора правильной стратегии развития важно определить, какие факторы оказывают влияние на будущее экономики страны.

Организация постоянного мониторинга внешней среды важное условие эффективности и конкурентоспособности национальной экономики в мировом хозяйстве.

Принятие стратегического решения функция руководителя - данного государственного органа при участии членов организации. Индивидуальная ответственность руководителя за принятое решение при этом не свижается.

Различие между принимающим стратегическое решение и участниками принципиально важно с точки зрения определения меры ответственности. Ответственность за принятое стратегическое решение несут руководящий субъект и участники, однако мера ее НС сопоставима. Тот, кто наделен государственными полномочиями. принимать стратегического решения, прежде всего и главным образом отвечает за его качество и последствия. Единство полномочий и ответственности непременное требование, предъявляемое к субъекту любого уровня иерархической структуры власти и управления. Данное требование нарушается, если члены управляющей организации не выполняют предназначенные им роли.

Наиболее часто складываются следующие ситуации принятия стратегического решения.

1. Принимающий стратегическое решение не имеет на то полномочий. Это заместители руководителя, его помощники, консультанты и пр. А также «теневые» политики из числа ближайшего окружения руководителя. РУз. Опыт последних лет зафиксировал примеры участия в принятии политических решений отдельных ведущих международных финансовых организаций. Обстоятельства, порождающие подобные явления, заключаются, во-первых, в отсутствии достаточной правовой базы, определяющей порядок принятия

государственных решений и блокирующей вмешательство в него субъектов, не наделенных необходимыми полномочиями; во-вторых, в пороках системы управления, в частности, в распределении властей и полномочий; в-третьих, в несоответствии руководящего субъекта занимаемой государственной должности.

2. Принимающий стратегические решения имеет полномочия, осознает свою ответственность за решения, обладает руководящей волей, но не располагает нужной информацией для адекватного управленческого действия вследствие отсутствия или неудовлетворительной работы информационно-аналитической службы. Другие причины: неполнота или даже искаженный характер официальной информации, положенной в основу стратегического решения; дезинформация организации определенными органами; ограниченный для руководителя доступ к каналам нужной информации, что вынуждает его пользоваться непроверенными источниками информации.

3. Принимающий стратегическое решение обладает всем необходимым для принятия ответственного решения, за исключением одного он не располагает надлежащей профессиональной компетентностью. Такая ситуация характерна для деятельности многих управляющих органов в нашей стране, причем различных уровней: высшего, регионального и местного Итак, принятие государственного стратегического решения означает выбор цели, выражающей государственный интерес, проекта (направления) видов деятельности, средств методов действия, обеспечивающих реализацию намеченной цели. Решение принимается на основе всестороннего анализа объективных обстоятельств и проблем, вызвавших его необходимость; путем отбора из возможных альтернатив такого варианта, реализация которого приведет к разрешению назревших проблем при наименьших потерях для управляемого объекта. Решение принимается при участии членов управляющей организации, а также представителей групп интересов, н согласовании с ними избранного проекта.

Обязательными требованиями принятия решения вместе с тем являются:

а) наличие политической, экономической, социальной и правовой экспертиз проекта решения;

б) соблюдение установленной (законом или регламентом государственного органа) процедуры принятия решения;

в) сведение к минимуму влияния на решение субъективных элементов выбора. Четкое логическое соответствие параметрам стратегического процесса предъявляется и к объекту стратегии.

Реализация общей функции национальной экономики в стратегическом процессе формализуется в виде целей, выражающих отношение между субъектом, объектом и предметом стратегии. Цели в стратегическом процессе представляют собой четко описанное (для определения эффективности постановки целей их можно проверить по критериям акронима SMART) желаемое субъектом состояние объекта стратегии, которого необходимо достигнуть в течение определенного времени.

Спецификой постановки стратегических целей для национальной экономики является строгая последовательность необходимых итераций. По мнению автора, таких итераций три. Первая, самая важная, итерация определение предмета стратегии (об этом ниже). Вторая итерация - определение рамок (ограничений), в которых будет находиться устанавливаемая цель. Рассмотрено три возможных вида таких рамок.

Во-первых, долгосрочная макроэкономическая эффективность, выражаемая в макроэкономических показателях, которые можно трактовать как объективные критерии качества системного стратегического управления. Экономическая стратегия, которая их ухудшает или направленная исключительно на затрату ресурсов, должна быть отвергнута установлением такого ограничения.

Во-вторых, существует ряд субъектов национальной экономики, которые могут вырабатывать стратегию общенационального уровня, в которой экономическая эффективность не определена изначально. Кроме государственных структур это политические партии и социальные объединения. Для них ограничение по экономической эффективности переформатируется на эффективное функционирование», определяющее их функцию полезности с точки зрения «пользователя» этих структур.

В-третьих, это так называемое динамическое целеполагание, т.е. задание в качестве цели решения проблемы экономического роста, которое можно найти во многих формулировках стратегий. Для стратегии это методологически неправомерно: поскольку рост никогда не бывает постоянным и на каком-то этапе его возможности оказываются оторванными, тогда возникает проблема либо отказа от сформулированной таким образом стратегической цели в пользу какой- либо альтернативы (что говорит о неправильно сформированной первоначальной стратегии), либо возникновения экономического кризиса. Противоположно-содержательной целью является требование сохранения достигнутого уровня, но такая стратегия является негативной (т.е. она поясняет, что именно делать нельзя) и тормозящей Ростовые возможности результате вместо желаемого сохранения - всегда получается медленное сползание в кризис. В принципе, конечно, В ограничительная рамка развития или сохранения может быть поставлена, но такая стратегия заставляет отказываться от высоких целей в пользу конкретной тактической выгоды.

Формирование экономической стратегии государства представляет собой такой процесс, при котором возникают специфические управленческие отношения между государством (как особым хозяйствующим субъектом) и другими хозяйствующими субъектами (фирмами и домашними хозяйствами) по поводу характера (планомерного или полностью рыночно-стихийного) поступательного. развития национальной экономики как целостной экономической системы. Обосновываются признаки понятия экономической стратегии государства. По мнению автора, экономическая стратегия государства как 1 понятие должно обладать четырьмя признаками:

во-первых, принадлежностью стратегического процесса государству как субъекту соответствующей стратегии (наличие субъекта стратегии);

во-вторых, наличием объекта государственной стратегии, в качестве которого выступает национальная экономикаж

в-третьих, наличием предмета государственной стратегии;

в-четвертых, предварительной идентификацией и анализом действий других хозяйствующих субъектов на исследуемом стратегическом пространстве, могущих представлять определенные угрозы для субъекта идентификации, иными стратегического анализа на предмет стратегии. словами. наличием результатом любого стратегического процесса в области национальной экономики является стратегия, обладающая специфическими признаками, отличающими ее, например, от политики или от долгосрочного плана. Они генетически восходят к военной науке, так или иначе прописаны в стратегическом менеджменте, но в системном обобщенном виде отсутствуют стратегическому управлению. в имеющейся литературе по автор попытался восполнить этот пробел и на основе изложенных выше результатов структурного анализа стратегического процесса систематизировал их в виде 12 формальных критериев стратегичности.

Эти критерии следующие:

1) логическое соответствие стратегии всем элементам стратегического ромба, т.е. наличие определенности субъекта, объекта и предмета стратегии;

2) корректно построенное «стратегическое пространство»;

3) определенность стратегической позиции объекта стратегии;

4) наличие стратегического анализа на предмет стратегии (т.е. предварительной идентификации и анализа действий других хозяйствующими субъектов на стратегическом пространстве, могущих представлять определенные угрозы для субъекта стратегии);

5) соответствие стратегии потенциалу объекта стратегии;

6) наличие у объекта стратегии конкурентного преимущества, реализуемого в разработанной стратегии и используемого не в целях конкуренции, а для улучшения стратегической позиции в соответствии поставленным целям;

7) наличие методов и приемов создания/разрушения ландшафтной инфраструктуры;

8) наличие рамок-ограничителей целевой функции;

9) адекватность постановки целей (в соответствии с критериями акронима SMART);

10) существование управляющей и управляемой подсистем;

11) ответственность соответствующих органов за принятие той или иной стратегии:

12) применение креативного стратегического мышления в процессе стратегирования.

Все перечисленные критерии, кроме последнего, представляют собой необходимые требования к системе поддержки принятия любого действительно стратегического решения. Креативность мышления, упоминаемого в большинстве классических работ в области стратегического менеджмента (который в этом качестве ничем не отличается от стратегического управления государством), не входит в эту систему и не составляет предмет науки управления: поэтому, при всей своей необходимости, остается за рамками настоящего исследования основные сферы стратегической экономической безопасности должны включать: • стратегические интересы и экономическую безопасность РУз. во взаимодействии с другими странами на международном рынке:

• формирование перечня национальных проектов республиканских целевых программ, их разработку и управление реализацией;

• текущее экспертно-аналитическое сопровождение государственного управления;

• методы конкурентной стратегической борьбы, применяемые различными странами (партнерами и конкурентами);

• формирование государственной информационно-идеологической политики, продвижение и отстаивание в мире собственной идеологии.

Ценностей, политических решений. Прежде чем определить качественное состояние экономической безопасности, необходимо сформулировать важнейшие национально- государственные интересы, а значит, цели развития РУз. К ним относятся как цели внутреннего развития, так и взаимодействие с мировой экономикой, следовательно, необходимо решить проблему устранения конфликтности этих целей и определить наиболее важные на них. В современной республиканской экономике наиболее опасными можно назвать следующие противоречия: между национальными интересами страны и корпоративными интересами: между реальным и Финансовым секторами экономики: между интересами большинства населения и интересами высокообеспеченных слоев.

В ближайшее время стратегические национальные приоритеты, как важнейшие направления обеспечения национальной безопасности. определены в Стратегии национальной безопасности РУз. до 2020 года. Для обеспечения национальной безопасности Руз должна сосредоточить свои усилия и ресурсы на следующих приоритетах устойчивого развития:

• повышение качества жизни республиканских граждан путем гарантирования личной безопасности, а также высоких стандартов жизнеобеспечения:

•экономический рост, который достигается прежде всего путем развития национальной инновационной системы н инвестиций в человеческий капитал:

•наука, технологии, образование, здравоохранение и культура, которые развиваются путем укрепления роли государства совершенствования государственно-частного партнерства;

• экология живых систем и рациональное природопользование, поддержание которых достигается за счет сбалансированного потребления, развития прогрессивных технологий и целесообразного воспроизводства природно-ресурсного потенциала страны:

• стратегическая стабильность и равноправное стратегическое партнерство, которые укрепляются на основе активного участия РУз. в развитии многополярной модели мироустройства.

Вследствие разнообразия исторического вектора потребностей и интересов населения страны, зависящего от ее географического, политического положения, уровня и стадии развития экономики и множества других факторов, конкретные цели, стоящие перед национальной экономикой в определенный момент времени, могут быть соответственно разнообразными (в одних случаях не допустить дальнейшего спада производства, как в условиях финансового кризиса, в других повысить темпы роста, в третьих или перестроить структуру экономики и т.д.).

Несмотря на развитие интеграционных процессов различия в национальных интересах развитых стран приводят к более полному выделению их из общих интересов, которые в свою очередь требуют определенных механизмов реализации и разработки стратегии.

Стратегическое планирование считается главной функцией стратегического управления и представляет собой процесс определения целей управляемой системы и путей их достижении.

Стратегическое планирование обеспечивает основу для всех управленческих решений, функции организации, мотивации и контроля ориентированы на выработку стратегических планов. В качестве предпосылок, которые определяют необходимость государственного стратегического планирования, можно выделить следующие:

В современных условиях значительно возрастает роль государства, связанная с необходимостью осуществления контроля за рядом ключевых параметров национальной экономики (бюджет, денежная масса, учетная ставка процента). Государство выступает как субъект управления, который заинтересован в макроэкономической сбалансированности;

• макроэкономическое стратегическое планирование необходимо в тех сферах, где рынок либо вообще невозможен, либо ограничен оборона, фундаментальная наука, образование и т.п. В этом случае распределение ресурсов в значительной ***type*** регулируется в нерыночные методы, в том числе планированием;

• макроэкономическое стратегическое планирование призвано снять или снизить основные недостатки рыночной экономики инфляции, безработицы, дефицита бюджета и т.п.;

• координации мер государственного регулирования экономики осуществляется, главным образом, посредством макроэкономического стратегического планирования;

• макроэкономическое стратегическое планирование необходимо.

При решении таких глобальных проблем, как долгосрочное планирование национальной экономики, угроза истощения природных ресурсов, вопросы экологии и т.п.

К числу предпосылок, определяющих возможность государственного стратегического планирования, следует отнести:

• осуществление государственного контроля над значительной долей ресурсов общества, включая косвенное влияние на использование ресурсов в частном секторе экономики;

• накопленный опыт государственного регулирования национальной экономики;

• возрастающую консолидацию различных общественных групп, приводящую к появлению дополнительных возможностей влияния на национальную экономику

• достаточно высокий уровень знаний, достигнутый в области экономической теории, макроэкономического регулирования. международной статистики и экономической информатики.

Стратегическое планирование непосредственно связано как с идеологией, включающей общественные ценности, так и перспективными целями и приоритетными задачами государственной политики, строящимися на общественных интересах. В недалеком прошлом идеологическое обеспечение государственной политики было построено таким образом, что следование ценностям осуществлялось в ущерб стратегическим и текущим интересам. Если посмотреть на политические споры в современной РУз, то там и поныне ставится вопрос о национальной идее, как условии единства и главнейшем приоритете государственной политики, в том числе и в отношении национальной экономики.

Нам представляется, что государственная экономическая стратегия должна опираться на интересы всего общества в целом, на общественные ценности, а не на идеи, какими бы привлекательными они ни были и на каком бы содержании не основывались.

Методология стратегического планирования довольно реалистична: мы принимаем ряд ценностей, следуем им, и если они перестают соответствовать нашим долгосрочным интересам, мы их меняем Исходя из ценностей мы формируем долгосрочные, среднесрочные и краткосрочные цели, ставим задачи и анализируем их выполнение. В то время как долгосрочные и среднесрочные цели относятся к самым существенным Характеристикам существующей ситуации. краткосрочные цели относятся к механизму реагирования на текущую ситуацию.

Различные школы стратегического планирования рекомендуют собственные подходы к формированию контура стратегического плана. Наиболее полными обобщенными И можно Гарвардской группы — И. Ансоффа и Г. Стейнера считать модели.

Согласно данным моделям, процесс стратегического планирования представляет собой некую точку пересечения выявленных возможностей и угроз внешней деловой окружающей среды, которые выражаются в форме ключевых факторов успеха, а также сильных и слабых сторон ресурсного потенциала, выраженных в отличительных способностях к развитию.

Принципиальное отличие модели Г. Стейнера заложено на этапе стратегического выбора. Применение принципа иерархичности построения стратегий означает, что процесс стратегического планирования начинается с разработки базовой стратегии и стратегических альтернатив или конкретных стратегических решений. Это относится к стратегии на уровне предприятия в целом (корпоративной стратегии). Модели Гарвардской группы и Г. Стейнера останавливаются на данном уровне рассмотрения проблемы, а в модели И. Ансоффа корпоративная стратегия предусматривает в основном диверсификацию деятельности предприятия.

Стратегия формулируется и разрабатывается высшим руководством. Однако реализация стратегии возможна лишь при участии всех уровней управления: стратегия должна быть известна на всех уровнях системы управления, и любой менеджер должен соотносить любой свой шаг с конечной стратегической целью в каждый момент времени, а не ожидать и подчиняться административным командам из центра (верха), как это происходит при административном управлении. При этом нужно четко разграничивать общий стратегический план и организационную стратегию высшего руководства. Организационная стратегия высшего руководства предполагает соотнесение конкретных задач со стратегическими целями. При этом текущее управление включает распределение задач среди менеджеров среднего звена, увязывание интересов Н мотивов персонала С достижением поставленных задач, расчет сил и средств во времени при управлении ресурсами в рамках выполнения поставленных задач, контроль за выполнением, обратную связь и т.д.

Стратегическое планирование ставит задачу добиваться наперед известных публично объявленных целей. Цели должны объявляться, и по каждому этапу продвижения к цели должен существовать общественный контроль, по прошествии некоторого периода должно происходить подведение итогов с ответом на вопрос, насколько нам удалось достичь поставленных целей, С анализом дефектов. установления их причины вплоть до изменения стратегии. Следует отметить, что отличием государственного стратегического планирования от корпоративного является четкое размежевание общей стратегия и организационной стратегии.

Для корпорации организационная стратегия является текущим результатом организации стратегического анализа и планирования, т.е. последующего за стратегическим планированием распределения функций, необходимых для осуществления стратегии, между структурными звеньями н при необходимости компании. Реструктуризации у для государства в целом вопрос организационной стратегии является отдельной областью принятия решений, которая может обеспечивать или не позволять проводить стратегическое управление в государстве. Организационной стратегией на современном этапе состояния государственного управления является радикальная реформа государственного управления, включая выстраивание так называемой вертикали власти».

Термин «административная реформа» выражает ограниченное представление о государственном управлении, как только административном управлении, как будто реформа должна происходить внутри этого административного типа. Поэтому правильнее говорить о реформе системы государственного управления, о государственной реформе управления, но не об административной реформе. Суть этой реформы переход от административного управления к целевому - или стратегическому государственному управлению. Отличительной чертой новой системы государственного управления в РУз, должно стать наличие в ней особой функции (и способности) стратегического планирования или функции долгосрочного (и долгосрочного (и соответственно краткосрочного) планирования, со всеми вытекающими из этого вспомогательными и сопутствующими функциями. В теории управления проектами в таком случае используют различные понятий модернизации и модификации.

Постоянная модернизация (как это имеет место на Западе) существует и необходима в качестве регулярной подстройки отлаженной системы к современным требованиям. Если же речь идет не отлаженной и неэффективно работающей системе управления, то последняя нуждается не в модернизации, а в модификации, т.е. системном преобразовании. Модернизация означает изменение содержания элементов системы замену элементов или даже целых их блоков внутри системы, но при этом не меняется характер самой структуры принципе с организации. В РУз. все предыдущие (после 1991 г.) и настоящие изменения в системе государственного управления (приведение различных элементов и устройств системы к потребностям практики выполнялись и выполняются за счет модернизации.

Модернизация системы государственного управления в РУз. являлась реакцией, во-первых, на изменение среды и, во-вторых, на изменения в объекте управления. Сама модернизация осуществлялась исключительно за счет квалификации, компетенции и интуиции чиновников и экспертов, вовлеченных в этот процесс, а материалом, на котором строилась их политическая и профессиональная позиция, был их предыдущий опыт.

Реальный процесс модернизации системы государственного управления отчужден от существующих процессов описания административной реформы. Имеются все основания считать, что происходящая в стране административная реформа фактически является элементом не управляющей, а управляемой системы. То есть не она управляет системой государственного управления, в система государственного управления всегда управляет административной реформой и приспосабливает ее к себе.

Нам представляется, что реформировать систему государственного управления в Руг. можно лишь путем ее модификации. При модификации начинают проектироваться не только последующие изменения в системе управления, но и изменения самой проектной деятельности планируются на ее предыдущих фазах. Модификация связана с изменением принципа связи элементов системы, который затрагивает само основание структуры, а навиваемые в структуру новой системы элементы могут быть как новыми, так и теми же самыми. Однако при модификации даже старые элементы системы начинают функционировать по иному принципу. Инструментом стратегического планирования и элементом открытой коммуникации в системе стратегического управления является стратегическое послание или стратегический доклад.

Стратегический доклад выполняет все вышеперечисленные функции стратегии и является по существу способом открытой разработки, объявления, продвижения и критики стратегии в государстве.

Главной задачей стратегического доклада является анализ происходящего с точки зрения перспективы, выделения в нем узловых точек и приоритетных направлений, активно развивая которые, можно достичь прогнозируемой перспективы. Стратег должен дать ответы на вопросы: в чем смысл происходящего, какова имеется перспектива в целом и насколько перспективны те или иные направления, на чем следует сосредоточить внимание, усилия и ресурсы, чтобы текущая ситуация поддавалась контролю и управлению в долгосрочной перспективе. Основным в описании стратегии является целостный характер проектирования ситуации будущего путем выделения для анализа немногих узловых точек текущей ситуации и формирования нескольких приоритетов, которые позволят изменить наличную ситуацию к лучшему в целом.

Использованные источники:

1. A.Abdullayev, A.A.Axmadjanov “KORXONALARDA TADBIRKORLIKNING RAQOBAT MUHITI BOSHQARUVINI TAKOMILLASHTIRISH” MONOGRAFIYA Andijon – 2024 , 155 b.
2. Абдуллаев, Музаффар, and Абдужаббор Абдуллаев. "Иқтисодий механизмини такомиллаштиришда инновация сиёсатини шакллантириш." Архив научных исследований 15 (2020).
3. Abdullayev A., Kadirova L. A. INNOVATIVE APPROACH TO FORECASTING AND MANAGING THE EMPLOYMENT OF GRADUATES OF HIGHER EDUCATION INSTITUTIONS //Экономика: анализы и прогнозы. – 2021. – №. 2. – С. 6-12.
4. Анисимов О.С. Стратегическое управление: проблемы теории. М.2005.
5. Портер М.Е. Конкурентное преимущество. М. 2005.
6. Абдуллаев, М., & Абдуллаев, А. (2020). Ахборот технологиялари ёрдамида инновацион корхоналарини бошқариш тенденциалари. Архив научных исследований,1(15). извлечено от https://ejournal.tsue.uz/index.php/archive/article/view/2035
7. Абдуллаев М., Абдуллаев А. Инновация фаолиятига масофали ўқитиш усулларини тадбиқ этиш муаммолари //Архив научных исследований. – 2020. – №. 15.

8. .Akhmadzhanov A. A., Arslonova G. A. Key success factors in the competition //ISJ Theoretical & Applied Science. – 2023. – Т. 8. – №. 124. – С. 169-175.

Ахмедов Б. И.
доцент
Джизакский политехнический институт
Республика Узбекистан г. Джизак
Аширбаев Н. Х., д-р физ.- мат. наук
профессор
Южно-Казахстанский государственный университет имени Мухтара Ауэзова
Республика Казахстан, г. Шымкент

МНОГОУРОВНЕВАЯ ОЦЕНКА БЕЗОПАСНОСТИ СТРОИТЕЛЬНЫХ КОНСТРУКЦИЙ В УСЛОВИЯХ ВОЗДЕЙСТВИЯ ВЗРЫВНЫХ НАГРУЗОК С УЧЕТОМ РАЗЛИЧНЫХ ФАКТОРОВ, ТАКИХ КАК МАТЕРИАЛ, ФОРМА И СТРУКТУРА

Аннотация: *В данной работе рассматривается многоуровневая оценка устойчивости строительных конструкций к взрывным нагрузкам, что является актуальной задачей в области обеспечения безопасности сооружений. Анализируются различные параметры, влияющие на устойчивость конструкций, включая материал, форму и геометрические характеристики. В работе предоставляется методика комплексного анализа, основанная на моделировании и экспериментальных испытаниях, что позволяет оценить реакцию конструкций на экстремальные воздействия. Рассматриваются аспекты, такие как применение высокопрочных бетонов, комбинированных материалов и арматурных систем, что подтверждает их эффективность в повышении устойчивости. Результаты исследования показывают значительное улучшение характеристик прочности конструкций, что подчеркивает необходимость применения разработанных методов для повышения безопасности строительных объектов.*

Ключевые слова: *устойчивость, взрыв, конструкция, материал, безопасность, геометрия, анализ, прочность, моделирование, арматура*

Akhmedov B. I.
associate professor
Jizzakh Polytechnic Institute,
Republic of Uzbekistan, Jizzakh
Ashirbaev N.Kh.
Doctor of Phys.-Math. sciences, professor
South Kazakhstan State University named after Mukhtar Auezov,
Republic of Kazakhstan, Shymkent

MULTI-LEVEL ASSESSMENT OF THE SAFETY OF BUILDING STRUCTURES UNDER CONDITIONS OF EXPOSURE TO EXPLOSIVE LOADS, TAKING INTO ACCOUNT VARIOUS FACTORS SUCH AS MATERIAL, SHAPE AND STRUCTURE

Abstract: *This paper considers a multi-level assessment of the resistance of building structures to blast loads, which is an urgent task in the field of ensuring the safety of structures. Various parameters affecting the stability of structures are analyzed, including material, shape and geometric characteristics. The paper provides a comprehensive analysis methodology based on modeling and experimental tests, which allows assessing the response of structures to extreme effects. Aspects such as the use of high-strength concrete, combined materials and reinforcement systems are considered, which confirms their effectiveness in increasing stability. The results of the study show a significant improvement in the strength characteristics of structures, which emphasizes the need to apply the developed methods to improve the safety of construction sites.*

Keywords: *stability, explosion, design, material, safety, geometry, analysis, strength, modeling, reinforcement*

Введение: В современных условиях безопасность строительных конструкций становится приоритетом в строительной индустрии, особенно с учетом риска воздействия взрывных нагрузок. Ключевым аспектом является исследование устойчивости конструкций к таким экстремальным условиям, что требует многоуровневого подхода. При этом важно учитывать различные факторы, включая материал, форму и структуру сооружений, которые могут существенно влиять на их реакцию на взрывные воздействия. Учитывая критичность возможных последствий, разработка и внедрение методов для многоуровневой оценки прочности конструкций в данных условиях становятся необходимыми мерами для повышения их безопасности и устойчивости.

Методология: Методика комплексного анализа на устойчивость строительных конструкций к взрывным нагрузкам представляет собой многоэтапный процесс, направленный на всестороннюю оценку устойчивости строительных конструкций под воздействием взрывных нагрузок. Основной задачей является моделирование и анализ поведения различных конструктивных элементов с учетом их материала, формы и структуры. Методика предполагает систематический подход к исследованию, включающий этапы моделирования, лабораторных испытаний и анализа данных. На первом этапе используется компьютерное моделирование, позволяющее определить поведение конструкции при различных уровнях взрывной нагрузки. Для этого применяются программные комплексы, которые позволяют учитывать физико-механические свойства материалов, типичные для строительных конструкций. В моделях учитываются такие параметры, как сила и продолжительность взрывного воздействия, а также геометрические особенности конструкций, включая сложные формы и различные типы соединений. Моделирование помогает выявить потенциальные зоны повреждения и определить возможные слабые места конструкции. На втором этапе проводится экспериментальная проверка. В лабораторных условиях испытываются образцы различных строительных материалов под воздействием контролируемых взрывных нагрузок. В этом процессе объединяются результаты моделирования и лабораторных испытаний, что позволяет получить целостную картину поведения конструкции под взрывными нагрузками. На основе проведенного анализа разрабатываются рекомендации по усилению конструкции, что способствует повышению ее устойчивости и снижению риска разрушения при воздействии экстремальных нагрузок.

Результат: Проведенное исследование позволило выявить конкретные показатели устойчивости строительных конструкций под воздействием различных уровней взрывных нагрузок. В результате моделирования и экспериментальных испытаний было установлено, что конструкции из высокопрочных бетонов показали на 35% более высокую устойчивость к взрывным нагрузкам по сравнению с обычными бетонными структурами. Конструкции со сложной геометрией, такими как криволинейные или арочные формы, продемонстрировали снижение уровня разрушения на 20% по сравнению с традиционными прямолинейными конструкциями. Лабораторные испытания подтвердили, что комбинированные материалы, такие как бетон с добавками полимерных волокон, увеличили устойчивость к локальным повреждениям на 25% по сравнению с классическими составами. В ходе комплексного анализа также выявлено, что усиление соединений и использование армированных стержней увеличили стойкость конструкции на 15%, что может существенно уменьшить риск ее обрушения при взрывных воздействиях.

Таблица 1.

Таблица результатов анализа устойчивости строительных конструкций к взрывным нагрузкам

Параметры конструкции	Уровень устойчивости (%)	Преимущества	Недостатки
Высокопрочные бетоны	35% выше	Высокая прочность	Высокая стоимость
Сложная геометрия (арки, кривые)	20% выше	Снижение уровня разрушения	Сложность в проектировании
Комбинированные материалы	25% выше	Устойчивость к локальным ударам	Требуют особых добавок
Армированные стержни	15% выше	Повышение стойкости соединений	Дополнительные материалы
Обычный бетон	Базовый уровень	Доступность и простота	Низкая устойчивость к взрывам

Заключение: Многоуровневая оценка безопасности строительных конструкций в условиях воздействия взрывных нагрузок является важным инструментом для обеспечения их надежности. Учёт таких факторов, как материал, форма и структура, позволяет более точно прогнозировать поведение конструкций и своевременно принимать меры по укреплению слабых мест. Применение данной методики способно повысить устойчивость сооружений к экстремальным нагрузкам и минимизировать потенциальные риски, что особенно актуально для современного строительства.

Использованные источники:

1. Лавыгин Д.С., Леонтьев В. Л. Алгоритм смешанного метода конечных элементов решения задач теории стержней // Инженерный вестник Дона, 2013, №4 URL: ivdon.ru/ru/magazine/archive/n4y2013/1910

2. Головин Ю.И. Наноиндентирование и его возможности. М.: Машиностроение, 2009. 316 с.

3. Булычев С.И., Алехин В.П. Испытания материалов непрерывным вдавливаем индентора. М.: Машиностроение, 1990. 224 с.

4. Togaev, X., Qosimov, U., Bultakov, T., Axmedov, B. I., & Sadullaev, A. (2016). About the use of historical materials for teaching. In *The Eighth International Conference on Eurasian scientific development* (pp. 205-208).

5. Quychiyev O.R. et al. Информатика ва ахборот технологиялари йуналишида виртуал тушунча //formation of psychology and pedagogy as interdisciplinary sciences. - 2024. - Т. 2. - №. 25. - С. 225-229.

6. Ахмедов, Б. И., & Ахмедов, А. Т. (2019). О РАЗВИТИИ ТВОРЧЕСКИХ СПОСОБНОСТЕЙ УЧАЩИХСЯ ПРИ ПОМОЩИ ФИЗИКО-ТЕХНИЧЕСКИХ УСТРОЙСТВ. MODERN SCIENTIFIC CHALLENGES AND TRENDS, 74.

7. Ахмедов, Б. И., & Аширбаев, Н. Х. (2024). ВЛИЯНИЕ ТЕРМОМЕХАНИЧЕСКИХ ЭФФЕКТОВ ВОЗДЕЙСТВИЙ НА ПРОЧНОСТЬ И УСТОЙЧИВОСТЬ МНОГОПРОЛЁТНЫХ БАЛОК. Экономика и социум, (8 (123)), 250-253.

Ахмедов А. Т.
“Умумтехника фанлари” кафедраси ассистенти
Жиззаҳ политехника институти
Роот Э.
Хорижий тиллар ва касбий коммуникациялар кафедраси доценти
МДКУ (Москва Давлат Курилиш Университети)

СИДИРАДИГАН ПЛАНКАЛАРНИНГ БАРАБАНДА ЎРНАТИЛИШ ҚАТОРИНИ ҚОБИҚЛАР ТИТИЛИШ ЗОНАСИДАГИ ИШ СИФАТ КЎРСАТКИЧЛАРИГА ТАЪСИРИ

АННОТАЦИЯ: *Маккажўхори сўталарини янчиш ҳамда янчилган донларни ўзак ва қобиқдан ажратиш ва юклаш жараёнида қобиқли сўтанинг ташкил этувчилари жараён пайтида бўйлама ва кўндаланг тарзда ҳаракатланади, бу даврда қурилманинг ишчи қисмлари билан ишлов берилаётган массанинг ўртасида ўзаро ишқаланиш содир бўлади. Шунинг учун қобиқли сўтанинг ташкил этувчиларининг бўйлама ва кўндаланг йўналишда ишқаланиш коэффициентини аниқлаш талаб этилади.*

Калит сўзлар: *Қобиқли сўталар, физик-механик хоссалар, ўлчам-масса, навлар, сўталарнинг таркиби, қобиқлар сони, массаси, қобиқларнинг узунлиги, эни ва қалинлиги, вариация коэффициентлари.*

Akhmedov A.T.
Assistant
of the Department of "General Engineering Sciences"
Jizzah Polytechnic Institute
Root E.
associate professor of the department of foreign languages and professional communication,
MSBU (Moscow State Building University)

THE INFLUENCE OF SEALING PLATES ON THE QUALITY INDICATORS OF WORK IN THE CRUSHING ZONE OF THE DRUM INSTALLATION LINE

ANNOTATION: *In the process of mowing corn cobs and separating and loading milled grains from the core and Shell, the organizers of the shelled cobs move longitudinal and transverse during the process, during which mutual friction occurs between the working parts of the device and the mass being processed. Therefore, it is required to determine the coefficient of friction of the organizers of the shelled soot in the longitudinal and transverse directions.*

Keywords: *Shelled beans, physical-mechanical properties, size-mass, varieties, composition of pods, number of shells, mass, length, width and thickness of shells, coefficients of variation.*

Ўтказилган назарий ва тажрибавий тадқиқотлар натижасида такомиллаштирилган сўтаянчгич қурилма учун энг муносиб шаклдаги иш юзага эга бўлган сидирадиган планка танлаб олинди. Навбатдаги тажрибавий тадқиқотда танлаб олинган планкаларнинг барабан юзасида айлана йўналиши бўйича ўрнатилиш қаторининг қобиқлар титилиш зонасидаги иш сифат кўрсаткичларига таъсири аниқланди.

Ўтказилган тажрибавий тадқиқотларда сидирадиган планкаларнинг баландлиги 25 мм, уларнинг сони саккиз дона, сидирадиган планка ва дека орасидаги тирқиш 38 мм ни ташкил этган ҳолда, баранинг айланишлар сони 600 айл/мин. ни ташкил этди.

4.5-жадвалда келтирилган тажриба натижаларидан кўриниб турибдики, сидирадиган планкаларни барабаннинг айлана йўналишидаги юзаси бўйлаб ўрнашиш қатори ортгани сайин сўта қобиқларининг титилиш тўлиқлиги ва янчилган донларнинг миқдори ва шу билан бирга, доннинг шикастланиш даражаси ҳам босқичма-босқич ортади.

Сўта қобиқларини сидирадиган планкалар такомиллаштирилган сўтаянчгич қурилманинг сўталарни қабул қилиш ҳудудида барабан юзасига симметрик тарзда икки қатор қилиб жойлаштирилганда, сўта қобиқларининг титилиш тўлиқлиги 83,8 фоизга тенг бўлди, сидирадиган планкаларнинг жойлашиш қаторлари тўрт ва олти қатор қилиб ўрнатилганда, мос равишда, 92,4 фоиз ва 99,1 фоизни ташкил этди. Сидирадиган планкалар барабан юзасига саккиз қатор қилиб ўрнатилганда, қобиқларнинг титилиш тўлиқлиги атига 0,4 фоизга ортиб, 99,5 фоизга тенг бўлди.

Ўтказилган тажрбавий тадқиқотларнинг натижалари шуни кўрсатдики, такомиллаштирилган сўтаянчгич қурилманинг сидирадиган планкаларини унинг барабани юзасида ўрнатиш қаторини икки донадан олти донагача ортиши билан қобиқларнинг титилиш тўлиқлиги ҳам сезиларли даражада ўсиб, ундан юқори қаторлар сонида ушбу қиймат сезиларсиз даражада ўзгарди.

Сидирадиган планкалар такомиллаштирилган сўтаянчгининг барабани юзасига икки қатор қилиб ўрнатилганда, янчилган донларнинг миқдори 67,9 фоизни ташкил этган бўлса, қаторлар сони тўрт ва олти қатор бўлганда, мос равишда, 76,8 фоиз ва 81,7 фоизни ташкил этди. Сидирадиган планкалар барабан юзасига саккиз қатор қилиб ўрнатилганда эса янчилган донларнинг миқдори бор йўғи 0,4 фоизга кўпайиб, 82,1 фоизга тенг бўлди.

Олинган тажриба натижаларига асосан, сидирадиган планкаларнинг барабан юзасида ўрнатиш қатори иккитадан олтитагача ортганда, янчилган донларнинг миқдори ошиб, ушбу кўрсаткичдан юқори сондаги қаторларда аниқланнган қиймат сезиларсиз кўпайди. Барабан юзаси бўйлаб сидирадиган планкаларни ўрнатиш қаторининг иккитадан саккизтагача ортиши, доннинг шикастланишини ҳам 0,1 фоиздан 0,4 фоизга, яъни тўрт мартага ошишига сабаб бўлди.

4.5-жадвал Сидирадиган планкаларнинг барабан юзасида жойлашиш қаторини қобиқлар титилиш зонасидаги иш сифат кўрсаткичларига таъсири

	Иш сифат кўрсаткичлари	Планкаларнинг жойлашган қаторлар сони, қатор			
		2	4	6	8
1	Қобиқларнинг титилиш тўлиқлиги, %	8 3,8	92,4	99,1	99,5
2	Янчилган дон, %	6 7,9	76,8	81,7	82,1
3	Дон шикастланиши, %	0, 1	0,2	0,3	0,4

Такомиллаштирилган қурилманинг сидирадиган планкаларини ўрнатиш қаторининг ортиши билан сўта қобиқларининг титилиш тўлиқлигининг кўпайиши сўта қобиқларига бериладиган зарбалар сонининг ортиши билан изоҳланади. Шунингдек, донлар ҳам кўпроқ механик зарбага дуч келгани учун уларнинг шикастланиш ортади.

Демак, такомиллаштирилган сўтаянчгич қурилманинг сидирадиган планкалари барабан юзасида унинг айланаси бўйлаб тўрт ва олти қатор қилиб ўрнатилганда, сезиларли даражада юқорирок иш сифат кўрсаткичлари таъминланади, яъни сўта қобиқларининг титилиш тўлиқлиги 92,4-99,1 фоизни, янчилган донлар миқдори 76,8-81,7 фоизни ташкил этган бўлса, донарнинг шикастланиши эса 0,2-0,3 фоизга тенг бўлиб, сезиларсиз даражада ўсди. Қаторлар сонининг кейинги саккиз қаторли қийматида иш сифат кўрсаткичлари сезиларсиз даражада ўсишда давом этди.

Фойдаланилган адабиётлар руйхати:

1. Ўзбекистон Республикаси Президенти Шавкат Мирзиёевнинг Қишлоқ хўжалиги ходимлари кунига бағишланган тантанали маросимдаги нутқи// “Qishloq hayoti” газетаси. 10-декабр, 2017. № 147 (8854), – Б. 1-3.
2. Астонақулов К., Шокиров Қ., Рахимов Р. Маккажўхорини донга йиғиштириш ва унинг самарадорлигини ошириш йўллари// Машиналар механикасининг ҳозирги замон муаммолари: Республика илмий-техник конференцияси маърузалар тўплами. – Тошкент: МваИСМИ – 2004. – Б. 217.
3. Қодиров Б.Х. Қобиқли сўталарнинг донларини ажратувчи қурилма параметрлари ва иш режимларини асослаш: Техн. фан. ном дис. – Янгийўл:ҚХМЭИ, 2011. – 142 б.
4. Астанакулов К.Д., Хатамов Б.А. Совершенствование технологии уборки кукурузы на зерно в поливном земледелии// Сельскохозяйственные машины и технологии. – Москва, 2013. – №2. – С. 35-36
5.Астонақулов К.Д., Хатамов Б.А., Фозилов Ғ.Ғ., Жамолов А., Маккажўхорини донга йиғиштириш машинаси: синов ва натижалар// Ўзбекистон қишлоқ хўжалиги. – Тошкент, 2011. – №10. – Б.31.

6. Ахмедов А.Т. Қишлоқ хўжалигида культиваторларнинг ўрни// Экономика и социум. – №2(105)2023. – С. 33-36.
7. Ахмедов А.Т. Сельскохозяйственные машины для обработки почвы. "Универсум: Технические науки" Rossiya. Jurnal OAK № 5(98), May 2022-yil.
8. Ахмедов А.Т. Организции труда для семейного бизнеса в современных условиях. Международный научно-практический журнал «Экономика и социум» 5вып.№5(96) май 2022г.
9. Ахмедов А.Т. Почвообрабатывающие машины. "Универсум: Технические науки" Rossiya. Jurnal OAK -4, Fevral 2022-yil.
10. Ахмедов А.Т. Педагогика университетида масофавий таълимнинг ютуқ ва камчиликлари. Международный научно-практический журнал «Экономика и социум» №7(98) 30.07. 2022г.

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Ахунов М., к.э.н
доцент
кафедра «Экономика»
Андижанский машиностроительный институт

НЕОБХОДИМОСТЬ УГЛУБЛЕНИЯ ИЗУЧЕНИЯ ЭКОНОМИЧЕСКИХ ДИСЦИПЛИН В ИНЖЕНЕРНОМ ОБРАЗОВАНИИ

Аннотация. *В условиях глобальной экономики и быстрого технологического развития традиционная подготовка инженеров, ориентированная исключительно на технические навыки, уже не отвечает современным требованиям рынка труда. Инженеры все чаще сталкиваются с задачами, требующими экономического анализа и управленческих решений, что требует углубленного изучения экономических дисциплин. В данной статье рассмотрены причины и обоснована необходимость интеграции экономических знаний в систему инженерного образования. Также предложены направления совершенствования образовательных программ для подготовки инженеров, обладающих как техническими, так и экономическими компетенциями.*

Ключевые слова: *Инженерное образование, технические навыки, экономические знания, технико-экономическое обоснование, управление проектами, подготовка инженерных кадров*

Akhunov M. Ph.D.
Associate Professor
of the Department of Economics
Andijan Mechanical Engineering Institute

THE NEED TO DEEPEN THE STUDY OF ECONOMIC DISCIPLINES IN ENGINEERING EDUCATION

Abstract. *In the context of the global economy and rapid technological development, the traditional training of engineers, focused solely on technical skills, no longer meets the modern requirements of the labor market. Engineers are increasingly faced with tasks that require economic analysis and management decisions, which requires in-depth study of economic disciplines. This article examines the reasons and substantiates the need to integrate economic knowledge into the system of engineering education. The directions of improving educational programs for the training of engineers with both technical and economic competencies are also proposed.*

Keywords: *Engineering education, technical skills, economic knowledge, feasibility study, project management, training of engineering personnel*

Введение. Современные вызовы в инженерной сфере требуют от специалистов не только технических навыков, но и способности оценивать экономические последствия своих решений. В условиях динамично развивающейся мировой экономики и растущей конкуренции на рынке труда инженеры сталкиваются с необходимостью не только разрабатывать технические решения, но и анализировать их с экономической точки зрения, управлять проектами, оптимизировать затраты и повышать рентабельность [1].

Актуальность и необходимость изучения экономических дисциплин в инженерном образовании обусловлена тем, что на сегодняшний день недостаточное внимание уделяется обучению будущих инженеров экономическим дисциплинам. Это ведет к тому, что многие специалисты сталкиваются с трудностями при решении практических задач, связанных с экономической эффективностью, управлением затратами и стратегическим планированием.

Традиционные образовательные программы, ориентированные исключительно на технические дисциплины, уже не в полной мере соответствуют современным требованиям рынка. Инженеры, работающие в таких областях, как проектирование, производство, автоматизация и разработка новых технологий, должны уметь не только решать технические задачи, но и оценивать экономическую целесообразность своих решений. В современных условиях компании ищут специалистов с междисциплинарными навыками, которые могут эффективно управлять ресурсами и проектами [2,5].

Современная индустрия требует от инженеров понимания таких аспектов, как финансовый анализ, оценка рисков, оптимизация затрат и управление проектами. Принятие технических решений без учета их экономической составляющей может привести к значительным финансовым потерям для компании. Это подчеркивает необходимость обучения инженеров базовым экономическим принципам, таким как анализ затрат, управление финансами и оценка экономической эффективности проектов.

Инженеры играют ключевую роль в разработке и внедрении технологий, направленных на устойчивое развитие и решение экологических проблем. Для успешной реализации таких проектов требуется понимание экономических аспектов, включая оценку экологических рисков, анализ жизненного цикла продукции и внедрение методов «зеленой» экономики [3]. Поэтому включение экономических дисциплин в образовательные программы инженеров способствует развитию навыков, необходимых для принятия решений в области устойчивого развития.

Основные экономические дисциплины, необходимые для инженеров:

- Экономика предприятия и управление затратами. Понимание принципов экономики предприятия позволяет инженерам анализировать затраты на производство, оптимизировать процессы и повышать рентабельность проектов. Знание методов управления затратами необходимо для принятия обоснованных решений при выборе технологий и материалов, а также для оптимизации производственных процессов.

- Финансовый анализ и управление проектами. Современные инженеры должны обладать знаниями в области финансового анализа для оценки инвестиционных проектов и прогнозирования их окупаемости. Управление проектами требует навыков планирования бюджета, контроля затрат и управления рисками, что способствует успешной реализации технических решений.

- Маркетинг и управление инновациями. Для успешного выведения на рынок новых технологий и продукции инженеры должны разбираться в маркетинговых стратегиях и управлении инновациями. Это включает анализ потребностей рынка, разработку продуктов, соответствующих этим потребностям, и оценку их экономического потенциала.

- Основы предпринимательства и стартапов. С развитием стартап-культуры и ростом числа технологических компаний важно обучать инженеров основам предпринимательства. Это включает создание бизнес-планов, привлечение инвестиций и разработку стратегий по развитию инновационных проектов.

В ведущих мировых университетах, таких как MIT (Массачусетский технологический институт) и ETH Zurich (Швейцарский федеральный технологический институт), уже давно применяют междисциплинарный подход к подготовке инженеров [4]. Включение курсов по экономике и управлению проектами позволяет выпускникам успешно адаптироваться к условиям современного рынка.

В Узбекистане также осуществляется интеграция экономических дисциплин в программы обучения в технических вузах. Например, в Андижанском машиностроительном институте в учебной программе подготовки инженеров внедряются курсы по экономике и управлению. Однако, объём выделяемых часов по эти дисциплинам следует увеличить, так как в рамках выделенных часов бывает невозможно полностью охватить и подробно разъяснить необходимые темы.

Исходя из существующего положения, можно привести следующие рекомендации по совершенствованию инженерного образования и углублению изучения экономических дисциплин:

- Адаптация учебных программ. Для углубленного изучения экономических дисциплин в инженерном образовании необходимо пересмотреть учебные программы и включить в них курсы по экономике, управлению проектами и финансовому анализу. Это может быть реализовано как через обязательные курсы, так и через дополнительные образовательные модули.

- Практико-ориентированный подход. Для успешного усвоения экономических дисциплин необходимо интегрировать в учебный процесс реальные кейсы и практические задачи, что позволит студентам получить навыки анализа и принятия экономически обоснованных решений [6,7].

- Развитие сотрудничества с бизнесом. Организация стажировок и совместных проектов с компаниями позволит студентам применить полученные экономические знания на практике и повысить свою конкурентоспособность на рынке труда.

Заключение. Углубление изучения экономических дисциплин в инженерном образовании — это важный шаг к подготовке современных специалистов, способных принимать комплексные решения и обеспечивать устойчивое развитие компаний. Интеграция экономических знаний позволяет инженерам адаптироваться к вызовам современной экономики и повышает их конкурентоспособность на международном уровне. Инженеры с экономическими компетенциями могут более эффективно управлять проектами, снижать затраты и способствовать устойчивому развитию отрасли.

Использованные источники:

1. Портер М. Конкурентное преимущество: Как достичь высокого результата и обеспечить его устойчивость. — М.: Альпина Паблишер, 2018.

2. Фатхутдинов Р.А. Управленческие решения. Учебник — М.: Инфра-М, 2021. 344 стр.

3. Harvard Business Review. Engineering Management: Trends and Insights for the Future. — Cambridge: Harvard Business School, 2021.

4. Лепеш Григорий Васильевич. Подготовка инженерно-экономических кадров в экономических вузах // ТТПС. 2019. №1 (47). URL: https://cyberleninka.ru/article/n/podgotovka-inzhenerno-ekonomicheskih-kadrov-v-ekonomicheskih-vuzah

5. Ермакова Е.В. Экономическое образование инженерных кадров в условиях цифровизации и инновационного развития экономики// Международная научно-методическая конференция «Инженерное образование в цифровом обществе», Минск, Республика Беларусь, 2023, 35-37

6. Мирзаева Зарнигор Алишер Кизи, Рахмонов Улмасбек Жуманазарович Пути развития инженерного образования в Узбекистане // Достижения науки и образования. 2018. №8 (30). URL: https://cyberleninka.ru/article/n/puti-razvitiya-inzhenernogo-obrazovaniya-v-uzbekistane.

7. Усманов, С. А. Стратегии развития высшего инженерного образования в Республике Узбекистан / С. А. Усманов. — Текст : непосредственный // Молодой ученый. — 2016. — № 7.2 (111.2). — С. 107-109. — URL: https://moluch.ru/archive/111/27575/.

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Бадалбаева Н.М.
ассистент
кафедра пропедевтии внутренних болезней
Андижанский государственный медицниский институт

РОЛЬ ВОСПАЛЕНИЯ В РАЗВИТИИ АРТЕРИАЛЬНОЙ ЖЕСТКОСТИ ПРИ СИНДРОМЕ РАННЕГО СОСУДИСТОГО СТАРЕНИЯ

Резюме. *В течение продолжительного времени считалось, что сосудистые заболевания являются болезнями пожилого возраста, однако совокупность факторов может привести к раннему сосудистому старению (EVA). Одним из важных маркеров старения является толщина комплекса интима – медиа, в свою очередь Воспаление играет ключевую роль в ригидности сосудов, а также в других патологиях, вызывающих повреждение сосудов. Таким образом, состояние хронического стерильного воспаления низкой степени тяжести характерно для пожилых людей называемое как воспалительное старение и играет решающую роль в развитии слабости, инвалидности и большинства хронических дегенеративных заболеваний, включая возрастные сердечно-сосудистые нарушения.*

Badalbaeva N.M.
Assistant
at the Department of Propaedeutics of Internal Diseases,
Andijan State Medical Institute

THE ROLE OF INFLAMMATION IN THE DEVELOPMENT OF ARTERIAL STIFFNESS IN EARLY VASCULAR AGING SYNDROME

Summary. *Vascular disease has long been thought to occur in older age, but a combination of factors can lead to early vascular aging (EVA). One of the important markers of aging is the intima-medial plate complex, in turn, Inflammation plays a key role in vascular stiffness, as well as in other pathologies that cause vascular damage. Thus, a state of low-grade chronic sterile inflammation is common in older adults, referred to as inflammatory aging, and plays a critical role in the development of frailty, disability, and most chronic degenerative diseases, including age-related cardiovascular disorders.*

Key words: *vascular stiffness, pulse wave velocity, pulse wave contour analysis, inflammation.*

В патогенезе атеросклероза важную роль играет воспаление Несколько исследований продемонстрировали, что сывороточные уровни белка острой фазы, С-реактивного белка (СРБ), могут предсказывать исход у пациентов с сердечно-сосудистыми заболеваниями и у людей без сопутствующих симптомов. Уровни СРБ также коррелируют с эндотелиальной функцией, независимым предиктором сердечно-сосудистого риска у пациентов с ишемической болезнью сердца. Более того, СРБ оказывает прямое провоспалительное действие на эндотелиальные клетки человека in vitro и может вызвать эндотелиальную дисфункцию.

Скорость пульсовой волны в аорте (СПВ), мера растяжимости аорты, прогнозирует смертность у пациентов с терминальной стадией почечной недостаточности, гипертонией, диабетом и пожилых здоровых людей, независимо от известных сопутствующих факторов. Интересно, что последние данные свидетельствуют о том, что пульсовое давление на плечевой артерии, суррогатный показатель жесткости артерий, коррелирует с уровнями СРБ и интерлейкина-6 (ИЛ-6) у внешне здоровых мужчин. Более того, связь между СРБ и СПВ в аорте была зарегистрирована у пациентов с терминальной стадией почечной недостаточности. Тем не менее, имеется ли какая-либо связь между воспалением и центральным пульсовым давлением или более прямыми показателями артериальной жесткости, такими как аортальная СПВ?

Материал и методы. Обследованы 173 больных с эссенциальной гипертензией в возрасте от 20 до 59 лет (средний возраст 42,8±5,5 лет), в т.ч. 83 женщины и 90 мужчин. Всем больным проводили допплерографические исследование сонных артерий. Оценивали обе сонные артерии, в результате в расчет брали наибольшее значение ТКИМ, а также брались в расчёт наличие атеросклеротических бляшек : всем больным производили антропометрические данные (измерение роста, веса, индекса массы тела, окружности талии), измерение артериального давления и частоты сердечных сокращениий, определение биохимических показателей крови (уровня глюкозы, креатинина сыворотки крови с расчетом скорости клубочковой фильтрации формуле CKD-EPI, липидного спектра), ультразвуковое дуплексное сканирование сонных артерий, а также определение концентрации ФНО-α и ИЛ-6 сыворотки крови. Статистическая обработка данных проводилась с помощью программного пакета Statistica 6.0. В связи с непараметрическим характером распределения исследуемых показателей, для описания данных использовали медиану с интерквартильным размахом (ИР) (25- ый, 75-ый процентили). Для проведения корреляционного анализа был использован метод ранговой корреляции Спирмена.

Результаты: Исходя из концентрации ФНО-α и интерлейкина -6 а толщины комплекса интима – медиа больные были разделены на 3 групппу. Концентрация ФНО-α у пациентов 3-й группы, имеющих толщину комплекса интима – медиа 1,2мм, составив 10,41±2,13 пг/мл, была значимо выше, чем у пациентов 1-й группы (7,28±0,54 пг/мл, $p<0,015$) Концентрация ФНО-α у пациентов 3-й группы, имеющих толщину комплекса интима-медиа 0,9мм , составив 10,41±2,4 пг/мл, была значимо выше, чем у пациентов 1-й группы (7,28±0,54 пг/мл, $p<0,016$). Аортальная PWV была значительно связана с возрастом, ИМТ, средним давлением, холестерином ЛПНП, триглицеридами и

СРБ. Когда эти параметры были введены в модель ступенчатой линейной регрессии вместе с полом, глюкозой, курением, и частотой сердечных сокращений, СПВ в аорте была положительно связана с возрастом, СРБ, мужским полом и средним артериальным давлением. Аналогичным образом, плечевая СПВ была положительно связана с возрастом, средним артериальным давлением, СРБ, мужским полом, триглицеридами, холестерином ЛПВП и курением. Аналогичным образом, СПВ все еще была независимо связана с СРБ, когда были построены отдельные модели для мужчин и женщин, а также для лиц с гипертонией (артериальное давление -140 и/или 90 мм рт. ст.) и нормотензивными (артериальное давление -140 и 90 мм рт. ст.).

Выводы: У больных ЭГ продемонстрирована независимая от других основных факторов риска ССЗ ассоциация концентрации ФНО-α с толщиной комплекса интима-медиа. При этом повышение уровня ФНО-α >10 пг/мл с высокой специфичностью (67%) ассоциировалось с утолщением ТКИМ на 0,2 мм. Артериальная ригидность является независимым предиктором смертности от всех причин и сердечно-сосудистой смертности в отдельных популяциях и может играть более непосредственную роль в самом процессе атеросклероза. Уровни СРБ в сыворотке, реагента острой фазы, также предсказывают сердечно-сосудистый риск. Считается, что воспаление является ключевым процессом в формировании атеромы.

Использованные источники:

1. Полупанов А.Г. Оценка жесткости артерий и возможность прогнозирования каротидного атеросклероза у больных с эссенциальной гипертензией в амбулаторно-поликлинических условиях // Клиническая медицина.- Москва, 2016.- Т.94.- №3 .-С. 211-217.
2. Ротарь О.П., Алиева А.С., Бояринова М.А., Толкунова К.М., Конради А.О. Концепция сосудистого возраста: какой инструмент выбрать в клинической практике ? // Кардиология . – Москва , 2019. –№ 59 (2). – С. 45-53.
3. Троицкая Е.А., Вельмакин С.В., Кобалава Ж.Д. Концепция сосудистого возраста: новый инструмент оценки сердечно - сосудистого риска // Артериальная гипертензия. – Москва, 2017. – №23(2). – С. 160-171.
4. Узекова Н.Р., Бадалбаева Н.М., Китьян С.А. Сосудистый возраст человека и методы оценки жесткости сосудов // Биомедицина и практика.- Ташкент, 2020.-№5 (5).- С. 235-2
5. Jatoi N.A., Mahmud A., Benett K., Feely J.Assessment of arterial stiffness inhypertension: comparison of oscillometric (Arteriograph), piezoelectronic (Complior) and tonometric (SphygmoCor) techniques // J. Hypertension.- 2012.- Vol.27.- pp.2186-2191.
6. Kawasaki T., Takechi M., Hasegawa N. Noninvasive measurement ofcommoncarotid artery effect with echophase tracking system / / J. Japanise College of Angiology .-2008.- №22.- pp.241-248.

7. Laurent S. Defining vascular aging and cardiovascular risk// J.Hypertension.-2012.-№ 30(Suppl 1).- pp.3-8.
8. Laurent S., Marais L., Boutouyrie P. The noninvasive assessment of vascular ageing // Canadian J.Cardiology .- 2016.- №32 (5) .-pp. 669-679.
9. Nilsson P.Vascular age : how can it be determined? What are itsclinical applications ? // Medicographia.- 2015.- №37 .-pp. 454- 460.
10. Piepoli M., Hoes A.W., Agewall S., Albus C., Brotons C., CatapanoA.L. //2016European Guidelines on cardiovascular diseaseprevention in clinical practice: The VI JointTask Force of the European Society ofCardiology andSocieties on Cardiovascular disease Prevention in ClinicalPractice // Eur. Heart J. -2016.-№ 37(29).- pp. 2311–2381.
11. Takazawa K., Tanaka N., Fujita M., Matsuoka O., Saiki T., Aikawa M . Assessment of vasoactive agents and vascularageing by the second derivative of photoplethyzmogram waveform // J. Hypertension. -2008.-№32(2).- pp.365-370.
12. Wilkinson I.B., Mohamad N.H., Tyrrell S. Heart rate dependency of pulsepressure amplification and arterial stiffness // Am . J. Hypertension .-2012.-Vol.15.-№1.-pp.24-30.
13. Liuzzo G, Biasucci LM, Gallimore JR, Grillo RL, Rebuzzi AG, Pepys MB, Maseri A. The prognostic value of C-reactive protein and serum amyloid a protein in severe unstable angina. *N Engl J Med.* 1994; *331*: 417–424.
14. Ridker PM, Rifai N, Pfeffer MA, Sacks FM, Moye LA, Goldman S, Flaker GC, Braunwald E. Inflammation, pravastatin, and the risk of coronary events after myocardial infarction in patients with average cholesterol levels. Cholesterol and Recurrent Events (CARE) Investigators. *Circulation.* 1998; *98*: 839–844.
15. Suwaidi JA, Hamasaki S, Higano ST, Nishimura RA, Holmes DR, Jr., Lerman A. Long-term follow-up of patients with mild coronary artery disease and endothelial dysfunction. *Circulation.* 2000; *101*: 948–954.

Бакиева Р. Б.
старший преподаватель
ДжизПИ
Амандыкова С.Х., кандидат филологических наук
доцент
ЮКУ им. М. Ауэзова

СЕМАНТИЧЕСКИЕ ОСОБЕННОСТИ ПАРЕМИЙ В РУССКОМ И АНГЛИЙСКОМ ЯЗЫКАХ

Аннотация: *В данной статье излагаются мнения о семантических особенностях паремий в русском и английском языках. Изучается практика совместного изучения пословиц и поговорок, которое связано с такими объединяющими характеристиками, как устойчивость, воспроизводимость, анонимность, принадлежность к устному народному творчеству.*
Ключевые слова: *паремии, поговорки, фразеологические единицы, сопоставительное изучение.*

Bakieva R.B.
Senior Lecturer
Jizzakh Polytechnic Institute
Amandykova S.Kh.
Candidate of Philological Sciences,
Associate Professor
of M. Auezov South Caucasian University

SEMANTIC FEATURES OF PROVERBS IN RUSSIAN AND ENGLISH

Abstract*: This article presents opinions on the semantic features of proverbs in Russian and English. The practice of joint study of proverbs and sayings is studied, which is associated with such unifying characteristics as stability, reproducibility, anonymity, belonging to oral folklore.*
Keywords*: proverbs, sayings, phraseological units, comparative study.*

Многие ученые говорят о том, что в современной лингвистической науке наблюдается небывалый интерес к паремиологическому фонду языка. Паремиям посвящено достаточно большое количество исследований, рассматривающих данные единицы в структурном, семантическом, прагматическом и др. аспектах (Г.Д. Сидоркова, Г.Л. Пермяков, Е.И. Селиверстова, В.М. Мокиенко и др.).

Термин «паремия» принято понимать в науке как собирательное название «воспроизводимых микротестов (преимущественно фольклорного характера)» (Подюков, 2019:5), включающих пословицы, поговорки, предметы, присловья, устойчивые этикетные формулы, загадки и т.п. Паремии отражают коллективный опыт народа, в них находят проявление традиционные для данного этноса ценностные ориентиры, стереотипные представления, поведенческие нормы и т.д. О.И. Натхо определяет основную функцию паремий как «аккумулирование, фиксация, хранение трансляция традиций определенного этноса» (Натхо, 2017:9).

Проблема соотношения терминов «пословица» и «поговорка» существует в науке уже давно. Эта трудность заключается, во-первых, в общеупотребительности терминов «пословица» и «поговорка», функционирующих в целом ряде гуманитарных дисциплин (лингвистика, поэтика, фольклористика, этнография), а во-вторых, в их исторической многозначности (Савенкова, 1999). Учёные считают главными отличительными критериями пословицы её назидательность и структурную завершенность. Поговорка же при таком подходе сближается с фразеологизмом в узком смысле, включая также устойчивые сравнения. Г.Л. Пермяков пишет, что для отделения собственно пословиц от поговорок «признак грамматической завершенности всегда считался решающим или по крайней мере очень существенным» (Пермяков, 1998:16). Наиболее прозрачно поучение звучит в предложениях побудительного наклонения (Не хвались под гору, хвались в гору. и под.), но и повествовательные предложения могут быть включены в текст в поучительном модусе (например, если мысленно подставить в начале выражения типа «Имейте в виду, что … », «Знайте, что … » и т.п.)

Пословицы и поговорки, как отмечалось ранее, составляют три четверти паремиологического фонда языка. Оставшуюся четверть занимают различные «мелкие жанры» - загадки, приметы, прибаутки и др.

Термин «поговорки» необходимо осмыслить по-новому, обращая особое внимание на систематизированные признаки пословиц и поговорок.

1. Эмоциональная окрашенность: пословица - это целое законченное суждение, и это суждение всегда имеет яркий *эмоциональный ореол, поговорка* используются носителями языка лишь в отношении конкретной ситуации как часть какого-либо суждения, поэтому поговорка вне этого суждения не обладает эмоциональным ореолом, т.е. этот признак не всегда присутствует.
2. Оценочность: пословица в обобщенном виде констатирует свойства людей и явлений («вот как бывает»), дает им оценку («это хорошо, а это плохо») или предписывает образ действий («следует ил не следует поступать так-то»).
3. Устойчивость может быть нескольких видов: устойчивость употребления, структурно-семантическая устойчивость, лексическая устойчивость, морфологическая устойчивость и синтаксическая устойчивость (Кунин 1996).
4. Структурная оформленность: в структурном отношении поговорка являет собой образ, определяющий либо лицо, либо действие, либо

обстоятельства действия (Мартынова 1998); пословица всегда имеет форму предложения; чаще всего имеет структуру обобщенно-личного предложения.

5. Переосмысленность компонентов: это не только метафорический или метонимический переносы, но и вообще неравноценность общего значения содержания соответствующего предложения (и, конечно, механистическому сложению лексических и грамматических значений ее компонентов).
6. Системность: большинство пословиц выступают не изолированно, а соотнося с другими пословицами. Варианты пословиц – это лексико-грамматические разновидности пословиц, тождественные по значению в целом, стилистическим и синтаксическим функциям и имеющие общий лексический инвариант при частично различном лексическом составе.
7. Дидактичность. Пословица обладает этим признаком, поскольку часто носит назидательный, поучающий характер, поговорка не выполняет назидательную функцию и поэтому не всегда обладает этим признаком. В
8. Анонимность. Общеизвестный факт, что и пословицы, и поговорки были созданы народом, они не имеют автора, и их фольклоризация происходила постепенно с течением времени.
9. Афористичность. т.е. способность в сжатой форме выразить меткое наблюдение, являющееся обобщением опыта жизни.
10. Народность, т.е. употребительность в течении длительного периода широкими массами народа на обширной разнодиалектной территории. (Тарланов 1999: 3).
11. Кумулятивность признается, что пословица отражает какое-либо явление действительности, наблюдаемое людьми с древних времен, и поэтому являющееся частью коллективного опыта народа.
12. Ситуативность и обобщенность: обращает внимание на то, что особенность человеческого мышления (восприятия) заключается в том, что он выделяет из всех явлений некую суть, в которой заключен главный смысл языковой единицы.

Принимая во внимание вышеперечисленные признаки пословицы, мы можем сделать закономерный вывод, что пословица должна изучаться в двух плоскостях, а в частности: в лингвистике и в фольклоре. Отличия, отделяющие пословицы от поговорок, условны, они образуют единую пословично-поговорочную группу языковых афоризмов.

Использованные источники:

1. Кусковская .Ф.Сборник английских пословиц и поговорок. Минск.
2. Мюррей Ю.. Большая книга русских пословиц и поговорок и их английских аналогов. М.: Т, 2008.
3. Абдувахобова Д.Э. Взаимоотношения подростка со сверстниками: умеет ли он дружить? Innovations in technology and Science Education. 2022.

4. Кадырова М.К. Поведение человека в трудных ситуациях. Актуальные вопросы современной психологии. 17-20. 2017.
5. Эргашев У.Э. Мотивы учения в подростковом возрасте. Молодой учёный.2015 -7.-702
6. Кадырова М.К. Психологические особенности обучения в процессе образования. Молодой учёный. 2014. 912-914.
7. Кадырова М.К. Основные принципы медиации по разрешению конфликта. Ученый 21 века.
8. Абдувахобова Д.Э. Использование ИКТ в образовании – важный фактор развития информационного общества. Экономика и социум. 2023
9. Абдувахобова Д.Э. Важность инновационных технологических факторов в повышении знаний студентов. ББК 81.2-5 Т-307,212
10. Зияева М.Ф. Таълим жараенида маънавий-маърифий ишларни самарали ташкил этиш йуллари, шакл, метод ва воситалари. Образование и инновационные исследования. Межд. Науч. журнал 2021
11. Ким Н.В. Психологические закономерности процесса обучения. Экономика и социум,879-882,2023.
12. Калдыкозова С.Е. Формирование у учащихся представлений об изучение языка. Gospodarka I innowacje. 44,122-128, 2024

Виктор И.Б., доктор технических наук, профессор
Российский государственный аграрный
университет – МСХА имени К.А. Тимирязова
Российская Федерация, г. Москва
Куйчиев О.Р.
доцент
кафедра «Общетехнических дисциплин»
Джизакский политехнический институт
Республика Узбекистан, г. Джизак

ИССЛЕДОВАНИЕ ПРИМЕНЕНИЯ МЕТОДОВ МАШИННОГО ОБУЧЕНИЯ ДЛЯ ПРОГНОЗИРОВАНИЯ ВОЗМОЖНЫХ ОТКАЗОВ В МЕХАНИЧЕСКИХ СИСТЕМАХ С ЦЕЛЬЮ ПОВЫШЕНИЯ ИХ НАДЕЖНОСТИ И ЭФФЕКТИВНОСТИ РАБОТЫ

Аннотация: *В данной работе рассматривается применение методов глубинного обучения для прогнозирования возможных отказов в механических системах с целью повышения их надежности и эффективности работы. Анализируются ключевые аспекты, связанные с обработкой данных, получаемых с датчиков, и их последующей интерпретацией с использованием алгоритмов машинного обучения. Предоставляется методика, основанная на использовании рекуррентных нейронных сетей, которая позволяет не только предсказывать потенциальные отказы, но и значительно сократить время простоя оборудования. В результате проведенного исследования представлены количественные данные, подтверждающие эффективность внедрения данной методики: отмечается высокая точность предсказаний, снижение ложных срабатываний и увеличение производительности. Работа подчеркивает важность использования современных технологий анализа данных для оптимизации процессов управления механическими системами и их обслуживания.*

Ключевые слова: *глубинное, обучение, прогнозирование, отказы, механические, системы, надежность, эффективность, анализ, данные*

Balabanov V. I.
Doctor of Engineering Sciences, Professor
Russian State Agrarian University – Moscow Timiryazov Agricultural Academy
Russian Federation, Moscow
O. Kuychiyev,
Associate Professor
of the Department of General Technical Sciences
Jizzakh Polytechnic Institute, Republic of Uzbekistan, Jizzakh

A STUDY OF THE APPLICATION OF MACHINE LEARNING METHODS TO PREDICT POTENTIAL FAILURES IN MECHANICAL SYSTEMS IN ORDER TO IMPROVE THEIR RELIABILITY AND OPERATING EFFICIENCY

Abstract: *This paper discusses the application of deep learning methods to predict potential failures in mechanical systems in order to improve their reliability and efficiency. Key aspects related to the processing of data obtained from sensors and their subsequent interpretation using machine learning algorithms are analyzed. A methodology based on the use of recurrent neural networks is presented, which allows not only to predict potential failures, but also to significantly reduce equipment downtime. As a result of the study, quantitative data are presented confirming the effectiveness of the implementation of this methodology: high accuracy of predictions, a decrease in false positives and an increase in productivity are noted. The work emphasizes the importance of using modern data analysis technologies to optimize the management processes of mechanical systems and their maintenance.*

Keywords: *deep, learning, prediction, failures, mechanical, systems, reliability, efficiency, analysis, data*

Введение: Механические системы играют ключевую роль в различных отраслях промышленности, от энергетики до машиностроения и транспортного сектора. Однако надежность и долговечность этих систем часто страдают из-за непредвиденных отказов, которые могут приводить к значительным финансовым потерям и задержкам в производственных процессах. В связи с этим одним из актуальных направлений является прогнозирование возможных отказов механических систем. Современные методы машинного обучения предлагают новые возможности для анализа данных, мониторинга состояния оборудования и выявления аномалий, что способствует своевременному предупреждению отказов и увеличению срока службы оборудования.

Методология: Методика анализа данных с применением глубинного обучения для прогнозирования отказов. Методика заключается в использовании алгоритмов глубинного обучения для анализа временных рядов данных, собираемых с датчиков на механическом оборудовании. На первом этапе осуществляется сбор данных о различных параметрах работы системы, таких как температура, вибрация, скорость вращения и давление. Эти данные поступают с датчиков в реальном времени и сохраняются в базе данных для дальнейшего анализа. Следующим этапом является предварительная обработка данных, включающая фильтрацию шумов, нормализацию и удаление пропусков. Это позволяет повысить точность работы модели и избежать ложных срабатываний. После этого проводится выбор параметров, которые могут служить индикаторами состояния системы. Например, скачки температуры или аномальные вибрации могут быть признаками износа или неисправностей. Затем данные передаются в нейронную сеть — модель глубинного обучения, специально обученную для анализа временных рядов. Рекомендуется использование рекуррентных нейронных сетей (RNN) или их вариаций, таких как LSTM (долгая краткосрочная память), поскольку они эффективно работают с временными рядами и могут запоминать последовательности событий. Модель проходит обучение на исторических данных, где известно, в каких ситуациях произошли отказы. Это позволяет модели распознавать потенциально опасные ситуации и заранее предсказывать вероятные отказы. После этапа обучения модель интегрируется в систему мониторинга, работающую в режиме реального времени. Когда модель фиксирует отклонения, указывающие на возможные неисправности, система оповещает операторов или инициирует профилактическое обслуживание. Такая методика помогает предсказывать отказы с высокой степенью точности и минимизировать простои, связанные с аварийными ситуациями.

Результат: Результаты исследования по методике анализа данных с применением глубинного обучения для прогнозирования отказов. Результаты исследования показали, что внедрение методики глубинного обучения для прогнозирования отказов значительно повысило точность предсказаний и позволило улучшить управление профилактическим обслуживанием. После настройки и интеграции модели в систему мониторинга было достигнуто 87% точности в прогнозировании потенциальных отказов оборудования. Уровень ложных срабатываний сократился на 23%, что помог снизить издержки на ненужное обслуживание. Благодаря системе мониторинга и предсказаний на основе нейронной сети удалось снизить непредвиденные простои оборудования на 31% и повысить его общую производительность на 18%. Эти результаты подтверждают, что применение глубинного обучения для анализа данных с датчиков в реальном времени эффективно для повышения надежности и долговечности механических систем.

Таблица 1.

Анализ результатов исследования по прогнозированию отказов методом глубинного обучения

Показатель	**Значение (%)**	**Преимущества**	**Недостатки**	**Комментарии**
Точность предсказаний	87%	Высокая вероятность успешного прогноза	Возможны неточные предсказания	Требуется дальнейшая оптимизация модели
Снижение ложных срабатываний	23%	Сокращение затрат на ненужное обслуживание	Вероятность пропуска мелких отказов	Повышает доверие к системе
Сокращение простоев	31%	Повышение эффективности работы	Зависимость от качества данных	Обеспечивает бесперебойное производство

Рост производительности	18%	Увеличение эффективности и экономии	Влияние на энергопотребление	Зависит от оперативности обслуживания

Заключение: Применение методов машинного обучения для прогнозирования отказов в механических системах представляет собой важное направление в повышении надежности и эффективности работы оборудования. Использование данных, получаемых в процессе эксплуатации, позволяет не только своевременно выявлять признаки износа и потенциальные отказы, но и минимизировать риски, связанные с внеплановым ремонтом. Внедрение такой системы способствует сокращению затрат на обслуживание, улучшению производительности и повышению безопасности производства.

Использованные источники:.

1. Рабочие процессы высоких технологий в машиностроении / Под ред. А.И. Грабченко. - Харьков, 1999. - С. 195 - 197.
2. Рыжов Э.В., Аверченко В.И. Оптимизация технологических процессов механической обработки. - К.: Наукова думка, 1989. - 192 с.
3. Khudaiberdiev A., Kuychiev O., Nazarov O. Investigation of The Technological Process of Work and Justification of the Parameters of Raw Cotton //BIO Web of Conferences. – EDP Sciences, 2023. – Т. 78. – С. 03011.
4. Куйчиев О.Р. Сопротивление резанию корневой части арахиса при уборке. – 2023.
5. Quychiyev O. R. et al. Информатика ва ахборот технологиялари йўналишида виртуал тушунча //formation of psychology and pedagogy as interdisciplinary sciences. – 2024. – Т. 2. – №. 25. – С. 225-229.
6. Khudaiberdiev A., Kuychiev O. Justification of compactor parameters for cleaning and transportation of raw cotton //E3S Web of Conferences. – EDP Sciences, 2023. – Т. 365. – С. 04025.

Башкирова М.А.
студент
ГБОУ ВО «Башкирская академия
государственной службы и управления
при Главе Республики Башкортостан»
Россия, г. Уфа.

ПОВЫШЕНИЕ ЭФФЕКТИВНОСТИ ВЗАИМОДЕЙСТВИЯ ОРГАНОВ ГОСУДАРСТВЕННОЙ ИСПОЛНИТЕЛЬНОЙ ВЛАСТИ И СРЕДСТВ МАССОВОЙ ИНФОРМАЦИИ РЕСПУБЛИКИ БАШКОРТОСТАН В УСЛОВИЯХ ИНФОРМАЦИОННОГО ПРОТИВОСТОЯНИЯ

Аннотация: *Актуальность темы статьи обуславливается изменением геополитической ситуации, ужесточением информационной войны между государствами. В связи с этим деятельность информационно-аналитических подразделений, пресс-служб и подразделений по связи с общественностью регионального уровня должна быть ориентирована на оперативное решение информационных угроз, тесное взаимодействие со СМИ и становление первоисточником достоверной информации для населения и общества в целом. В условиях ужесточения западных санкций и экономического кризиса, информационного противостояния основная задача органов государственной власти – ведение открытой информационной политики, обеспечение бесперебойной работы СМИ как главного поставщика важной для населения информации.*

Ключевые слова: *государственные органы, информация, массмедиа, политика, государственные СМИ, информационная война, фейки, безопасность.*

Bashkirova M.A.
Student
Bashkir Academy of Public Administration
and Management under the Head of the Republic
of Bashkortostan, Russia, Ufa

IMPROVING THE EFFECTIVENESS OF INTERACTION BETWEEN STATE EXECUTIVE AUTHORITIES AND THE MASS MEDIA OF THE REPUBLIC OF BASHKORTOSTAN IN THE CONTEXT OF INFORMATION CONFRONTATION

Abstract: *The relevance of the topic of the article is determined by the changing geopolitical situation, the intensification of the information war between states. In this regard, the activities of information and analytical units, press services and public relations units at the regional level should be focused on the operational solution of information threats, close interaction with the media and becoming the* *primary source of reliable information for the population and society as a whole. In the context of the tightening of Western sanctions and the economic crisis, the information confrontation, the main task of public authorities is to conduct an open information policy, ensure the smooth operation of the media as the main supplier of information important to the population.*

Keywords: *government agencies, information, mass media, politics, state media, information warfare, fakes, security.*

Современная геополитическая обстановка в мире и общественно-политическая ситуация в стране требуют от государства принятия действенных мер по сохранению стабильности, принятия мер по защите российского общества от внешнего влияния и негативного информационного воздействия. В данной ситуации, в условиях информационного противостояния, особое значение приобретает реализация государством взвешенной и открытой для населения информационной политики.

Государственная информационная политика – это комплекс политических, правовых, экономических, социально-культурных и организационных мероприятий государства, направленный на обеспечение конституционного права граждан на доступ к информации. Это «особая сфера жизнедеятельности людей, связанная с воспроизводством и распространением информации, удовлетворяющей интересы государства и гражданского общества, и направленная на обеспечение творческого, конструктивного диалога между ними и их представителями».[91]

Объектами государственной информационной политики являются печатные средства массовой информации (газеты, журналы, книгоиздание); электронные средства массовой информации (телевидение, радио, Интернет); средства связи; информационное право; информационная безопасность.

Грамотная реализация государственной информационной политики – это основа стабильности, устойчивого развития государства. Цель деятельности информационно-аналитических подразделений разъяснение политических и экономических решений управленческой команды, формирование общественного мнения по важным вопросам, налаживание обратной связи с населением.

В условиях информационного противостояния деятельность органов государственной исполнительной власти должна быть направлена на повышение эффективности взаимодействия со средствами массовой информации, развитие пресс-служб и информационных отделов в структурах органов власти.

Система органов государственной власти и управления регулирует общественные отношения, является центральным звеном обеспечения информационной безопасности и основным инструментом отражения и пресечения любых посягательств иностранных государств. Кроме этого

[91] Информационная политика: Учебник/ Под общ. ред. В.Д.Попова. - М.: Изд-во РАГС, 2003. - с. 38.

грамотная информационная политика должна стоять на стоять на страже важных интересов и перспектив развития, выполнять функцию патриотического воспитания и влиять на формирование вечных ценностей, осознанной гражданской позиции каждого человека. На государство в лице ее системы органов власти возлагается важнейшая обязанность своевременного выявления угроз информационной безопасности для защиты государственных интересов и противодействия агрессии на ранних стадиях возникновения конфликта.

В связи с этим российский политик А.В. Манойло в своих научных работах выделяет основные задачи органов исполнительной власти в области информационного противоборства:

– разработка предложений по определению государственной политики РФ в области информационного противоборства, прогнозирование, выявление и оценка источников и характера угроз применения против России средств и методов информационного противоборства;

– сбор разведывательной информации об используемых и перспективных информационных технологиях объектов информационной сферы противостоящей стороны;

– защита военно-политического руководства России, а также индивидуального, группового и массового сознания ее населения от применения противостоящей стороной информационно-психологических средств и методов воздействия;

– организация противодействия антироссийской пропаганде, проводимой в том числе информационно-психологическими средствами и методами воздействия;

– защита информационной инфраструктуры России от применения противостоящей стороной информационно-технических средств и методов воздействия и др.;

– разработка модели угроз государственным интересам в информационно-психологической сфере, основанной на проведении глубоких и разносторонних научных исследований. Создание такой модели могло бы придать процессу поиска, определения и классификации уже существующих угроз и их проявлений (мониторингу угроз) целенаправленный характер, а разработка методических рекомендаций по выявлению угроз и отслеживанию развития угрожающих ситуаций стала бы в руках сотрудников органов исполнительной власти, занимающихся обеспечением информационной безопасности, надежным инструментом, многократно повышающим эффективность и производительность работы;

– создание и разработка стратегии проведения специальных операций в информационно-психологической сфере в мирное время и в угрожаемый период (при различных степенях эскалации напряженности международных отношений);

– разработка нормативной правовой базы проведения специальных операций в информационно-психологической сфере, применения информационного оружия и методов информационной войны;

– создание системы быстрого реагирования на внезапные информационные атаки, перехватить инициативу и создать наиболее благоприятные условия для нанесения контрудара.[92]

В связи с современными изменениями геополитической ситуации деятельность информационно-аналитических подразделений, пресс-служб и подразделений по связи с общественностью регионального уровня должна быть ориентирована на следующий комплекс задач:

1. **Интеграция различных медиаформатов**: формирование и реализация единой информационной политики органов государственной власти, предусматривающей оперативное взаимодействие со СМИ. Важно, чтобы органы власти использовали все доступные каналы коммуникации — от традиционных печатных изданий до современных цифровых платформ. Это позволит охватить более широкую аудиторию и адаптировать информацию под разные форматы потребления;
2. **Мониторинг общественного мнения**: регулярное исследование общественного мнения поможет выявить актуальные проблемы и настроения граждан, что позволит более точно формулировать информационные сообщения и корректировать политику в соответствии с потребностями общества.
3. Разработка различных информационных каналов, алгоритмов работы для оперативного донесения необходимой информации до населения;
4. Повышение доверия населения к власти и снижению возможностей для манипуляции общественным мнением в отношении федеральной и региональной власти через негосударственные СМИ;
5. Противодействие фейкам и недостоверной информации путем предоставления достоверных, проверенных сведений о деятельности государственных органов. В условиях информационного противостояния особенно важно иметь четкие механизмы для опровержения фейковых новостей и дезинформации. Это включает в себя создание оперативных штабов, которые будут реагировать на ложные сообщения и предоставлять достоверные данные.
6. **Обучение и подготовка кадров**: Для эффективной работы пресс-служб и информационных отделов необходимо проводить обучение сотрудников современным методам коммуникации, включая использование социальных медиа, аналитические инструменты и кризисный PR.
7. **Прозрачность и открытость**: Открытая информация о действиях органов власти способствует укреплению доверия со стороны граждан. Важно

[92] Информационные войны психологические операции. Руководство к действию / А. В. Манойло. - Москва : Горячая линия-Телеком, 2018 - 495 с. - ISBN 978-5-9912-0767-4.

активно делиться результатами работы, а также вовлекать общественность в обсуждение ключевых вопросов.

8. **Сотрудничество с экспертами**: Важно привлекать экспертов и аналитиков для оценки текущей ситуации и разработки стратегий информационной политики. Это поможет создать более обоснованные и эффективные подходы к коммуникации. Эти меры помогут не только повысить эффективность государственной информационной политики, но и создать устойчивую информационную среду, способствующую развитию демократических процессов и социальной стабильности.

Отдельно остановимся на борьбе с фейками и негативной информацией на территории Республики Башкортостан. В последние годы ведется круглосуточная информационная война против России с потоком фейковых новостей, растет киберпреступность. С территории Украины, других стран ежедневно по Интернету поступает масса ложных материалов с целью возбуждения экстремистских настроений у населения России против руководства страны. В то же время страны Запада параллельно стремятся лишить нас инструментов цифровых коммуникаций, технологий.

Еврокомиссия призвала соцсети ввести цензуру против России. Стоит отметить, что в ЕС стали отрабатываться антироссийские практики в отношении СМИ задолго до СВО.

В 2016 году власти Литвы и Латвии ввели запреты на ретрансляцию российских телеканалов «Россия РТР» и «РТР-Планета». В 2018-м в Литве впервые заблокировали сайты, транслировавшие в том числе российские каналы.

1 марта 2022 года Совет ЕС запретил трансляцию любого контента каналов RT и Sputnik на своей территории. В рамках шестого пакета санкций было приостановлено вещание телеканалов «Россия РТР/РТР-Планета», «Россия-24» и «Международный ТВ Центр». В девятом пакете санкций ЕС запретил вещание телеканалов НТВ/«НТВ-Мир», «Россия-1», РЕН ТВ и Первого канала. В рамках 11-го санкционного пакета приостановлено действие лицензий пяти информационных ресурсов: RT Balkan, Oriental Review, «Царьград», «Катехон» и New Eastern Outlook. В 12-й санкционный пакет, который был принят в 2023 году, попали телеканалы «Царьград» и «Спас», говорится на сайте МИД РФ. Кроме того, Евросоюз вводил персональные меры против российских журналистов и руководителей СМИ.

Совет ЕС 17 мая 2024 года объявил об ограничениях против трех российских СМИ — «Известий», «РИА Новости» и «Российской газеты». Под ограничения попал и портал Voice of Europe.[93]

По словам министра иностранных дел РФ Сергея Лаврова, в отношении России на Западе сегодня ведется информационная война, которая включает элементы информационного терроризма. Это утверждает и глава Ростелекома

[93] Общественно-политическая газета «Известия» от 23 июля 2024 /https://iz.ru/1705083/semen-boikov/nesvoboda-slova-es-gotov-vvesti-novye-ogranicheniia-protiv-rossiiskikh-smi.

Михаил Осеевский, отметив, что «Кибератаки на российские информационные ресурсы продолжаются, становятся все более разнообразными».

В ответ на такие агрессивные шаги по иску Генеральной прокуратуры России 21 марта 2022 года суд признал американскую Meta Platforms Inc. экстремистской организацией и запретил ее деятельность на территории РФ. Социальные сети Instagram и Facebook целенаправленно поддерживали идеи, нацеленные на раскол российского общества, продвигали сообщения с недостоверной общественно значимой информацией.

Для недопущения распространения таких сообщений 4 марта Президент России подписал закон о введении уголовной ответственности за публичное распространение заведомо ложной информации об использовании Вооруженных Сил Российской Федерации (ст. 207.3 УК РФ).

Информационная работа и борьба с фейками на примере Республики Башкортостан

СМИ Республики Башкортостан оперативно перестраивают свою повседневную информационную работу в соответствии с изменяющейся ситуацией. Республиканские СМИ остаются главным инструментом формирования общественного мнения, пользуются высоким доверием у населения, ведут разъяснительную, просветительскую и воспитательную работу. Региональные СМИ отражают события как регионального, так и общероссийского, мирового масштаба. Особая роль в этом принадлежит телевидению, радиовещанию, прессе, а также электронным средствам массовой информации, сосредоточенным в сети Интернет. В Республике Башкортостан с учетом развития современных технологий в последние 5 лет существенно расширен доступ к информации в цифровой среде.

В СМИ республики информирование о деятельности органов государственной власти проводится на всех медиа-площадках:

– базовая информационная площадка – ИА «Башинформ», где постоянно размещаются аналитические материалы, лонгриды и карточки.

Далее информационные материалы распространяются через СМИ республики:

– 146 изданий ГУП РБ Издательский дом «Башкортостан», в том числе 121 городских и районных газет;

– Телевидение и радио – АО ТРК «Башкортостан», ГТРК «Башкортостан».

В целом нужно отметить, что в реалиях информационной войны республиканские органы власти совместно со СМИ республики стараются работать на опережение, масс-медиа республики ведется целенаправленная работа по предоставлению достоверной и актуальной информации для населения. Этому способствует также активное внедрение новых Интернет-ресурсов, наращивание аудитории государственных СМИ на новых и традиционных каналах.

Аудитория сайтов печатных и электронных СМИ Башкортостана с 2012 г. по 2018 г. выросла на 26% (с 2,6 млн. до 3,3 млн.), с 2019 г. - уже в 1,5 раза (с 3,3 млн. до 5,1 млн.). Аудитория в социальных сетях государственных СМИ с 2012 г. по 2018. выросла в 3,9 раза (с 189 тыс. до 750 тыс.), с 2019 г. увеличилось в 6,1 раз (с 750 тыс. до 4640 тыс.). Наиболее популярной площадкой для продвижения СМИ является социальная сеть «ВКонтакте». С 2012 г. по 2018 года количество аккаунтов СМИ увеличилось на этой площадке 2 раза (с 42 до 98). В настоящее время здесь функционируют порядка 200 аккаунтов СМИ Башкортостана, общее количество подписчиков достигает 3,2 млн.

Общий тираж печатных изданий в 2023 году составил 238 000 экземпляров. Так, на 30 миллионов просмотров в год выросли показатели у Издательского дома «Республика Башкортостан» и составили 81 миллион просмотров в ВКонтакте. По итогам года сайты издательского дома лидируют по количеству посетителей. Группам газет удалось в ряде районов республики обогнать по количеству подписчиков различные паблики и стать главным источником верифицированной информации.

В 2022 и 2023 гг. телеканал БСТ АО ТРК «Башкортостан» занял 1 место по доле телесмотрения среди обязательных общедоступных телеканалов регионов России. Телеканалу БСТ в последние несколько лет удалось совершить значительный рывок по показателю доли аудитории. Если в 2020 г. БСТ был на 8 месте среди самых популярных у жителей Башкортостана телеканалов, то по последним данным - на ноябрь 2023 г., достигнув доли 9,3, он впервые попал в тройку лидеров телесмотрения по данным компании «МедиаХиллс», опередив Первый канал.

В 2023 году впервые в истории российского конкурса «Радиомания» в номинации «Радиоигра» победу одержал национальный проект – радио «Юлдаш».

Телеканал «Салям» стал лучшим среди региональных телеканалов городов-миллионников в работе в соцсетях по вовлеченности.

Информационное агентство «Башинформ» по итогам 2023 г. - самый цитируемый и посещаемый Интернет-ресурс Башкортостана. 2023 г. стал для «Башинформ» годом перезагрузки и выхода на федеральный уровень. Это единственное государственное СМИ РБ, которое постоянно входит в топ-20 рейтинга СМИ всей России по переходам из соцсетей наряду с такими крупными федеральными изданиями, как life, РИА Новости, Комсомольская правда, Медиакорсеть, РБК.

Информационное поле республики, кроме того, представлено филиалами федеральных СМИ – ВГТРК, ТНТ; «Интерфакс», «РИА-Новости», «ИТАР-ТАСС», «РБК»; «Российская газета», «Комсомольская правда», «Коммерсантъ», «Аргументы и факты», «Труд».

Развита в республике и сеть местных телеканалов. В ряде городов и районов действуют 27 муниципальных телеканала.

Всего в сегменте социальных сетей можно выделить 170 наиболее крупных и значимых сообществ и личных аккаунтов (охват аудитории – 2 млн 845 тыс. человек), из них 126 являются оппозиционными (охват аудитории – 869,3 тыс. человек), 18 – нейтральными (охват аудитории – 1,06 млн человек), 26 – сообщества госсми (охват аудитории – 916,2 тыс. человек).

В целях предоставления населению республики актуальной и достоверной информации в аккаунтах социальных сетей подведомственных СМИ появились созданные в рамках федерального проекта группы «Объясняем. Башкортостан». Они помогают жителям республики получать ответы на различные вопросы о социально-экономическом состоянии республики и страны в целом. Источником информации этих ресурсов являются органы власти и местного самоуправления республики. Актуальная информация размещается с хэштегом #объясняем_Башкортостан. Здесь ежедневно на русском и башкирском языках размещаются информационные материалы, в том числе видеоролики, лонгриды, карточки на актуальные темы, волнующие людей.

Кроме этого, активно используются популярные среди населения паблики в социальных сетях (БашДТП, Подслушано и тд.), телеграмм-каналы. С целью донесения достоверной и правдивой информации о деятельности органов республиканской власти создан телеграмм-канал «Фактчекинг по-башкирски» (https://t.me/bashFCK) где ежедневно выкладываются опровергающие фейки желтых изданий факты и информация. Популярный телеграмм-канал для своих читателей создали журналисты республиканской молодежной газеты «Йэшлек» на башкирском языке – «Йүкә телефон» (https://t.me/+YdhLsYZMNboyNTA6) и тд.

В условиях информационной войны важно, чтобы республиканские органы власти и СМИ работали в тесном сотрудничестве, создавая единое информационное поле. Вот несколько ключевых аспектов, которые можно дополнительно подчеркнуть:

1. **Проактивная стратегия**: Опережающее информирование позволяет не только предотвращать распространение дезинформации, но и формировать позитивный имидж органов власти. Регулярные пресс-релизы, брифинги и открытые встречи с журналистами помогают обеспечить прозрачность.

2. **Многообразие каналов распространения**: Использование как традиционных, так и новых медиа позволяет охватить более широкую аудиторию. Это включает в себя телевидение, радио, печатные издания, а также социальные сети и специализированные онлайн-платформы.

3. **Обучение и поддержка журналистов**: Проведение семинаров и тренингов для журналистов по вопросам работы с фактами и проверкой информации может повысить качество материалов и снизить риск распространения недостоверной информации.

4. **Интерактивные форматы**: Внедрение интерактивных форматов, таких как вебинары, онлайн-конференции и прямые эфиры, способствует более активному вовлечению граждан в обсуждение важных вопросов.

5. **Мониторинг общественного мнения**: Регулярный анализ мнений и настроений граждан помогает адаптировать информационную стратегию в соответствии с актуальными потребностями общества.

6. **Сотрудничество с экспертами**: Привлечение экспертов для комментирования сложных тем помогает повысить уровень доверия к информации и обеспечивает более глубокое понимание вопросов. Эти меры способствуют созданию устойчивого информационного пространства, что особенно важно в условиях современных вызовов и угроз.

Таким образом, можно сделать следующие выводы:

1. Необходимо дальнейшее развитие взаимодействия органов государственной исполнительной власти Республики Башкортостан и средств массовой информации.

2. Пресс-службам органов государственной власти следует разработать алгоритм оперативного решения актуальных вопросов, отработки негативной информации, информационных угроз.

3. Для обеспечения информационной стабильности на уровне региона должны эффективно работать каналы прямой коммуникации с гражданами: проведение руководителями встреч с населением, приемов граждан, общение через социальные сети, проведение брифингов, прямых эфиров и т.д.

4. В условиях информационного противостояния регональные органы власти должны вести открытую информационную политику, требуется консолидация государства и гражданского общества: органов власти, молодежи, представителей СМИ, вузов, экспертных сообществ.

Реализация данных рекомендаций позволит органам государственной власти улучшить качество и результативность деятельности в информационной сфере, что в итоге приведет к повышению общей эффективности и доверия к работе государственных структур со стороны граждан.

ИСПОЛЬЗОВАННЫЕ ИСТОЧНИКИ:

1. Российская Федерация. Законы. Конституция Российской Федерации. – Справочно-правовая система «Консультант Плюс». – Текст : электронный.
2. Манойло А.В. / Информационные войны психологические операции. Руководство к действию / - Москва : Горячая линия-Телеком, 2018 - 495 с. - ISBN 978-5-9912-0767-4.
3. Информационная политика: Учебник/ Под общ. ред. В.Д.Попова. - М.: Изд-во РАГС, 2003. - с. 38.
4. Общественно-политическая газета «Известия» от 23 июля 2024 /https://iz.ru/1705083/semen-boikov/nesvoboda-slova-es-gotov-vvesti-novye-ogranicheniia-protiv-rossiiskikh-smi.

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Бородин А.А.
студент
Забайкальский государственный университет

СТРАТЕГИЧЕСКОЕ УПРАВЛЕНИЕ ЧЕЛОВЕЧЕСКИМИ РЕСУРСАМИ В УСЛОВИЯХ ТЕХНОЛОГИЧЕСКОГО РАЗВИТИЯ: ОПЫТ АО «РУСБУРМАШ»

Аннотация: *Статья посвящена анализу стратегического управления человеческими ресурсами в АО «РУСБУРМАШ» в контексте технологического развития отрасли. Рассматриваются ключевые аспекты кадровой политики компании, включая организационную структуру управления персоналом, программы обучения и развития, систему мотивации и оценки сотрудников. Особое внимание уделяется инновационным подходам к управлению персоналом, адаптированным к вызовам цифровой трансформации. Анализируются механизмы развития компетенций сотрудников, управления талантами и формирования кадрового резерва. Исследуются перспективы цифровизации HR-процессов и развития корпоративной культуры инноваций. Опыт компании рассматривается как модель для других предприятий промышленного сектора, стремящихся повысить эффективность управления человеческими ресурсами в высокотехнологичной среде.*

Ключевые слова: *кадровая политика, стратегическое управление, управление персоналом, система мотивации, человеческий капитал.*

Borodin A.A.
Student
Trans-Baikal State University

STRATEGIC HUMAN RESOURCE MANAGEMENT IN THE CONTEXT OF TECHNOLOGICAL DEVELOPMENT: THE EXPERIENCE OF RUSBURMASH JSC

Annotation: *The article is devoted to the analysis of strategic human resource management in JSC RUSBURMASH in the context of technological development of the industry. The key aspects of the company's HR policy are considered, including the organizational structure of personnel management, training and development programs, and the employee motivation and evaluation system. Special attention is paid to innovative approaches to personnel management adapted to the challenges of digital transformation. The mechanisms of employee competence development, talent management and the formation of a personnel reserve are analyzed. The* *prospects of digitalization of HR processes and the development of a corporate culture of innovation are explored. The company's experience is considered as a model for other enterprises in the industrial sector seeking to improve the efficiency of human resource management in a high-tech environment.*

Key words: *personnel policy, strategic management, personnel management, motivation system, human capital.*

Введение

В условиях стремительного технологического прогресса и цифровой трансформации экономики ключевым фактором конкурентоспособности промышленных предприятий становится эффективное управление человеческими ресурсами. Особую актуальность данная проблема приобретает в высокотехнологичных отраслях, где качество и компетентность персонала напрямую влияют на инновационный потенциал и рыночные позиции компаний. Стратегическое управление человеческими ресурсами в таких условиях требует комплексного подхода, учитывающего как текущие потребности бизнеса, так и долгосрочные перспективы его развития.

АО «РУСБУРМАШ», являясь одним из ведущих российских производителей бурового оборудования, представляет собой показательный пример компании, успешно адаптирующей свою кадровую политику к вызовам современности. Опыт данного предприятия в области стратегического управления человеческими ресурсами представляет значительный интерес для исследования и может служить ориентиром для других компаний промышленного сектора.

Цель настоящего исследования заключается в анализе системы стратегического управления человеческими ресурсами АО «РУСБУРМАШ» в контексте технологического развития отрасли и выявлении ключевых факторов, обеспечивающих эффективность кадровой политики предприятия. Особое внимание уделяется инновационным подходам к управлению персоналом, применяемым в компании, а также оценке их влияния на общую результативность бизнеса.

В рамках исследования рассматриваются такие аспекты, как организационная структура управления персоналом, основные направления кадровой политики, программы обучения и развития сотрудников, системы мотивации и оценки персонала. Анализируются механизмы адаптации кадровой стратегии к изменяющимся условиям внешней среды и технологическим инновациям в отрасли.

Актуальность данного исследования обусловлена необходимостью поиска эффективных моделей управления человеческими ресурсами в высокотехнологичных отраслях промышленности, способствующих повышению конкурентоспособности отечественных предприятий на глобальном рынке. Опыт АО «РУСБУРМАШ» в этой области может послужить основой для разработки рекомендаций по совершенствованию кадровой политики других компаний, сталкивающихся с аналогичными вызовами в условиях цифровой трансформации экономики.

Теоретические основы и методология исследования

Стратегическое управление человеческими ресурсами (СУЧР) представляет собой комплексный подход к управлению персоналом, направленный на достижение долгосрочных целей организации через эффективное использование человеческого капитала. В контексте высокотехнологичных компаний, таких как АО «РУСБУРМАШ», СУЧР приобретает особое значение, поскольку успех в этой сфере во многом зависит от компетенций и инновационного потенциала сотрудников.

Теоретическая база СУЧР включает в себя несколько ключевых концепций. Во-первых, это ресурсная теория фирмы, которая рассматривает уникальные человеческие ресурсы как источник устойчивого конкурентного преимущества. В случае АО «РУСБУРМАШ» это проявляется в акценте на развитие и сохранение специфических компетенций в области бурения и геологоразведки.

Во-вторых, теория человеческого капитала подчеркивает важность инвестиций в обучение и развитие сотрудников. Это находит отражение в комплексной системе обучения персонала АО «РУСБУРМАШ», включающей как внутреннее обучение, так и возможности повышения квалификации в специализированных академиях Росатома.

В-третьих, концепция стратегического соответствия предполагает, что практики управления персоналом должны быть согласованы как между собой, так и с общей стратегией организации. В АО «РУСБУРМАШ» это проявляется в интеграции системы мотивации с целями повышения производительности и внедрения инноваций.

Методология исследования СУЧР в АО «РУСБУРМАШ» основана на комплексном анализе различных аспектов управления персоналом и их влияния на результаты деятельности компании. Важным методологическим аспектом исследования является учет специфики высокотехнологичной отрасли, в которой работает АО «РУСБУРМАШ». Это предполагает особое внимание к таким факторам, как инновационная активность сотрудников, способность компании быстро адаптироваться к технологическим изменениям, развитие цифровых компетенций персонала.

Анализ системы управления человеческими ресурсами в АО «РУСБУРМАШ»

АО «РУСБУРМАШ», являясь ведущим производителем бурового оборудования в России, уделяет значительное внимание стратегическому управлению человеческими ресурсами как ключевому фактору обеспечения конкурентоспособности в высокотехнологичной отрасли. Анализ системы управления человеческими ресурсами компании позволяет выявить ряд особенностей и инновационных подходов, адаптированных к специфике деятельности предприятия и современным вызовам рынка труда.

В АО «РУСБУРМАШ» функции управления персоналом сосредоточены в отделе кадров, который подчиняется непосредственно генеральному директору, что подчеркивает стратегическую важность кадровой функции в компании. Отдел кадров интегрирован в общую систему управления предприятием и активно взаимодействует с другими подразделениями, такими как производственно-технический отдел, финансовая служба и отдел маркетинга.

Такая структура позволяет обеспечить комплексный подход к управлению человеческими ресурсами, охватывая все этапы взаимодействия сотрудника с компанией – от найма до увольнения.

Анализ кадровой политики АО «РУСБУРМАШ» выявил следующие приоритетные направления:

1. Стратегическое планирование персонала

Компания уделяет особое внимание долгосрочному планированию потребности в кадрах, учитывая стратегические цели развития бизнеса и прогнозы технологических изменений в отрасли. Для этого используются современные методы прогнозирования, включая анализ больших данных и машинное обучение, что позволяет более точно определять будущие потребности в специалистах различного профиля.

2. Развитие компетенций и непрерывное обучение

В условиях быстро меняющихся технологий АО «РУСБУРМАШ» делает ставку на непрерывное развитие компетенций сотрудников. Компания разработала комплексную систему обучения, включающую как традиционные формы (лекции, семинары), так и инновационные методы (онлайн-курсы, виртуальные симуляторы, геймификация). Особое внимание уделяется развитию цифровых навыков персонала, что способствует более эффективному внедрению новых технологий в производственные процессы.

3. Управление талантами и кадровый резерв

В компании действует программа управления талантами, направленная на выявление и развитие перспективных сотрудников. Создан кадровый резерв, обеспечивающий преемственность на ключевых позициях. Для участников программы разрабатываются индивидуальные планы развития, включающие ротацию, наставничество и участие в стратегических проектах компании.

4. Система мотивации и вовлеченности персонала

АО «РУСБУРМАШ» использует комплексный подход к мотивации сотрудников, сочетая материальные и нематериальные стимулы. Внедрена система грейдов, обеспечивающая прозрачность и справедливость в оплате труда. Действует программа признания достижений сотрудников, включающая как финансовые бонусы, так и нематериальные формы поощрения. Особое внимание уделяется повышению вовлеченности персонала через развитие корпоративной культуры и создание комфортной рабочей среды.

5. Цифровизация HR-процессов

Компания активно внедряет цифровые технологии в управление персоналом. Разработана и внедрена единая HR-платформа, автоматизирующая основные кадровые процессы – от рекрутинга до оценки эффективности. Использование HR-аналитики позволяет принимать более обоснованные решения в области управления персоналом и оценивать эффективность HR-инициатив.

6. Социальная ответственность и забота о сотрудниках

АО «РУСБУРМАШ» реализует широкий спектр социальных программ для сотрудников, включая медицинское страхование, поддержку в приобретении жилья, организацию отдыха и оздоровления. Особое внимание уделяется созданию безопасных условий труда и поддержанию здоровья персонала, что особенно актуально в условиях сложного производства.

7. Развитие корпоративной культуры инноваций

Компания стремится развивать культуру инноваций и постоянного совершенствования. Внедрена система сбора и реализации инновационных предложений сотрудников, проводятся конкурсы инновационных проектов. Это способствует повышению инновационной активности персонала и более эффективному использованию интеллектуального потенциала сотрудников.

Анализ показывает, что система управления человеческими ресурсами в АО «РУСБУРМАШ» характеризуется стратегической ориентацией и высокой степенью адаптивности к изменениям внешней среды. Компания успешно сочетает традиционные подходы к управлению персоналом с инновационными практиками, что позволяет эффективно решать кадровые задачи в условиях технологического развития отрасли.

Особо следует отметить системный подход к развитию компетенций персонала и формированию кадрового резерва, что обеспечивает компании долгосрочное конкурентное преимущество на рынке труда. Внедрение цифровых технологий в HR-процессы способствует повышению эффективности управления персоналом и позволяет оперативно реагировать на изменения в кадровых потребностях предприятия.

Вместе с тем, анализ выявил некоторые области для потенциального улучшения, такие как необходимость дальнейшего развития программ удержания ключевых специалистов и усиление связи между системой мотивации и стратегическими целями компании. Эти аспекты требуют дополнительного внимания для обеспечения устойчивого развития человеческого капитала АО «РУСБУРМАШ» в долгосрочной перспективе.

Инновационные подходы к управлению персоналом в высокотехнологичной компании

АО «РУСБУРМАШ», являясь частью высокотехнологичного Уранового холдинга «АРМЗ», активно внедряет инновационные подходы к управлению персоналом. Эти подходы направлены на повышение эффективности работы сотрудников, их мотивации и профессионального развития в условиях постоянного технологического прогресса.

Одним из ключевых элементов инновационного подхода к управлению персоналом в компании является система обучения и развития сотрудников. АО «РУСБУРМАШ» уделяет большое внимание поддержанию высокого уровня профессиональных компетенций своих работников. В компании действует единая система обучения персонала, включающая в себя несколько важных элементов.

Прежде всего, это обязательное обучение производственного персонала. Данный вид обучения обеспечивает соответствие квалификации сотрудников требованиям производственных процессов и техники безопасности. Кроме того, компания регулярно проводит мероприятия по повышению квалификации инженерно-технического и административного персонала. Это позволяет сотрудникам быть в курсе последних технологических достижений и инноваций в своей области.

Особое внимание уделяется развитию корпоративных управленческих компетенций руководителей. Это направление обучения способствует формированию эффективной управленческой культуры в компании, что особенно важно в условиях быстро меняющейся технологической среды.

АО «РУСБУРМАШ» также проводит обучение сотрудников стандартам, используемым в работе. Это обеспечивает единообразие подходов к выполнению рабочих задач и повышает общую эффективность деятельности компании.

Важно отметить, что компания не ограничивается только внутренним обучением. Сотрудники АО «РУСБУРМАШ» имеют возможность проходить курсы повышения квалификации и переподготовки в Корпоративной Академии и Технической академии Росатома за счет компании. Это позволяет им получать знания и навыки, выходящие за рамки их текущей деятельности, и способствует их профессиональному росту.

Другим важным аспектом инновационного подхода к управлению персоналом в АО «РУСБУРМАШ» является система мотивации и оценки персонала. Компания внедрила прогрессивную шкалу мотивации, которая стимулирует сотрудников к повышению производительности труда. Суть этой системы заключается в том, что после выполнения базового плана сотрудники получают повышенную оплату за каждую дополнительную единицу работы. Например, если за выполнение плана сотрудник получает условный «рубль за метр», то при перевыполнении плана ставка увеличивается до «трех рублей за метр».

Такая система мотивации выгодна как для компании, так и для сотрудников. Компания получает возможность увеличить объемы производства без существенного роста постоянных затрат, а сотрудники – возможность значительно увеличить свой доход. В результате внедрения этой системы компании удалось существенно повысить производительность труда.

Например, на некоторых участках объем бурения увеличился на 20% по сравнению с плановыми показателями.

Система оценки персонала в АО «РУСБУРМАШ» тесно связана с системой мотивации. Компания регулярно анализирует эффективность работы сотрудников, выявляет лучшие практики и распространяет их среди всего коллектива. Это позволяет постоянно совершенствовать производственные процессы и повышать общую эффективность работы компании.

Важным элементом инновационного подхода к управлению персоналом в АО «РУСБУРМАШ» является также система наставничества и передачи знаний молодым специалистам. Компания активно привлекает молодых специалистов и создает условия для их профессионального роста. При этом опытные сотрудники выступают в роли наставников, передавая свои знания и опыт молодому поколению. Это позволяет сохранять и развивать уникальные компетенции компании в области бурения и геологоразведки.

Инновационный подход к управлению персоналом в АО «РУСБУРМАШ» также включает в себя активное внедрение принципов Производственной системы «Росатома» (ПСР). С 2014 года в компании действует система мотивации сотрудников за внедрение ПСР-мероприятий, в частности, предложений по улучшению. Главная цель этой инициативы – увеличение производительности и снижение себестоимости выполнения работ. Результатами внедрения системы принципов ПСР за 5 лет стала реализация более 50 мероприятий с общим экономическим эффектом более 300 млн рублей.

Важным показателем эффективности системы управления персоналом является способность компании выполнять сложные проекты в сжатые сроки. Так, в 2021 году АО "РУСБУРМАШ" впервые в истории горнорудного дивизиона всего за полгода выполнил полный цикл работ от "чистого поля" до добычи первого урана на новом месторождении, сократив плановый срок на 50%.

Таким образом, инновационный подход к управлению персоналом в АО «РУСБУРМАШ» охватывает все ключевые аспекты работы с человеческими ресурсами: от обучения и развития до мотивации и оценки эффективности. Это позволяет компании не только привлекать и удерживать высококвалифицированных специалистов, но и постоянно повышать эффективность их работы, что является ключевым фактором успеха в высокотехнологичной отрасли.

Вызовы и перспективы развития кадровой политики в условиях цифровизации

Цифровизация и технологическое развитие создают новые вызовы и открывают новые перспективы для кадровой политики АО «РУСБУРМАШ». Компания, являясь частью высокотехнологичного Уранового холдинга «АРМЗ», находится на переднем крае внедрения инновационных технологий в горнодобывающей отрасли. Это требует постоянной адаптации кадровой политики к меняющимся условиям.

Один из ключевых вызовов, стоящих перед компанией, – это необходимость постоянного обновления компетенций сотрудников. С внедрением новых технологий, таких как «умные полигоны», автоматизированные системы управления производством, цифровые двойники месторождений, требования к квалификации персонала существенно меняются. Сотрудникам необходимо не только обладать традиционными навыками в области бурения и геологоразведки, но и уметь работать с современным цифровым оборудованием, анализировать большие объемы данных, принимать решения на основе этого анализа.

Перспективным направлением развития кадровой политики в этом контексте может стать создание системы непрерывного обучения, основанной на принципах Agile и микрообучения. Это позволит оперативно адаптировать программы обучения под меняющиеся требования производства и обеспечить постоянное развитие цифровых компетенций сотрудников.

Другой важный вызов – это изменение характера труда в условиях цифровизации. Все большее значение приобретают креативность, способность к нестандартному мышлению, умение работать в междисциплинарных командах. Это требует пересмотра подходов к оценке и мотивации персонала. Перспективным направлением может стать внедрение системы управления талантами, которая позволит выявлять и развивать сотрудников с высоким потенциалом, способных генерировать инновационные идеи и эффективно управлять сложными проектами.

Цифровизация также создает новые возможности для оптимизации процессов управления персоналом. Внедрение современных HR-платформ позволяет автоматизировать рутинные операции, повысить точность кадрового учета, обеспечить более эффективное планирование человеческих ресурсов. Перспективным направлением является использование технологий искусственного интеллекта и машинного обучения для анализа данных о персонале, прогнозирования потребности в кадрах, оптимизации процессов подбора и адаптации новых сотрудников.

Важным вызовом в условиях цифровизации становится обеспечение информационной безопасности и защиты персональных данных сотрудников. Это требует не только внедрения соответствующих технических решений, но и развития культуры информационной безопасности среди персонала. Перспективным направлением может стать разработка комплексной программы обучения сотрудников основам кибербезопасности и защиты данных.

Цифровизация также создает новые возможности для развития корпоративной культуры и внутренних коммуникаций. Внедрение современных цифровых платформ для совместной работы и обмена знаниями может способствовать более эффективному взаимодействию между сотрудниками, особенно учитывая географическую распределенность подразделений АО «РУСБУРМАШ». Перспективным направлением является создание цифровой экосистемы компании, которая объединит все аспекты деятельности сотрудников – от профессионального развития до участия в инновационных проектах.

Еще одним важным вызовом является привлечение и удержание молодых специалистов, обладающих цифровыми компетенциями. Для этого компании необходимо не только предлагать конкурентоспособные условия труда, но и создавать возможности для профессионального роста и участия в инновационных проектах. Перспективным направлением может стать развитие программ стажировок и акселераторов для молодых специалистов, ориентированных на решение реальных производственных задач с использованием цифровых технологий.

Цифровизация также создает новые вызовы в области охраны труда и промышленной безопасности. С одной стороны, внедрение цифровых технологий позволяет повысить уровень безопасности производства, с другой – требует от сотрудников новых навыков и более высокого уровня ответственности. Перспективным направлением является внедрение цифровых систем мониторинга состояния здоровья сотрудников, предиктивного анализа рисков безопасности, использование технологий виртуальной и дополненной реальности для обучения персонала безопасным методам работы.

Важным аспектом развития кадровой политики в условиях цифровизации является обеспечение баланса между технологическим развитием и сохранением человеческого фактора в производстве. Несмотря на растущую автоматизацию, опыт сотрудников остается критически важным для успеха компании. Перспективным направлением является развитие системы управления знаниями, которая позволит эффективно сохранять и передавать опыт от старшего поколения сотрудников к молодым специалистам, интегрируя этот опыт с новыми цифровыми технологиями.

Цифровизация также открывает новые возможности для развития социальной ответственности компании. Использование цифровых технологий позволяет более эффективно реализовывать программы корпоративной социальной ответственности, вовлекать сотрудников в волонтерские проекты, повышать прозрачность и эффективность социальных инвестиций. Перспективным направлением может стать создание цифровой платформы для реализации социальных проектов, которая объединит сотрудников, местные сообщества и партнеров компании.

Успешное преодоление вызовов цифровизации и реализация новых возможностей в области управления персоналом требует стратегического подхода и постоянной адаптации кадровой политики к меняющимся условиям. АО «РУСБУРМАШ», обладая значительным опытом в области инновационного развития и управления персоналом, имеет все предпосылки для успешной трансформации своей кадровой политики в соответствии с требованиями цифровой эпохи.

Заключение

Проведенное исследование стратегического управления человеческими ресурсами в АО «РУСБУРМАШ» в условиях технологического развития позволяет сделать ряд важных выводов и сформулировать рекомендации по дальнейшему совершенствованию кадровой политики компании.

Прежде всего, следует отметить, что АО «РУСБУРМАШ» демонстрирует прогрессивный подход к управлению персоналом, адаптируя свою кадровую политику к вызовам цифровой трансформации отрасли. Компания успешно интегрирует инновационные практики управления человеческими ресурсами в свою деятельность, что способствует поддержанию ее конкурентоспособности на рынке высокотехнологичного бурового оборудования.

Ключевым фактором успеха кадровой политики АО «РУСБУРМАШ» является стратегическая ориентация на развитие компетенций сотрудников. Компания уделяет значительное внимание непрерывному обучению персонала, что особенно важно в условиях быстро меняющихся технологий. Создание комплексной системы обучения, включающей как традиционные, так и инновационные методы, позволяет эффективно адаптировать навыки сотрудников к новым требованиям производства.

Важным достижением компании является внедрение программы управления талантами и формирование кадрового резерва. Это обеспечивает преемственность на ключевых позициях и способствует удержанию высококвалифицированных специалистов. Однако в этой области есть потенциал для дальнейшего развития, в частности, через усиление связи между системой управления талантами и стратегическими целями компании.

Цифровизация HR-процессов в АО «РУСБУРМАШ», предполагающая внедрение единой HR-платформы и использование HR-аналитики повышает эффективность управления персоналом и позволяет принимать более обоснованные решения. В то же время, компании рекомендуется продолжить развитие в этом направлении, в частности, через внедрение технологий искусственного интеллекта для прогнозирования потребности в кадрах и оптимизации процессов подбора персонала.

Система мотивации и вовлеченности персонала в АО «РУСБУРМАШ» демонстрирует комплексный подход, сочетающий материальные и нематериальные стимулы.

Особого внимания заслуживает подход компании к развитию корпоративной культуры инноваций. Внедрение системы сбора и реализации инновационных предложений сотрудников способствует повышению инновационной активности персонала. Одним из приоритов будет дальнейшее развитие этого направления, в частности, через создание междисциплинарных команд для работы над инновационными проектами и внедрение системы внутреннего предпринимательства.

В условиях цифровизации АО «РУСБУРМАШ» сталкивается с новыми вызовами в области информационной безопасности и защиты персональных данных сотрудников. Важным аспектом будет разработка комплексной программы обучения персонала основам кибербезопасности и создание культуры информационной безопасности на всех уровнях организации.

Важным направлением развития кадровой политики АО «РУСБУРМАШ» должно стать усиление работы по привлечению и удержанию молодых специалистов с цифровыми компетенциями, в частности, через расширение программы стажировок и создания акселераторов для молодых специалистов, ориентированных на решение реальных производственных задач с использованием цифровых технологий.

В заключение следует отметить, что опыт АО «РУСБУРМАШ» в области стратегического управления человеческими ресурсами в условиях технологического развития представляет значительный интерес для других компаний промышленного сектора. Успешная адаптация кадровой политики к вызовам цифровой трансформации позволяет компании не только сохранять, но и укреплять свои позиции на рынке. Дальнейшее развитие в направлении цифровизации HR-процессов, усиления связи между управлением персоналом и стратегическими целями компании, а также создания культуры непрерывного обучения и инноваций позволит АО «РУСБУРМАШ» обеспечить устойчивое развитие человеческого капитала и поддержать свою конкурентоспособность в долгосрочной перспективе.

Использованные источники:

1. Носырев, Г. М. «Русбурмаш» — нарасхват / Г. М. Носырев. — Текст : электронный // Вестник Атомпрома : [сайт]. — URL: https://atomvestnik.ru/2022/03/15/rusburmash-narashvat/ (дата обращения: 09.07.2024).
2. «РУСБУРМАШ» совершенствует схему мотивации сотрудников с помощью «1С:Первого БИТа». — Текст : электронный // Новости ИТ-канала. Пресс-служба компании «1С:Первый БИТ» : [сайт]. — URL: https://www.novostiitkanala.ru/news/detail.php?ID=89644 (дата обращения: 09.07.2024).
3. Официальный сайт компании АО «РУСБУРМАШ». Раздел "Социальная ответственность", подраздел "Кадровая политика". — Текст : электронный // Официальный сайт компании АО «РУСБУРМАШ» : [сайт]. — URL: https://rbm.armz.ru/ru/sotsialnaya-otvetstvennost/kadrovyj-politika (дата обращения: 09.07.2024).
4. АО «РУСБУРМАШ» внедряет стандарты ПСР. — Текст : электронный // НИА-Санкт-Петербург : [сайт]. — URL: https://nia-spb.ru/news/economy/10223.html (дата обращения: 09.07.2024).
5. Внутренние отчеты компании АО «РУСБУРМАШ»

Вафокулов С.Х.
Вафокулова Н.Х.
Самаркандский государственный медицинский университет
Республика Узбекистан, г. Самарканд

НОРОВИРУСНАЯ ИНФЕКЦИИ У ДЕТЕЙ РАННЕГО ВОЗРАСТА

Резюме. Доля норовирусной инфекции составляет 17–20% всех случаев острого гастроэнтерита в мире. Эпидемиологическими особенностями норовирусной инфекции являются длительное выделение возбудителя из организма больных и вирусовыделителей, особенно у лиц с иммуносупрессией, реализация различных путей передачи (пищевого, водного, контактно-бытового, аэрозольного), высокая контагиозность, зимнее летнее сезонность в странах как северного полушария, так и резко континентальном климате. Тяжелая форма норовирусной инфекции может привести к летальным исходам у детей младшего возраста, пожилых, пациентов с коморбидностью и иммунокомпроментированных лиц. Норовирусный гастроэнтерит во многом сходна с другими вирусными гастроэнтеритами, что определяет необходимость лабораторной верификации диагноза.

Ключевые слова: норовирусная инфекция, острый гастроэнтерит, эпидемиология, клинические проявления, диагностика

Vafokulov S.K.
Vafokulova N.Kh.
Samarkand State Medical University
Republic of Uzbekistan

NOROVIRUS INFECTION IN YOUNG CHILDREN

Resume. The share of norovirus infection accounts for 17-20% of all cases of acute gastroenteritis in the world. The epidemiological features of norovirus infection are the long-term isolation of the pathogen from the body of patients and virus separators, especially in people with immunosuppression, the implementation of various transmission routes (food, water, household contact, aerosol), high contagiousness, winter and summer seasonality in countries of both the northern hemisphere and sharply continental climates. A severe form of norovirus infection can lead to fatal outcomes in young children, the elderly, patients with comorbidity and immunocompromised individuals. Norovirus gastroenteritis is similar in many ways to other viral gastroenteritis, which determines the need for laboratory verification of the diagnosis.

Keywords: norovirus infection, acute gastroenteritis, epidemiology, clinical manifestations, diagnosis

Актуальность. Острые кишечные инфекции среди детей продолжают оставаться одной из актуальных проблем как для практическо так и научной медицины в Узбекистане. По данным Всемерной Организации Здравоохранение [ВОЗ] ежегодно в мире острые кишечные инфекции переносят около 2 млрд. Человек, при этом 60-65% всех случаев острых кишечных инфекции регистрируется среди детей. Особенно высока заболеваемость (до 70%) у детей раннего возраста. Республика Узбекистан традиционно являясь страной многодетным и рождаемость детей по сравнение с России, Европы, и США гораздо выше. Географическая расположенность страны в регионе резко континентальный климате благоприятствует возникновению некоторых инфекционных заболеваний в том числе диарейных болезней среди детей. Официальная статистика ОКИ среди детей регистрируемые в областных и республиканских Санитарной эпидемиологических благополучия центрах далеко не соответствует от истинных количествах больных детей которые обращаются или лечатся в детских лечебных учреждениях республики. Последние годы применение в клинической практике молекулярной – генетических методов исследование позволили выявить множество вирусов которые являются причиной острых кишечных заболеваний у детей, что стало крайне важным в тактике лечение этих больных. К настоящему времени многочисленными учеными установлено что норовирусы являются частыми причинами не только крупных вспышек острых кишечных заболеваний но и спорадических случаев ОКИ во всех возрастных группах населения. В США норовирусы являются вторым по значимости после ротавирусов в этиологическим агентом ОКИ у детей первых лет жизни. Аналогичные результаты полученные Японскими исследователями по данным которых 84,5% больных норовирусным гастроэнтеритым были дети до 3 х лет. Наше многолетней (50 и более) лет наблюдений за количеством больных поступившихся в Областную клиническую инфекционную больницу показывает, что острые кишечные инфекции в Самаркандской области у детей имея сезонного характера резко увеличивается в июне, июле и в августе месяцев года. Абсолютное количество больных детей в области с ОКИ не имеет тенденцию к снижению. В возрастном аспекте доля ОКИ грудного возраста составляет от 44% до 63% из общего количество заболевших детей. Наибольшую опасность ОКИ представляют для детей первых лет жизни в связи с высокими показателями заболеваемости и летальности во всем мире. Дети в этом возрасте в связи с иммунной недостаточности относятся к группе наиболее уязвимыми по развитии осложнений и летальности от ОКИ. Норовирусы у человека было установлено при изучении вспышки острого гастроэнтерита, которое произошло в Октябре 1968 г одной из школ г.Норвольк (штат Огайо, США). На первом этапе лабораторного изучение данной вспышки охарактеризовать этиологический агент не удалось, однако инфекционная природа заболевания была подтверждена путем заражения трех добровольцев абактериальным экстрактом кишечного содержимого больного. В 1972 Kopikian с соавт. [1,11] при исследование копроматериалов больных из

Норволькской вспышки, методом ИЭМ обнаружило вирусные частицы. В США норовирусы вызывает примерно 23 млн случаев гастроэнтерита в год, признаются в котором по значимости после ротавирусов этиологическим агентом острого гастроэнтерита у детей первых лет жизни [6,7,8] в России по разных авторов, в этиологической структуре острых кишечных инфекций на долю норовирусов приходиться 5-27% [2,3,9]. Штаммы доминирующего геноварианта норовируса периодический заменяются новыми, на предыдущем этапе находившимися на стадий становление. За период с 1991 по 2006 г наблюдалась последовательная смена эпидемиологических вариантов норовирусов генотипа G 11,4 которые появлялись каждые 2 года и вызывали глобальные эпидемии острого гастроэнтерита [8,9]. Высокая вероятность возникновения рекомбинантых штаммов позволяет предположить возможную роль норовирусов животных в эволюции норовирусов человека [2]. При изучении 38 вспышек норовирусной инфекции у заболевших наблюдались следующие симптомы: тошнота (79%), рвота (69%), диарея (66%), головная боль, (22%), лихорадка (37%), Озноб (32%). В ходе клинических исследований было установлено возможность бессимптомного инфицирования вирусом Norvolk при котором развивается норовирус – специфичный иммунный ответ [7]. Инфицированные бессимптомно пациенты, также как и больные с острой манифестной формой инфекции, могут выделять вирусные частицы в течений трёх недель и более заражение [5,6]. Аналогичные явление в Самаркандской области наблюдали при ротавирусной инфекции, так при обследование здоровых 32 ребёнка ясельскую группу (дети от 1,5 до 2 лет]) и садовскую 95 детей (дети старше 3 лет). Из них ротавирусный антиген был выявлен у 6,03 и 15,8% соответственно инфицированных (Вафокулов С.Х. 1991 г.) В связи с разработки высокочувствительных и специфических методов диагностики дало возможность более широко изучить вирусов которые являются причиной ОКИ у больных [10]

Цель работы: Целью работы является анализ литературных данных по течению острых кишечных инфекций норовирусной этиологии у детей раннего возраста.

Роль норовирусов при заболеваемости ОГЭ существенно недооценивалось до последнего времени. По данным исследований, проведенных на территориях разных стран, частота обнаружения. Норовирусов у детей, госпитализированных с острым гастроэнтеритом, колеблется от 6 до 48%, при среднем уровне- 12-14 % [12]. Это дает основания говорить о втором месте норовирусов (после ротавирусов) в этиологической структуре острых гастроэнтеритов у детей [13]. Так, при обследовании 363 детей с клиническими симптомами гастроэнтерита в Испании в период с ноября 2000 г. по октябрь 2001 г. в 50,7% случаев был определен этиологический агент, вызвавший заболевание. В 36,9% гастроэнтерит был вызван ротавирусами, в 8,6% случаев - норовирусами, в 4,3% - астровирусами, на долю аденовирусов типов 40 и 41 пришлось 3,8% [15]. При этиологической расшифровке спорадических случаев небактериального ОГЭ в Индонезии было установлено, что в 42,3% выявляются ротавирусы, в 20,6% - норовирусы [1,6]. По результатам изучения острых гастроэнтеритов у детей в Китае в 2005-2007 гг. установлено, что за 2 года произошло изменение относительного вклада разных вирусов в этиологическую структуру гастроэнтеритов: процент обнаружения ротавирусов и аденовирусов снизился с 61,2% и 5,4% до 47,6% и 1,4%, соответственно, в то время как процент выявления калицивирусов увеличился с 5,0% до 15,0% [7]. Ведущим механизмом передачи норовируса является фекально-оральный механизм, который реализуется контактно-бытовым, пищевым и водным путями [8]. По результатам исследований, проведенных в Европе в установлено, что в 88% вспышек распространение вируса происходило контактно-бытовым путем (от человека к человеку), 10% вспышек имели пищевой характер и 2% водный [12]. Источником инфекции в местах общественного питания могут быть и члены семей кухонных работников. Было доказано, что при вспышке НВГЭ, возникшей после празднования рождества в ресторане в Австрии в декабре 2007 г. факторомриска явилось употребление рулета из ветчины, приготовленного работником, не имевшим симптомов заболевания, сын которого за два дня до события заболел лабораторно подтвержденным норовирусным гастроэнтеритом. При попадании организм человека норовирусы определяют три типа реагирования: 1) генетически обусловленную невосприимчивость к вирусу, 2) формирование протективного иммунитета, 3) вызывают как клинически выраженную, так и бессимптомную формы инфекции [6]. Симптомокомплекс заболевания, наиболее часто наблюдавшийся при вспышках ОКИ в зимнее время, при котором преобладающими клиническими проявлениями были тошнота и рвота, первые был описан Zaharsky J. в 1929 г. Zaharsky J. предложил назвать заболевание «Зимней рвотной болезнью» [13]. Аналогичный симптомокомплекс наблюдался и при вспышке гастроэнтерита в г. Норволк. В настоящее время заболевание. обусловленное норовирусами, занесено в МКБ-10 как острая гастроэнтеропатия, вызванная возбудителем Норволк (Блок А00-А09. А08.1). При инкубационном периоде, составляющем 12-48 часов, выделение вируса достигает максимума на 1-2 день после инфицирования, но после исчезновения клинических симптомов может продолжаться более двух недель [7], а по другим данным в среднем - 28 дней в количестве 10^4 вирусных копий на 1 г фекалий [15]. У больных с иммунодефицитом отмечено длительное выделение норовируса (119-182 дня), причем за это время вирус эволюционировал, в его капсидном белке произошло от 5 до 11 аминокислотных замен [14,16].В настоящее время клиника норовирусной инфекции изучена достаточно. При изучении 38 вспышек норовирусной инфекции у заболевших наблюдались следующие симптомы: тошнота (79%), рвота (69%), диарея (66%), головная боль (22%), лихорадка (37%), озноб (32%) [10]. В исследованиях Горелова А.В. соавт. показано, что у 62,96% детей норовирусной инфекцией заболевание протекало в форме гастроэнтерита, у 37,04% гастроэнтероколита, у 35, 18% больных в среднетяжелой форме, у 64,83% больных отмечалось легкое течение заболевания [4]. Нередко норовирусная инфекция протекает в форме острого гастрита [6]. Характерно острейшее начало заболевания – повышение температуры в течение 6-8 часов до 38,3-3 8,8°С, появляются озноб, ломота в теле, миалгия, головокружение, головная боль. На высоте интоксикации у детей обычно развивается тошнота и рвота, взрослые чаше страдают диареей [1,3,10]. По данным Лагир Г.М. и сооавт. Из 60 детей с норовирусной инфекцией заболевание начиналось с появления рвоты и лихорадки, у 43,3% - с повышения температуры и жидкого стула. 31,7% больных имели катаральный синдром в виде насморка, кашля, гиперемии зева. Рвота у большинства больных сохранялась 1-2 дня до 5 раз в сутки. Стул в основном был водянистым, желтого или зеленого цвета без патологических примесей, однако у 33,9% больных в стуле отмечались примеси слизи и прожилки крови, продолжительность дисфункции в среднем составляла 5 дней [8]. При сравнении симптомов заболевания, вызванного ротавирусами и норовирусами у детей в северном Тайване, показано, что ротавирусы вызывают более частую и продолжительную рвоту и более выраженную лихорадку. Однако норовирусы обусловливают более длительную госпитализацию - в среднем 6 дней [5-8 дней], по сравнению с ротавирусами - в среднем 5 дней [4-7 дней] и существенно более высокую частоту судорог (29,7% против 5%) по сравнению с ротавирусной инфекцией. У взрослых норовирусы обычно вызывают краткосрочное самокупирующееся заболевание, при лечении которого необходимы покой, оральная регидратация и, в некоторых случаях, внутривенное Введение электролитов. Осложнения при норовирусной инфекции часто наблюдаются у младенцев и пожилых людей, которые более чувствительны к потере веса [9]. Описана вспышка некротизирующего энтероколита у новорожденных в Филадельфии [США] [10]. Документированы случаи хронической диареи у реципиентов трансплантантов. У младенца после трансплантации участка кишечника наблюдалась устойчивая (персистирующая) диарея [11]. Норовирусная инфекция у детей с воспалительными заболеваниями кишечника (язвенный колит, болезнь Крона) приводит к обострению основного заболевания, сопровождается диареей с кровью и в большинстве случаев требует госпитализации. Выделение норовируса в таких случаях продолжается в течение нескольких месяцев после инфицирования [12]. У людей с иммунодефицитом и находящихся в состоянии физического стресса могут встречаться необычные клинические проявления и осложнения при норовирусной инфекции. Дифференциальный диагноз у больных с норовирусной инфекцией проводят с теми инфекционными заболеваниями, при которых в клинической картине на первый план выступает синдром гастроэнтерита, в первую очередь, с ротавирусным гастроэнтеритом. При спорадических случаях, особенно при легком и стертом течении, решающее значение в постановке диагноза имеют данные лабораторных исследований [14]. Для кишечной инфекции, вызываемой норовирусами, задолго до открытия возбудителя были описаны специфические клинические проявления, так называемые критерии Каплана: инкубационный период 15-50 часов, рвота более чем в половине случаев, диарея, средняя продолжительность симптомов 12-60 часов, высокий уровень заболеваемости, также образцы стула, отрицательные на бактериальные патогенны [2,9]. Эти признаки были описаны на основании наблюдений за взрослыми больными с норовирусной инфекцией. Однако у пациентов до трех лет в связи с особенностями детского возраста эти признаки могут отличаться. Отсутствие специфической клинической картины норовирусного ОГЭ определяет необходимость лабораторной верификации диагноза. Более широко используется иммуноферментный анализ (ИФА) для выявления антигенов норовирусов геногрупп GI и GII, чувствительность тест-систем ИФА оценивается как 60–90% при специфичности, близкой к 100%, но на практике чувствительность метода не превышает 70% [8, 9]. В последнее десятилетие для обнаружения РНК норовирусов получил распространение метод полимеразной цепной реакции с обратной транскрипцией (ПЦР-ОТ), который используется как для диагностики инфекции у пациентов, так и для обнаружения вируса в пищевых продуктах и объектах окружающей среды. При известной высокой чувствительности и специфичности метода необходимо учитывать, что обнаружение норовирусов в фекалиях методом ОТ-ПЦР может быть ограничено такими факторами, как низкие концентрации вируса, неправильное хранение образцов, неэффективность вирусной экстракции РНК, а также наличие фекальных ингибиторов обратной транскриптазы.

Использованные источники:

1. Вафакулов С., Вафокулова Н., Рустамова Ш. Клинико-лабораторная характеристика норовирусной инфекции у детей //Журнал проблемы биологии и медицины. – 2014. – №. 3 (79). – С. 94-94.
2. Вафокулова Н.Х. КЛИНИКО - ЭПИДЕМИОЛОГИЧЕСКИЕ ОСОБЕННОСТИ НОРОВИРУСНОЙ ИНФЕКЦИИ У ДЕТЕЙ ГРУДНОГО ВОЗРАСТА// Проблемы биологии и медицины. - 2021. №3. Том. 128. - С. 19-22. DOI: http://doi.org/
3. Рустамова Ш. А. Республикамизда болаларда ўткир юқумли ичак касалликларининг иқлимий ўзгаришлар билан боғлиқлигини таҳлил қилиш (Самарқанд вилояти микёсида) //Биология ва тиббиет муаммолари илмий амалий журнал. – 2021. – Т. 3. – С. 128.
4. Жураев Ш. А., Рустамова Ш. А., Орзикулов А. О. Клинико-эпидемиологические особенности течения паротитной инфекции у взрослых (на примере Самаркандской области) //Вопросы науки и образования. – 2020. – №. 22 (106). – С. 54-64.
5. Одилова Г. М., Рустамова Ш. А., Муминова Ш. Ш. Анализ антибактериальной резистентности S. Typhmurium по Самаркандской области //Молодежь и медицинская наука в XXI веке. – 2019. – С. 178-179.

6. Вафокулов С. Х., Рустамова Ш. А. ОСОБЕННОСТИ КИШЕЧНОЙ МИКРОФЛОРЫ У НОВОРОЖДЕННЫХ // Экономика и социум. 2024. №5-2 (120). URL: https://cyberleninka.ru/article/n/osobennosti-kishechnoy-mikroflory-u-novorozhdennyh (дата обращения: 08.11.2024).
7. Рустамова Ш., Журасв Ш., Одилова Г. Гепатит с и беременность //Журнал вестник врача. – 2013. – Т. 1. – №. 2. – С. 110-111.
8. Одилова Г. М. УСЛОВНО ПАТОГЕННЫЕ КИШЕЧНЫЕ БАКТЕРИЙ ПРИ ПИЩЕВЫЕ ТОКСИКОИНФЕКЦИИ НЕУСТАНОВЛЕННОЙ ЭТИОЛОГИИ //INDEXING. – 2024. – Т. 1. – №. 1. – С. 36-42.
9. Одилова Г. М., Исокулова М. М. ХАРАКТЕРИСТИКА ПОКАЗАТЕЛЕЙ ИММУНИТЕТА И ФАКТОРОВ НЕСПЕЦИФИЧЕСКОЙ ЗАЩИТЫ У ДЕТЕЙ РАННЕГО ВОЗРАСТА //INTERNATIONAL JOURNAL OF RECENTLY SCIENTIFIC RESEARCHER'S THEORY. – 2024. – Т. 2. – №. 4. – С. 86-89.
10. Караматуллаева З. Э., Ибрагимова Э. Ф. СОВРЕМЕННЫЕ МЕТОДЫ ОБСЛЕДОВАНИЯ В ДИАГНОСТИКЕ ОСТРОГО МИОКАРДИТА У ДЕТЕЙ // Экономика и социум. 2024. №5-2 (120). URL: https://cyberleninka.ru/article/n/sovremennye-metody-obsledovaniya-v-diagnostike-ostrogo-miokardita-u-detey (дата обращения: 08.11.2024).
11. Abdikhakimovich K. D. PERFORMANCE OF INDEPENDENT WORK OF STUDENTS IN THE DEPARTMENT OF MICROBIOLOGY, VIROLOGY AND IMMUNOLOGY //TADQIQOTLAR. – 2024. – Т. 31. – №. 2. – С. 57-61.
12. Yusupov M. et al. Rannee vыyavlenie rotavirusnoy infeksii u detey //Katalog monografiy. – 2023. – Т. 1. – №. 1. – С. 1-68.
13. Одилова, Г.М. (2024) Changes in the Properties of Enterococci in Intestinal Infections in Children. world of Medicine: Journal of Biomedical Sciences, 1 (9). pp. 56-60. ISSN 2960-9356
14. Orzikulovich O. A. et al. CLINICAL FEATURES OF THE COURSE OF ERYSIPELAS OF THE SKIN AT THE PRESENT STAGE //Web of Medicine: Journal of Medicine, Practice and Nursing. – 2024. – Т. 2. – №. 3. – С. 95-100.
15. Abdikhakimovich K. D. ANTIMICROBIAL SUBSTANCES OF LACTIC BACTERIA AND PRACTICAL ASPECTS OF THEIR USE //ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ. – 2023. – Т. 33. – №. 1. – С. 32-37.

Винаровская А.А
студент
ОмГПУ «Омский государственный
педагогический университет»
Омск
Елкина В. Н., канд.экон.наук
доцент кафедры экономики, менеджмента и маркетинга
ОмГПУ «Омский государственный педагогический университет»
Омск

ДИАГНОСТИКА СИСТЕМЫ УПРАВЛЕНИЯ ПЕРСОНАЛОМ: ПОНЯТИЕ, ЦЕЛИ, МЕТОДЫ

Аннотация. *В данной статье дано представление понятию диагностики системы управления персоналом, анализируется цель и задачи такой диагностики, раскрываются методы ее проведения.*

Ключевые слова: *система управления персоналом, диагностика системы управления, методы диагностики.*

Vinarovskaya A.A
Student
of Omsk State Pedagogical University
Omsk
Elkina V.N.
candidate of economic sciences, associate professor
of the department of economics, management and marketing
of Omsk State Pedagogical University
Omsk

DIAGNOSTICS OF THE PERSONNEL MANAGEMENT SYSTEM: CONCEPT, GOALS, METHODS

Annotation. *This article presents the concept of personnel management system diagnostics, analyzes the purpose and objectives of such diagnostics, and reveals the methods of its implementation.*

Keywords: *personnel management system, management system diagnostics, diagnostic methods*

В недалеком прошлом процесс управления большинства организаций сводился к эффективному, рациональному использованию финансовых и материальных ресурсов. Персонал организации рассматривался как статья расходов, а эффективность управления персоналом оценивалась с позиции возможной экономии бюджета организации по фонду заработной плате. Тем самым шла недооценка роли персонала как неотъемлемого и важного фактора в системе управления предприятием [3, с. 43].

В настоящее время становится понятным, что повышение эффективности организационных и финансовых подсистем предприятия невозможно без качественного изменяя в системе управления персоналом организации. По этой причине важное значение в системе управления организацией отводится кадровому менеджменту. Тем самым становится понятным, что основной ресурс любой организации - его персонал, который оказывает непосредственное воздействие на его экономическую успешность. По этой причине организация должна создать такую систему управления персоналом, которая сможет осуществить эффективную работу и высокую конкурентоспособность, а также устойчивое положение на рынке.

Диагностика системы управления персоналом представляет собой важное направление в системе управления организации, которая позволяет установить на заданный период времени качественный и количественный уровень системы управления персоналом.

Диагностика позволяет затронуть множество организационно-инфраструктурных проблем, которые оказывают воздействие на систему управление персоналом. а в дальнейшем выработать меры и создать условия для их устранения [2, с. 482].

Цель диагностики системы управления персоналом — дать представление о сильных и слабых сторонах организации, её ресурсах, потенциальных возможностях, потребностях персонала.

Диагностика системы позволяет выявить:

– соответствие организационной структуры основным целям и задачам организации;
– соответствие численности кадрового состава имеющимся и перспективным целям компании;
– оценить эффективность коммуникаций внутри организации;
– оценить эффективность существующей системы стимулирования;
– провести оценку уровня квалификации работников различного уровня;
– оценить коммуникации между руководством и подчиненными;
– оценить уровень инновационного развития компании

Результаты диагностики системы управления персоналом позволяют выработать план для оптимального функционирования предприятия в будущем.

В процессе диагностика системы управления персоналом следует учитывать внутренние (рис.1) и внешние (рис. 2) факторы воздействия.

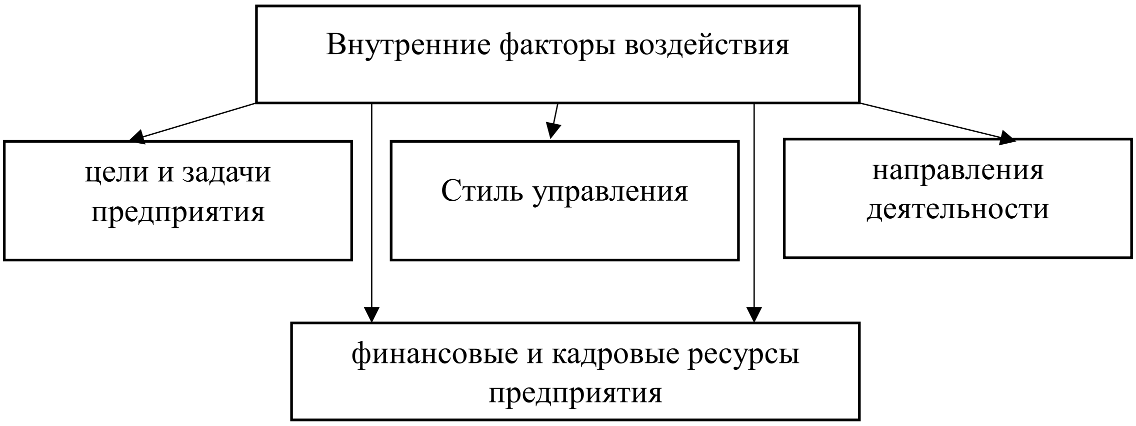

Рис. 1 Внутренние факторы воздействия на систему управления персоналом

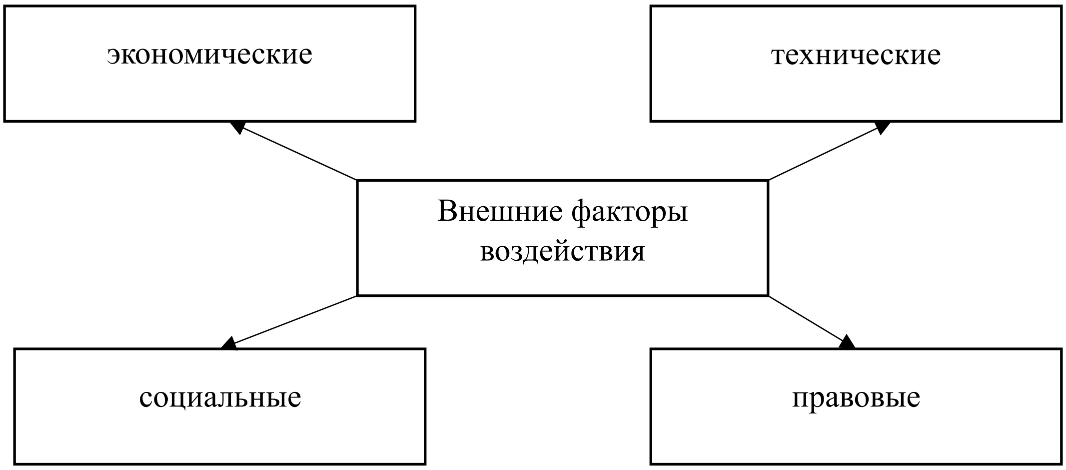

Рис. 1 Внешние факторы воздействия на систему управления персоналом

Внешние факторы при диагностике необходимо анализировать, поскольку предприятие подействовать на них не может, но следствие их могут оказать необратимый результат. Благодаря диагностики систему управления персоналам можно построить сильную организацию, которая будет адаптирована к условиям внешней среды.

В процессе диагностики системы управления персоналом проводится оценка готовности руководителей и сотрудников для реализации целей предприятия, анализируется структура и численность предприятия. В результате такой диагностики определяется соотношение между группой руководящего состава и специалистами различных категорий. Диагностика пропорций дает общую картину о персонале предприятия и позволяет выявить недочеты и противоречия в системе управления. Также через диагностику можно выявить элементы системы управления персоналом, которые игнорируются, упускаются или недооцениваются. Как правила такой диагностики достаточно, если изменения в системе управления не требуют фундаментальных изменений [1, с. 64].

Если же по итогу диагностики выявлены серьезные нарушения, которые требуют серьезной реорганизации, то для этого следует провести более широкую диагностику системы управления. Обычно такая ситуация возникает в случае, если слабо организованна система управления предприятием в целом и отсутствует современная система учета, а также система анализа рынка.

Глубокая диагностика системы управления персоналом может включать в себя анализ системы управления человеческими ресурсами. Сюда можно отнести: анализ документов, структурированных интервью с руководителями и работниками, отбор и анализ вспомогательных процедур системы управления персоналом. Такая диагностика позволит выявить ключевые проблемы и потенциал развития управления трудовыми ресурсами, а также позволит сформировать начальные рекомендации по оптимизации в соответствии со стратегическими и тактическими целями организации.

Таким образом, благодаря оценки, полученной на основе диагностики, можно сделать выводы о наличие или отсутствии ресурсов для эффективного управления персоналом на предприятии, а также о необходимости подготовки, переподготовки или привлечение новых сотрудников.

Использованные источники

1. Гончаренко О.В. Диагностика системы управления персоналом на современном уровне. // В сборнике: Современные проблемы АПК и их решение. Материалы V Национальной конференции. 2022. – С. 64-68.
2. Пронская О.Н., Москалева Ю.А., Халитова С.А. Теоретические аспекты диагностики системы управления персоналом на предприятии // В сборнике: Приоритеты экономического роста страны и регионов в период постпандемии. Сборник материалов Всероссийской научно-практической конференции. Под редакцией О.Н. Пронской. 2020. – С. 481-484.
3. Симонин П.В., Курбацкая Т.Б., Митрохина К.А. роль диагостических процедур и цифровизации в системе управления персоналом // Аудитор. – 2022. – Т. 8. № 11. – С. 43-46.

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Габова Д.Н.
студент
Научный руководитель: Гребнев Г.Д., к.э.н.
Оренбургский государственный университет
г.Оренбург, Россия

АНАЛИЗ ТРАДИЦИОННЫХ И СОВРЕМЕННЫХ МЕТОДОВ УЧЕТА ЗАТРАТ

Аннотация: *В данной статье проводится анализ существующих подходов и научных мнений к учету затрат на предприятии и их влияние на себестоимость продукции. Затрагиваются основы учета затрат с помощью традиционных и современных методов учета затрат. Рассматриваются такие методы учета затрат, как «директ-костинг», «стандарт-костинг», метод учета полных затрат, АВС-метод и другие. Статья позволяет выявить основные преимущества и недостатки рассмотренных способов учета затрат.*

Ключевые слова*: управление затратами, себестоимость, методы учета затрат, система «директ-костинг», система «стандарт-костинг», АВС-метод.*

Gabova D.N.
Student
Scientific supervisor: Grebnev G.D., Ph.D
Orenburg State University
Orenburg, Russia

ANALYSIS OF TRADITIONAL AND MODERN COST ACCOUNTING METHODS

Abstract: *This article analyzes existing approaches and scientific opinions to cost accounting in an enterprise and their impact on the cost of production. Covers the basics of cost accounting using traditional and modern cost accounting methods. Cost accounting methods such as "direct costing", "standard costing", the full cost accounting method, the ABC method and others are considered. The article allows us to identify the main advantages and disadvantages of the considered cost accounting methods.*

Key words: *cost management, cost, cost accounting methods, direct costing system, standard costing system, ABC method.*

Затраты являются важным показателем финансово-хозяйственной деятельности предприятия и во многом определяют эффективность его функционирования. Существуют большое количество методов учета затрат. Важно понимать, что выбранный метод учета затрат играет важную роль в процессе формирования себестоимости продукции и эффективности системы управления затратами.

Традиционными методами учета затрат являются: нормативный, попередельней и позаказный. Так, нормативный метод связан со своевременным выявлением отклонений фактических издержек от установленных норм. Попередельней метод ведет учет затрат по цехам, переделам, фазам и стадиям производственного процесса. Позаказный метод связан с учетом затрат отдельно по каждому заказу [1].

К современным методам учета затрат относятся такие методы, как метод учета полных затрат, «директ-костинг», «стандарт-костинг», метод-АВС, методы учета стандартных и фактических затрат и другие.

Рассмотрим более подробно некоторые из них.

Метод «директ-костинг» набирает популярность в зарубежной и отечественной практике ведения бизнеса. Сущность данного метода заключается в раздельном учете постоянных и переменных затрат. «Директ-ксотинг» позволяет руководству выявить изменение маржинального дохода в целом и по отдельным продуктам, определить наиболее рентабельные продукты и адаптировать производство к изменяющимся условиям рынка. При этом метод связан со сложностью разделения постоянных и переменных затрат, не формирует полную себестоимость продукции, что искажает финансовые результаты [2].

Метод «стандарт-костинг» используется на предприятиях, которые работают в стабильных условиях, есть возможность установить какие-либо нормативные показатели. Данный метод учета калькулирует себестоимость продукции на основе нормативных затрат. В основе данной системы лежит принцип учета и контроля затрат в пределах установленных норм и нормативов и отклонениям от них. Главным преимуществом данного метода является возможность своевременно выявить отклонения от норм и устранить возможные потери. Но при этом «стандарт-костинг» имеет зависимость от внешних условий, сложность в применении на всех этапах жизненного цикла продукта, нет показателей качественной оценки деятельности предприятия [3].

Наиболее популярным и совершенным способом учета затрат является АВС-метод. Задача метода - это локализировать косвенные затраты по их функциональному возникновению. С помощью тщательного подбора базы распределения затрат формируется более полная и точная себестоимость продукции.

К основным преимуществам данного метода можно отнести:

1) формирование полной и объективной себестоимости продукции;

2) метод дает возможность оценить прибыльность видов деятельности предприятия;

3) способствует увеличению рентабельности предприятия за счет формирования более объективной цены продукции и полной картины для управления затратами [4].

Но при этом ABC-метод, как и все другие, имеет определенные ограничения. Например, данный способ учета затрат является весьма затратным, сложным и трудоемким, требует строго соблюдения всех требований, направлен больше на долгосрочную перспективу, поэтому не дает мгновенно результата.

Указанные недостатки ликвидируются за счет наличия квалифицированного персонала, что в будущем может определить успешность и высокую прибыльность предприятия.

Анализ существующих методов учета затрат производства позволяет сделать вывод, что каждый метод учета имеет свои особенности, преимущества и недостатки. Применение того или иного способа учета зависит также и от организационно-правовой формы предприятия, его размеров, отрасли функционирования, типа производства и производимой продукции. Несмотря на эффективность ABC-метода в некоторых организациях, например, с низкой долей накладных затрат, его использование будет сказываться негативно на прибыльности продукции. Предприятию важно сперва выбрать рациональный метод учета затрат, а дальше уже с помощью него анализировать затраты и оптимизировать их.

Таким образом, каждому предприятию важно выбрать наиболее эффективный метод учета затрат, при котором они будут минимальны, а финансовый результат максимальный. Правильно выбранный метод учета затрат оказывает сильное воздействие на успешность и эффективность всей системы управления затратами.

Использованные источники:

1."Основные положения по планированию, учету и калькулированию себестоимости продукции на промышленных предприятиях" (утв. Госпланом СССР, Госкомцен СССР, Минфином СССР, ЦСУ СССР 20.07.1970) (ред. от 17.01.1983). Режим доступа: https://www.consultant.ru/document/cons_doc_LAW_101032/fe466d12403ae3aa81b766fde0e38fc7328a59ff/ (дата обращения: 19.06.2023)

2. Ананьева, М. В. Использование метода директ-костинг в управленческом учете / М. В. Ананьева, Т. В. Небавская // Актуальные проблемы развития хозяйствующих субъектов, территорий и систем регионального и муниципального управления: материалы 16-й Международной научно-практической конференции, Курск, 27–29 мая 2021 года. Том ВЫПУСК 2. – Курск: Юго-Западный государственный университет, 2021. – С. 19-22.

3. Милосердова Н. Д. "Стандарт-кост" и "директ-костинг": преимущества и недостатки / Н. Д. Милосердова ; науч. рук. А. Л. Спесивцева // Экономика России в XXI веке : сборник научных трудов XI Международной научно-практической конференции "Экономические науки и прикладные исследования: фундаментальные проблемы модернизации экономики России", посвященной 110-летию экономического образования в Томском политехническом университете, г. Томск, 18-22 ноября 2014 г. : в 2 т. — Томск : Изд-во ТПУ, 2014. — Т. 2. — [С. 87-90].

4. Чуркина, К. А. Метод учета затрат по функциям (ABC-метод) / К. А. Чуркина, И. В. Дрожжина // Экономика и управление: проблемы, тенденции, перспективы развития : Сборник материалов VIII Международной научно-практической конференции, Чебоксары, 19 апреля 2018 года / Редколлегия: Б.К. Мейманов [и др.]. – Чебоксары: Общество с ограниченной ответственностью "Центр научного сотрудничества "Интерактив плюс", 2018. – С. 167-170. – EDN XOJUEP.

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Габова Д.Н.
студент
Научный руководитель: Гребнев Г.Д., к.э.н.
Оренбургский государственный университет
г.Оренбург, Россия

ОСОБЕННОСТИ УЧЕТА ЗАТРАТ В НЕФТЕГАЗОВОЙ ОТРАСЛИ

Аннотация: *В данной статье раскрываются особенности формирования и учета затрат в нефтегазовой отрасли. Нефтегазовая отрасль имеет большое количество особенностей функционирования. К ним можно отнести последовательность и многогранность производственных процессов, высокая зависимость от природных условий, высокая фондоемкость и другие. Все эти особенности находят отражение в затратах и порядке их учета.*

Ключевые слова: *нефтегазовая отрасль, учет затрат, себестоимость продукции, налог на добычу полезных ископаемых, фондоемкость.*

Gabova D.N.
Student
Scientific supervisor: Grebnev G.D., Ph.D.
Orenburg State University
Orenburg, Russia

ANALYSIS OF TRADITIONAL AND MODERN COST ACCOUNTING METHODS

Abstract: *The article reveals the features of the formation and accounting of costs in the oil and gas industry. The oil and gas industries have a large number of different types of protection. These include the consistency and versatility of production processes, high dependence on environmental conditions, high capital intensity and others. All these features are reflected in the costs and the procedure for their accounting.*

Key words: *oil and gas industry, cost accounting, product cost, mineral extraction tax, capital intensity.*

Предприятия, функционирующие в нефтегазовой отрасли, обладают рядом уникальных характеристик, которые находят отражение в специфики экономических и финансовых показателей, их формирования, учета, анализа и контроля. Далее рассмотрим основные особенности учета и формирования затрат в нефтегазовой отрасли.

Так, Туякова З.С. и Черемушникова Т.В. отмечают следующие особенности:

- высокая доля основных средств в составе активов компании, среди которых значительная доля приходится на нефтяные и газовые скважины. Это влияет на высокий уровень амортизационных отчислений, затрат на капитальный и текущий ремонт;

- способ эксплуатации скважин, что может требовать дополнительные энергетические затраты и соответствующего отражения их в учете;

- наряду с основными видами продукции (нефть и природный газ) возможно получение и попутных продуктов, например, попутный нефтяной газ и газовый конденсат. В связи с этим возникает необходимость обоснованного разделения затрат между этими продуктами для формирования их справедливой себестоимости [4].

Зубарев В.Д., Саркисов А.С., Андреев А.Ф. выделяют еще некоторые особенности функционирования нефтегазового комплекса. Так, для поддержания пластового давления в скважине могут закачиваться различные химические реагенты, вода, газ и проводиться прочие мероприятия, которые повышают конечную себестоимость продукции. Авторы отмечают удаленность предмета труда и подземной части эксплуатационного оборудования от места непосредственного управления процессом. В связи с этим также появляются дополнительные затраты, связанные с организацией удаленного процесса наблюдения за производственными объектами и строительством дополнительной инфраструктуры. Вместе с этим важно отметить высокую зависимость производства от природных условий и влияние на экологическую обстановку, что также дополняет общий перечень затрат [1].

Нефтегазовая отрасль является комплексным процессом, включающим в себя последовательное прохождение стадий поисковых, геологоразведочных, буровых и последующих работ. На каждом из этих этапов формируются затраты.

На этапе геологоразведки формируются следующие затраты: затраты, связанные с приобретением лицензии; затраты, связанные с бурением поисковых скважин; затраты, связанные с проведением геологоразведочных работ на эксплуатируемой скважине; затраты, связанные с содержанием законсервированных поисковых скважин; затраты, связанные с хранением геологической информации и другие. Вместе с этим все указанные расходы подлежат ежемесячной амортизации, как правило, линейным методом. Важно отметить, что при проведении геологических работ предприятию важно уплачивать обязательные платежи. В их перечень входят разовые платежи за пользование недрами при наступлении обстоятельств, указанных в лицензии; регулярные платежи за пользование недрами; сбор за участие в аукционе и за выдачу лицензии. Вместе с этим пользователи недр могут уплачивать и другие обязательные налоги и сборы согласно законодательству РФ [2].

На этапе буровых работ учитываются затраты на строительство скважин, монтаж и демонтаж оборудования, непосредственное бурение и крепление скважины, испытание скважины на продуктивность и другие.

Следующим этапом является добыча и промысловая подготовка нефти и газа. Ключевой затратой на данном этапе является уплата специализированных налогов и сборов согласно налоговому законодательству РФ. Одним из таких является налог на добычу полезных ископаемых (далее - НДПИ). НДПИ в структуре затрат занимает большую долю, но для каждого предприятия этот налог имеет свой размер и сумму к учету. Это связано с видом добываемой продукции, условиями добычи, колебаниями курса валют, применением налоговых льгот и других факторов.

На этапе добычи Литовченко Н.Н. считает целесообразным разделить затраты на прямые (оплату труда рабочих, обслуживание скважин, налоги, ремонт оборудования и другие) и косвенные (амортизация поддерживающего оборудования, ликвидация отложений). Кроме этого, автор отмечает важность учета затрат на сбор нефти и газа. Эти расходы являются текущими и связаны с добычей, транспортировкой и хранением добытого сырья на промысле. На этапе добычи также формируется большая статья затрат, связанная с капитальным и текущим ремонтом скважин и скважинного оборудования, трубопроводов, а также проведением диагностики и технического обслуживания основных фондов. Затраты на проведение данных работ списываются, как и другие, в расходы периода. Проведение ремонтных и планово-предупредительных работ является неотъемлемой статьей расходов, так как обеспечивает бесперебойность и качество процессов добычи углеводородного сырья [3].

Заключительные этапы нефтегазовой цепочки связаны с переработкой углеводородного сырья. Как правило, газ реализуется в исходном состоянии с минимальными работами по его промысловой подготовке. В то же время нефть может быть реализована в разных формах нефтепродуктов, которые возникают после многоступенчатых стадий переработки сырья, что значительно повышает себестоимость конечной продукции.

Подводя итог, можно отметить, что нефтегазовая отрасль имеет достаточно больший спектр особенностей функционирования, что оказывает существенное влияние на формируемые затраты и себестоимость. Так, сильная зависимость от природных условий, высокая фондоемкость, многостадийность и комплексность работ, высокая налоговая нагрузка и другие факторы оказывают влияние на формируемые объем и перечень затрат, что впоследствии влияет на уровень себестоимости и политику управления данными затратами.

Использованные источники:

1 Андреев А.Ф., Зубарева В.Д., Саркисов А.С. Оценка эффективности и рисков инновационных проектов нефтегазовой отрасли: Учебное пособие.— М.: МАКС Пресс, 2007.— С. 18–22

2. Крайнова Э.А., Лоповок Г.Б. Технико-экономическое проектирование в нефтяной и газовой промышленности. Учебник. - М.: Издательский центр РГУ нефти и газа имени И.М. Губкина, 2012. - 264 с.

3. Литовченко, Н. Н. Метод успешных затрат в учете нефтегазовой отрасли / Н. Н. Литовченко // Международный бухгалтерский учет. – 2008. – № 12(120). – С. 37-43.

4. Туякова З.С., Черемушникова Т.В. Особенности учета в отдельных отраслях экономики: учебное пособие для обучающихся по программам высшего образования по направлению подготовки.

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Гарифуллина А. Р.
преподаватель
кафедра «Филология»
Международный университет Туран
Узбекистан, Наманган

СКАЗОЧНЫЕ ПЕРСОНАЖИ И ИХ ИМЕНА: КАК ДЕРИВАЦИЯ ПОМОГАЕТ СОЗДАВАТЬ ХАРАКТЕР. ИССЛЕДОВАНИЕ ВЛИЯНИЯ ИМЕН НА ВОСПРИЯТИЕ ГЕРОЕВ

Аннотация: *В статье рассматривается роль имен сказочных персонажей и их деривация как важный инструмент создания характера и формирования восприятия у читателей. Исследование анализирует, как имена героев отражают их культурную принадлежность и передают определенные черты, благодаря чему формируется уникальность персонажей и закладываются ожидания у аудитории. В работе подчеркивается, что имена часто несут описательную и идентификационную функцию, что усиливает связь с культурным контекстом, особенно в сказках различных народов мира. Примеры из русских, западноевропейских и восточных сказок показывают, как прозвища героев помогают усилить их образы, создавая эмоциональную и символическую нагрузку. В итоге делается вывод, что деривация имен является ключевым элементом в передаче культурных смыслов и ценностей через сказочные персонажи, что следует учитывать в процессе перевода и анализа фольклорных произведений.*

Ключевые слова: *деривация, сказочные персонажи, культурный контекст, восприятие, перевод.*

Garifullina A.R.
Professor
of the Department of Philology
Turan International University
Uzbekistan, Namangan

FAIRY-TALE CHARACTERS AND THEIR NAMES: HOW DERIVATION HELPS TO CREATE CHARACTER. A STUDY OF THE INFLUENCE OF NAMES ON THE PERCEPTION OF HEROES

Abstract: *The article examines the role of names of fairy-tale characters and their derivation as an important tool for creating character and shaping readers' perceptions. The study analyzes how the names of heroes reflect their cultural affiliation and convey certain traits, thereby forming the uniqueness of characters and setting audience expectations. The work emphasizes that names often have a descriptive and identifying function, which strengthens the connection with the* *cultural context, especially in fairy tales of different peoples of the world. Examples from Russian, Western European and Eastern fairy tales show how nicknames of heroes help to enhance their images, creating an emotional and symbolic load. As a result, it is concluded that the derivation of names is a key element in conveying cultural meanings and values through fairy-tale characters, which should be taken into account in the process of translating and analyzing folklore works.*

Keywords: *derivation, fairy-tale characters, cultural context, perception, translation.*

Среди культур, присутствующих в народных сказках, наименования персонажей занимают чрезвычайно важное место. Благодаря их долголетию и резонансу в сознании каждого носителя языка (ведь целые поколения вырастают, слушая, если не одни и те же сказки, то по крайней мере приключения одних и тех же героев), персонажи приобретают в коллективном воображении значительную степень репрезентативности определённых человеческих типов, а их наименования наделены чертами, которые тесно связывают их с культурой, из которой они происходят. Неоспоримо, что существует родство между литературами индоевропейского происхождения и что фольклор народов евразийского пространства разделяет более одного из своих фундаментальных элементов. Парадоксальным образом именно на уровне фольклора проявляются существенные различия и специфика каждой общины [1, с. 75-89].

Переводчик сказок непосредственно сталкивается с этим парадоксом, даже когда работает с языками одной и той же семьи, поскольку от него ожидают, что он передаст именно то, что в норме остаётся неясным из-за языковых и культурных барьеров. Наличие схожих жанров и литературных элементов, аналогичных по своей функции в культуре перевода, не обязательно облегчает его задачу, поскольку чрезмерное использование эквивалентов может скрыть инаковость. Однако цель перевода сказок может заключаться именно в том, чтобы познакомить читателя с другим народом, иной концепцией восприятия мира. Слишком ориентированный на оригинал подход, напротив, может сделать текст нечитабельным или, по крайней мере, трудночитаемым из-за высокой плотности чужеродных элементов. Если к этому добавить ограничения, накладываемые возрастными группами, потенциально ориентированными на перевод сказок, каждая из которых обладает своей степенью восприимчивости к чуждости, становится ясно, что трудности немалые. Отсюда возникает интерес и даже необходимость в создании последовательной переводческой стратегии.

Несмотря на разнообразие аспектов переводоведения, вполне возможно придерживаться системного подхода, если рассматривать наименования как единицы перевода, согласно определению Мишеля Баллара. В оригинальном тексте основа всегда имеет соответствующий результат в тексте перевода, даже если это всего лишь местоимение. Речь идёт об «эквиваленте» культуремы и переводческой единицы, который применим к нашему исследованию, но не может быть обобщённым. Это возможно благодаря тому, что «границы этих понятий довольно гибкие и изменчивые, поскольку рассматриваемые единицы находятся в процессе индивидуального, а не стандартизированного перевода». Когда наименования рассматриваются как единицы перевода, они предстают в совершенно ином свете. В оригинальном тексте «имена персонажей характеризуются отсутствием чётких ориентиров, позволяющих определить время и место событий», к тому же они являются культуремами, тогда как в переводе отсутствие отсылок к конкретным эпохам и местам указывает на целевой подход, что ухудшает качество наименований как культурем [2, с. 5-32].

Для переводчика наибольший интерес представляют переменные, так как именно на этом уровне ему предстоит преодолевать трудности и одновременно находить подсказки, которые могут направить его выбор в целевом языке. Не умаляя роли, которую играет тот или иной персонаж, переводчику необходимо провести углублённый анализ, прежде чем выбрать конкретный вариант перевода [3, с. 112-148].

Согласно Проппу, существуют три основные категории атрибутов («внешний вид и наименование, особые формы появления, обитание») и дополнительные элементы «второстепенного значения», которые он не называет. Он делает важное для переводчика замечание, что существует определённая степень повторяемости этих переменных и, следовательно, «существует международный канон, есть национальные формы, специфически индийские, арабские, русские, немецкие, а также провинциальные формы […] ; наконец, есть формы, которые соответствуют определённым социальным или профессиональным категориям: солдаты, сельские слуги, полу-городские жители». Всё это оправдывает поиск культурных эквивалентов при переводе, особенно когда речь идёт о двух индоевропейских литературах, сказки которых имеют схожую структуру. Однако такой поиск усложняется значимостью деталей, таких как речевой регистр персонажа, значение составляющих его имя терминов или его отношения с другими персонажами культуры-источника, а также необходимостью передать именно те различия, которые выделяют персонажа по сравнению с персонажами культуры перевода и подчёркивают специфику исходной среды [4, с. 148-192].

Поэтому переводчику необходимы и другие инструменты, и семиотический квадрат Греймаса может оказаться полезным для уточнения анализа. Этот автор определяет элементарную структуру значения как четырёхчленную структуру: «понять смысл — это исследовать все связи семиотического квадрата». Этот метод позволяет свести наименование к ряду пар сем (отличительных черт), выделить список ключевых свойств персонажа: одушевлённый / неодушевлённый, человеческий / нечеловеческий, природный / сверхъестественный, положительный / отрицательный. Определив значимые оппозиции для персонажей, переводчик может добавить ряд лингвистических и социолитературных наблюдений. Таким образом, он сможет обосновать свои решения объективными аргументами и детализированными межкультурными сравнениями [5, с. 89-130].

Аналогично можно использовать этот метод для систематического сравнения различий в подходах. В случае наименований персонажей сказок трудности, связанные с передачей имени собственного, ещё больше усугубляются, если речь идёт о прозвищах, которые указывают на определяющую черту персонажа; идентификационная функция дополнена описательной. Эта сильная ономастическая мотивация требует разного подхода в зависимости от того, является ли прозвище распространённым в нескольких текстах или же оригинальным созданием автора (в последнем случае его желательно переводить из-за связи с референтом. Вопрос сложного понимания смысла имени собственного здесь менее затруднителен, поскольку «составление имени включает в себя выражение и осмысление смысла». Однако этап «переписывания» в процессе перевода становится особенно трудоёмким.

Наименования персонажей представляют особые трудности при переводе сказок, а решения переводчика — неизбежно несовершенные — оказывают непосредственное и значительное влияние на читателя. Аналитическая схема, учитывающая отличительные черты, определяющие «смысл» персонажа, его место в тексте и в культуре-источнике, а также языковую форму его наименования, оказывается полезной, поскольку позволяет объективно оценивать решения по различным проблемам, связанным с именами персонажей, и компенсировать возможные потери на других уровнях: текстуальном (что является более сложной, а иногда и невозможной задачей) или пери-текстуальном (иллюстрации, пара-тексты). Таким образом, семантика имен будет передаваться и на другие языки, сохранив первичный признак деривации.

Применение методик Проппа и Греймаса в переводе позволяет переводчику идентифицировать ключевые характеристики персонажа, такие как одушевлённость, человеческая природа, положительность или отрицательность, и подобрать культурные эквиваленты, максимально близкие по смыслу. Например, немецкий Румпельштильцхен в переводе на русский должен сохранять свои гротескные и загадочные черты, иначе теряется часть фольклорного контекста.

Анализ оппозиционных признаков через семиотический квадрат Греймаса помогает сохранить баланс между сохранением оригинальных черт и адаптацией к целевой аудитории. Основной вывод исследования состоит в том, что деривация и грамотный перевод имён позволяют сохранить оригинальный культурный колорит сказки, а также усилить восприятие и понимание образов в другой языковой среде. Таким образом, грамотный подход к переводу имён и прозвищ может не только усилить воздействие сказки, но и стать инструментом для межкультурной коммуникации, позволяя читателю глубже проникнуть в особенности фольклора другой страны, сохраняя при этом эмоциональную и смысловую насыщенность оригинала.

Использованные источники:

1) Adrada, Cristina. The Translation of Onomastic Connotation in Literature / C. Adrada // In: Ballard, Michel (ed.). Translation: Contact of Languages and Cultures (1)**.** Arras: Artois Presses Université, 2005: 75-89.
2) Bachelin, Léo. General Introduction and Folklorist Commentary / L. Bachelin // In: Seven Romanian Tales. Translated by Jules Brun. Paris: Firmin-Didot, 1894: 5-32.
3) Ballard, Michel. Proper Names in Translation / M. Ballard. Paris: Ophyris, 2001: 112-148.
4) Propp, Vladimir. Morphology of the Folktale / V. Propp. Paris: Gallimard, 1970: 148-192.
5) Greimas, Algirdas Julien. Structural Semantics / A. J. Greimas. Paris: Larousse, 1966: 89-130.

Дадабаева Н.У.
старший педагог
кафедра "Экономика транспорта"
ТГТУ
ORCID: 0000-0005-8002-1323.
Адрес и место работы: Узбекистан, г. Ташкент

АНАЛИЗ ЭФФЕКТИВНОСТИ ИСПОЛЬЗОВАНИЯ ПОЛИКАРБОКСИЛАТНЫХ СУПЕРПЛАСТИФИКАТОРОВ В ПРОИЗВОДСТВЕ БЕТОНА

Аннотация. *Проведены лабораторные исследования, направленные на оценку влияния молекулярной структуры поликарбоксилатных суперпластификаторов на реологические свойства и прочностные характеристики цементных композитов и бетона. Исследование учитывает такие параметры, как плотность анионного заряда и длина боковых полиэфирных цепей макромолекул. На основе сравнительных испытаний наглядно продемонстрировано превосходство поликарбоксилатных суперпластификаторов по ключевым техническим показателям над традиционными добавками на основе сульфированного нафталинформальдегидного конденсата (СНФ). Представлены результаты комплексного исследования эффективности применения поликарбоксилатных суперпластификаторов с учетом специфики их молекулярной структуры, в сравнении с сильнопластифицирующей добавкой на основе технических лигносульфонатов. Использованы термины: реологические свойства, механические характеристики, цементные композиты, анионный заряд, полиэфирные цепи, сульфированный нафталинформальдегидный конденсат (СНФ), лигносульфонаты, макромолекулы, высокорастекающиеся добавки.*

Ключевые слова: *поликарбоксилатные суперпластификаторы; технические лигносульфонаты; плотность анионного заряда; боковые полиэфирные цепочки; стерический эффект; реологические свойства бетона; подвижность (текучесть) бетонной смеси; механическая прочность; цементные композиты; влияние молекулярной структуры; улучшение свойств бетона.*

Dadabayeva N.U.
TDTU Senior Lecturer
of the Department of Transport Economics
ORCID: 0000-0005-8002-1323.
Uzbekistan, Tashkent

ANALYSIS OF THE EFFICIENCY OF USE OF POLYCARBOXYLATE SUPERPLASTIFIER IN THE PRODUCTION OF CONCRETE

Abstract. *Laboratory studies were conducted aimed at evaluating the influence of the molecular structure of polycarboxylate superplasticizers on the rheological properties and strength characteristics of cement composites and concrete. The research takes into account parameters such as the density of the anionic charge and the length of the side polyether chains of macromolecules. Comparative tests clearly demonstrated the superiority of polycarboxylate superplasticizers over traditional additives based on sulfonated naphthalene-formaldehyde condensate (SNF) in key technical indicators. The results of a comprehensive study on the effectiveness of polycarboxylate superplasticizers are presented, considering the specifics of their molecular structure, in comparison with a highly plasticizing additive based on technical lignosulfonates. Terms used include: rheological properties, mechanical characteristics, cement composites, anionic charge, polyether chains, sulfonated naphthalene-formaldehyde condensate (SNF), lignosulfonates, macromolecules, high-flow additives.*

Key words: *polycarboxylate superplasticizers; technical lignosulfonates; anion charge density; polyester side chains; steric effect; rheological properties of concrete; mobility (fluidity) of the concrete mixture; mechanical strength; cement composites; influence of molecular structure; improvement of concrete properties.*

Введение

Использование химических добавок в производстве бетона является одним из самых эффективных и универсальных методов управления его свойствами путем регулирования реологических характеристик бетонных смесей [1–6].На сегодняшний день в индустрии строительных материалов применяются три основных класса пластифицирующих добавок: соединения на основе технических лигносульфонатов (ЛСТ) и их производных; сульфированные полимеры меламинформальдегидного или нафталинформальдегидного типа; поликарбоксилатные эфиры (ПКС).

Добавки первых двух групп характеризуются линейной молекулярной структурой и относятся к предыдущему поколению пластификаторов. Их механизм действия основан на электростатическом отталкивании, возникающем вследствие хемосорбции молекул пластификатора на поверхности частиц цементного клинкера и формирования двойного электрического слоя. Это приводит к смещению значения ζ-потенциала в более электроотрицательную область и способствует диспергированию системы [7]. Однако спустя короткое время, по мере образования продуктов гидратации на поверхности цементных зерен, их диспергирующая эффективность резко снижается, что приводит к ухудшению подвижности бетонной смеси.

В отличие от них, поликарбоксилатные эфиры (ПКС) обладают разветвленной молекулярной структурой, состоящей из основной поликарбоксильной цепи с боковыми полиэфирными ответвлениями. Такая конфигурация обеспечивает частицам цемента как электростатическое, так и стерическое (пространственное) отталкивание. Ионный заряд основной цепи необходим для адсорбции поликарбоксилатов на поверхности цементных зерен и создания электростатического эффекта, тогда как боковые полиэфирные цепочки обеспечивают стерическое отталкивание, усиливая и продлевая диспергирующее действие.

Эффективность поликарбоксилатных суперпластификаторов определяется плотностью заряда их основной цепи, а также химической структурой, длиной и количеством боковых полиэфирных ответвлений [8]. По параметрам сохраняемости свойств и способности снижать водоцементное отношение они значительно превосходят традиционные добавки на основе технических лигносульфонатов и сульфированных меламинформальдегидных или нафталинформальдегидных полимеров, что делает их незаменимыми в современных строительных технологиях. В результате даже при минимальных дозировках ПКС обеспечивают высокую текучесть, стабильность (отсутствие расслоения) бетонных смесей и высокие эксплуатационные характеристики.

Использование ПКС позволяет целенаправленно управлять процессами структурообразования, создавая высококачественные композиционные материалы для различных целей. Это обеспечивает повышение технологических показателей бетонных смесей и улучшение строительных и технических свойств готовых изделий. За рубежом поликарбоксилатные суперпластификаторы (ПКС) уже широко применяются, что связано с их повышенной эффективностью, экологичностью, коррозионной безопасностью и способностью увеличивать прочность бетона. В России же доля ПКС в общем объеме пластифицирующих добавок остается незначительной. Это объясняется недостаточным развитием и внедрением современных технологий бетонирования. Кроме того, часто упускается из виду, что снижение концентрации ПКС в бетонных смесях и экономия цемента при их использовании в ряде случаев не только не повышают себестоимость бетона, но и уменьшают ее, одновременно предоставляя все перечисленные преимущества.

Компания ООО «Zakikimyo» разработала линейку отечественных высокоэффективных поликарбоксилатных суперпластификаторов нового поколения, не уступающих по качеству импортным аналогам. Технология их производства и состав этих суперпластификаторов защищены патентом. Путем изменения условий синтеза были получены поликарбоксилаты с различным строением основной цепи и боковых полиэфирных ответвлений. Это позволило создать материалы с разным соотношением стерического эффекта и плотности анионного заряда в макромолекуле, учитывая состав используемого вяжущего вещества. Структуры полимеров суперпластификаторов варьируются по длине и составу основной цепи, а также по длине, химической природе, количеству боковых цепей и плотности анионного заряда. Следует отметить, что, к сожалению, не существует универсальной пластифицирующей добавки, которая бы обеспечивала одинаково высокую эффективность независимо от характеристик исходных материалов и технологии производства бетона. Для каждого конкретного случая и типа цемента необходимо подбирать добавку в соответствии с заданными параметрами технологии бетонирования и требуемыми свойствами бетона. Известно, что цементы разных производителей отличаются по своему составу и свойствам. В литературе имеется достаточно много исследований, посвященных влиянию поликарбоксилатных суперпластификаторов на свойства бетонов, однако большинство из них выполнено зарубежными авторами на импортных цементах. Поэтому изучение эффективности применения ПКС на основе цементов российских производителей является актуальной задачей с точки зрения внедрения передовых технологий и повышения экологической безопасности.

Известно, что диспергирующая эффективность поликарбоксилатных суперпластификаторов (одинаковой химической природы) и время сохраняемости бетонных смесей зависят от соотношения между длиной боковых цепей и плотностью ионного заряда. Согласно предположению, молекулы поликарбоксилатных суперпластификаторов с высокой плотностью ионного заряда демонстрируют лучшую адсорбцию и эффективный диспергирующий эффект, однако это может негативно влиять на сохраняемость таких систем. Моделирование связи между структурой и свойствами полимерных соединений является одной из фундаментальных проблем современной химии. Установление количественных взаимосвязей между структурой пластификатора и свойствами бетона необходимо для прогнозирования их влияния на цементные системы и целенаправленного синтеза более эффективных аналогов, что позволит достичь нового уровня качества строительных материалов. В данной работе проведено исследование влияния молекулярной структуры поликарбоксилатных суперпластификаторов на подвижность, сохраняемость и прочностные характеристики цементных и бетонных смесей. Также выполнено сравнение эффективности поликарбоксилатных суперпластификаторов, учитывая особенности их молекулярной структуры, с добавкой на основе сульфированного нафталинформальдегида и сильнопластифицирующей добавкой на основе технических лигносульфонатов.

Исследование эффективности поликарбоксилатных суперпластификаторов с учетом их молекулярной структуры в сравнении с добавкой на основе сульфированного нафталинформальдегида

материалы и методы исследования

Для оценки влияния поликарбоксилатных добавок на свойства бетонных смесей по сравнению с добавкой на основе сульфированного нафталинформальдегида были использованы соединения, разработанные ООО «Zakikimyo». Эти соединения отличаются по молекулярной структуре и соответствуют определенным маркам из коммерческого ассортимента компании. Применяемые вещества синтезировали методом радикальной полимеризации ненасыщенных эфиров полиоксиалкиленгликолей с молекулярной массой от 1000 до 5000 Да и ненасыщенной монокарбоновой кислотой [9].

Схематические структуры этих полимеров представлены на рисунке 1. Плотность анионного заряда зависит от количества карбоксильных групп в основной цепи суперпластификатора и характеризуется их концентрацией: ПКС-1, ПКС-3 и ПКС-4 имеют одинаковую плотность заряда, составляющую 1800 мкэкв/г. ПКС-2 отличается более высокой плотностью заряда — 2300 мкэкв/г. Боковые цепи в образцах различаются по молекулярной массе: В ПКС-3 боковые цепи имеют ММ ≈ 1000 Да. В ПКС-1 и ПКС-2 — ММ ≈ 2000 Да. В ПКС-4 присутствуют боковые цепи с ММ ≈ 1000 и 2000 Да. Рисунок 1. Схематическое изображение структуры поликарбоксилатных суперпластификаторов различных типов. Это исследование позволяет установить взаимосвязь между молекулярной структурой поликарбоксилатных суперпластификаторов и их эффективностью в улучшении свойств бетонных смесей, а также сравнить их с традиционными добавками на основе сульфированного нафталинформальдегида.

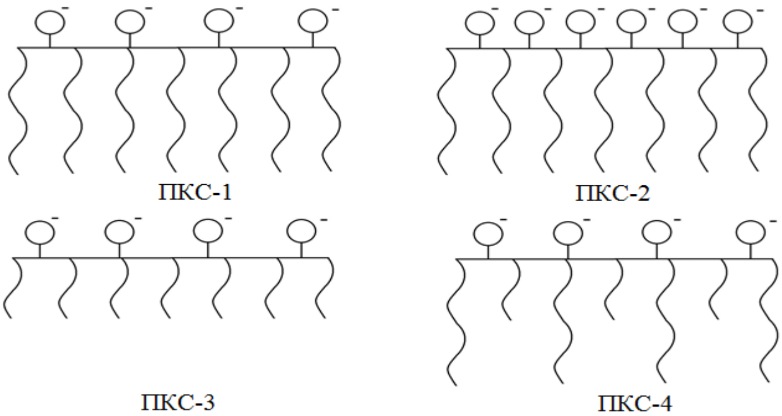

Рисунок 1 – Схема структуры поликарбоксилатных суперпластификаторов

Изучение влияния структуры поликарбоксилатных пластификаторов проводили на цементных растворах с применением вяжущих производственных марок ООО «Тулацемент», ЗАО «Осколцемент» и ОАО «Вольскцемент». Химический и минералогический состав представлен в таблице 1

Таблица 1 – Химический и минералогический состав используемых цементов

SiO_2	Al_2O_3	Fe_2O_3	CaO	MgO	SO_3	Cl^-	Щелочи в пересчете на Na_2O	Нерастворимый осадок	Удельная поверхность, $см^2/г$	C_3S	C_2S	C_3A	C_4AF
Цемент I 4 ,5 Н производства ООО «Тулацемент»													
20,59	4,86	3,74	63,79	2,53	2,68	0,03	0,65	0,68	3440	59	14	6	13
Цемент I 4 ,5 Н производства ЗАО «Осколцемент»													
21,52	5,83	4,50	66,03	0,57	0,28	0,001	0,66	2,59	2820	64,9	14	9	12,1
Цемент ПЦ 500-Д0-Н производства ОАО «Вольскцемент»													
20,50	4,50	4,50	63,00	1,50	3,00	0,02	0,7	0,2	3450	67	11	4	15

Реологические характеристики цементных растворов изучались с использованием лабораторного мини-конуса (D=41 мм, d=1 мм, H=60 мм) (см. рис.). Доза вводимых поликарбоксилатных добавок составляла 0,18% в пересчете на сухое вещество от массы цемента. Водоцементное отношение (В/Ц) было установлено равным 0,3.

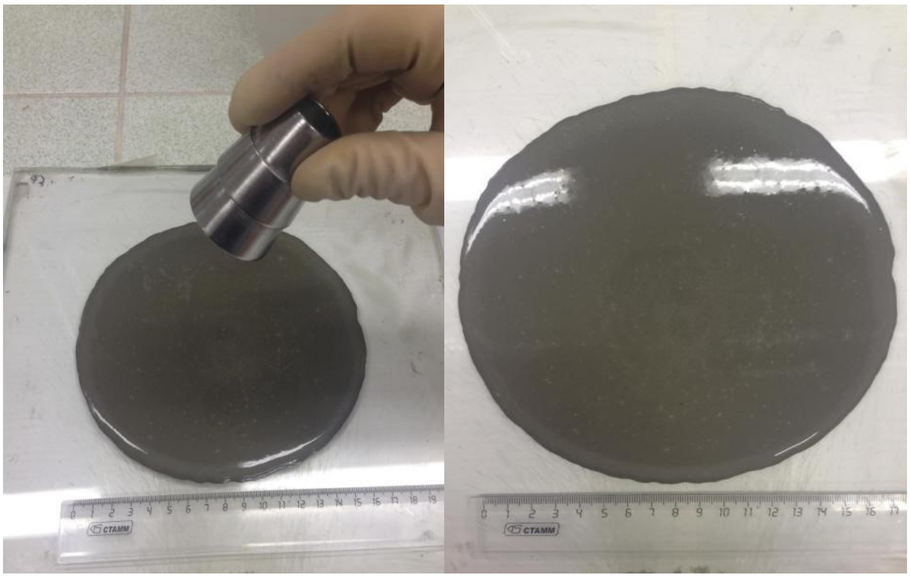

Рисунок 2 – Испытания цементных паст с ПКС с применением лабораторного миниконуса

Результаты и обсуждение

Исследование подвижности цементных смесей в зависимости от структуры поликарбоксилатного суперпластификатора

Для оценки подвижности цементных паст в зависимости от структуры поликарбоксилатного суперпластификатора проводили измерение диаметра расплыва мини-конуса. Полученные результаты представлены в таблице.

Таблица2 – Реологические свойства цементной смеси в зависимости от структуры поликарбоксилатного суперпластификатора

Наименование суперпластификатора (СП)	Расход СП по сух, % от массы цемента	В/Ц	Диаметр расплыва миниконуса, мм			
			0 мин	60 мин	1 0 мин	180 мин
Цемент I 4 ,5 Н производства ООО «Тулацемент»						
ПКС-1	0,18	0,3	155	150	165	125
ПКС-2	0,18	0,3	170	140	130	90
ПКС-3	0,18	0,3	145	130	125	110
ПКС-4	0,18	0,3	150	180	175	135

Цемент I 4 ,5 Н производства ЗАО «Осколцемент»						
ПКС-1	0,18	0,3	190	165	150	125
ПКС-2	0,18	0,3	210	160	130	100
ПКС-3	0,18	0,3	185	115	105	70
ПКС-4	0,18	0,3	175	165	155	135
Цемент ПЦ 500-Д0-Н производства ОАО «Вольскцемент»						
ПКС-1	0,18	0,3	200	180	175	155
ПКС-2	0,18	0,3	220	170	160	140
ПКС-3	0,18	0,3	190	145	130	110
ПКС-4	0,18	0,3	200	185	180	160

Согласно данным из работы [10], увеличенная плотность ионного заряда в основной цепи поликарбоксилатного суперпластификатора свидетельствует о его потенциально высокой адсорбционной способности на поверхности зерен цементного клинкера, а удлиненные боковые цепочки способны обеспечить значительное стерическое отталкивание. Молекулы с повышенным электростатическим эффектом лучше взаимодействуют с гидратирующимися цементными частицами и могут усиливать процессы гидратации, что приводит к ускоренному росту новообразований на поверхности клинкерных зерен и снижению диспергирующего действия, которое со временем поддерживается преимущественно за счет стерического отталкивания. Полученные в данном исследовании результаты на различных производственных марках цемента хорошо соответствуют описанной теории.

Анализ данных таблицы показывает высокую начальную текучесть образцов цементного теста с добавками ПКС-1 и ПКС-2. Указанные соединения имеют одинаковые по длине боковые цепочки, но различаются по электростатической силе. ПКС-2, обладая более высоким ионным зарядом, вероятно, в большей степени адсорбируется на цементных зернах, обеспечивая лучшую подвижность и ускоренное протекание гидратационных реакций. В результате начальная текучесть цементной пасты выше и составляет 170–200 мм по сравнению с ПКС-1, где расплыв конуса равен 155–190 мм. Однако при испытаниях после 60, 120 и 180 минут выдержки образец с добавкой ПКС-1 продемонстрировал лучшие результаты по сохраняемости текучести. Цементное тесто с добавкой ПКС-3 демонстрирует самые низкие реологические свойства среди рассмотренных вариантов. Невысокая плотность ионного заряда в основной цепи обеспечивает уровень адсорбции молекул полимера на поверхности цементных зерен, который сопоставим с ПКС-1 и ПКС-4, но уступает ПКС-2. При этом длина боковых цепей у ПКС-3 почти вдвое меньше по сравнению с другими суперпластификаторами, изученными в данной работе, что приводит к снижению стерического эффекта. В результате наблюдается низкая начальная подвижность смеси (145–190 мм). Это также объясняет, почему эффективность ПКС-3 со временем снижается быстрее: короткие боковые цепи не способны обеспечить достаточный уровень стерического отталкивания, который достигается при использовании поликарбоксилатных соединений с более длинными боковыми ответвлениями, характерными для ПКС-1, ПКС-2 и ПКС-4.

Особый интерес вызывают результаты испытаний суперпластификатора ПКС-4, который характеризуется наличием боковых цепей разной длины в своей молекулярной структуре. Начальная подвижность цементной пасты с добавкой ПКС-4 (150–200 мм) оказалась ниже, чем у ПКС-2, обладающего высоким ионным зарядом и длинными боковыми цепями (170–200 мм), а также ниже, чем у ПКС-1 с аналогичной плотностью заряда и постоянной длиной длинных боковых цепей (155–200 мм). Однако в ходе испытаний в течение следующих 180 минут было обнаружено, что цементная смесь с ПКС-4 демонстрирует наибольшие показатели расплыва конуса.

В случае ПКС-4 концентрация длинных боковых цепей, отвечающих за продолжительный диспергирующий эффект, ниже, чем у ПКС-1 и ПКС-2, что предполагало бы снижение его эффективности в плане сохраняемости подвижности смеси. Тем не менее, полученные данные указывают на обратную тенденцию: можно наблюдать определенный синергетический эффект от сочетания коротких и длинных боковых цепей. Согласно патентной информации [11], считается, что короткие звенья молекулы связываются с поверхностью частиц и образующимися на ней гидратными структурами, в то время как длинные цепи выполняют функцию диспергирования. Такая молекулярная конфигурация суперпластификатора способна обеспечить усиленный замедляющий эффект схватывания и увеличить жизнеспособность строительных смесей.

Исследование реологических и прочностных свойств бетона с использованием поликарбоксилатных суперпластификаторов

Исходя из анализа данных об изменении подвижности цеметных смесей в зависимости от структуры поликарбоксилатных соединений, была синтезирована новая марка поликарбоксилатного суперпластификатора «Zakikimyo П-153». В данной работе представлены результаты сравнительных испытаний «Zakikimyo П-153», характеризующегося боковыми цепочками различной длины, с нафталинформальдегидным суперпластификатором марки MasterRheobuild PC 3000, производимым компанией BASF. Технические характеристики суперпластификаторов приведены в таблице 3.

Таблица 3 – Свойства «Zakikimyo П-153 » и «MasterRheobuild PC 3000»

п/п	Наименование суперпластификатора	Внешний вид	Плотность, г/см^3	Показатель Активности ионов водорода, ед. pH
1.	«Zakikimyo П-153»	от бесцветного до желтого цвета	1,08-1,1 (при 5 °С)	6,0-8,5
2.	«MasterRheobuild PC 3000»	однородная жидкость темно-коричневого цвета	1,21-1, 5 (при 0 °С)	7-11

Бетонные смеси готовили следующим образом: в смеситель загружали и перемешивали строительный песок с модулем крупности 2,5 согласно ГОСТ 8736-93, щебень фракции 5–10 мм по ГОСТ 8267-93 и цемент производства ООО «Тулацемент». Состав бетона был следующим: 390 кг цемента, 845 кг песка и 975 кг гравия. Пластифицирующую добавку вводили в виде раствора в последней трети воды затворения. Подвижность определила бетонной смеси касаясь по осадке конуса (ОК). Сохраняемость смеси оценивалась через 30 и 60 минут после приготовления. Прочностные показатели определяли после 8 часов тепловлажностной обработки (ТВО), а также на 1-е и 28-е сутки при нормальных условиях твердения (НУ). Для испытаний изготавливались кубические образцы размером 100×100×100 мм. Концентрация добавки, водоцементное отношение, реологические и прочностные характеристики бетонов представлены в таблице 4.

Таблица 4 – Реологические и прочные свойства бетона с добавкой «Zakikimyo П-153 » и «Master Rheobukd PC3000»

№ п/п	Наименовани едобавки	Расход добавки, % от массы цемента	В/Ц	Осадка конуса, см			Плот-ность, кг/см^3	Прочность, МПа		
				0 мин	30 мин	60 мин		8 часов ТВО	1 сутки НУ	28 суто кНУ
1.	«MasterRheo-build PC 3000»	1%	0.5	16	0	0	2419	13,74	4,69	25,28
2.	«Zakikimyo П-153»	0,5%	0,43	25	19	18	2399	18,76	7,69	33,17
3.	“Zakikimyo П-153”	0,5%	0,41	25	19	18	2405	24,20	7,74	36,56

Использование поликарбоксилатного суперпластификатора «Zakikimyo П-153» позволяет получить бетон с повышенной подвижностью и сохраняемостью при одновременном снижении водоцементного отношения и дозировки добавки. Например, начальная осадка конуса бетона с 1,0 % добавки «MasterRheobuild PC 3000» составила 16 см, тогда как введение вдвое меньшего количества «Zakikimyo П-153» увеличило подвижность до 25 см и снизило водоцементное отношение на 18 % — с 0,5 до 0,41. Как показано в таблице 4, сохраняемость бетонной смеси с поликарбоксилатным суперпластификатором остается высокой в течение 60 минут (осадка конуса уменьшается с 25 до 18 см), в то время как смесь с добавкой «MasterRheobuild

PC 3000» теряет текучесть уже через 30 минут. Водоредуцирующий эффект «Zakikimyo П-153» способствует повышению прочностных характеристик бетона. Максимальное увеличение прочности наблюдается при В/Ц 0,41 и составляет 76 % (от 13,74 МПа до 24,20 МПа) после 8 часов тепловлажностной обработки и 45 % (от 25,58 МПа до 36,56 МПа) после 28 суток нормального твердения. Также следует отметить ускорение набора прочности при использовании « Zakikimyo П-153»: после первых суток твердения прочность бетона на сжатие составила 7,7 МПа, тогда как с «MasterRheobuild PC 3000» — всего 4,7 МПа.

Исследование эффективности поликарбоксилатных суперпластификаторов с учетом их молекулярной структуры в сравнении с сильнопластифицирующей добавкой на основе технических лигносульфонатов

Материалы и методы исследования

Для оценки влияния поликарбоксилатных добавок на свойства бетонных смесей по сравнению с лигносульфонатами (ЛСТ) были использованы соединения, произведенные ООО «Zakikimyo». Эти соединения отличались по молекулярной структуре и были получены методом радикальной полимеризации ненасыщенных эфиров полиоксиалкиленгликолей с молекулярной массой (ММ) от 1000 до 5000 Da и ненасыщенной монокарбоновой кислотой. Схематические изображения структур этих полимеров представлены на рисунке 1.

Образец ПКС-3 характеризовался плотностью заряда 1800 мкэкв/г и имел боковые цепи с ММ около 1000 Да, тогда как ПКС-2 обладал более высокой плотностью заряда 2300 мкэкв/г и боковыми ответвлениями с ММ около 2000 Da. Характеристики исследуемых добавок определяли и сравнивали в соответствии с требованиями ГОСТ 30459-2008 «Добавки для бетонов и строительных растворов». Для приготовления бетонных смесей в качестве вяжущего материала использовался портландцемент марки ПЦ500-Д0. В качестве заполнителей применяли гранитный щебень фракции 5–10 мм по ГОСТ 8267 и песок I класса с модулем крупности 1,8 по ГОСТ 8736.

Состав бетона, рассчитанный на 1 м^3 смеси, включал:

Цемент: 350 кг , Песок: 850 кг , Щебень: 1050 кг

Пластифицирующие добавки вводили одновременно с водой затворения, обеспечивая равномерное распределение компонентов в смеси. Концентрация поликарбоксилатных суперпластификаторов (ПКС) составляла 0,5% от массы цемента, а для лигносульфонатов (ЛСТ) — 1,0%. Сохраняемость бетонных смесей оценивали через 30 и 60 минут после приготовления. Для испытаний были изготовлены кубические образцы размером 100×100×100 мм. Прочностные характеристики определяли на 3-и и 28-е сутки при нормальных условиях твердения.

Результаты и обсуждения

В таблице 5 представлено сравнение прочностных характеристик бетонов с добавками ПКС различной молекулярной структуры и бетона с сильнопластифицирующей добавкой на основе ЛСТ (контрольный состав). Подвижность контрольной смеси с ЛСТ и основных смесей с ПКС соответствовала осадке конуса 2–4 см, при этом водоцементное отношение всех смесей было одинаковым и равнялось 0,4.

Таблица 5 – Прочность на сжатие бетона с добавкой поликарбоксилатных суперпластификаторов и ЛСТ

№ п/п	Наименование добавки	Расход материалов на 1 м^3 бетона					Прочность на сжатие на 3 сутки нормального твердения	Изменение прочности бетона относительно контрольного состава, %
		Цемент, кг	Песок, кг	Щебень, кг	Добавка			
					% от массы цемен-та	кг		
1	ЛСТ (контроль-ный)	350	850	1050	1,2	4,2	31,4	-
2	ПКС-3	350	850	1050	0,5	1,75	36,2	15,3
3	ПКС-2	350	850	1050	0,5	1,75	38,2	21,3

Бетоны с добавлением ПКС, по сравнению с контрольным образцом, продемонстрировали повышение прочностных характеристик на 15,3% и 21,3% в возрасте 3 суток. Этот факт указывает на возможность снижения расхода цементного вяжущего при достижении прочностных показателей, соответствующих контрольному составу. Чтобы подтвердить это предположение, были проведены исследования прочностных и реологических свойств бетона с уменьшенным содержанием цементного вяжущего. Водоцементное отношение подбирали таким образом, чтобы при заданной дозировке пластифицирующей добавки начальная осадка конуса соответствовала классам подвижности П4–П5.

Результаты испытаний, представленные в таблице 6, показывают, что введение ПКС в количестве в два раза меньшем позволяет получать начальную подвижность (осадку конуса), практически аналогичную образцу с ЛСТ.

Таблица 6 – Пластические и прочностные свойства бетона с добавками поликарбоксилатных суперпластификаторов и ЛСТ

п/п	Наименование добавки	Расход цемента, кг/м^3	Расход добавки		/Ц	Осадка конуса через, мин			Прочность на 8 сутки, МПа
			% от массы цемента	кг/м^3		0	30	60	
	ЛСТ (контрольный)	350	1,2	4,2	0,56	18	10	-	37,3
	ПКС-3	330	0,55	1,82	0,56	21	-	-	36,8
	ПКС-2	330	0,55	1,82	0,56	24	14		39,2

Бетонная смесь с добавлением ПКС демонстрирует более высокую начальную осадку конуса по сравнению с составами, содержащими ЛСТ и ПКС-3. Такие различия в реологической эффективности поликарбоксилатных суперпластификаторов с различной молекулярной структурой подтверждаются их механизмом действия [10]. У ПКС-2 более высокая плотность ионного заряда в основной цепи, что усиливает сорбцию молекул поликарбоксилата на поверхности цементных зерен и, следовательно, приводит к улучшению начальной подвижности системы. Наличие более длинных боковых цепей в структуре продукта (с молекулярной массой ≈2000 Да) обеспечивает бетонной смеси с ПКС-2 лучшую сохраняемость свойств. В свою очередь, бетон с добавкой ПКС-3 обладает сниженными реологическими показателями, что обусловлено более низкой плотностью ионного заряда основной цепи ПКС-3 и более короткими боковыми полиоксиалкиленгликолевыми цепями (с молекулярной массой ≈1000 Да), которые не обеспечивают тот же уровень стерического отталкивания, как у ПКС-2. Быстрая потеря подвижности бетонной смеси с ПКС-3, вероятно, связана с недостаточным стерическим эффектом и короткой длиной боковых цепей в ПКС-3.

Молекулы с усиленным электростатическим эффектом более эффективно взаимодействуют с гидратированными цементными частицами и способны ускорять процессы гидратации. Это приводит к ускоренному росту новообразований на поверхности клинкерных зерен и повышению прочности бетона.

Данные результаты (см. таблицу 6) демонстрируют, что при использовании ПКС расход цемента можно снизить с 350 кг/м^3 (для состава с ЛСТ) до 330 кг/м^3 для бетона с ПКС, при этом прочность бетона не уменьшается: прочности образцов с ПКС-3 и ПКС-2 составляют 36,8 МПа и 39,1 МПа соответственно и отличаются не более чем на 10%, что не превышает нормального коэффициента вариации прочностных свойств бетона при испытаниях на осевое сжатие. В этом случае расход цемента на 1 м^3 бетона сокращается на 5,7%, а расход ПКС по сравнению с ЛСТ ниже в 2,3 раза.

Снижение потребления ПКС по сравнению с пластификаторами предыдущего поколения позволяет уменьшить логистические затраты. Известно, что применение ЛСТ в качестве пластифицирующей добавки может дополнительно способствовать повышенному воздухововлечению, увеличивать пористость системы и снижать прочностные характеристики. ПКС лишены этого недостатка, и при их использовании не всегда требуется дополнительное введение пеногасителей. Кроме того, ЛСТ, являясь отходами производства целлюлозно-бумажных комбинатов, не имеют постоянного химического состава и содержат различные примеси, вследствие чего бетон не обладает стабильными свойствами. Напротив, ПКС производятся посредством регулируемого синтеза, обладают значительно большей однородностью состава, что обеспечивает высокую стабильность их эксплуатационных характеристик.

Выводы

Проведенное исследование влияния молекулярной структуры поликарбоксилатных суперпластификаторов на подвижность и прочность бетонных смесей подтвердило их высокую эффективность по сравнению с нафталинформальдегидными суперпластификаторами и техническими лигносульфонатами. Несмотря на более высокую стоимость ПКС, комплексная оценка, учитывающая все факторы — качество бетона, технологические параметры его производства, экономию цемента и логистические аспекты, — показывает, что себестоимость бетона с применением ПКС часто оказывается ниже, чем при использовании более дешевых пластификаторов предыдущего поколения.

Экономический вывод и оценка повышения эффективности производства

Использование поликарбоксилатных суперпластификаторов позволяет снизить водоцементное отношение и уменьшить расход цемента без потери прочностных характеристик бетона. Экономия цемента на 5–10% напрямую снижает материальные затраты на производство. Кроме того, меньшая дозировка ПКС по сравнению с традиционными добавками снижает расходы на транспортировку и хранение химических реагентов, что уменьшает логистические издержки. Повышенная подвижность и сохраняемость бетонных смесей с ПКС ускоряет процессы укладки и уплотнения, что сокращает трудозатраты и время строительства. Ускорение набора прочности бетона позволяет быстрее переходить к следующим этапам строительства, что улучшает оборачиваемость средств и повышает общую эффективность проекта. В долгосрочной перспективе повышение качества бетона благодаря использованию ПКС приводит к увеличению долговечности строительных конструкций и снижению затрат на их обслуживание и ремонт. Это дополнительно усиливает экономический эффект от применения поликарбоксилатных суперпластификаторов.

Оценка повышения эффективности производства:

Снижение себестоимости бетона за счет экономии цемента и уменьшения дозировки добавок. Ускорение строительных процессов благодаря улучшению реологических свойств и быстрому набору прочности. Снижение логистических расходов из-за меньшего объема используемых добавок. Повышение качества и долговечности строительных изделий, что уменьшает затраты на эксплуатацию и ремонт. Повышение конкурентоспособности продукции благодаря улучшенным техническим и экономическим показателям. Таким образом, применение поликарбоксилатных суперпластификаторов не только улучшает технические характеристики бетона, но и существенно повышает экономическую эффективность производства, что делает их предпочтительным выбором в современных строительных технологиях.

Использованные источники:

1. Гусев Б.В., Ин Иен-лян С., Кузнецова Т.В. Цементы и бетоны – тенденции развития. М.: Научный мир, 01 . 136 с.

2.Гусев Б.В. Перспективные технологии при производстве сборного железобетона. Ижевск: Издательский дом «КИТ», 015. 05 с.

3.Тарасов В.Н., Лебедев В.С. Отечественные поликарбоксилатные суперпластификаторы производства ООО «НПП «Макромер» для бетона, гипса и строительных смесей // Бетон и железобетон. 015. № 1. С. 58-60.

4.Liu J., Ran Q., Miao C., Qiao M. Effects of Grafting Densities of Comb-Like Copolymer on the Dispersion Properties of Concentrated Cement Suspensions. Materials Transactions. 2012. Vol. 53. P. 553-558.

5. Гусев Б.В., Петрунин С.Ю. Кавитационное диспергирование углеродных нанотрубок и модифицирование цементных систем // Нанотехнологии в строительстве. 2014.
№ 6. С. 50-57.

6. Долгарев В.А., Долгарев А.В., Тарасов В.Н., Лебедев В.С. Новые отечественные поликарбоксилаты для монолитных бетонов на основе гипсового вяжущего // Технологии бетонов. 015. № 9-10. С. 13-15.

7. Вовк А.И. Добавки на основе отечественных поликарбоксилатов // Строительные материалы, оборудование, технологии XXI века. 01 . № 9. С. 31-33.

8. Witt J., Plank J. A Novel Type of PCE Possessing Silyl Functionalities. 10th CANMET/ACI Conference on Superplasticizers and Other Chemical Admixtures in Concrete (Proceedings). Prague. 2012. P. 57-70.

9.Патент 469975 РФ МПК C04B 4/ 6. Поликарбоксилатная пластифицирующая добавка для бетона, строительных растворов и сухих строительных смесей и способ ее получения (варианты) / В.Н. Тарасов, В.С. Лебедев, 01 . Бюл. № 35.

10. Plank J., Sachsenhauser B. Impact of Molecular Structure on Zeta Potential and Absorbed Conformation of α-Allyl-ω-Methoxypolyethylene Glycol - Maleic Anhydride Superplasticizers. Journal of Advanced Concrete Technology. 20067. Vol. 47 P. 233-239

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Дегтярева М.М.
студент магистратуры 3 курса
направления подготовки
38.04.03 Управление персоналом
Брянского филиала РАНХиГС
Россия, г. Брянск
Зимонина О.В., кандидат педагогических наук
доцент кафедры государственного
управления и менеджмента
Брянского филиала РАНХиГС
Россия, г. Брянск

ПРОФЕССИОНАЛЬНОЕ РАЗВИТИЕ ГОСУДАРСТВЕННЫХ ГРАЖДАНСКИХ СЛУЖАЩИХ КАК ОСНОВА ПРОФЕССИОНАЛЬНОЙ ДЕЯТЕЛЬНОСТИ

Аннотация: *В настоящей статье рассматривается важность профессионального развития гражданских служащих, механизмы которого оказывают влияние на развитие профессиональных и личностных качеств, для надлежащего исполнения должностных обязанностей.*

Ключевые слова: *профессиональное развитие, государственная служба, государственный гражданский служащий*

Degtyareva M.M.
student
Department of State
management and management,
Zimonina O.V., candidate of pedagogical sciences
associate professor
Bryansk branch of RANEPA, Russia, Bryansk

PROFESSIONAL DEVELOPMENT OF PUBLIC CIVIL SERVANTS AS THE BASIS FOR PROFESSIONAL ACTIVITIES

Abstract: *This article discusses the importance of professional development of civil servants, the mechanisms of which influence the development of professional and personal qualities for the proper performance of official duties.*

Key words: *professional development, public service, state civil servant*

Профессия государственного служащего одна из самых социально важных и сложных, требующая на подготовку хорошего специалиста больших затрат времени и средств, а от человека не только служебно-профессиональных качеств, но и нравственных.

Общеизвестно, что успешность должностного и профессионального продвижения по службе во многом зависит от потенциала государственного служащего, включающего в себя ресурсы, которые он может использовать при достижении более высокого статуса, организаторские способности, образование, должностное положение и т.д.

Приоритетными (достаточно важными) качествами, необходимыми для успешного продвижения по службе, сами государственные служащие называют: добросовестность в работе, профессиональный опыт, образование, принципиальность.

Наука и практика говорят, что на карьеру государственного служащего прежде всего влияют внутренние факторы. К ним можно отнести профессиональное образование; опыт работы; высокий интеллектуальный уровень, сюда же относят широкий кругозор, знания, навыки и умения; организаторские способности; уровень правовой и общей культуры. Нельзя исключить такие составляющие, как мотивация и целеустремленность личности в конкурентной борьбе; психологическая нацеленность и настрой на карьеру; умение показать, зарекомендовать себя перед руководством; умение строить отношения в рабочем коллективе, не создавая конфликтных ситуаций; возраст и состояние здоровья.

Одним из приоритетных направлений деятельности Правительства Российской Федерации по повышению качества государственного управления является создание многоуровневой системы профессионального развития государственного гражданского служащего в течение всего периода прохождения гражданской службы, учитывающей уровень должности, область профессиональной служебной деятельности, специфику должностных обязанностей гражданского служащего.

К фундаментальным принципам постоянного функционирования государственной гражданской службы относится принцип профессионализма и компетентности, который обеспечивается системой профессионального развития гражданских служащих.

От качественного функционирования системы профессионального развития зависит результативность профессиональной деятельности, и эффективность государственной гражданской службы в целом.

В настоящее время достаточно актуальным и отвечающим требованиям современности является непрерывное образование государственных служащих, в связи с чем возрастает потребность в расширении возможностей для обучения, в т.ч. для самообразования.

Одним из основных направлений развития государственной гражданской службы Российской Федерации в последние годы являются:

- совершенствование системы профессионального развития государственных гражданских служащих;

- повышение их профессионализма и компетентности;

- внедрение новых форм профессионального развития гражданских служащих, в том числе предусматривающих использование информационно-коммуникационных технологий [1].

С 2017 года начался переход от системы дополнительного профессионального образования гражданских служащих к системе их профессионального развития, в связи с чем был издан Указ Президента РФ от 21.02.2019 №68 «О профессиональном развитии государственных гражданских служащих Российской Федерации», а также внесены изменения в ст. 62 Федерального закона от 27.07.2004 №79-ФЗ «О государственной гражданской службе Российской Федерации».

Федеральным законом Российской Федерации от 29.07.2017 №275-ФЗ были внесены существенные изменения в положения Федерального закона от 27.07.20004 №79-ФЗ «О государственной гражданской службе Российской Федерации» в дополнение к понятию «дополнительное профессиональное образование» гражданского служащего введено понятие «профессиональное развитие».

В целях внедрения новых подходов к профессиональному развитию, предусмотрен ряд нововведений: отменено обязательное повышение квалификации гражданских служащих не реже одного раза в три года, меняются принципы организации дополнительного профессионального образования.

Профессиональное развитие гражданских служащих, в частности, включает в себя:

-семинары, тренинги, мастер-классы, иные мероприятия, направленные преимущественно на ускоренное приобретение гражданским служащим новых знаний и умений;

- конференции, круглые столы, служебные командировки, иные мероприятия, направленные на изучение передового опыта, технологии государственного управления, обмен опытом;

- самостоятельное изучение гражданскими служащими образовательных метареиалов, тематика которых соответствует направлению их профессиональной служебной деятельности;

- образовательные курсы, доступ к которым предоставляется гражданским служащим в дистанционной форме и т.д. [3]

Применение новых форм профессионального развития должно обеспечить мотивацию гражданских служащих к непрерывному профессиональному развитию и повысить эффективность профессиональной деятельности. Кроме того, Федеральным законом от 27.07.20004 №79-ФЗ [2] предусмотрено профессиональное развитие на протяжении всего периода прохождения гражданской службы, т.е учиться служащие должны постоянно и непрерывно.

Этому способствуют и иные мероприятия по профессиональному развитию гражданских служащих, такие как: ускоренное приобретение гражданскими служащими новых знаний и умений, изучение передового опыта, конференции, стажировки, вебинары и др. Что в свою очередь оказывают влияние на развитие профессиональных и личностных качеств, необходимых для надлежащего исполнения должностных обязанностей. Ведь профессиональное развитие отражает показатели профессионализма, которые определяют профессиональную пригодность и компетентность служащего, его способность осуществлять служебную деятельность, как в штатных (обычных), так и в экстремальных условиях.

Умения на государственной гражданской службе – профессиональные знания государственного гражданского служащего, воплощенные в решении конкретных служебных задач в соответствии с замещаемой должностью.

Навыки на государственной гражданской службе:

- это умения гражданского служащего, осуществляемые им автоматически в режиме реального служебного времени;

- приобретаются в процессе практической служебной деятельности в условиях типичных управленческих ситуаций;

- позволяют экономить служебное время, сводить до минимума ошибки и просчеты.

У любого навыка и умения есть основы, на которые нужно опираться, чтобы применить его правильно. Механизм повышения практических навыков требует проявления государственным служащим заинтересованной инициативности, способности и желании брать на себя ответственность за выполнение важных и сложных задач (поручений). Процесс выполнения ранее неизвестных задач, при получении успешного результата, позволит сформировать современные компетенции.

Использованные источники:

1. Каришина И.Е. Непрерывное обучение как тренд профессионального развития государственных гражданских служащих (в соавт. с Суховеевой О.И.) // Налоговая культура и цифровизация налогового администрирования. Материалы научно-практической конференции (Нижний Новгород, 18 мая 2022 г.). – Н. Новгород, 2022. С.204-209

2. Федеральный закон от 27.07.2004 №79-ФЗ «О государственной гражданской службе Российской Федерации»

3. Указ Президента РФ от 21.02.2019 №68 «О профессиональном развитии государственных гражданских служащих Российской Федерации»

Джураева Ф.И.
ассистент
кафедра русского языка и литературы УзФинПи
Рустамова М.
студент 101 группы
Рахманова З.
студент 101 группы
Норгабилова Ў.
студент 101 группы
факультет точных и прикладных наук
УзФинПи

ПОКАЗАНА ИСТОРИЯ СТРОЕНИЯ И УНИКАЛЬНЫЕ ОСОБЕННОСТИ КИРИЛЛИЦЫ, ИСПОЛЬЗУЕМОЙ В РУССКОМ ЯЗЫКЕ

Аннотация: *В этой статье подробно рассматривается структура и характеристики кириллического алфавита, используемого в русском языке. В ней прослеживается историческое развитие алфавита от его истоков со святыми Кириллом и Мефодием до современной 33-буквенной системы, используемой сегодня. Обсуждаются ключевые структурные особенности, такие как разделение гласных, согласных и специальные знаки (твердые и мягкие знаки), а также фонетические характеристики, которые делают кириллицу особенно подходящей для русского языка. Уникальные особенности, такие как твердость и смягчение согласных, озвончение и оглушение и гармония гласных, иллюстрируют, как кириллица отражает нюансы русской фонологии. Кроме того, в статье рассматривается глобальный охват кириллицы и ее адаптивность в цифровую эпоху. В обсуждении подчеркивается роль кириллицы как культурного символа и эффективной системы для представления русских языковых структур.*

Ключевые слова: *кириллица, русский язык, русская фонология, отвердение и смягчение согласных, русские гласные, твердые и мягкие знаки, историческое развитие кириллицы, русская письменность, славянские языки, Юникод и кириллица*

Jorayeva F.I.
Assistant
of the Department of Russian Language and Literature
of the UzFinPi
Rustamova M.
Rakhmanova Z.
Norgabilova O.
Students of the 101st group
of the Faculty of Exact and Applied Sciences of the UzFinPi

THE HISTORY OF THE STRUCTURE AND UNIQUE FEATURES OF THE CYRILLIC ALPHABET USED IN THE RUSSIAN LANGUAGE ARE SHOWN

Abstract: *This article examines in detail the structure and characteristics of the Cyrillic alphabet used in the Russian language. It traces the historical development of the alphabet from its origins with Saints Cyril and Methodius to the modern 33-letter system used today. Key structural features such as the separation of vowels, consonants, and special signs (hard and soft signs) are discussed, as well as the phonetic characteristics that make the Cyrillic alphabet particularly suited to the Russian language. Unique features such as hard and soft consonants, voicing and devoicing, and vowel harmony illustrate how Cyrillic reflects the nuances of Russian phonology. Additionally, the article examines the global reach of Cyrillic and its adaptability in the digital age. The discussion highlights the role of Cyrillic as a cultural symbol and an effective system for representing Russian language structures.*

Keywords: *Cyrillic, Russian language, Russian phonology, hard and soft consonants, Russian vowels, hard and soft signs, historical development of Cyrillic, Russian writing, Slavic languages, Unicode and Cyrillic*

Кириллица является неотъемлемой чертой русского языка и более широкой славянской языковой семьи, выступая в качестве уникального представления фонетических звуков и грамматических нюансов. Первоначально созданная для поддержки славяноязычных сообществ в чтении и письме, она развивалась на протяжении веков, чтобы стать одной из самых узнаваемых систем письма в мире. Ниже мы рассмотрим исторические корни, структурную схему и особые характеристики кириллического алфавита, используемого в русском языке.

Происхождение и историческое развитие кириллицы

Кириллица была разработана в IX веке святыми Кириллом и Мефодием, двумя византийскими миссионерами, которые стремились создать письменную систему для славянских носителей для доступа к религиозным текстам. Хотя они сначала разработали **глаголицу**, она вскоре превратилась в кириллицу, которая имела большее сходство с греческим письмом. Впоследствии он был принят различными славянскими группами, включая ранние русские общины, из-за его адаптивности и простоты.

На протяжении веков кириллица претерпела несколько изменений. **Петр Великий** провел одну из самых значительных реформ в начале XVIII века, упростив письмо, чтобы привести его в соответствие с западноевропейскими нормами печати. Еще одно заметное изменение произошло с **советской реформой орфографии** в начале XX века, которая привела к современной 33-буквенной системе, используемой в русском языке сегодня.

Структура современного кириллического алфавита

Русская версия кириллицы состоит из **33 букв**, каждая из которых выполняет определенную фонетическую функцию. Структура алфавита, как и латинского алфавита, включает как заглавные, так и строчные формы. Вот обзор его разбивки:

1. Основные гласные буквы: в русской кириллице 10 гласных букв: А, Э, Ы, У, О, Я, Е, Ё, Ю, И. Эти гласные представляют отдельные звуки в русском языке и могут указывать на смягчение или твердость согласных в паре с ними.

2. Согласные буквы: большинство букв в русском алфавите являются согласными, некоторые из которых уникальны для славянской фонетической структуры. К этим согласным относятся: Б, В, Г, Д, Ж, З, К, Л, М, Н, П, Р, С, Т, Ф, Х, Ц, Ч, Ш, Щ. Большинство согласных в русском языке могут быть как «мягкими», так и «твердыми», различие отмечается определенными гласными или «мягким знаком» (Ь).

3. Специальные знаки: в русском языке используются два немых символа: **твердый знак (Ъ**) и **мягкий знак (Ь).** Эти символы не представляют звуки сами по себе, а служат для изменения соседних звуков, при этом мягкий знак указывает на палатализацию (смягчение) предшествующего согласного, в то время как твердый знак в основном используется для разделения гласного после твердого согласного.

Фонетические характеристики кириллического алфавита

Одной из основных функций кириллического алфавита является отражение богатой фонетической системы русского языка, которая включает в себя некоторые звуки, которых нет в других языках. Вот несколько основных фонетических характеристик:

1. Твердые и мягкие согласные: большинство русских согласных могут произноситься как твердые или мягкие, в зависимости от их положения в слове или следующих за ними букв. Мягкие согласные обозначаются мягким знаком (Ь) или гласными, такими как Е, Ё, Ю, Я и И, которые смягчают предшествующий согласный. Например, в слове «мать» мягкий знак обозначает смягченный звук «т».

2. Гармония и влияние гласных: гласные в русском языке — это не просто независимые звуки; они также влияют на окружающие согласные, особенно в конце слогов. Например, разница между **а** и **я** имеет решающее значение для обозначения твердых и мягких звуков. В русском языке также используются парные гласные для обозначения различных качеств согласных (например, «е» против «э» и «и» против «ы»).

3. Озвончение и оглушение: в русском языке есть уникальное фонетическое правило, согласно которому звонкие согласные становятся глухими в конце слова. Например, слово «хлеб» произносится как [khlep], при этом конечный согласный смягчается. Глухие звуки также могут стать звонкими, когда их окружают звонкие звуки, обеспечивая естественное течение в произношении.

Технические адаптации и цифровая совместимость

Кириллический алфавит, включая его русскую версию, полностью поддерживается современными цифровыми системами. Благодаря **стандарту Unicode** кириллица доступна на цифровых платформах, что облегчает использование русского и других языков на основе кириллицы на компьютерах, смартфонах и других устройствах. Более того, кириллица может быть легко интегрирована в текстовый процессор и программирование, что делает ее универсальной и глобальной системой письма.

Заключение

Кириллица — это больше, чем просто набор букв для русскоговорящих; это утонченная система, которая отражает сложность и нюансы русского языка. Ее уникальная структура, отражающая многовековую лингвистическую эволюцию, обеспечивает ясность произношения и выражения, что делает ее идеально подходящей для русского и других славянских языков. В результате кириллица остается неизменным символом славянской культуры и языковой идентичности, соединяя прошлое и настоящее в современную цифровую эпоху.

Использованные источники:

1. Cubberley, Paul. The Slavic Alphabets: A Guide to Cyrillic and Glagolitic Origins. Cambridge University Press, 1996.
2. Simmons, David. "Orthography and Identity: The Evolution of the Cyrillic Alphabet in Russian". Russian Review, т. 62, № 3, 2003, стр. 345-364.
3. Šekli, Matej. "Orthographic and Phonological Aspects of Cyrillic in Slavic Languages". Journal of Slavic Linguistics, т. 24, № 1, 2018, стр. 17-34.
4. Comrie, Bernard и Corbett, Greville G. The Russian Language in the Twentieth Century. Clarendon Press, 1991.
5. Everson, Michael и др. Стандарт Unicode, версия 13.0 — кириллица и другие письменности. Консорциум Unicode, 2020.
6. Джанда, Лора А. и Клэнси, Стивен Дж. Книга о русском языке. Издательство Slavica, 2002.
7. Виноградов, Виктор В. Развитие русской орфографии. Издательство Progress, 1968.
8. Карамзин, Николай М. Роль кириллицы в русской культурной идентичности. Российская академия наук, 2010.

Енокян Т.А.
студент 3 курса магистратуры
Новосибирский университет экономики и управления «НИНХ»
Российская Федерация, г.Новосибирск

ИССЛЕДОВАНИЕ ПОТРЕБИТЕЛЬСКОЙ ЛОЯЛЬНОСТИ

Аннотация. *В данном исследовании анализируются результаты опроса клиентов компании "СТ-Проект" с целью оценки уровня удовлетворенности качеством предоставляемых услуг и стоимостью продукции. Согласно данным опроса, большинство клиентов выражают полное или частичное удовлетворение как качеством услуг (80%), так и стоимостью продукции (70%), что свидетельствует о высокой конкурентоспособности компании на рынке. Однако 20% респондентов отмечают определенную неудовлетворенность, что подчеркивает необходимость дальнейшего улучшения сервиса и адаптации ценовой политики. Исследование также выявило высокий уровень удовлетворенности работой персонала, что является одним из важнейших факторов клиентской лояльности. Полученные результаты позволяют сделать выводы о положительном восприятии бренда потребителями, но также указывают на области для совершенствования.*

Ключевые слова: *удовлетворенность клиентов, качество услуг, стоимость продукции, опрос клиента, лояльность, конкурентоспособность, бренд, ценовая политика.*

Enokyan T.A.
3rd year master's student Novosibirsk University of Economics and Management "NINH"
Russian Federation, Novosibirsk

CONSUMER LOYALTY RESEARCH

Abstract. *This study analyzes the results of a customer survey of ST-Project to assess the level of satisfaction with the quality of services provided and the cost of products. According to the survey, most customers express full or partial satisfaction with both the quality of services (80%) and the cost of products (70%), which indicates the company's high competitiveness in the market. However, 20% of respondents note some dissatisfaction, which emphasizes the need for further improvement of service and adaptation of pricing policy. The study also revealed a high level of satisfaction with the staff, which is one of the most important factors of customer loyalty. The results obtained allow us to draw conclusions about the positive perception of the brand by consumers, but also indicate areas for improvement.*

Keywords: *customer satisfaction, service quality, product cost, customer survey, loyalty, competitiveness, brand, pricing policy.*

Современные компании тратят значительные ресурсы на изучение удовлетворенности клиентов, так как это напрямую влияет на успешность бизнеса и его репутацию. В изучение лояльности потребителей, немалый вклад внесли такие зарубежные учёные, как У.Э. Деминг, Ф.Ф. Диксон, Р.М. Каннинхэм, Ф. Котлер, Ж.-Ж. Ламбен, Р. Оливер, С.У. Парк, А. Пессемье, Б. Райс и другие. Из отечественных авторов, можно назвать Т. С. Степченко, К. Кириллову, Н. В. Трубникову, И. Лопатинскую, В. Скульского, Э. Тарасенко и других. [1]

Благодаря своевременной оценке потребительской лояльности, компания способна получить данные о предпочтениях потребителей, выстроить управление бизнесом таким образом, чтобы удовлетворять их потребности и повысить уровень лояльности. [2]

Настоящее исследование основано на результатах опроса, проведенного среди клиентов компании "СТ-Проект", направленного на выяснение уровня удовлетворенности предоставляемыми услугами и продуктами, а также на изучение предпочтений и потребностей потребителей. Для выявления уровня потребительской лояльности компании было проведено анкетирование. В исследовании была использована случайная выборка, данный метод обычно используется для обеспечения представительности выборки и минимизации искажений. Анкетирование проведено среди клиентов которые уже приобрели оборудование или пользовались услугами компании. Исследование их уровня лояльности может помочь понять, насколько они остались довольны и какие факторы могут повлиять на их решение повторно обратиться к компании или уйти к конкурентам. Анкета содержит 43 вопроса, включает в себя как открытые, так и закрытые вопросы. Закрытые вопросы содержат список вариантов ответов, из которых нужно выбрать один. Открытые же вопросы предоставляют возможность давать ответы в свободной форме. После окончания исследования проводилась и обработка заполненных анкет, был проведен анализ полученных результатов. [3]

Как выявил опрос, более половины респондентов полностью или скорее удовлетворены качеством предоставляемых услуг: 30% отметили полное удовлетворение, 50% — скорее удовлетворение. Эти данные свидетельствуют о высоком уровне клиентского довольства и конкурентоспособности компании на рынке. Однако 20% клиентов выражают различные степени неудовлетворенности, что указывает на необходимость улучшения некоторых аспектов обслуживания.

Большинство респондентов (70%) считают стоимость продукции приемлемой, что свидетельствует о соответствии предложений компании ожиданиям потребителей. Однако 20% отметили, что цены высоки, что может побуждать компанию к разработке более гибкой ценовой политики. Интересно, что 85% респондентов удовлетворены стоимостью предоставляемых услуг, что также свидетельствует о способности компании поддерживать баланс между качеством и ценой.

Основной фактор, привлекающий клиентов в компанию, — это доступная стоимость (50%), что подчеркивает важность конкурентоспособных цен для удержания и привлечения клиентов. Другими важными аспектами выделены доступность (30%) и спектр услуг (20%), что говорит о необходимости предоставления всесторонних решений для разных категорий покупателей.

Опрос выявил высокий уровень удовлетворенности работой сотрудников компании: 50% клиентов полностью удовлетворены качеством обслуживания, 35% выразили скорее удовлетворение. Эти результаты указывают на высокий профессионализм и хорошую подготовку персонала, что является одним из залогов успеха компании.

Из результатов исследования видно, что компания занимает сильные позиции на рынке, предлагая качественные и доступные услуги. Высокие показатели удовлетворенности клиентов формируют положительный имидж компании и способствуют удержанию существующих заказчиков, а также привлечению новых.

Несмотря на положительную динамику, существует необходимость в постоянном совершенствовании как самого продукта, так и системы клиентского обслуживания. Мониторинг отзывов и устранение недочетов помогут повысить лояльность и снизить процент неудовлетворенных клиентов.

Исследование показало, что клиенты компании в целом довольны предлагаемыми услугами и считают стоимость продукции приемлемой. Однако стоит уделить внимание запросам менее удовлетворенных клиентов, чтобы снизить их процент и улучшить общее восприятие бренда.

Дальнейшие исследования в данной области могут включать более детальную сегментацию клиентов, анализ их изменений в предпочтениях и выявление новых трендов, что позволит компании своевременно адаптировать свои предложения и поддерживать высокий уровень конкурентоспособности.

Использованные источники

1. Н.Ф. Солдатова, К. К. Терчанян, А. Г. Михайлова Роль и место удовлетворенности потребителей в деятельности компании [электронный ресурс] Экономика и бизнес – URL: https://cyberleninka.ru/article/n/rol-i-mesto-udovletvorennosti-potrebiteley-v-deyatelnosti-kompanii/viewer

2. А.А. Лойко Исследование лояльности потребителей: Обзор современных методов [электронный ресурс] Экономика и бизнес – URL: https://cyberleninka.ru/article/n/issledovanie-loyalnosti-potrebiteley-obzor-sovremennyh-metodov

3.В.А. Кобцев особенности и этапы маркетинговых исследований [электронный ресурс] «Экономика и бизнес» -URL: https://cyberleninka.ru/article/n/osobennosti-i-etapy-marketingovyh-issled

Жамалова Ф.А.
Одилова Г.М.
Самаркандский государственный медицинский университет
Республика Узбекистан, г. Самарканд

СРАВНИТЕЛЬНАЯ ХАРАКТЕРИСТИКА СТАФИЛОКОККОВОЙ ФЛОРЫ ЗДОРОВЫХ И БОЛЬНЫХ ЛЮДЕЙ

Аннотация. *В настоящее время интерес к проблеме распространения стафилококков разных видов в организме человека возрастает в связи с нередким возникновением стафилококковых заболеваний среди работников некоторых отраслей промышленности, в детских и лечебных учреждениях, особенно в хирургических стационарах. Проведено бактериологическое обследование 102 здоровых взрослых людей, у которых с помощью стандартных поролоновых тампонов брались, пробы с 22 участков тела (слизистые оболочки носа, зева, конъюнктивы, кожные участки, волосы и выделения). Всего изучено 6650 проб, из которых выделено 4062 штамма стафилококков. Все культуры изучались по следующим свойствам: наличие пигмента, образование лецитовителлазы и коагулазы, тесты Бэрд-Паркера, чувствительность к антибиотикам стафилоциногенная активность, а коагулазопозитивные штаммы подвергались фаготипированию и типированию по КВ- тесту.*

Ключевые слова: *чувствительность к антибиотикам, коагулазопозитивные,, слизистой оболочке, носительство.*

Jamalova F.A.
Odilova G.M.
Samarkand State Medical University,
Republic of Uzbekistan, Samarkand

COMPARATIVE CHARACTERISTICS OF STAPHYLOCOCCAL FLORA IN HEALTHY AND SICK PEOPLE

Abstract. Currently, interest in the problem of the spread of different types of staphylococci in the human body is increasing due to the frequent occurrence of staphylococcal diseases among workers in some industries, in children's and medical institutions, especially in surgical hospitals. A bacteriological examination of 102 healthy adults was conducted, from whom samples were taken from 22 areas of the body (mucous membranes of the nose, pharynx, conjunctiva, skin areas, hair and secretions) using standard foam swabs. A total of 6650 samples were studied, from which 4062 strains of staphylococci were isolated. All cultures were studied for the following properties: pigment presence, lecithinellase and coagulase formation,

Baird-Parker tests, antibiotic sensitivity, staphylocinogenic activity, and coagulase-positive strains were subjected to phage typing and typing by the KV test.
Keywords: antibiotic sensitivity, coagulase-positive, mucous membrane, carriage

Введение. В настоящее время интерес к проблеме распространения стафилококков разных видов в организме человека возрастает в связи с нередким возникновением стафилококковых заболеваний среди работников некоторых отраслей промышленности [1,2], в детских и лечебных учреж-дениях, особенно в хирургических стационарах [3]. Нередко возбудителем заболеваний является *St.epidermidis* [4,5]. Однако результаты многочисленных работ, посвященных этой проблеме, дают весьма разноречивые представления о стафилококковой флоре организма человека [6,7].

Целью данного исследования явилось изучение распространения стафилококков разных видов, и их количественного со става и соотношений на различных участках тела человека.

Материалы и методы. Проведено бактериологическое обследование 102 здоровых взрослых людей, у которых с помощью стандартных поролоновых тампонов брались, пробы с 22 участков тела (слизистые оболочки носа, зева, конъюнктивы, кожные участки, волосы и выделения). 86 человек были обследованы двукратно. Кроме того, были обследованы 3 группы больных. Первую составили 41 человек с различными стафилококковыми инфекциями, у которых брались пробы из 26 мест тела (помимо перечисленных участков, в очаге воспаления и в 3 ареалах вокруг него); 31 больной был обследован дважды. Вторую группу составили 106 больных стафилодермиями, у которых обследованию подвергались воспалительный очаг, слизистая оболочка носа, кожа спины и запястья. В третью группу вошли 125 больных хроническим гайморитом, у которых обследовался очаг воспаления (содержимое гайморовых полостей) и слизистая оболочка носа.

Всего изучено 6650 проб, из которых выделено 4062 штамма стафилококков. Все культуры изучались по следующим свойствам: наличие пигмента, образование лецитовителлазы и коагулазы, тесты Бэрд-Паркера, чувствительность к антибиотикам стафилоциногенная активность, а коагулазопозитивные штаммы подвергались фаготипированию и типированию по КВ- тесту.

На основании изучения качественного состава стафилококковой флоры здоровых и больных людей выявлено, что отсутствие стафилококков всех видов отмечается примерно одинаково на теле здоровых и больных и наиболее часто на конъюнктиве, коже предплечья, плеча, кисти, ягодицы, также на «кашлевых пластинках».

Результаты и их обсуждение. Общее число проб с находками *St. aureus*, взятых от больных, было большим (18,7% из 857), чем в пробах от здоровых (12,2% из 2107 проб; $P<0,01$) за счет находок *St. aureus* в очагах воспаления. Частота обнаружения *St.aureus* на различных участках тела здоровых и больных людей достоверно не отличилась: наиболее часто они найдены на слизистой оболочке носа (у 59,7% здоровых и 53,7% больных), зева (у 39,4% и 32,6%), на коже промежности (у 12,2% и 25,6%), тыла стопы межпальцевыми пространствами (у 18,6% и 23,7%), коже подмышечной впадины (в 11,3% и 7,3%).

Количество *St. aureus* в указанных местах было достоверно большим, чем в других участках. У здоровых средняя обсемененность этих мест (M±m) составила $49{,}0\cdot10^4 \pm 1{,}54\cdot10^4$ - $248{,}0\cdot10^4\pm23{,}7\cdot10^4$ единиц стафилококка на 1 $см^2$ ($P<0,05$), е больных была равной $92{,}0\cdot10^4\pm3{,}55\cdot10^4$- $1680\cdot10^4\pm3{,}96\cdot10^4$ ед/$см^2$ ($P<0,05$).

Эпидермальные стафилококки на теле здоровых и больных людей встречались наиболее часто и в больших количествах, но примерно одинаково у тех и других, в следующих местах: кожа подмышечной впадины (соответственно у 81,4% и 78,2%), промежности (у 77,8% и 74,9%) тыла стопы с межпальцевыми пространствами (у 82,3% и 84,2%) и слизистая оболочка носа (у 62,8% и 64,4%).

Не удалось отметить существенной разницы в характеристике стафилококковой флоры, обнаруживаемой в выделениях здоровых и больных *St. aureus* одинаково часто были найдены в испражнениях (у 13,4% и 16,8 %), в моче (у 14,4% и 13,5%) и кашлевых пластиках (у 5,2% и 5,3%).

St.epidermidis наиболее часто и одинаково для здоровых и больных обнаруживались в моче (у 80,5% и 70,2%), в кале несколько реже у больных, но в большем количестве (у 43,3% и 21,1%) и одинаково часто в кашлевых пластинах (у 24,7% и 31,6%).

Таким образом, как у больных, так и здоровых людей, кроме главного биотопа слизистой оболочки носа выявлены и другие резервуары *St.aureus*, имеющие, по нашему мнению, определенное значение. Это слизистая оболочка зева, а также кожные участки промежность, подмышечная впадина и тыл стопы с межпальцевыми пространствами.

Основными биотопами *St.epidermidis* оказались в организме здоровых и больных людей кожные участки – стопа с межпальцевыми промежутками, промежность, подмышка и, в меньшей степени, слизистая оболочка носа.

Наряду с обитанием *St.aureus* и *St.epidermidis* в чистом виде в различных участках тела, были обнаружены случаи их совместного существования. Количество эпидермальных стафилококков в ассоциации со *St.aureus* преобладало в 33,1% ассоциаций из 130 изученных, а количество *St.aureus*- лишь в 10,7%. У 56,2% больных и у 48% здоровых людей *St. aureus* обнаруживался более чем в 3 местах одновременно. *St.epidermidis* у 55,6% здоровых людей встречается одно временно в 8 -13 местах тела и на теле 56,6% больных в 6-12 местах.

Среди *St.epidermidis*, найденных одновременно у одних и тех же лиц, преобладали штаммы определенного (чаще 1 или 2) биотипа по Бэрд-Паркеру и примерно одинаково часто у здоровых (89,3%) и больных (73%). В большинстве случаев они выявлялись и при повторное обследование.

По результатам двукратного обследования 17 здоровых больных людей с интервалом от 1,5 до 9 месяцев мы распределили всех обследованных на категории носительства *St.aureus* в выявленных биотопах по Г. Н. Чистовичу. Данные, представленные в таблице, показывают, что наиболее часто у обследованных нами лиц носительство *St.aureus* обнаруживалось на слизистой оболочке носа (72,7%). 54,8% лиц являлись носителями на слизистой оболочке зева. На кожных участках носительство этого микроба наблюдалось реже и примерно одинаково часто в разных местах. Отмечено, что постоянное носительство в зеве найдено у 14,5% обследованных, на коже подмышки - у 3,4% лиц, промежности - у 7,8% и на стопе с межпальцевыми пространствами - у 10,3% лиц.

Распределение 117 обследованных лиц по категориям носительства
***St.aureus* в выявленных биотопах**

Биотопы	Число лиц, распределенных по категориям носительства						Всего носителей	
	резидентные (злостные)		транзиторные (постоянные)		временные			
	абс.	%	абс.	%	абс.	%	абс.	%
Нос	23	19,6	21	17,9	41	34,9	85	72,7
Зев	8	6,8	9	7,7	47	40,3	64	54,8
Подмышечная впадина	2	1,7	2	1,7	27	23,2	31	26,6
Промежность	6	5,2	3	2,6	25	21,4	34	29,2

Стопа + межпальцевые промежутки	2	1,7	10	8,6	23	19,6	35	29,9

Представляло интерес сопоставить частоту «резидентного» носительства на слизистой оболочке носа с носительством в других резервуарах. Оказалось, что 20 человек из 23 «резидент ных» носителей имели *St.aureus* только на слизистой оболочке носа. Один из обследованных оказался «резидентным» носителем *St.aureus* одновременно в носу, в зеве, промежности и в подмышке. У второго человека дважды обнаруживались идентичные *St.aureus* на слизистой оболочке носа и зева, а у третьего - в носу и на коже промежности. «Резидентное» носительство *St.aureus*, не связанное с носовым носительством, обнаружено 6 человек в зеве, у 1-в подмышке, 4 - промежности, у 2- на стопе. Из них у одного человека было обнаружено резидентное носительство в 2 резервуарах - в промежности и на стопе, но различных по биологической характеристике.

Выводы. Таким образом кроме подтверждения положения о том, что главным биотопом *St.aureus* в организме здоровых и больных людей является слизистая оболочка носа, выявлены дополнительные резервуары этого микроба, к которым относится не только зев, но и участки кожи-промежность, подмышечная впадина и тыл стопы с межпальцевыми пространствами. Наличие «резидентного» носительства *St.aureus* на выявленных нами кожных участках тела человека выдвигает вопрос

о необходимости учета возможных резервуаров этих микробов и при обследовании на носительство как здоровых людей, так и больных проводить исследование проб из обозначенных мест.

Исползование источники.

1. Mamarasulova N.I. JARROHLIK BO’LIMIDAGI TIBBIY XODIMLARIDAN AJRATILGAN STAFILOKOKKLARNING TARQALISHI VA BIOLOGIK XUSUSIYATLARI // Экономика и социум. 2024. №1 (116). URL: https://cyberleninka.ru/article/n/jarrohlik-bo-limidagi-tibbiy-xodimlaridan-ajratilgan-stafilokokklarning-tarqalishi-va-biologik-xususiyatlari (дата обращения: 08.11.2024).
2. Одилова Г., Шайкулов Х., Юсупов М. Клинико-бактериологическая характеристика стафилококковых диарей у детей грудного возраста //Журнал вестник врача. – 2020. – Т. 1. – №. 4. – С. 71-74.
3. Мавлюдова К. С., Жамалова Ф. А. АНТИБИОТИКОЧУВСТВИ ТЕЛЬНОСТЬ СТАФИЛОКОККОВ, ВЫДЕЛЕННЫХ ПРИ БАКТЕРИАЛЬ НЫХ ВАГИНИТАХ //Печатается по решению редакционно-издательско го совета ФГБОУ ВО КГМУ Минздрава России. – 2022. – С. 36.

4. Мамедов А., Одилова Г. Частота обнаружения дрожжеподобные грибы рода candida с ассоциаций стафилококков //Евразийский журнал академических исследований. – 2022. – Т. 2. – №. 11. – С. 1098-1102.
5. Даминов Ж. Н. и др. Сравнительное Изучение Биологических Свойств Стафилококков, Выделенных От Здоровых Носителей И При Различных Клинических Формах Инфекций //Central Asian Journal of Medical and Natural Science. – 2022. – Т. 3. – №. 3. – С. 148-150.
6. Болтаев К. С., Одилова Г. М. ВЗАИМОДЕЙСТВИИ R-ЭПИСОМНЫХ ФАКТОРОВ С ХРОМОСОМНЫМИ ГЕНАМИ АНТИБИОТИКОУСТОЙЧИВОСТИ У КИШЕЧНЫХ ПАЛОЧЕК И ШИГЕЛЛ ЗОННЕ //Экономика и социум. – 2024. – №. 2-1 (117). – С. 922-926.
7. Ташпулатов, Ш., Д. Ҳўжақулов, and К. Болтаев. "Особенности внешнего дыхания при пищевом ботулизме у детей." *Журнал вестник врача* 1.2 (2019): 105-108.

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Жуманов М.А., доктор биологических наук профессор
Айтмуратова З.Р.
стажер преподаватель
Джуманиязова М.М.
студент магистратуры
Сапарова А.Б.
студент магистратуры
Кафедра «Общая биология и физиология
Каракалпакский государственный университет им. Бердаха
Республика Узбекистан

БИОЭКОЛОГИЧЕСКИЕ ОСОБЕННОСТИ СЕМЕЙСТВО ПЕЛИКАНОВЫХ ВСТРЕЧАЮЩИЕСЯ В КАРАКАЛПАКСТАНЕ

Аннотация: *В статье рассматриваются биоэкологические особенности, семейство пеликановых встречающиеся на территории Каракалпакстана. Изучение пеликановых в Каракалпакстане также имеет важное значение с точки зрения сохранения биоразнообразия. Угрозы в виде загрязнения водоёмов и изменения климата, уничтожение места обитания могут оказывать значительное влияние на их численность и распространение.*

Ключевые слова: *семейство, фактор, перья, зимовка, гнездования, перелет*, миграция.

Zhumanov M.A.
Doctor of Biological Sciences, Professor
Aitmuratova Z.R.
Intern Lecturer
Dzhumaniyazova M.M.
Saparova A.B.
Master's Students
Department of General Biology and Physiology
Karakalpak State University named after Berdakh
Republic of Uzbekistan

BIOECOLOGICAL FEATURES OF THE PELICAN FAMILY FOUND IN KARAKALPAKSTAN

Abstract:*The article discusses the bioecological features of the pelican family found in Karakalpakstan. The study of pelicans in Karakalpakstan is also important in terms of preserving biodiversity. Threats in the form of water pollution and*

climate change, habitat destruction can have a significant impact on their numbers and distribution.

***Key words**: family, factor, feathers, wintering, nesting, flight, migration.*

Сегодня в мире с каждым годом возрастает интенсивность антропогенных факторов и их влияние на животный мир, являющийся биоиндикатором окружающей среды. В результате возникает угроза резкого сокращения или исчезновения некоторых видов животных. Поэтому в настоящее время в мировом масштабе основное внимание уделяется сохранению их среды обитания и видового разнообразия.

Пеликаны представляют собой единственный род птиц из семейства пеликановых и принадлежат к отряду веслоногих (пеликанообразных). К этому роду относится семь видов. Размер этих птиц составляет от 1,3 до 1,8 метров. Пеликаны характеризуются громоздким телосложением, внушительными крыльями, короткими крупными ногами, длинной шеей и удлинённым клювом, который превышает длину головы примерно в 4–5 раз.

На нижней части клюва расположен сильно растяжимый кожистый мешок. Их оперение не плотно прилегает к телу, между перьями содержится воздух, что способствует уменьшению плотности этих крупных птиц. Ещё более способствует уменьшению их плотности наличие под кожей воздушной прослойки.

Пеликаны распространены преимущественно в тропиках и субтропиках на озёрах и морских побережьях. Они формируют колонии для гнездования и питаются исключительно рыбой. Эти птицы проводят много времени на воде, однако не умеют нырять. Ходят по земле свободно, держа своё тело более или менее параллельно поверхности. Летают они уверенно и часто используют парение. В кладке у пеликанов находится 2–3 яйца голубоватого или желтоватого оттенка с меловым покрытием на скорлупе. Период насиживания составляет от 30 до 42 дней. Птенцы появляются на свет слепыми и без пера, начинают покрываться пухом на 8–10 день, а летать учатся на 70–75 день жизни.

В Каракалпакстане встречаются розовый пеликан (*Pelecanus onocrotalus* L., 1758**)** и кудрявый пеликан (Pelecanus crispus B., 1832). Эти виды занесены в Красную книгу Узбекистана (2019) и в Красный список МСОП.

Розовый пеликан (*Pelecanus onocrotalus* L., 1758) - малочисленная сокращающаяся, прелетная птица.

Распространение. Южное Приаралье (гнездование) Амударья Зарафшан, бассейны Сырдарьи (перелет, зимовка) За пределами Узбекистана: другие страны Средней Азии, Казахстан, юг Восточной Европы (гнездование) Западная Азия, Индия, Африка (гнездование, зимовка).

Места обитания. Крупные равнинные водоемы.

Численность. В 1960-х годах они встречались в Южном Приаралье, и сейчас их количество составляет около 7 тысяч. Гнездится 500-700 пар (2-3%

мировой популяции). Несколько сотен зимуют, в группе пролетают несколько тысяч.

Условия обитания. Перелет весной в марте-апреле, гнездится колонией на камышовых зарослях, в апреле, мае откладывает 2-3 яйца и откладывает их в течение 29-30 дней. Птенцы начинают летать в июне-августе. Переселяются после гнездования (август - сентябрь) Осенний пролёт - в сентябре-ноябре, зимовка - с ноября по февраль.

Лимитриующие факторы. Уничтожение места обитания в результате изменения водного режима в бассейне Аральского моря. Браконьерство.

Способы охраны. Охота запрещена. Охраняется в заказниках, в местах гнездования (озеро Судочье), во время перелета , миграции и зимовки (Тузкон, Каракыр, Денгизкуль)

Кудрявый пеликан (Pelecanus crispus B., 1832)- малочисленный, сокращающийся перелётный вид. Внесён в Красный список МСОП.

Распространение. В низовьях Амударьи и Зарафшана, в среднем течении Сырдарьи (гнездования), центральная и южная часть Узбекистана (перелет, зимовка). За пределами Узбекистана: другие страны Средней Азии, Казахстан, Южная часть Восточной Европы (гнездования) Западная Азия, Индия (зимовка).

Места обитания. Крупные равнинные водоемы.

Численность. В 1960-х годах встречался в Южном Приаралье, в настоящее время исчезли в местах обиьания. Гнездится до 250 пар (5-6% мировой популяции), зимует несколько десятками, летает в группе до тысячи.

Условия обитания. Весенний прелёт - в марте-апреле, гнездится колонией в камышовых зарослях. В апреле-мае откладывает 2-3 яйца и откладывает их в течение 30-32 дней. Птенцы начинают летать в июне-августе. После гнездования переселяется (август-сентябрь) Осенний прелёт в сентябре-ноябре, зимовка: с ноября по февраль. Питается рыбой.

Лимитриующие факторы. Уничтожение места обитания в результате изменения водного режима в бассейне Аральского моря. Браконьерство.

Способы охраны. Охота запрещена. Охраняется в заказниках , в местах гнездования(озеро Судочье), во время перелета , миграции и зимовки (Тузкон, Каракыр, Денгизкуль) . Внесен в 1 категорию МСОП.

Пеликан в основном питается рыбой. По результатам исследования были установлены дневной минимальный режим питания, который составляет 14-12 гр. Самка, питавшаяся в жаркие дни с наименьшим весом, съела 18 кг 588 г рыбы, самка 18 кг 360 г рыбы. Если исходить из этих данных, то в нашем регионе пеликаны находится с марта по октябрь и ноябрь. Значит, за 200-250 дней один пеликан съедает 320-340 кг за сезон.

Таким образом, рассматривая биоэкологические особенности семейства пеликановых, следует обратить внимание на их уникальные адаптации к среде обитания и специфические поведенческие черты. Исследование биоэкологических особенностей пеликановых помогает не только лучше понимать их собственную уникальность, но и подчёркивает важность сохранения биоразнообразия в глобальном масштабе.

Использованные источники:

1. Абдреймов Т. Птицы тугаев и прилегающих пустын низовев Амударии. - Ташкент: Фан, 1981. - 108 с.
2. Аметов М. Птицы Каракалпакии и их охрана. - Нукус: Каракалпакстан, 1981. - 138 с.
3. Аметов М. Антропогенная трансформация фауны птиц Каракалпакстана.: Автореф. дис.... канд. биол. наук. - Ташкент. 1998. - 23 с.
4. Аметов Я.И. Қорақалпоғистон қушларининг биохилма-хиллиги ва уларни муҳофаза қилиш (фаунаси, экологияси, муҳофазаси). Автореф. дис…. докт. биол. наук. Тошкент, 2019. - 59 б.
5. Захидов Т.З. Биоценозы пустыни Кызылкум. - Ташкент, 1971. - 304 с.
6. Жуманов М.А. Позвоночные животные Южного Приаралья в условиях антропогенной трансформации среды их обитания.: Автореф. дисс. … докт. биол. наук. - Ташкент, 2017. - 52 с.
7. Новиков Г.А. Полевые исследования по экологии наземных позвоночных животных. - М. 1953. - 502 с.
8. Мамбетжумаев А.М. Полный систематический список птиц Южного Приаралья. Неворобьиные - Нон-Пассериформес // Вестник ККО АН РУз. – Нукус, 1995. - №1. - С. 55-68.

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Жуманов М.А., доктор биологических наук
профессор
Айтмуратова З. Р.
стажер преподаватель
Олломберганова М. Ф.
студент магистратуры по специальности «Биология»
кафедра «Общая биология и физиология»
Каракалпакский государственный университет
Республика Узбекистан

БИОЭКОЛОГИЧЕСКИЕ ОСОБЕННОСТИ ПОЛЕВОГО ВОРОБЬЯ (*PASSER MONTANUS*)

Аннотация
В статье рассматриваются биоэкологические особенности полевого воробья. Полевой воробей благодаря своей гибкости и эффективности природных адаптаций, остаётся неизменным участником природных сообществ многочисленных регионов.

***Ключевые слова**: гнездо, питание, размножение, перья, экосистема, численность, насекомые.*

Zhumanov M.A.
Doctor of Biological Sciences, Professor
Aitmuratova Z. R.
Intern teacher
Ollomberganova M.F.
Master's student in the specialty "Biology"
Department of "General Biology and Physiology"
Karakalpak State University
Republic of Uzbekistan

BIOECOLOGICAL FEATURES OF THE FIELD SPARROW (PASSER MONTANUS)

***Abstract:**The article discusses the bioecological features of the field sparrow. The field sparrow, due to its flexibility and effectiveness of natural adaptations, remains an invariable participant in the natural communities of numerous regions.*

***Key words**: nest, nutrition, reproduction, feathers, ecosystem, numbers, insects.*

Полевой воробей *(Passer montanus)* — представитель воробьиных, широко распространённый вид, который тесно связан с домовым воробьём. В отличие от домового воробья, он менее зависим от человека. Обитает на окраинах городов и деревень, в заброшенных селениях, а также около полей с зерновыми, садов и виноградников. В естественной среде предпочитает светлые леса, кустарниковые заросли и степи. Немного меньше размерами, чем домовой воробей, легко узнаваем благодаря коричневой шапочке на голове, чётким чёрным пятнам на его белых щеках, меньшему чёрному «нагруднику» на горле и белому воротничку из перьев на шее.

Эта птица образует стаи и живёт оседло, хотя иногда может перекочёвывать. Избегает гнездиться рядом с домовым воробьём, который больше по размеру, и иногда они конкурируют за места для гнездования. Когда ареал обоих видов пересекается, они могут кормиться вместе в полях и на лугах, образуя смешанные группы.

Полевых воробей, можно узнать по монотонности окраса, у них отсутствует выраженный половой диморфизм, характерный для домовых воробьёв; самцы и самки полевых особей выглядят одинаково. Окраска самки сравнима с окраской самца домового воробья, что, возможно, объясняет редкость гибридизации между этими видами. Молодые птицы по форме и окраске напоминают взрослых, но имеют более бледное оперение и менее заметные рисунки на голове. Их вокализация — характерное чириканье: резкое, двусложное и более гнусавое по сравнению с домовым воробьём. По земле они передвигаются прыжками.

Этот вид встречается практически по всей Европе и большей части Азии, исключая территории Крайнего Севера и Ближнего Востока. Полевой воробей обитает во всех населенных пунктах Узбекистана в оседлой форме.

Полевые воробьи обитают в различных биотопах. Гнездится в дуплах деревьев, старых птичьих гнёздах и норах млекопитающих, а в городах предпочитает крыши домов и с охотой занимает дуплянки.

Наши наблюдения показали, что на территории Кегейлийского района эти птицы чаще гнездятся колониями. Гнездятся в основном в щелях стен новостроек, под крышами домов и в крутых оврагах, в гнездах других птиц и в редких случаях деревьях.

В большинстве случаев мы стали свидетелями того, что полевые воробьи гнездились вблизи людей. Гнездо у полевых воробьев очень плотное, гнездо начинается с входного отверстия. Внутренняя сторона гнезд состоит из сухих и зеленых трав, а также из перьев.

В качестве гнездовых материалов обычно используются стебли сорных трав, листья деревьев, пух и перья птиц, корни растений, корневая кора, листья и перья растений злакового рода, хлопок, бумага, полиэтилен и пух.

Наши наблюдения показывают, что полевые воробьи гнездятся в основном в антропогенных ландшафтах. В частности, мы стали свидетелями того, что их гнезда расположены в трещинах стен зданий и в дырах деревьев. Следует особо отметить, что размеры гнезд, установленных на дереве, оказались утолщенными и увеличенными по сравнению с размерами гнезд, расположенных на крыше и в других помещениях жилого дома. Кроме того, в ходе наших наблюдений мы также наблюдали, как иногда полевые воробьи занимает гнезда ласточек и откладывает яйца (рис. 1).

После устройства гнезда полевые воробьи приступают к откладке яиц. Согласно литературным данным, первые яйца — это птица откладывает в окрестностях Ташкента и Намангана только в мае. Полевые воробьи откладывают 5-6 и даже до 8 яиц серых и желтых с черными мелкими пятнами.

Рис.1. Полевые воробьи (Passer montanus L.) захватывают гнездо ласточек и откладывают яйца

По данным Т.З. Захидова и Р. Н. Мекленбурцева (1969) размеры яиц этой птицы были следующими: длина яиц 19-23 мм, ширина яиц 14-16 мм. По нашим наблюдениям, полевые воробьи за один сезон увеличивается в 2-3 раза. Первые яйца были отложены 28 апреля, а последние - 4 мая. Яйца откладывались по одному в течение 5-6 дней. Яйца имеют эллиптическую форму, цвет яичной скорлупы белый, сероватый или желтоватый, покрытые плотными мелкими черными пятнами.

По данным А.Н.Богданова (1967) полевые воробьи начинают насиживать яйца еще до полного откладки яиц и период откладки яиц, который охватывает 12-13 дней. По данным Д.Ю. Кашкарова и Д.Н. Пузанковой, самцы и самки полевых воробьев насиживает яйца по очереди.

Например, в одном из гнезд, находящихся под наблюдением, в период с 7:00 до 21:00 полевые воробьи заменяли друг друга каждые 16 минут, в общей сложности 56 раз. Птицы, откладывающие яйца, редко оставляют гнездо свободным.

По нашим наблюдениям, полевые воробьи начали насиживать яйца после первого и второго откладывания. В период насиживание каждое яйцо теряет воду в своем составе и облегчается. Согласно нашим наблюдениям, в процессе насиживания каждое яйцо теряет около 77% своего веса за счет потери воды в своем составе.

Вылупление птенцов из яиц полевого воробья приходится на вторую декаду мая. Птенцы, вышедшие из яйца, голые, тело покрыто тонкой эмбриональной кожей. Цвет кожи красноватый и желтый. Клюв открывается и закрывается, угол клюва беловато-желтый. Птенцы, вылупившиеся из свежих яиц, не имеют перьев на крыльях, глаза также не открыты, на их месте имеются 2 черные пятна, глаза открываются позже. Средняя длина тела 22 мм, крылья 5 мм, вес 2,40 г. Начиная с третьего дня жизни птенцы становятся более подвижными и начинают издавать звуки. На теле, крыльях и хвосте начинают развиваться первые перья, медленно открываются глаза.

Птенцы, покинувшие гнездо, не уходят далеко от него. Масса тела птенцов полевого воробья увеличивается от 2,40-3,0 грамма до 23-25 граммов. Общий период развития полевого воробья (от откладывания яиц до вылупления птенцов) составляет 30-32 дня.

По литературным данным, полевые воробьи (Богданов 1983) в раннюю весну собирают молодые ветви, побеги, цветы, листья плодовых деревьев, семена и семена других культурных растений, а также насекомых, их личинки. В начале лета они питаются больше жуками, клещами, дневными и ночными бабочками, муравьями, терминами, клещами и другими растениями.

Полевые воробьи играют значимую роль в экосистемах, распространяя семена растений и регулируя численность насекомых. Они имеют многочисленных врагов, в число которых входят хищные птицы, млекопитающие и змеи, что делает жизни воробьев насыщенными, но полными вызовов.

Таким образом, изучение биоэкологических особенностей полевого воробья включает анализ его пищевых предпочтений, гнездового поведения и ареала распространения. Полевой воробей, являясь одним из наиболее распространенных видов воробьиных, демонстрирует интересное и адаптивное поведение в различных экосистемах. Его способность адаптироваться к разным условиям среды обитания делает его идеальным объектом для исследований.

Использованные источники:

1. Аметов М. Птицы Каракалпакии и их охрана. - Нукус: Каракалпакстан, 1981. - 138 с.

2. Аметов Я.И. Қорақалпоғистон қушларининг биохилма-хиллиги ва уларни муҳофаза қилиш (фаунаси, экологияси, муҳофазаси). Автореф. дис…. докт. биол. наук. Тошкент, 2019. - 59 б.

3. Богданов О.П. Животные Узбекистана. Ташкент, 1962. - 316 с.

4. Богданов О. П. Животные Узбекистана: (Позвоночные). Пособие для учителей. Пер. со 2-го рус. испр. и доп. изд. Ташкент: Укитувчи, 1983.

5. Жуманов М.А. Позвоночные животные Южного Приаралья в условиях антропогенной трансформации среды их обитания.: Автореф. дисс. … докт. биол. наук. - Ташкент, 2017. - 52 с.

6. Жуманов М.А., Асенов Г.А., Бекбергенова З.О., Қошанов Д.Е. Қорақалпоғистоннинг ҳайвонат олами. - Нукус, 2020. - 640 б.

7. Захидов Т. З., Мекленбурцев Р. Н. Природа и животный мир Средней Азии / Позвоночные животные: 2 том [Птицы]. - Ташкент: Укитувчи, 1969. — 426 с.

8. Кашкаров Д. Ю., Пузанкова Р. Н. Ткачиковые // Позвоночные животные Ферганской долины. Ташкент: Фан, 1974. С. 93-104.

Зокирходжаев Р.А., доктор медицинских наук, доцент
кафедра Офтальмологии
Ташкентская медицинская академия.
Хасанов Н.Н.
Врач-офтальмолог
Центральный госпиталь МВД Республики Узбекистан.
Бузрукхонов С.С.
Врач-офтальмолог
Республиканский специализированный
научно-практический центр микрохирургия глаза

ЭЛЕКТРОФИЗИОЛОГИЧЕСКИЕ ИССЛЕДОВАНИИ В ОФТАЛЬМОЛОГИИ

Аннотация. *Электрофизиологическая диагностика — современный метод выявления нарушений проводимости зрительных нервов, чувствительности рецепторов в коре головного мозга и сетчатке, а также скорости и адекватности их реакций на специфические стимулы. В офтальмологии ЭФИ глаз считается одним из самых информативных методов диагностики нарушений зрения, который позволяет дифференцировать различные виды аномалий — от дегенерации сетчатки до демиелинизирующих заболеваний ЦНС. В отличие от других процедур, ЭФИ-обследование глаз позволяет выявить функциональные нарушения зрения. Метод работает за счет регистрации электрических импульсов в разных участках зрительной системы. Измеряя показания проводимости и реакции тканей на внешние импульсы, можно выявить аномалии, которые не видны при других исследованиях.*

Ключевые слова: *Электрофизиология, электроретинография, зрительный вызванный потенциал, электроокулография,*

Zokirkhodjaev R.A.
Doctor of Medical Sciences, Associate Professor
of the Department of Ophthalmology
Tashkent Medical Academy.
Khasanov N.N.,
Ophthalmologist
Central Hospital of the Ministry of Internal Affairs
of the Republic of Uzbekistan.
Buzrukhonov S.S.
Ophthalmologist
Republican Specialized Scientific and Practical Center for Eye Microsurgery

ELECTROPHYSIOLOGICAL STUDIES IN OPHTHALMOLOGY

***Abstract**. Electrophysiological diagnostics is a modern method for detecting disorders of optic nerve conductivity, receptor sensitivity in the cerebral cortex and retina, as well as the speed and adequacy of their reactions to specific stimuli. In ophthalmology, EFI of the eye is considered one of the most informative methods for diagnosing visual impairment, which allows differentiating various types of anomalies - from retinal degeneration to demyelinating diseases of the central nervous system. Unlike other procedures, EFI eye examination allows identifying functional visual impairments. The method works by recording electrical impulses in different parts of the visual system. By measuring the conductivity readings and tissue response to external impulses, it is possible to identify anomalies that are not visible in other studies.*

***Keywords**: Electrophysiology, electroretinography, visual evoked potential, electrooculography.*

В статье рассматриваются основные положения электрофизиологических тестов в клинической офтальмологии. Электрофизиологические тесты включают оценку функции палочко-колбочковой системы и проксимального зрительного пути. Зрительный вызванный потенциал (ЗВП) выполняется для оценки функции проксимального зрительного нерва. Электроокулограмма (ЭОГ) используется для изучения соединения фоторецептор-РПЭ. Электроретинограмма (ЭРГ) используется для оценки функции фоторецептора (а-волна) и внутренней сетчатки (b-волна). Паттерн ЭРГ полезен для изучения функции колбочек макулы и функции ганглиозных клеток. а-волна в ЭРГ является диагностической для дистрофии палочек-колбочек или колбочек-палочек. Амплитуда b-волны в ЭРГ помогает нам отличить дисфункцию внутренней сетчатки от дистрофии фоторецепторов. Таким образом, ЭРГ не только полезна для постановки диагноза, но и полезна для изучения прогноза заболевания, что в конечном итоге помогает в консультировании пациента. Паттерн ЭРГ при использовании в сочетании с паттерном ЗВП помогает точно определить причину необъяснимой потери зрения. Мультифокальная ЭРГ изучает фокальные ответы на заднем полюсе в аркадах. Наиболее важным применением мультифокальной ЭРГ является раннее выявление токсичности гидроксихлорохина. Оценка остроты зрения с помощью развертки ЗВП, фокальной ЭРГ и мультифокальной ЗВП являются новейшими разработками в электрофизиологии.

Электрофизиологические тесты включают оценку функции системы палочек и колбочек и проксимального зрительного пути. Для постановки диагноза проводится несколько тестов. Электроретинография (ЭРГ) и вызванный зрительный потенциал (ВЗП) являются наиболее распространенными из них. Формы волн в этих тестах не только помогают поставить диагноз, но и полезны для прогнозирования пациента. Тесты также помогают диагностировать необъяснимую потерю зрения. Существуют новые разработки в электрофизиологии в виде мультифокальной электроретинографии (МФ ЭРГ) и вызванного зрительного потенциала (ВЗП). Целью написания этой статьи является получение базовых знаний о форме волн в электрофизиологии и их интерпретации.

Электрофизиология — это ретинальный электрический потенциал, полученный путем визуальной стимуляции.

Цели электрофизиологии

1. Диагностика известной дисфункции сетчатки
2. Диагностика необъяснимой потери зрения

Следующие исследования проводятся при электрофизиологическом тестировании

1. Зрительный вызванный потенциал
2. Полная электроретинограмма
3. Паттерн-электроретинограмма (ПЭРГ)
4. Мультифокальная электроретинограмма (мфЭРГ)
5. Электроокулограмма (ЭОГ)

Зрительный вызванный потенциал

ЗВП — это корковый ответ, который привязан по времени к событию визуального стимула, такому как контрастное изменение шахматного рисунка или вспышка света. Амплитуда обычно составляет 4–15 мкВ, а задержка — 90–100 мс.[2] Каналы, упомянутые в левой части рисунка, — это протоколы в ЗВП для правого и левого глаза при углах обзора 1,0 градуса. Первый протокол для каждого глаза взят при большом размере клетки, а второй — при маленьком размере клетки. N75 — это первый отрицательный ответ, и его время задержки с начала ответа отмечено. P100 — это первый положительный ответ, его время задержки отмечено в третьем столбце. Эта волна является самой важной волной в ЗВП. N135 — это большой отрицательный ответ, отмеченный, но не имеющий большого клинического значения. Амплитуда N75-P100 отмечена в пятом столбце. Следовательно, третий и пятый столбцы являются наиболее важными.

Паттерн ЗВП используется у пациентов, которые могут концентрироваться на паттерновом стимуле. Он чрезвычайно полезен для изучения функции зрительного нерва. Задержка латентности P100 предполагает дисфункцию зрительного нерва, в основном затрагивающую аксон, т. е. неврит зрительного нерва или демиелинизацию. Обратите внимание на задержку латентности P100 с левой стороны (более 110, что считается нормой). Снижение амплитуды P100 обычно предполагает нарушение зрения проксимальнее зрительного нерва или нейронной ткани (в основном атрофические изменения). Следовательно, паттерн ЗВП используется для исключения дисфункции зрительного нерва и служит ориентиром для определения уровня потери зрения. Если пациент не может фиксировать взгляд или имеет плотную непрозрачную среду, то проводится вспышка ЗВП, чтобы исключить наличие или отсутствие зрительной реакции со стороны зрительного нерва. Результаты вспышки ЗВП очень изменчивы, и поэтому она используется только как маркер наличия или отсутствия реакции со стороны зрительного нерва. N1, N2 и N3 — отрицательные ответы, а P1, P2 и P3 — положительные ответы. При вспышке ЗВП важны только амплитуды P1 и P2.

Электроокулограмма (ЭОГ)

ЭОГ является мерой функции ретинального пигментного эпителия (RPE) и взаимодействия между RPE и фоторецептором. Любое расстройство, которое затрагивает палочковый фоторецептор, повлияет на EOG, и подъем света обычно снижается при пигментном ретините (RP) и связанной с ним дисфункции фоторецептора. Коэффициент Ардена представляет собой соотношение между светлым и темным минимумом и пиками. Коэффициент Ардена выше 1,8 является нормальным, а ниже 1,6 является ненормальным. Между 1,8 и 1,6 это подозрительно. Основное применение EOG в клинической практике заключается в диагностике лучшей вителлиформной макулярной дистрофии, когда наблюдается сильно сниженный или отсутствующий подъем EOG, сопровождающийся нормальным

Электроретинограмма.

Паттерн электроретинограмма (ПЭРГ) — это реакция сетчатки на структурированный стимул, такой как перевернутая черно-белая шахматная доска или решетка. Это мощный клинический инструмент, позволяющий как объективную клиническую оценку функции макулы (P50), так и прямую оценку функции ганглиозных клеток сетчатки (N95). ПЭРГ считается промежуточным этапом между ЭРГ полного поля и ЗВЭП, поэтому ее не следует рассматривать отдельно. Паттерн ЭРГ страдает от заболеваний, ограниченных макулой, и, наоборот, у пациента с генерализованной дисфункцией сетчатки, не затрагивающей макулу, будет аномальная ЭРГ, но нормальная ПЭРГ. Таким образом, у пациентов с тяжелой формой дистрофии палочек и колбочек с хорошей остротой зрения наблюдается выраженная аномальная ЭРГ, но довольно хорошая ПЭРГ из-за спарринга макулы на этой стадии заболевания. Таким образом, ПЭРГ можно использовать в качестве маркера для определения стадии и прогрессирования дистрофии палочек и колбочек.

Паттерн ЭРГ также используется для оценки ранних изменений глаукомы. Поскольку компонент N95 представляет функцию ганглиозных клеток, паттерн ЭРГ является первой формой волны, которая подвергается влиянию ранних изменений глаукомы.[3]

Необъяснимая потеря зрения

Электрофизиология является золотым стандартом в оценке пациентов с необъяснимой потерей зрения. Паттерн ЗВП и паттерн ЭРГ выполняются в виде одновременной записи для оценки этих пациентов. Если паттерн ЭРГ и паттерн ЗВП в норме, то причина необъяснимой потери зрения обычно неорганическая. Если паттерн ЭРГ в норме, а паттерн ЗВП ненормален, то потеря зрения вызвана дисфункцией зрительного нерва. Если компонент P50 паттерна ЭРГ в норме, а N95 ненормален, то мы должны полагаться на паттерн ЗВЭ, который обычно ненормален и представляет собой дисфункцию зрительного нерва. Если P50 ненормален, то мы, вероятно, имеем дело с дисфункцией фоторецепторов. Следующий шаг — сделать полную ЭРГ, которая определит, есть ли чистая макулярная дистрофия или генерализованная дисфункция сетчатки.

Полномасштабная электроретинограмма

Полномасштабная ЭРГ — это массовый электрический ответ сетчатки на стимуляцию яркостью. Он имеет два основных компонента: скотопический (адаптированный к темноте ответ) и фотопический (адаптированный к свету ответ).

Скотопический ответ имеет две основные формы волны, а именно b-волну палочкового ответа и максимальную ответную волну a и b. Эта волна в основном используется для изучения палочковидных фоторецепторов. Этот ответ является наиболее важной формой волны, используемой для дифференциации дисфункции фоторецепторов и внутренней сетчатки. A-волна (отрицательная) представляет функцию фоторецептора, пре-фототрансдукцию, а b-волна (положительная) представляет функцию внутренней сетчатки (биполярные клетки, пост-фототрансдукцию).[4]

Фотопический ответ получается после яркой фотопической адаптации. Первая волна получается после однократной фотопической вспышки. Эта волна также имеет отрицательную a-волну и положительную b-волну. Отрицательная волна a представляет собой функцию фоторецептора колбочки, а положительная волна b представляет собой внутреннюю функцию сетчатки.

Следующий ответ в фотопическом состоянии — это ответ на мерцание 30 Гц. При 30 Гц плохое временное разрешение системы палочек, в дополнение к наличию подавляющего палочки фона, позволяет регистрировать чистую форму волны, специфичную для колбочек.

На основе ЭРГ установлено три основные группы диагнозов.

1. Палочко-колбочковая дистрофия
2. Колбочко-палочковая дистрофия
3. Внутренняя ретинальная дисфункция

Палочко-колбочковая дистрофия

Палочко-колбочковая дистрофия — это группа заболеваний, связанных с дисфункцией слоя палочек и колбочек фоторецепторов, но в основном с участием палочковых фоторецепторов. У пациентов наблюдаются симптомы ночной слепоты. Палочковые ответы заметно снижены (a-волна), и это приводит к вторичному снижению b-волны. Обе волны снижены равномерно. РП является наиболее распространенным заболеванием в этой группе. Наряду с палочковой реакцией снижена также колбочковая реакция, но в меньшей степени. Снижение скотопического, фотопического и макулярного паттерна ЭРГ. Таким образом, ЭРГ помогает не только в диагностике палочко-колбочковой дистрофии, но и в определении стадии заболевания.

Дистрофия колбочек и палочек

Дистрофия колбочек и палочек — это группа заболеваний, включающих снижение функции фоторецептора колбочек. Скотопический ответ при дистрофии колбочек, b-волна палочек и волна a-b в максимальном ответе снижены, но не так заметно, как при дистрофии палочек и колбочек. Сниженный ответ на мерцание 30 Гц в значительной степени свидетельствует о сниженной функции колбочек. Паттерн ЭРГ также снижен при дистрофии колбочек и также выступает в качестве точки дифференциации между чистой макулярной дистрофией и дистрофией колбочек

Внутренняя ретинальная дисфункция

В-волна ответа ЭРГ на яркую вспышку возникает во внутренней сетчатке, в основном в биполярных клетках, и, таким образом, связана с активностью, происходящей после фототрансдукции. Это также называется электроотрицательной ЭРГ. Волновая картина показывает почти нормальную а-волну и отсутствующую или сниженную b-волну. Отрицательная b-волна лучше воспринимается в скотопической ЭРГ, чем в фотопической ЭРГ. Наиболее распространенными состояниями, отмеченными в этой группе, являются врожденная стационарная ночная слепота (ВСНС), X-сцепленный ретиношизис, меланома-ассоциированная ретинопатия (MAP), хориоретинопатия «birdshot» и болезнь Баттена. Классическим клиническим расстройством, обычно связанным с отрицательным ЭРГ, является окклюзия центральной артерии сетчатки (ОЦАС). Это открытие отражает двойственность кровоснабжения сетчатки, т. е. фоторецепторы снабжаются хориоидальным кровообращением, а внутренняя сетчатка — центральной артерией сетчатки. Следовательно, ЭРГ также используется для исключения ишемической ретинопатии, особенно у диабетиков. Дифференциация между слоем фоторецепторов и внутренней дисфункцией сетчатки является одним из наиболее важных применений ЭРГ.[5]

Мультифокальная ЭРГ (мф ЭРГ)

Мультифокальная электроретинография — это исследование, которое может одновременно измерять несколько электроретинографических ответов в разных местах сетчатки с помощью методов кросс-корреляции. Таким образом, мфЭРГ позволяет топографически картировать функцию сетчатки в центральных 40–50 градусах макулы. Отображение может быть в виде массива следов трехмерного представления. Массив следов показывает несколько ответов на небольших участках, особенно от аркады до аркады. Трехмерная карта представляет собой псевдоцветовой ответ, разделенный на несколько шестиугольников.[6] Фовеолярный пик, который имеет самый высокий ответ, виден в центре белым цветом (максимальный ответ). Маленькая черная стрелка представляет собой слепое пятно (минимальный ответ).

Клинически мф ЭРГ используется для изучения функции макулы в случае сомнений или для изучения функции на локализованной области макулы. При ВМД мфЭРГ можно использовать для исключения наличия неоваскуляризация при сухой ВМД или при последующем лечении ВМД. При диабетической ретинопатии мфЭРГ в основном используется для исключения ишемических изменений в макулярной области. Он используется для изучения функции макулы при последующем наблюдении за операциями (макулярное отверстие, эпиретинальная мембрана или диабетическая ретинопатия).[7]

Использованные источники:

1. Fishman GA, Birch DG, Holder GE, Brigell MG. Электрофизиологическое тестирование при расстройствах сетчатки, зрительного нерва и зрительного пути. 2-е изд. Монография по офтальмологии 2. Сан-Франциско: Фонд Американской академии офтальмологии; 2001. стр. 237-69.

2. Holder GE. Электрофизиологическая оценка заболеваний зрительного нерва. Eye (Lond) 2004;18:1133-43.

3. Holder GE. Значимость аномальной электроретинографии при дисфункции переднего зрительного пути. Br J Ophthalmology 1987;71:166-71.

4. Frishman LJ. Происхождение электроретинограммы. В: Heckenlively JR, Arden GB, редакторы. Принципы и практика клинической электрофизиологии зрения. 2-е изд. Кембридж, Массачусетс: MIT Press;

5. Audo I, Robson AG, Holder GE, Moore AT. Отрицательная ЭРГ: клинические фенотипы и механизмы заболеваний внутренней дисфункции сетчатки. Survival Ophthalmology 2008;1:16-40.

6. Hood DC. Оценка функции сетчатки с помощью мультифокальной техники. Prog Retin Eye Res 2000;19:607-46.

7. Sasoh M, Yoshida D, Kuze M, Uji Y. Мультифокальная электроретинограмма при отслойке сетчатки. Doc Ophthalmology 1997;94:239-52.

Изтлеуов Г. М.
Южно-Казахстанский государственный
университет им. М. Ауэзова
Абдуазизов Б.Т.
Джизакский политехнический институт
Хайдаров З.
351-21 Студент группы экологии и охраны окружающей среды

ЭКОЛОГИЧЕСКИЕ ТРЕБОВАНИЯ ДЛЯ ЭФФЕКТИВНОГО ЗДАНИЯ

Аннотация. *В статье рассмотрены основные проблемы воздействия на окружающею среду, с помощью строительной деятельностью. Дана оценка воздействия строительной деятельности на экологическую безопасность и предложены пути для совершенствования экологии, способствующая улучшения баланса природы.*
Ключевые слова: *микроклимат, негативное воздействие, устойчивое развитие*

Iztleuov G.M.
Auezov South Kazakhstan State University
Abduazizov B.
Jizzakh Polytechnic Institute
Haidarov Z.
351-21 Student
of the Ecology and Environmental Protection Group

ENVIRONMENTAL REQUIREMENTS FOR AN EFFICIENT BUILDING

Annotation. *The article discusses the main problems of environmental impact through construction activities. An assessment of the impact of construction activities on environmental safety is given and ways to improve the environment are proposed, contributing to improving the balance of nature.*
Keywords: *microclimate, negative impact, sustainable development*

Строительная сфера производит определенное воздействие на развитие окружающей среды. Строительная деятельность считается одним из важнейшим источников загрязнения окружающей среды. В основном дестабилизирующее влияние строительства оказываются в городских условиях.

Важным фактором является необходимость проведения экологической экспертизы отходов, применяемых для строительной цели. Для экологической безопасности производства стройматериалов, усиления охраны здоровья человека и окружающей среды необходимо предпринять меры безопасноти и экологической и строительной. Одним из ключевых вопросов в архитектурном проектировании является обеспечение благоприятного микроклимата [1] в жилых зданиях на основе критериев экологической безопасности.

Под микроклиматом необходимо понимать конкретные климатические условия на строительных площадках с учетом внутренней среды жилых зданий. Основными показателями микроклимата, которые следует учитывать при экологической и гигиенической оценке внутренней среды, являются:

- температура воздуха;
- повышение температуры (между барьером и вертикальными барьерами и температурой воздуха);
- интенсивность инфракрасного излучения;
- относительная влажность воздуха;
- скорость воздуха.

Наиболее подходящими для микроклимата жилых и общественных зданий в теплое время года являются:

- температура воздуха 20-25 ° C;
- относительная влажность 30-60%;
- скорость воздуха не менее 0,25 м / с;
- Средняя температура внутренних поверхностей барьерных структур 26-30^{0}С.

Лучшие микроклиматы для жилых и общественных зданий в самые холодные сезоны:

- температура воздуха 20-22°C;
- относительная влажность 30-45%;
- скорость воздуха не менее 0,1-0,15 м/с;
- средняя температура внутренних поверхностей барьерных структур 17-21^{0}С.

Отказ хотя бы одного из вышеупомянутых показателей окажет негативное влияние на все остальные показатели. Например, при влажности воздуха менее 20% кожа становится сухой, а иммунная система ослабевает. Человек не будет чувствовать себя комфортно в следующих ситуациях:

- относительно влажности не менее 85% воздуха;
- скорость воздуха до 0,1 м/с;
- когда температура воздуха в здании ниже на 2°C ниже средней температуры излучения.

Эти показатели показывают, что биологические процессы, происходящие в организме человека, неразрывно связаны с микроклиматическим режимом жилых зданий. Плохое воздействие микроклимата здания на организм человека проявляется в сжигании на открытом воздухе газа, используемого в качестве источника тепла. Кроме того, загрязнение воздуха вредными химическими веществами может повысить температуру на 3-6 ° C, а влажность на 10-10%. Компьютерное моделирование показало, что в этом случае скорость потока воздуха и тепла через помещения вызвана неровностями поверхностей, что привело к образованию громоздких участков.

Дефицит естественного света и ультрафиолетового излучения обусловлен:

- стекло вместо света (45% удержания света);
- загрязнение стекла (50-70% удержания света);
- на противоположной стороне здания;
- направление окон севернее и т.д.

При проектировании особое внимание уделяется утеплению зданий, то есть прямому солнечному свету и поверхностному излучению. Санитарно-гигиенические критерии для жилых зданий устанавливаются в соответствии с тем, что продолжительность непрерывной изоляции с 22 марта по 22 сентября будет не менее 2 часов для южных регионов (48°С), для умеренных районов (48-58°С). 2,5 часа и 3 часа на север (58°С). На основе сравнения расчетных данных с нормативными стандартами здания, которые перегреваются в течение летних месяцев, распределяются на те, которые более или менее утеплены и менее утеплены. Эффективное управление климатом в помещении с использованием массы для хранения и поддержания энергии достигается в соответствии с соответствующими правилами проекта активации потолка [2]. Эти правила показывают, что если тяжелую массу поместить снаружи здания, контроль температуры будет потерян. Внешняя масса поддерживает температурные пределы, чтобы сбежать за одну попытку. Это может быть сделано путем снижения высокой температуры в дневное время, а затем и для конструкций в областях, где температура падает и охлаждается вечером, когда солнечная энергия высока и мало осадков. Эти вещи больше не нужны. Это потому, что современные строительные материалы и внешний вид фасада проекта могут реально снизить потери энергии до такой степени, что достигается баланс. Мы рассматриваем проект «двухсторонний фасад» с высокотемпературными стеклопакетами в умеренном климате в Центральной Европе с динамической настройкой штрих-кода и системой управляемой вентиляции. Такой проект потребует дополнительных затрат энергии во время зимнего отопления и активного охлаждения летом.

По мнению экспертов, проблемы, связанные с созданием экологически чистой и устойчивой жилищной среды, стоят не только в глазах специалистов в области жилищного строительства, но и в области охраны окружающей среды. Достаточно сказать, что система экологического мониторинга жилищной среды все еще в значительной степени отсутствует в практике жилищного строительства.

Защита зданий от внутреннего и наружного загрязнения, шума, вибрации, электромагнитных полей и других повреждений является компонентом здоровья человека и хорошей окружающей среды. С этой точки зрения идея основана на Декларации об устойчивом развитии и окружающей среде 1992 года в Рио-де-Жанейро и городе Йоханнесбурге 2002 года [3], согласно которой цель действий по содействию устойчивому развитию заключается в том, чтобы люди жили в гармонии с природой. имеет право на помилование». Это сыграет важную роль в создании здорового экологически чистого жилья.

Использованные источники:

1. Charles J. Kibert, Jan Sendzimir and G. Bradley. Guy Construction ecology: nature as the basis for green buildings. London and New York (Edited by 2003)
2. David C. Coleman. Big ecology: the emergence of ecosystem science. University of California Press. Berkeley, Los Angeles, London. 2010.
3. И.А.Каримов. Узбекистан на пороге XXI века: угрозы безопасности, условия и гарантии прогресса. – Москва : Издательский дом “Дрофа”, 1997.
4. Н.В.Кузнецова. Экологическое право: учебное пособие.-М.: Юриспруденция, 2000.

Изтлеуов Г.М.
Южно-Казахстанский государственный университет им. М. Ауэзова
Аззамкулов А.
преподователь
Джизакский политехнический институт
Алимбеков Ж.
студент группы 351-21 Э и ООС

МЕРЫ ЭКОЛОГИЧЕСКОЙ БЕЗОПАСНОСТИ ПРИ ПРОВЕДЕНИИ СТРОИТЕЛЬНЫХ РАБОТ

Аннотация. *Экологическое благополучие планеты, государства, региона–один из важнейших показателей жизнеобеспечения цивилизации в целом и ее территориальных групп. До поры до времени об этом можно было не вспоминать, но в XX-м веке появились грозные симптомы экологических заболеваний. Как это часто бывает, основные силы, иногда лишь «разговорные», были брошены на подавление симптомов, тогда как думать необходимо о причинах. И работу в этом направлении пора организовывать на планомерной и взвешенной основе.*

Ключевые слова: *безопастность, благополучие, абсолютный, экологический, предельно-допустимая концентрация, соблюдения.*

Iztleuov G.M.
Auezov South Kazakhstan State University
Azzamkulov A.
lecturer
at the Jizzakh Polytechnic Institute
Alimbekov Zh.
is a student of the 351-21 E and EP group

ENVIRONMENTAL SAFETY MEASURES DURING CONSTRUCTION WORK

Annotation. The ecological well–being of the planet, the state, and the region is one *of the most important indicators of the life support of civilization as a whole and its territorial groups. For the time being, it was possible not to remember this, but in the twentieth century, terrible symptoms of cancer appeared. As is often the case, the main forces, sometimes only "conversational", were thrown at suppressing symptoms, whereas it is necessary to think about the causes. And it is time to organize work in this direction on a systematic and balanced basis.*

Keywords: *safety, well-being, absolute, ecological, maximum permissible concentration, compliance.*

Прения по поводу экологии, к сожалению, часто проистекают совсем «по другим причинам» – популизм, пиар, выборы. Поэтому слов много, а толку мало.

Достижение целей безопасности сопряжено со значительными материальными затратами и в условиях ограниченности ресурсов возможно лишь путем научно обоснованной разработки и осуществления комплекса взаимоувязанных правовых, экономических и политических мер. Переход от концепции «абсолютной» безопасности к концепции «приемлемого» риска, определил появление принципиально нового подхода к управлению развития общества, состоящего в том, что удовлетворение материальных и духовных потребностей населения должно осуществляться при соблюдении обязательного требования по обеспечению безопасности человека и окружающей его среды.

Обеспечение экологической безопасности АТК является сложной и ресурсоемкой работой, требующей системного подхода, основанного на четком определении целей системы и подсистем, способов, методов и сроков их достижения и необходимых ресурсов. Поэтому для решения такой задачи, например, на уровне региона, города, группы АТП или владельцев транспортных средств целесообразно разрабатывать целевую экологическую программу, представляющую собой комплекс факторов и мероприятий, обеспечивающих достижение поставленных перед АТК целей.

При этом вышестоящей системой является регион (город) с его экологической обстановкой, а подсистемой — АТК, оказывающий наряду с другими подсистемами (промышленность, коммунальное хозяйство и др.) влияние на окружающую среду.

Вышестоящая система устанавливает для АТК и для других подсистем цель первого уровня ЦН° и время ее достижения в виде допустимых годовых суммарных и покомпонентных выбросов, сбросов и отходов. АТК как подсистема второго уровня устанавливает свои цели Ц; для стационарных и передвижных источников загрязнения таким образом, чтобы было обеспечено достижение генеральной цели ЦН в заданное время.

Это позволяет для всех уровней АТК назначить свои управляемые, понятные и контролируемые целевые нормативы, оценить их влияние на достижение поставленной цели и определить способы (мероприятия) достижения поставленных целей, например улучшение технического состояния автомобилей, применение топлива с улучшенными экологическими характеристиками, утилизация и вторичное использование отработанных масел, аккумуляторов и т.д.

Таким образом, на третьем уровне дерева систем появляется достаточно большой перечень мероприятий, которые могут в принципе благоприятно сказаться на повышении экологической безопасности АТК и улучшении экологической ситуации в регионе (городе).

Очевидно, что по организационным, ресурсным и другим ограничениям практически одновременно задействовать все мероприятия невозможно. Они составляют лишь потенциальный перечень, из которого при формировании программы для конкретного региона (города), АТП, СТО выбирается некоторая группа мероприятий.

Природоохранная деятельность на АТП организуется и осуществляется в соответствии с действующим законодательством, подзаконными актами, а также экологическими программами вышестоящей системы и нормативными документами. Ответственность за соблюдение установленных правил и требований несет руководитель (владелец) предприятия. Основные из них приведены ниже. АТП, располагающее собственной ПТБ, должно иметь:

- экологический паспорт, утвержденный и зарегистрированный
- подразделением Государственный комитет Экология и охрана окружающей среды расчеты предельно допустимых
- выбросов в атмосферу, предельно допустимых сбросов в водоемы,
- объемов образующихся отходов);
- разрешения на ПДВ, водопользование и сброс воды, на хранение
- и вывоз отходов;
- подлинники актов, протоколов, предписаний, выданных
- государственными органами по контролю за состоянием
- окружающей среды;
- государственную отчетность о природоохранной деятельности;
- государственные стандарты на токсичность ОГ автомобилей и
- другую техническую и нормативную документацию.

Экологический паспорт является документом, характеризующим состояние природоохранных работ на АТП, и оформляется в соответствии с ГОСТ 17.0.0.04-90.

Расчет ПДВ выполняется в соответствии с "Рекомендациями по оформлению и содержанию проектов ПДВ в атмосферу для предприятий" и согласовывается с местными органами Госкомсанэпиднадзора. После утверждения расчета в территориальном отделении Государственный комитет Экология и охрана окружающей среды АТП получает разрешение на ПДВ установленной формы.

Расчет ПДС выполняется в соответствии с "Методикой расчета ПДС в водные объекты со сточными водами", согласовывается с местными органами Госкомсанэпиднадзора и территориальным отделением Государственный комитет Экология и охрана окружающей среды. Затем АТП заключает договор с региональным органом, контролирующим охрану водных ресурсов, и получает разрешение на водопользование с указанием лимитов водопотребления н водоотведения.

Расчет объемов образующихся на предприятии отходов выполняется в соответствии с «Методикой оценки объемов образования отходов производства» и потребления. На его основе АТП разрабатывает «Проект размещения лимитов промышленных отходов», представляет его в орган

Госкомсанэпиднадзора и получает от него разрешение на хранение и вывоз промышленных отходов, в котором указан их перечень, объемы хранения и место утилизации.

АТП должно располагать необходимыми производственными помещениями, оснащенными оборудованием в соответствии с существующими нормами, применять технологии, обеспечивающие высокое качество ТО и ТР, и поддерживать ПС в технически исправном состоянии. Кроме того, предприятие должно быть оснащено приборами для контроля токсичности автомобилей: 1 газоанализатор на 50 бензиновых автомобилей и 1 дымомер - на 50 дизельных.

Малые АТП и владельцы автомобилей, не имеющие ПТБ, обязаны проводить ТО и ТР, а также проверку и регулировку токсичности своего ПС на крупных оснащенных АТП или на специализированных предприятиях и СТО.

Выпускаемые на линию автомобили должны быть технически исправны, а токсичность их ОГ соответствовать действующим экологическим стандартам.

Предприятие обязано проводить организационно-технические и другие мероприятия, обеспечивающие снижение загрязнения окружающей среды и рациональное потребление природных ресурсов, и силами ИТС вести экологическое обучение и повышение квалификации персонала.

АТП должно быть отделено от жилой застройки санитарно-защитными зонами. Трубы котельных и вентиляционные выводы производственных участков, выбрасывающих вредные вещества (сварочный, аккумуляторный, окрасочный и др.), должны быть оборудованы специальными улавливающими фильтрами. Концентрации загрязняющих веществ, выбрасываемых ПТБ в атмосферу, на границе санитарно-защитной зоны не должны превышать установленные ПДК вредных веществ в воздухе населенных пунктов. Уровни создаваемого предприятием шума также не должны превышать значений, регламентированных санитарными нормами.

Необходимо соблюдать установленные нормы водопотребления и водоотведения, содержать в исправном состоянии очистные сооружения и обеспечивать очистку стоков до уровней, оговоренных в разрешении на ПДС. Следует также строго соблюдать правила сбора, хранения и утилизации промышленных отходов. Приемка и выдача ТСМ должна быть организована таким образом, чтобы исключалась возможность их попадания на почву и в канализацию.

Предприятия, расположенные в регионах, где температура самого холодного месяца достигает -15 °С, должны оснащать открытые стоянки устройствами подогрева или разогрева двигателей.

Государственная отчетность о природоохранной деятельности на АТП, имеющим ПТБ, ведется по следующим формам Госкомстата:

- "Отчет об охране атмосферного воздуха", форма 2-ТП (воздух);
- "Отчет об использовании воды (при заборе воды из собственных водоемов)", форма 2-ТП (водхоз);

- "Отчет о ходе строительства водоохранных объектов" (предприятия, имеющие предписания от административных органов о таком строительстве), форма 3-ос;
- "Отчет о текущих затратах на охрану природы" (покупка оборудования, приборов, специальной тары для отходов, нейтрализаторов и др.), форма 4-ос;

"Капитальные вложения на природоохранные цели", форма 18-КС. Оформленные на специальных бланках отчеты в установленные сроки направляются органам местной администрации.

Государственный экологический контроль за соблюдением АТП природоохранных требований осуществляют территориальные органы Государственный комитет Экология и охрана окружающей среды, Госкомсанэпиднадзора и органы местной администрации.

Использованные источники:

1. А.И.Радионов, В.Н.Клушин, Н.С. Тарагешников “Техника защиты окружающей среды”, М., Изд-во “Химия”, 1989 г.

2. С.В.Яковлев, Я.А.Карелин, Ю.М.Ласков, Ю.В.Воронов. “Очистка производственных сточных вод”, М., Стройиздат, 1985 г., с.336.

3. Кафаров В.В. Принципы создания безотходных химических производств. М. ХИМИЯ, 1982 г, 288с.

4. СНиП 11-31-74. Нормы проектирования. Водоснабжение. Наружные сети и сооружения.Изд.3-е. М. Стройиздат. 1978 г, 45—190с.

5. СНиП 11-32-74. Нормы проектирования. Канализация. Наружные сети и сооружения. М. Стройиздат, 1978, 191—304с.

Исроилов С.И.
yurist
Majburiy ijro byurosi Jizzax viloyat boshqarmasi inspektori 1-darajali

ЖАМИЯТДА ЁШЛАРНИНГ ҲУҚУҚИЙ ОНГИ ВА МАДАНИЯТИНИ ОШИРИШ-ДОЛЗАРБ ВАЗИФА

Аннотация: *Мазкур мақолада аҳолининг ҳуқуқий онги ва ҳуқуқий маданиятини ошириш, ҳуқуқий саводхонлиги янада юксалтиришнинг долзарб масалалари юзасидан фикр-мулоҳазалар юритилади.*

Калит сўзлар: *Ҳуқуқий онг, ҳуқуқий маданият, ҳуқуқий иммунитет, ҳуқуқий билим, ҳуқуқ ва бурч, ҳалоллик ва поклик, демократик янгиланиш, қонун устуворлиги, Ҳаракатлар стратегияси, Тараққиёт стратегияси, суд-ҳуқуқ тизими, қонун ҳужжатлари.*

Israilov S.I.
1st level lawyer
Inspector
of the Jizzakh regional administration
of the Bureau of Compulsory Enforcement

INCREASING THE LEGAL AWARENESS AND CULTURE OF YOUTH IN SOCIETY IS AN IMPORTANT TASK

Annotation: *In this article, there are opinions on the actual issues of increasing the legal consciousness and legal culture of the population, further improving legal literacy.*

Key words: *Legal consciousness, legal culture, legal immunity, legal knowledge, right and duty, honesty and purity, democratic renewal, rule of law, strategy of actions, strategy of development, legal system, legislation.*

Биз жамиятимизда шундай ҳуқуқий маданиятни шакллантиришимиз керакки, унга мувофиқ Конституция ва қонунларга амал қилиш, бошқаларнинг ҳуқуқ ва эркинликлари, шаъни ва қадр-қимматини ҳурмат қилиш мажбурият эмас,балки кундалик қоида ва одатга айланиши шарт.

Ш.М.Мирзиёев.

Ўзбекистонда демократик ҳуқуқий давлат, фуқаролик жамияти қуришнинг муҳим шартларидан бири шахснинг асосий ҳуқуқ ва эркинликлари таъминлаш ва ҳар бир инсон ҳуқуқларини ҳимоя қилишнинг амалий кафолатлари тизимини яратилганлигидир. Ҳуқуқий демократик давлат қуриш ва жамият тараққиётининг ривожи, ўсиб келатган авлоднинг таълим даражасининг, ҳуқуқий саводхонлигининг юқорилигига боғлиқдир.

Президентимиз Ш.Мирзиёев мамлакатимизда амалга оширилаётган демократикислоҳотларнинг мазмун-моҳиятига Янги Ўзбекистон стратегияси китобида тўхталар экан: Кейинги йилларда жамиятимиз ҳаётининг барча жабҳаларини қамраб олган ва тадрижий тарзда амалга оширилган ижтимоий-сиёсий янгиланишлар натижасида ҳалқимизнинг онгу тафаккури, дунёқараши ўзгариши билан бирга, бошқарув маъмурлари ва мулозимларининг иш услублари, фаолият йўналишлари ҳам янгича сифат ва замонавий мазмун касб эта бошлади, деб алоҳида таъкидлайди.

Давлат аҳолининг ҳуқуқий онги ва ҳуқуқий маданиятини ошириш, аҳолини, айниқса, ёшларни зарарли ахборотлардан ҳимоя қилиш бўйича мустаҳкам ҳуқуқий иммунитетни шакллантириш билан шуғулланади.

Хусусан, ҳуқуқий маданиятни юксалтиришда, энг аввало, ҳуқуқий таълим ва тарбия борасидаги ишлар тизимли ва узвий олиб борилмаяпти. Узоқ йиллар давомида бу масала ҳуқуқни муҳофаза қилувчи органлар ва айрим давлат органларининг иши сифатида қараб келиниб, бунда оила, маҳалла ва фуқаролик жамияти бошқа институтларининг иштироки етарлича таъминланмаган.

Ёшларнинг ҳуқуқий тарбиясига салбий таъсир кўрсатувчи омилларга нисбатан ҳуқуқий иммунитетни шакллантириш, ҳар бир шахсда қонунларга ва одоб-ахлоқ қоидаларига ҳурмат, миллий қадриятларга садоқат, ҳуқуқбузарликларга нисбатан муросасизлик ҳиссини уйғотиш ишига комплекс тарзда ёндашилмади.

Аҳолининг ҳуқуқий билимларини оширишга доир вазифаларнинг умумий тусда белгиланганлиги ҳамда уларни амалга оширишнинг аниқ таъсирчан механизми мавжуд эмаслиги жамиятда ҳуқуқий маданиятни юксалтириш борасидаги ишларнинг самарасиз олиб борилаётганлигини кўрсатади.

Ҳуқуқий онг ва ҳуқуқий маданиятни юксалтиришда шахсий манфаатлар ҳамда жамият манфаатлари ўртасидаги мувозанатни сақлаш ғояларини аҳоли онгига сингдириш ишларининг етарли олиб борилмаслиги ҳам қонун устуворлигини таъминлашга ўзининг жиддий салбий таъсирини кўрсатмоқда.

Аҳолининг ҳуқуқий билимлари етарли эмаслиги, шунингдек, давлат органларининг қонунга хилоф қарорлари устидан судга шикоят қилиш имкониятидан деярли фойдаланмаслиги мансабдор шахслар томонидан фуқароларнинг ҳуқуқлари ва қонуний манфаатлари камситилиши ҳолатларининг вужудга келишига сабаб бўлмоқда.

Қуйидагилар жамиятда ҳуқуқий онг ва ҳуқуқий маданиятни юксалтиришнинг асосий вазифалари этиб белгиланди:

- ёш авлод онгига ҳуқуқ ва бурч, ҳалоллик ва поклик тушунчаларини ҳамда одоб-ахлоқ нормаларини чуқур сингдириб бориш, Конституциянинг муҳим жиҳатларини уларга болалигидан бошлаб ўргатиш;
- аҳоли ўртасида ҳуқуқий маданиятни шакллантириш бўйича ҳуқуқий-маърифий тадбирларни халқимиз тарихи, дини, миллий қадриятларини ўргатиш билан уйғун ҳолда ташкил қилиш, шунингдек, ҳар бир фуқарода давлат рамзлари билан фахрланиш туйғуларини шакллантириш орқали мамлакатга дахлдорлик, ватанпарварлик ҳиссини кучайтириш;

- давлат хизматчиларининг ҳуқуқий онги ва ҳуқуқий маданиятини юксалтириб бориш, уларда коррупция ва бошқа ҳуқуқбузарликларга нисбатан муросасизлик муносабатини шакллантириш;
- давлат ҳокимияти ва бошқаруви органлари, шу жумладан, ҳуқуқни муҳофаза қилувчи органлар ҳамда фуқаролик жамияти институтларининг манзилли ҳуқуқий тарғиботни амалга ошириш борасидаги ўзаро ҳамкорлигини мустаҳкамлаш ва бошқалар. Аҳолининг ҳуқуқий билимларини оширишга доир вазифаларнинг умумий тусда белгиланганлиги ҳамда уларни амалга оширишнинг аниқ таъсирчан механизми мавжуд эмаслиги жамиятда ҳуқуқий маданиятни юксалтириш борасидаги ишларнинг самарасиз олиб борилаётганлигини кўрсатади.

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Аҳолининг ҳуқуқий билимлари етарли эмаслиги, шунингдек, давлат органларининг қонунга хилоф қарорлари устидан судга шикоят қилиш имкониятидан деярли фойдаланмаслиги мансабдор шахслар томонидан фуқароларнинг ҳуқуқлари ва қонуний манфаатлари камситилиши ҳолатларининг вужудга келишига сабаб бўлмоқда.

Бундан ташқари, ҳозирги глобаллашув, илмий-техник тараққиёт даврида аҳолининг ҳуқуқий онги ва ҳуқуқий маданиятини юксалтиришнинг инновацион усулларидан, тарғиботнинг илғор ва таъсирчан воситаларидан, хорижий давлатларнинг бу борадаги ижобий тажрибаларидан етарли даражада фойдаланилмаяпти".

Ўзбекистон Республикаси Президентининг "Жамиятда ҳуқуқий онг ва ҳуқуқий маданиятни юксалтириш тизимини тубдан такомиллаштириш тўғрисида"ги 2019 йил 9 январдаги ПФ-5618-сон Фармонининг биринчи иловаси билан "Жамиятда ҳуқуқий маданиятни юксалтириш" Концепциясиясини қабул қилиниши аҳолининг ҳуқуқий онги ва ҳуқуқий маданиятини юксалтиришга доир ишлар самарадорлигини янада такомиллаштириш, фуқароларнинг ижтимоий-сиёсий ўзгаришлар билан уйғун равишда ҳуқуқий билимларини ошириб боришнинг замонавий усулларини жорий этиш, шунингдек, аҳолини, айниқса, ёшларни зарарли ахборотлардан ҳимоя қилиш бўйича мустаҳкам ҳуқуқий иммунитетни шакллантиришга қаратилган мақсадларга эришишда муҳим ҳуқуқий ҳужжат сифатида жамият тараққиётига хизмат қилади.

Мамлакатимизда демократик янгиланиш жараёнида ёшларнинг ҳуқуқий ва маънавий билимларини изчил шакллантириш асосида эркин фикрлаш ва мустақил иш юритишини таъминлаш, уларнинг ҳуқуқ ва қонуний манфаатларини ҳимоя қилиш, ёшлар фаолиятини ҳар томонлама ташкилий-ҳуқуқий ҳамда моддий-техникавий жиҳатдан қўллаб- қувватлашни янада кучайтириш масалаларига давлат алоҳида эътибор қаратмоқда.

Ўзбекистонда кейинги икки йилда шиддат билан амалга оширилаётган демократик ислоҳотлар бугунги кунда жаҳон ҳамжамияти томонидан тан олинган ижобий ютуқларга эришилганлиги - кўп жиҳатдан Президентимиз Ш.М.Мирзиёев раҳбарлигида қонун чиқарувчи ҳокимият томонидан жамиятни тараққий эттиришга қаратилган қонунчилик негизи ислоҳотлар талабларига мувофиқ қонун ижодкорлиги асосида такомиллаштирилган ҳолда демократик ўзгаришларни ҳуқуқи негизи пухта ишлаб чиқилганлиги ва ҳаётга ҳуқуқ таъсирида қонун устуворлиги асосида тадбиқ этилаётганлигида намоён бўлмоқда.

Албатта, давлатнинг бош ислоҳотчи сифатида мамлакатимизда ҳуқуқий давлатни қуриш ва фуқаролик жамиятини барпо этиш жараёнида аҳолининг айниқса келажагимиз бўлган ёшларнинг иштирокини таъминлашда уларнинг ҳуқуқий маданият даражасини юксалтириш масаласи жамият тараққиётида ғоят муҳим масала ҳисобланади.

Мамлакатимиз Президенти Ш.М. Мирзиёев томонидан ишлаб чиқилган бугунги кунда дунё тан олган Ҳаракатлар стратегияси ва Тараққиёт стратегияси асосида қонунчиликни такомиллаштириш Асосий Қонунимизга тегишли ўзгартиришларни киритилиши ҳамда республикамизда амалга оширилган ҳуқуқий, иқтисодий, маънавий ва маърифий ислоҳотларни самарали бўлишида Ҳарактлар стратегияси ва Тараққиёт стратегияси ғоят, ноёб ҳуқуқий ҳужжат сифатида жамиятда ҳуқуқий маданиятни юксалишига хизмат қилганлигини эътироф этиш лозим. Шу сабабли ҳам кейинги икки йилда қабул қилинган қонунлар халқимизнинг бебаҳо маънавий ва маърифий мулки ҳамда жамиятда ҳуқуқий маданиятни юксалтиришнинг ҳуқуқий асоси ва муҳим омили ҳисобланади.

Ривожланган давлатларни тарақиёт йўлига назар солинганда ҳуқуқий давлат ҳокимиятининг самарадорлиги-бевосита фуқаролик жамиятида қонун устуворлигини етук ҳаракатда бўлишини таъминлаган ҳуқуқий тизим фаолиятида ҳуқуқий маданиятни ривожланганлигини кўрамиз.

Тараққиётнинг ҳозирги босқичида мамлакатимизнинг ижтимоий, иқтисодий ва ҳуқуқий ҳаётида юз берган ижобий ўзгаришлар миллий иқтисодиётни модернизациялаш асосида жамиятни янгиланиш жараёнларига асос солди.

Мамлакатимизда жамият-шахс ва давлат ўртасидаги муносабатлар ҳуқуқий муносабат сифатида тартибга солинишида бевосита ҳуқуқий маданият тинчлик ва осайишталикни, миллий бағрикенгликни, миллатлараро тотувликни ҳамда ҳуқуқий давлатчилик муносабатларини ривожлантириш ва кучли фуқаролик жамиятини шакллантиришга хизмат қилганлигини қайд этиш лозим.

Ўзбекистон халқаро ҳуқуқнинг субъекти сифатида давлат ва инсон жамият ва шахс ўртасидаги муносабатларни шакллантиришда инсон ҳуқуқларини ҳар жиҳатдан кафолатлаш, жумладан демократия ва ижтимоий адолатга содиқлик, фуқароларнинг тинчлиги, миллатлараро тотувликни таъминлаш масалалари бевосита амалга оширилаётган демократик ислоҳотларни бош мақсади сифатида қонунчиликда мустаҳкамланганлиги ва ислоҳотлар ҳаётга босқичма-босқич изчил тадбиқ этилганлиги натижасида бугунги кунда жамиятимиз барқарор ривожланишга эришди, иқтисодий ўсишни таъминлаш орқали давлат ва жамият равнақи таъминланди.

Мамлакатимиз парламенти томонидан Конституциямизнинг асосий принциплари ва конституцион нормалар негизида қабул қилинган қонунлар ҳамда Президентимиз Ш.М. Мирзиёевнинг раҳномалигида ишлаб чиқилган концепция ва дастурларга асосан бевосита амалга оширилаётган изчил ислоҳотлар ижроси қонунлар таъсирида таъминланганлиги мамлакатимиз бугунги кунда кўпчилик давлатлар ҳавас қиладиган даражада ижобий ютуқларга эришиш имкониятини яратди.

Айни пайтда, ривожланган ва ривожланиб бораётган мамлакатларда жаҳон молиявий-иқтисодий инқирозининг асоратлари ва оқибатлари ҳал этилмаётган бир пайтда республикамиз миллий иқтисодиётида кейинги икки йилда кўплаб инвестиция лойиҳаларини амалга оширилиши натижасида иқтисодий ўсишга эришилганлиги ҳамда мамлакатимизда тинчлик, тотувлик, осайишталик ҳамда диний ва инсоний бағрикенглик таъминланганлигини бугунги таҳликали дунё тан олиб, Ўзбекистоннинг мустақил давлат сифатида белгилаб олган мустақил тараққиёт йўли нақадар тўғри эканлигини нафақат халқимиз, балки, хориж давлатлари раҳбарлари ҳамда чет эллик экспертлар томонидан тараққиётга эришишнинг илмий ва амалий жиҳатларини ҳавас билан ўрганаётганлигини катта ғурур билан қайд этиш лозим. Бундан ташқари, Президентимиз раҳномалигида кейинги икки йилда мамлакатимиз суд-ҳуқуқ тизимида изчиллик билан босқичма-босқич инсонпарварлик - ҳуқуқпарварлик фалсафасига асосланган ислоҳотлар ҳар бир шахснинг Асосий қонунимизда белгиланган ҳуқуқ ва бурчларини таъминлаш, уларнинг қонуний манфаатларини ҳимоя қилишга асосланган давлат сиёсатини юритилиши натижасида жамиятда адолат тамойилларига асосланган моддий ва процессуал нормаларни янада такомиллаштириш воситасида қонун устуворлигини таъминланиши орқали республикамиз тараққиёт ва фаровонлик сари дадил қадамлар билан буюк келажак сари бораётганлигини нафақат фуқароларимиз, балки чет давлат жамоат арбоблари, олимлари томонидан эътироф этилаётганлиги ҳар бир фуқаромиз қалбида мустақилликдан фахрланиш, озод ва обод Ватанни янада обод ҳамда фарвон қилиш мақсадида яшаш туйғуси тобора ошиб бораётганлигида кузатиш мумкин.

Қолаверса, қонун ҳужжатларини аҳолига етказадиган веб-сайтлар номи ҳам ўзбек тилида, қисқа жумлада ифодаланса, мақсадга мувофиқ бўлар эди. Масалан, ҳозир амалдаги Ўзбекистон Республикаси норматив ҳуқуқий ҳужжатлар лойиҳалари муҳокамаси портали - www.regulation.gov.uz номи балки мутахассислар учун, зиёлилар учун тушунарлидир, аммо оддий фуқаролар учун эсда қоларли, дейиш қийин. Ўзбекистон аҳолисининг асосий қисми ўзбек тилида сўзлашишини инобатга олган ҳолда бу каби оммавий интерактив порталлар ўзбекча номланса, улар барчага тушунарли бўлади, деган фикрдамиз.

Шу жумладан, Жамиятда ҳуқуқий маданиятни юксалтириш концепциясига биноан ташкил этилган аҳолига бепул маслаҳат бериш порталини ўз ичига олган ҳуқуқий ахборот тизими номини (www.ochiqfikrim.uz) номи аҳолининг кенг қатлами, айниқса, ёшлар орасида кенг оммалашгани мисол бўла олади. Шундай экан, ўзбек тилидаги веб-сайтлар номининг инглизча бўлишига асло ҳожат йўқ. Бошқача айтганда, ушбу сайтларда ҳуқуқий мавзуда берилган ахборот, тушунтиришларни кўпчиликнинг ўқиши маълум даражада ана шу омил билан ҳам боғликдир.

Хулоса қилиб айтганда, фармонда белгилаб берилган жамиятда ҳуқуқий онг ва ҳуқуқий маданиятни юксалтириш борасидаги муҳим йўналиш ва вазифаларни ўз вақтида амалга ошириш биз, ҳуқуқшунос ва зиёлилардан масъулият ва фидойиликни талаб этади. Зеро, давлатимиз раҳбари таъкидлаганидек, "Қонун устуворлиги ва инсон манфаатларини таъминлаш - юрт тараққиёти ва халқ фаровонлигининг гаровидир".

Фойдаланилган адабиётлар рўйҳати:

1. Мирзиёев Ш.М. Янги Ўзбекистон стратегияси. Тошкент.: Ўзбекистон, 2021. 82 бет.
2. Ҳуқуқий онг юксалса, жамият тараққиётига йўл очилади- Ф.Эшонқулов/"Адолат" ижтимоий сиёсий газетаси №7 /2019.
3. https://lex.uz/ru/docs/4149765
4. https://lex.uz/docs/5841063
5. https://regulation.adliya.uz/

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Каримов Н.
доцент
кафедра АТ и математика
Андижанская инициатива сельского хозяйства и агротехнологий

К ВОПРОСУ ПРИМЕНЕНИЯ ЛОГИЧЕСКИХ ЭЛЕМЕНТОВ ПРИ РАЗРАБОТКЕ ЦИФРОВЫХ ТЕХНОЛОГИЙ В АСУ ТП

Аннотация:*В статье рассматриваются вопросы и проблемы разработки цифровых устройств на основе регистров, сумматоров, счетчиков, шифратора и дешифратора. Основа разработки цифровых технологий в автоматизации систем управления технологических процессов, является логическая алгебра и двоичная технология. Библ. 7 наз.*

Ключевые слова: *цифровые устройства, регистр, сумматор, генератор импульсов, счетчики, дешифратор, преобразователь, система, алгоритм, программа, код автоматизации систем управления технологических процессов.*

Karimov N.
Associate Professor
Department of AT and Mathematics;
Andijan Initiative of Agriculture and Agrotechnology

ON THE ISSUE OF USING LOGICAL ELEMENTS IN THE DEVELOPMENT OF DIGITAL TECHNOLOGIES IN APCS

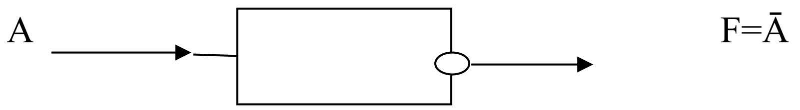
Annotations:*The article discusses the development of digital devices based on a register, adder, counters, and decoder. The basis for developing digital technologies in automation of process control systems is logical algebra and binary technology. Bibl. 7 titles.*

Key words: *digital devices, register, adder, pulse generator, counters, decoder, converter, system, algorithm, program, automated process control system code.*

В настоявшее время внедрение автоматизированных систем управления технологическими процессами (АСУТП) является одним из важнейших факторов повышения качества и оптимальности управления технологическими объектами. Сложность современных технологических процессов и высокие скоростные режимы производственных агрегатов требует создания четких и надежно действующих систем автоматического контроля и управления, а контроль и измерения осуществляется принципам преобразования всех измеряемых величин, в обобщённую и удобную для регистрации цифровых форм. Разрабатываемый АСУТП и его измерительные системы основывается на логические элементы и цифровым устройствам. Логические элементы - И, ИЛИ, НЕ, логическая дизъюнкция, логическая конъюнкция и логическое отрицание. Одноразрядные цифровые устройства-триггеры, регистры, счетчики, дешифраторы, сумматоры, генератор импульсов, электронные управлявшие схемы различного назначения, а так же датчики, электронные реле, преобразователи форм сигналов и электронные элементы которые организует различные необходимые блоки для системы автоматических контроля и управления объектов технологических процессов. При проектирование отдельных узлов, агрегатов и приборов, управления [1,2,3] выполняющих разнообразные многофункциональные логические действия, приступает к ее решении на основе имея лишь описания алгоритмов управления. В этом случае, пользование указанными данными, можно формулировать математическую логику работы данного узла и на ее основе строиться логическая схема функционирования и выясняется какие логические элементы должны его составлять. Для пояснения логики работы некоторого устройства состоявшего из ряда логических элементов, и упрощения его дальнейшей электронной реализации его функционирования, разрабатывается функциональная логическая схема и состояние логических элементов. На основе трех логических элементов достаточно для того чтобы описать логику функционирования любого узла или устройства, используемого для контроля и управление в системе АСУТП, каждый элементов представляется в виде прямоугольника с несколькими входами и одним выходом [4,5].

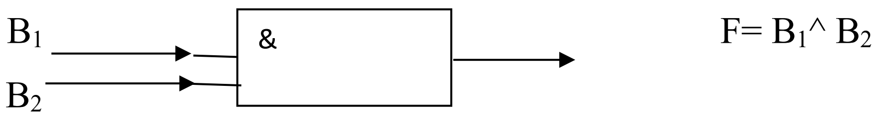
Логический элемент «НЕ» (инвертор)

Этот элемент имеет один вход и выход. При отсутствии сигнала на входе имеет место сигнал на выходе и наоборот, при наличии сигнала на входе на выходе сигнал отсутствует, то есть этот элемент инвертирует входной сигнал. Этот элемент имеет следующее условное обозначение. Внутри прямоугольника иногда ставится **НЕ** [6].



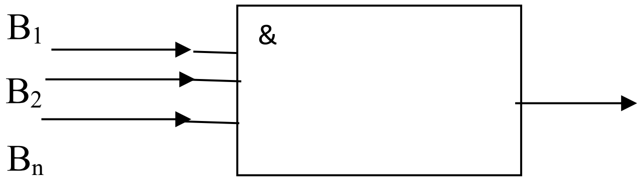
Логический элемент И (конъюнктор)

Этот элемент имеет два входа и один выход. Только при наличии сигналов на обоих входах B_1 и B_2 имеет место сигнал на выходи. Этот элемент выполняет операцию логического умножения двух сигналов B_1 и B_2. Этот элемент имеет следующее условное обозначение.



Внутри прямоугольника ставится знак конъюнкции & (либо И).

В общем случае, элемент «И» может иметь n (n>2) входов и один выход. Только при наличии сигналов на всех входах B_2, B_2, …., $B_{n\_}$ и B_n имеет место сигнал на выходе. Этот логический элемент выполняет операцию логического умножения всех сигналов B_1 B_2, ……, B_n. Этот элемент имеет следующее условное обозначение.

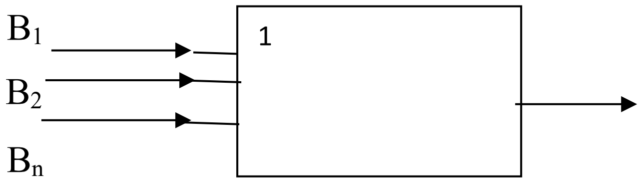


$F= B_1 \wedge B_2 \wedge \ldots \wedge B_n$

Логический элемент «ИЛИ» (дизъюнктор)

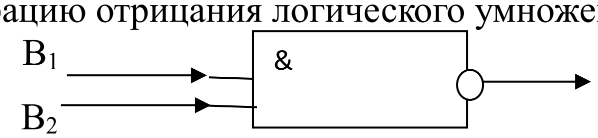
Этот элемент имеет два входа и один выход. Сигнал на выходе имеет место при наличии сигнала хотя бы на одном из входов B_1 или B_2.

В общем случае, элемент «ИЛИ» может иметь n (n>2) входов и один выход. Сигнал на выходе имеет место при наличии сигнала хотя бы на одном из входов B_2, B_2,….,B_{n-1} и B_n. Этот элемент выполняет операцию логического сложения всех сигналов B_1 B_2, ….., B_{n-1} и B_n. Этот элемент имеет следующее условное обозначение.



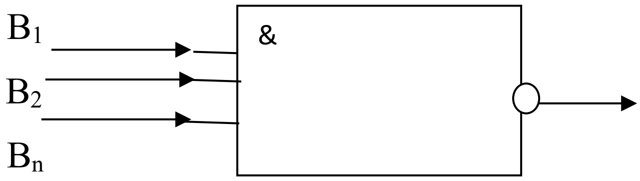
$F= B_1 \vee B_2 \vee \ldots \vee B_n$

Логический элемент «И-НЕ» (антиконъюнктор - элемент Шеффера) Этот элемент имеет два входа и один выход. Только при отсутствии сигнала на одном из входов имеет место сигнал на выходе. Этот элемент выполняет операцию отрицания логического умножения двух сигналов B_1 и B_2 .



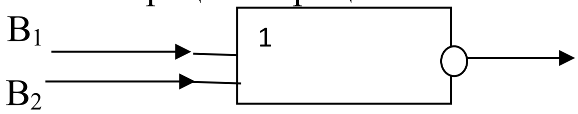
$F= \overline{B_1 \wedge B_2}$

В общем случае, элемент «И-НЕ» может иметь один выход. Только при отсутствии сигнала хотя бы на одном из входов B_1 , B_2 …., B_n имеет место сигнал на выходе. Этот логический элемент выполняет операцию отрицания логического умножения всех сигналов B_1, B_2 …., B_n или операцию штрих Шеффера.



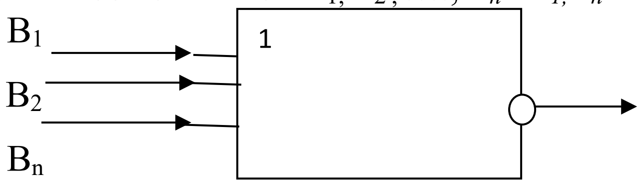
$$F=\overline{B_1 \wedge B_2 \wedge \ldots . \wedge B_n}$$

Логический элемент «ИЛИ-НЕ» (антидизъюнктор - элемент Пирса). Этот элемент имеет два входа и один выход. Сигнал на выходе имеет место при отсутствии сигналов на двух входов B_1 и B_2. Этот логический элемент выполняет операцию отрицания логического сложения двух сигналов B_1 и B_2.



$$F=\overline{B_1 \vee B_2}$$

В общем случае, элемент «ИЛИ-НЕ» может иметь $n(n>2)$ входов и один выход. Сигнал на выходе имеет место при отсутствии сигнала на всех входах B_1 , B_2 , …., B_{n-1}, B_{n}.. Этот элемент выполняет операцию отрицания логического сложения всех сигналов B_1, B_2 , …., B_n- и $_{1,}B_n$ или операцию стрелку Пирса. Все



$$F=\overline{B_1 \vee B_2 \vee \ldots . \vee B_n}$$

Некоторые вопросы электронной реализации управляющих логических схем. АСУТП.

Для соответствующих логических элементов ЭВМ разработаны их стандартные электронные реализации, основу которых оставляют так называемые триггеры. Триггер (от trigger(анг.)- крючок, защелка) является основной составляющей всех электронных устройств цифровой вычислительной техники. Он состоит из транзисторов и имеет два устойчивых состояния, переход из одного в другое происходит практически мгновенно (время перехода 10-^{8}-10^{9}сек.) в зависимости от подаваемых сигналов. Это обстоятельство позволяет запоминать и извлекать для обработки из каждого триггера двоичный сигнал 1или 0. Таким образом, каждый триггер используется для хранения (запоминания) одного бита. Для хранения (запоминания) одного байта требуется 8 триггеров.

В АСУ ТП используются триггеры двух типов: RS-триггеры и Т-триггеры. Функциональные логические управляющие схемы в АСУ ТП. Логические управляющие схемы находят очень широкое применение в структуре управлявших схем АСУ ТП. Она состоит все основные управляющих схемы и свази с другими узлами и устройства АСУ ТП. Сложные функциональные схемы управление можно конструировать из основных логических элементов, используя основные понятия и формулы алгебры логики. Обозначив, входные сигналы буквами, и сформировав логическую формулу, максимально упростив ее, конструируем соответствующую управляющую схему, заменяя каждую логическую операцию соответствующим логическим элементом.

Конструирование функциональных управляющих схем обязательно учитывается понятие базиса, в котором надо реализовать заданную логическую функцию. При этом, очевидно, для осуществлённые алгоритма управление используются различные логические элементы.

Можно сказать, подводя итог, что совокупность логических элементов, в которой выходы из одних элементов является входами для других, называется логическим устройством, а схематическое изображение содержащий логических элементов. Функциональной логической схемой некоторого управлявшего устройства. Каждой функциональной логической схеме соответствует определенная логическая функция и каждой логической функций соответствует определенная функциональная логическая схема. Система логических операции использующая для представления всех логических функций только операции логического операции логического сложения, логического умножения, и отрицания, то есть базис- {+x$_1$-} является полной а также другие базис конъюнктивный -{x-} и дизъюнктивный -{+,-} дальнейшем будем пользоваться логических элементами «НЕ», «И» и ИЛИ А также будем пользоваться переключательными (схемами) целями [5,6,7]. Решение задачи синтеза управлявших логических схем АСУ ТП состоит из следующих этапов:

- Если задан словесный алгоритм работы узла, то по нему строят таблицу истинности для логической функции, реализующей логику работу этого узла.
- С помощью полученной таблицы истинности или уже заданной таблицы истинности составляют логическую функцию (функции проводимости), описывающей логику работы узла.
- Проводят упрощение заданной или полученной функции проводимости схемы и, если необходимо, переводят ее в эквивалентную форму, записанную в соответствующем базисе.
- Проводят построение функциональной логической схемы (переключательной схемы), соответствующей заданным условиям.

На основании полученных результатов и при синтезе и при анализе переключательных и логических схем всегда стремятся к получению равносильной (эквивалентной) более простой схемы.

Микроэлектроника, электронная техника, цифровые устройства реализуется интегральными схемами (ИС), микроконтроллерами и микропроцессорами, а АСУ ТП проектируется системами САПР.

Использованные источники:

1.Яблонский С.В Введение в дискретную математику М. наука 1979 г

2. Яблонский С.В и др. Дискретная математика и математические вопросы кибернетики М. наука 1974 г

3.Колдуэлл С. Логический синтез релейных устройств М.ИЛ 1972 г

4.Кабулов А.В, Лосев Г.Ф. О локальных алгоритмах управления дизъюнктивных нормальных форм булевых функций ЖВМ Имф, 1978,Т.18 №3

5.Четвериков .В.И. и др. Вычислительная техника для статического моделирования М: сов радио 1978 г.
6.Савелоев А.Я и др. Основа информатики. Электронные вычислительных машины. 2 изд. Под редакции Совельева А.Я и Высшая школа 1991 г
7.Диденко К.У. Принцип построения комплекса технологических средства для локальных АСУ ТП журнал Управлявшие системы и машины 1978 №6.

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Кодиров М. К.
ассистент
Ташкентский государственный транспортный университет
Узбекистан, Ташкент

ПРЕИМУЩЕСТВА И НЕДОСТАТКИ ИСПОЛЬЗОВАНИЯ ЦИФРОВИЗАЦИИ В БУХГАЛТЕРСКОМ УЧЕТЕ

Аннотация. *В статье рассматриваются актуальные на сегодняшний день вопросы цифровизации учёта и их влияние на качество бухгалтерской отчётности. Цифровизация экономики формирует потенциальные возможности использования данных бухгалтерского учета для создания качественной финансовой отчётности и анализа финансовой устойчивости предприятия.*

Ключевые слова: *цифровая экономика, методология бухгалтерского учета, «блокчейн», финансовая отчетность, качество, счета бухгалтерского учета.*

Kodirov M. K.
assistant
Tashkent State Transport University
Uzbekistan, Tashkent

ADVANTAGES AND DISADVANTAGES OF USING DIGITALIZATION IN ACCOUNTING

Annotation. *The article discusses the current issues of digitalization of accounting and their impact on the quality of accounting statements. The digitalization of the economy creates potential opportunities for using accounting data to create high-quality financial statements and analyze the financial stability of an enterprise.*

Keywords: *digital economy, accounting methodology, "blockchain", financial reporting, quality, accounting accounts.*

Стремительное развитие цифровой экономики и внедрение цифровых технологий оказывает огромное влияние на учётный процесс. Бухгалтерский учет на предприятиях связан с большим объёмом первичной информации и поэтому претерпевает в последние десятилетия значительные изменения, связанные с внедрением цифровых технологий передачи и хранения информации. Общеизвестно, что развитие цифровых технологий позволяет значительно ускорить процесс сбора информации, увеличить оперативность ее обработки и хранения, а также создать комфортные условия реальной доступности и оперативности информации для пользователей любого ранга, притом, что качество учётной информации значительно улучшается

Однако можно констатировать тот факт, что наблюдается явный опережающий темп развития бухгалтерского учета на практике, нежели его методологии, что связано в первую очередь с совершенствованием инструментария бухгалтерского учета, а именно применением новых цифровых технологий форм передачи и хранения информации, то есть развитием других наук, отличных от бухгалтерского учета, и отсутствием исследований влияния полученных потенциальных возможностей на совершенствование методологии ведения бухгалтерского учета.

Управление экономическими процессами базируется на информации, одним из источников которой является бухгалтерский учет. Цифровизация оказывает влияние на значительное улучшение как характеристик бухгалтерской информации, так и возможностей ее применения [1].

Организации, чьи информационные системы являются более развитыми, преуспевают на современной конкурентной площадке где все коммуникации в онлайн-формат. Постепенное внедрение цифровизации в бизнес-процессы компании позволяет сотрудникам использовать облачные хранилища, социальные сети и другие элементы программного обеспечения, которые дарят возможность оставаться на связи с потенциальными клиентами и поставщиками. В бухгалтерии цифровизация дает возможность использования цифровых технологий и ускоряет процесс обработки информации и большого количества данных.

На сегодняшний день многие крупные и средние компании знакомы с электронным взаимодействием, так как автоматизация процессов давно не является редкостью и новые программные продукты, используемые в работе компаний, все чаще и чаще применяются.

Наиболее распространенными программными продуктами, которые применяют на практике специалисты по бухгалтерскому учету приведена на рисунке 1.

Рис.1. Наиболее распространенные программные продукты, которые используют специалисты по бухгалтерскому учету

В настоящее время осуществляется постепенная трансформация одних технологий другими, которая влечет за собой многоукладность в работе с документами, по причине того, что большое количество организаций, в основном используют бумажный документооборот, но и стремительно повышается доля предприятий, у которых бумажных документов почти не осталось.

Электронные документы позволяют применять более совершенные методы работы, с помощью которых повышается скорость и качество принятия управленческих решений, от которых в свою очередь, зависит эффективность управления, а также доходность деятельности организаций.

В то же время преимущества электронного документооборота очевидны, но полностью отказаться от применения привычного бумажного документооборота не всегда является преимуществом (таблица 1).

Таблица 1

Преимущества и недостатки использования цифровизации в бухгалтерском учете

Преимущества	*Недостатки*
1. Потенциальная возможность дистанционной работы (онлайн)	1. Изменение организации бухгалтерского учета под форму собственности организации
2. Цифровизация процессов ведения бухгалтерского учета	2. Замена капитальных расходов на операционные

3. Безусловный рост уровня производительности труда бухгалтера	3. Необходимость постоянного повышения квалификации бухгалтеров
4. Применение современных информационных технологий	
5. Сокращение документооборота	
6. Снижение себестоимости производства за счет прямых затрат	

Как видно из приведённых в таблице данных, преимуществ а 2 раза больше чем недостатков, что и является фактором широкого распространения шифровизации в бухгалреском учёте.

Ещё одним положительным фактором является использование технологии блокчейн в финансовых операциях (риснок 2).

Рис. 2. Блок-схема применения технологии блокчейн в финансовых операциях

Данная технология имеет множество преимуществ и значительно упрощает ведение бухгалтерского учета и составление бухгалтерской (финансовой) отчетности.

Таким образом, рассмотрев основные преимущества и недостатки цифровизации бухгалтерского учета мы пришлик следующим выводам:

1. Цифровизация обоеспечивает возможность для проведения оперативного цифрового аудита на каждом этапе производственного процесса.

2. Цифровые технологии упрощают отражение движения активов внутри организации.

3. Использование трансакций для проведения расчетов с контрагентами организации.

6. Упрощение процесса управления ресурсами с помощью безопасной

регистрации трансакций.

7. Сокращение непроизводительных расходов благодаря полной прозрачности сбора, обработки и анализа данных бухгалтерского учета в режиме онлайн.

Использованные источники:

1. S.M. Sultanova. Public-private partnership in the railway industry of Uzbekistan. Journal of Critical Reviews, ISSN- 2394-5125 Alembic Research Center, Вадодара, Индия Vol 7, Issue 5, 2020.

1. Sultanova, S. M., and N. U. Babakhanova. "Statistical model for determining the quality of cargo work JSC "Uzbekistan Railways"." *E3S Web of Conferences*. Vol. 402. EDP Sciences, 2023.

2. Sonya M. Sultanova, Marina A. Ivanova, Natalia M. Fomenko, Bazhan O. Turebekova, Aidar Konysbay. "Quality management through sustainable hrm based on digital competencies" International Journal for Quality Research *DOI:10.24874/IJQR18.04-05*. Volume 18 Number 4 Year – 2024. http://www.ijqr.net/archive.php

2. Арефьева А.С., Гогохия Г.Г. Перспективы внедрения технологии блокчейн // Молодой ученый. - 2017. - №15. - С. 326-330.

3. Бабкин А.В., Чистякова О.В. Влияние внедрения цифровых технологий на предпринимательскую деятельность компаний // Труды научно-практической конференции с международным участием «Промышленная политика в цифровой экономике: проблемы и перспективы». - СПб.: Изд-во Политехн. ун-та, 2017. - С. 23-33.

4. Башкатов В.В., Брык В.Ю., Зеленская А.М. Особенности бухгалтерского учета и отчетности в условиях цифровой экономики // Вестник Алтайской академии экономики и права. – 2022. – № 5-1. – С. 5-10.

5. Будович Ю.И. Цифровизация корпоративного учета //Человеческий капитал в формате цифровой экономики. - М., 2018. - С. 117-125.

6. Карпова Т.П. Направления развития бухгалтерского учета в цифровой экономике // Известия Санкт-Петербургского государственного экономического университета. - 2018. - №3 (111). - С. 52-57.

7. М П. Селезнёва, А С. Кочеткова Влияние цифровизации на бухгалтерский учет // Международный журнал гуманитарных и естественных наук. 2019. №12-3. URL: https://cyberleninka.ru/article/n/vliyanie-tsifrovizatsii-na-buhgalterskiy-uchet.

8. Орлова Е. А., Исаева Д. А. Влияние цифровизации экономики на развитие бухгалтерского учета // Russian Journal of Management. 2022. №. 4. С. 1-5. DOI: https://doi.org/10.29039/2409-6024-2021-9-4-1-5.

9. Сидорова М.И. Развитие моделей бухгалтерского учета в условиях современных информационных технологий: автореферат дис. на соискание степени доктора экономических наук. - М., 2013.

10. Султанова С.М., Исмаилова Н.Я. Информационно-аналитическое обеспечение финансовой отчётности предприятия транспорта // Universum: экономика и юриспруденция. 2022. №12-1 (99).

11. Тимофеев Р.А., Минибаева Д.Р. и Ехлакова Е.А. Цифровая экономика как драйвер устойчивого роста отечественной экономики // Вестник экономики, права и социологии. -2018. - № 1. - С. 42-45.

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Кодиров А.Н.
преподаватель
Turan International University

ТИПОЛОГИЯ ЖАНРОВ НА ОСНОВЕ СТИХОТВОРНЫХ СОСТЯЗАНИЙ В УЗБЕКСКОМ И РУССКОМ ФОЛЬКЛОРЕ

Аннотация. *Стихотворные состязания представляют собой важный аспект устной народной традиции как в узбекском, так и в русском фольклоре. Эти поэтические состязания не только развлекают, но и выполняют социальные, культурные и образовательные функции, позволяя передавать народные традиции и ценности. Целью данного исследования является проанализировать и систематизировать типологию жанров стихотворных состязаний в узбекском и русском фольклоре, выявить их культурные и социальные функции, а также определить особенности и отличия, присущие каждой традиции. Это позволит углубить понимание роли стихотворных состязаний в сохранении и передаче народных традиций и ценностей в обеих культурах. В данной статье мы рассмотрим типологию жанров, возникающих из стихотворных состязаний в двух культурах.*

Ключевые слова*: фольклор, оланы, сказания, частушки, жанры, соревнование, обряды.*

Kodirov A.N.
Teacher
Turan International University

TYPOLOGY JANROV NA OSNOVE STIKHOTVORNYX SOSTYAZANIY V UZBEKSKOM I RUSSKOM FOLKLORE

Annotation. *Poetry competitions represent an important aspect of oral folk tradition in both Uzbek and Russian folklore. These poetry competitions not only provide entertainment, but also perform social, cultural and educational functions, allowing the transmission of folk traditions and values. The purpose of this study is to analyze and systematize the typology of genres of poetic competitions in Uzbek and Russian folklore, to identify their cultural and social functions, as well as to determine the features and differences inherent in each tradition. This will deepen the understanding of the role of poetry competitions in the preservation and transmission of folk traditions and values in both cultures. In this article we will look at the typology of genres that arise from poetic competitions in two cultures.*

Key words*: folklore, olans, legends, ditties, genres, competition, rituals.*

Стихотворные состязания в русском фольклоре

В русском фольклоре стихотворные состязания имеют глубокие исторические корни и разнообразные формы. В русском фольклоре стихотворные состязания часто проявляются в формах, таких как частушки, сказания и шутливые баттлы. Одной из наиболее известных форм являются частушки — короткие, рифмованные стихи, которые могут содержать шутки, остроты и социальные комментарии. Частушки часто исполняются на праздниках, ярмарках и свадьбах, и их можно рассматривать как средство народного самовыражения. Частушки могут быть как индивидуальными, так и коллективными, что делает их универсальным жанром для различных социальных событий. Частушки представляют собой короткие, рифмованные строки, которые могут содержать как юмор, так и серьезные социальные комментарии. Соревнования в исполнении частушек часто происходят на праздниках и ярмарках, где участники демонстрируют свое мастерство и остроумие.

Сказания и былины, хотя и не всегда являются стихотворными состязаниями в узком смысле, также часто включают элементы поэтического соперничества, когда исполнители соревнуются в умении передавать эпические истории. Эти жанры имеют ярко выраженный эпический характер и углубляют понимание социальной структуры и исторической памяти русского народа.

Многие ученые-лингвисты исследовали фольклор, обращая внимание на его языковые особенности, структуру и роль в культуре, что способствует более глубокому пониманию народных традиций и их значения в обществе. Одним из таких исследователей является Татьяна Ильина, которая в своей книге "Русский фольклор: жанры и формы" глубоко анализирует разнообразие фольклорных жанров, их структуру и культурное значение, подчеркивая роль народного творчества в формировании общественного сознания. Она освещает не только основные жанры, такие как сказки, песни и пословицы, но и исследует их функции в социальной и культурной жизни, а также взаимодействие фольклора с историческими процессами, что делает её работы важным вкладом в изучение русской культуры.

Жанровая типология русского фольклора

В зависимости от содержания и формы стихотворные состязания в русском фольклоре можно классифицировать на несколько основных жанров:

1.Эпические жанры: былины, где герои сражаются не только на поле боя, но и в словесном поединке.

2.Лирические жанры: частушки, где акцент на эмоциональном восприятии и социальных вопросах.

3.Драматические жанры: народные театры и масленичные игры, где слово играет ключевую роль в создании спектакля.

Жанр	Описание	Примеры
Эпические жанры	Длинные нарративные произведения с героями	Былины
Лирические жанры	Короткие поэтические формы, отражающие чувства	Частушки,
Драматические жанры	Спектакли с элементами поэтического диалога	Народные театры

Стихотворные состязания в узбекском фольклоре

В узбекском фольклоре стихотворные состязания имеют свои уникальные формы, такие как стихотворные состязания, «оланы» и «лапары». Стихотворные состязания представляют собой поэтические соревнования между поэтами, где участники демонстрируют свои навыки в рифме и импровизации, часто затрагивая темы любви, природы и социальных вопросов. «Оланы» и «лапары» часто проходят на свадьбах, праздниках и других торжествах, где собраны большие компании.

Темой стихотворных состязаний и фольклора в целом занимались многие исследователи. И одна из них Галина Бахтиерова - специалист по узбекскому фольклору, изучавшая устное народное творчество и его жанры. Она является известным исследователем узбекского фольклора. Галина Бахтиерова в своих исследованиях по узбекскому фольклору уделяет особое внимание поэтическим формам, анализируя их структуру, содержание и культурное значение.

Стихотворные состязания, в свою очередь, являются более свободными по форме и содержанию, часто включают рифмованные ответы и поединки, что позволяет участникам проявлять креативность и оригинальность.

Жанровая типология узбекского фольклора

В узбекском фольклоре типология жанров, основанных на стихотворных состязаниях, может быть представлена следующим образом:

1.Эпические жанры: например, эпос "Алпамыш", который включает элементы поэтического соперничества и народной мудрости.

2.Лирические жанры: газели и рубаи, где поэты используют краткие формы для выражения глубоких чувств.

3.Драматические жанры: народные спектакли, которые включают элементы поэтического диалога и состязания.

Жанр	Описание	Примеры
Эпические жанры	Поэтические произведения, основанные на мифах и легендах	Эпос "Алпамыш", “Гур - оглы”
Лирические жанры	Короткие, часто рифмованные стихи, выражающие эмоции	«лапары», «оланы».
Драматические жанры	Театральные представления с поэтическими диалогами	Народные спектакли

Сравнительный анализ

- Сравнивая русский и узбекский фольклор, можно выделить несколько ключевых различий и сходств:
- Тематика: В русском фольклоре акцентируется внимание на социальных вопросах, человеческих взаимоотношениях и юморе, что отражает реалии жизни и культурные ценности общества. Например, частушки часто содержат сатирические элементы, комментирующие повседневные ситуации (Ильина, 2010). В то же время узбекский фольклор более склонен к романтике, героизму и природе, что видно в лирических произведениях, посвященных любви и родной земле. Галина Бахтиерова отмечает, что узбекская поэзия тесно связана с природными образами и этнической идентичностью (Бахтиерова, 2005).
- Структура: Русские частушки имеют четкую рифму и размер, что делает их легко запоминаемыми и подходящими для коллективного исполнения. Узбекские стихи, напротив, могут варьироваться в зависимости от исполнения и часто используют различные метрические схемы. Бахтиерова подчеркивает, что узбекская поэзия обладает гибкостью в ритме, что позволяет исполнителям проявлять индивидуальность и творчество (Бахтиерова, 2005).
- Исполнительский стиль: Русские состязания часто являются коллективными мероприятиями, в которых участвуют группы исполнителей, что создает дух соперничества и взаимодействия. В узбекских состязаниях, как правило, акцентируется индивидуальное выступление, что подчеркивает личное мастерство исполнителя. Равшан Назаров акцентирует внимание на том, что такие индивидуальные состязания способствуют выявлению уникальных талантов и поддержанию традиций (Назаров, 2018).
- Музыкальное сопровождение: В русском фольклоре часто используется аккомпанемент традиционных инструментов, таких как гармошка или балалайка, что добавляет характерный звучание. Узбекская поэзия, в свою очередь, нередко исполняется с использованием инструментов, таких как рубаб и дутар, которые придают исполнению особую атмосферу и глубину.

- Социальные функции: Русский фольклор выполняет важные социальные функции, включая образовательную и развлекательную, что позволяет сохранять культурные традиции. Узбекский фольклор также играет роль в социальном взаимодействии, часто выступая средством для передачи моральных уроков и воспитания молодежи. В обоих случаях фольклор служит связующим звеном между поколениями и помогает сохранить культурное наследие.
- Эти различия и сходства не только подчеркивают уникальность каждой культуры, но и открывают новые горизонты для дальнейшего изучения фольклора как важного элемента культурной идентичности и самосознания народов.

Параметр	**Русский фольклор**	**Узбекский фольклор**
Формы состязаний	Частушки, сказания	Стихотворные состязания, «оланы», «лапары»
Тематика	Социальные вопросы, юмор	Любовь, природа
Структура	Четкая рифма и размер	Свободная рифма
Исполнительский стиль	Коллективные выступления	Индивидуальные поединки

Заключение

Стихотворные состязания в русском и узбекском фольклоре представляют собой богатую традицию, которая не только развлекает, но и передает культурные ценности. Каждая культура развила свои уникальные жанры и формы, которые отражают особенности мировосприятия и социальные реалии. Изучение этих традиций помогает углубить понимание фольклорного наследия и его роли в формировании национальной идентичности.

Перспективы исследования

Дальнейшие исследования могут сосредоточиться на сравнительном анализе конкретных стихотворных состязаний, а также на их влиянии на современную культуру и искусство, что откроет новые горизонты для понимания фольклора как динамичного и живого явления.

Использованные источники:

1. Бахтиерова, Г. М. *Фольклор Узбекистана*. Ташкент: Узбекистан, 2005.
2. Ильина, Т. Н. *Русский фольклор: жанры и формы*. Москва: Наука, 2010.
3. Костюков, С. В. *Поэтика народного творчества*. Санкт-Петербург: Летний сад, 2012.
4. Назаров, Р. Ф. *Узбекская поэзия и ее традиции*. Ташкент: Фан, 2018.
5. Панов, В. А. *Жанровая специфика русского фольклора*. Москва: РГГУ, 2016.

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Коротких В.В.
студент
кафедра Экономики, менеджмента и маркетинга
ОмГПУ, Омск, Россия
Елкина В.Н., к.э.н., доцент
кафедра Экономики, менеджмента и маркетинга
ОмГПУ, Омск, Россия

СОВРЕМЕННЫЕ ТЕХНОЛОГИИ МОТИВАЦИИ ПЕРСОНАЛА

Аннотация: *В России мотивация работников с целью побуждения их к производительному труду была и остается серьезной проблемой. Оторванность заработной платы от конечных результатов работы привела к тому, что люди преимущественно направляли свои усилия не на повышение эффективности труда, а на получение тех или иных материальных благ и льгот. Жизнь показала, что от одностороннего внешнего принуждения к труду надо переходить к общегосударственной системе мотивации, которая бы максимально соответствовала способностям, потребностям и интересам работников.*

Ключевые слова*: мотивация, персонал, управление персоналом, производительность труда, технологии мотивации.*

Korotkikh V.V.
Student
Department of Economics, Management and Marketing
Omsk State Pedagogical Univ., Omsk, Russia
Elkina V.N.
Ph.D. (Econ.), Associate Professor,
Department of Economics, Management and Marketing
Omsk State Pedagogical Univ., Omsk, Russia

MODERN STAFF MOTIVATION TECHNOLOGIES

Abstract: *In Russia, motivating employees to be productive has been and remains a serious problem. The disconnect between wages and the final results of work has led to people primarily directing their efforts not to increasing labor efficiency, but to receiving certain material benefits and privileges. Life has shown that it is necessary to move from one-sided external coercion to work to a nationwide motivation system that would best match the abilities, needs and interests of employees.*

Keywords: *motivation, personnel, personnel management, labor productivity, motivation technologies.*

В современных условиях, удовлетворения разнообразных потребностей и запросов работников предприятий реализуется через большое количество методов мотивации результативности деятельности, которые можно разделить на три группы:

– экономические (прямые), например, сдельная оплата, участие в прибылях, оплата обучения;

– экономические (косвенные) - льготное питание, доплаты за стаж, льготное пользование жильем, транспортом и др.;

– не денежные - обогащение труда, гибкие рабочие графики, охрана труда, программы повышения качества труда, продвижение по службе, участие в принятии решений на высшем уровне [1].

Если говорить в целом, то в России существуют определенные трудности с мотивацией персонала. Это, прежде всего, связано с тем, что наиболее действенными инструментами мотивации являются финансовые, однако большинство руководителей стремятся не тратить средства на мотивирование персонала. Поэтому чаще используют определенные санкции за невыполнение задачи.

Вознаграждения и разного рода премии, также встречаются, но предназначены для лучших работников. Нематериальная мотивация у нас также используется, но в меньшей степени, поскольку по мнению большинства руководителей, является менее действенной. Хотя на предприятиях и создается определенная культура и традиции, способствующие эффективному выполнению работы, однако финансовые выплаты - лучший мотив, поскольку заработные платы по сравнению с ценами растут меньшими темпами [2].

Для преодоления указанных проблем, в современных условиях, отечественные предприятия вынуждены внедрять инновационные средства и методы мотивирования персонала, ориентированные на постановку целей и определение ответственности работников.

Инновационные технологии мотивации персонала - это система новых для конкретной организации инструментов, побуждающих работников к эффективной трудовой деятельности, направляющая ее на достижение целей организации, обеспечивает удовлетворенность персонала своим трудом.

Анализ работ в области социологии управления, а также практического опыта инновационных компаний позволили сформулировать 4 этапа процесса внедрения инновационных технологий мотивации персонала в организациях:

- 1-й этап - комплекс работ по анализу подготовленности и восприимчивости к изменениям;
- 2-й этап - распределение ответственности между руководителями и специалистами за выполнение каждого инновационного мероприятия;
- 3-й этап - создание целевой группы, которая будет координировать и направлять весь процесс в соответствии с утвержденным графиком;

- 4-й этап - выбор показателей, позволяющих судить об уровне и динамике изменений [2].

В современном менеджменте целесообразно выделить такие эффективные технологии мотивации:

Экономические мотивы всех типов (зарплата во всех ее разновидностях, включая контрактную, премии, льготы, страховки, беспроцентные кредиты и т.д.).

Управление по целям. Методы данной группы применяются в той или иной форме примерно в 50% крупных западных корпораций. Ключевой момент здесь - гармонизация потребностей работников и организационных целей.

Обогащение труда (означает предоставление людям более содержательной, перспективной работы, значительной самостоятельности в определении режима труда, использовании ресурсов). Популярным является метод, предполагающий разделение рабочего задания. Работу, охватывающую 40 часов в неделю, разделяют между двумя или несколькими служащими. Система участия в прибылях [1].

Мотивационные карты. Карты знаний.

Система ключевых показателей эффективности (KPI).

Система ключевых показателей эффективности позволяет классифицировать и оценивать сотрудников по их месту и важности предприятия. С помощью системы KPI можно не только контролировать и оценивать эффективность выполняемых действий, но и построить эффективную систему оплаты труда [2].

Эффективное управление производственно-хозяйственной деятельностью предприятий в значительной степени зависит от умело налаженного мотивационного механизма.

При построении системы оплаты и мотивации труда, руководителю предприятия следует учитывать, бесперспективность одинаковой мотивации для всех работников. Это поможет ему сделать систему оплаты и мотивации труда экономически эффективной. Пользуясь разделением работников, руководитель предприятия может разработать индивидуальную систему мотивации для каждого сотрудника или для группы сотрудников.

При построении системы оплаты труда и мотивации работников на предприятии необходимо учитывать, что эффективность мотивации персонала должна отражать степень достижения социальных и экономических целей, которые ставит руководство предприятия и его работники.

Подводя итог, можно утверждать, что мотивационный механизм управления персоналом должен включать интересы работников; приводить в соответствие желание работников с целями предприятия; повышать производительность труда; поощрять инициативу работников при решении их собственных проблем и проблем предприятия; улучшать микроклимат в коллективе, удовлетворять базовым потребностям всего персонала. Только комплексная система мотивации, включающая в себя как материальную, так и нематериальную мотивацию, позволит добиться от сотрудников полной самоотдачи на работе, максимальной эффективности и производительности.

Таким образом, разработка мотивационного механизма имеет стратегическое значение для предприятия, отрасли, страны в целом и для эффективного его применения необходимо использовать мировой опыт и современные инновационные технологии мотивации персонала.

Использованные источники:

1. Кузнецов, А. П., Сидорова, Е. В. Инновационные методы мотивации персонала: опыт и практика // Экономика и управление. 2023. № 4. С. 78-84.

2. Петрова, Л. И., Смирнов, И. В. Мотивация как ключевой фактор успеха организации // Научные труды университета. 2020. Т. 15. № 1. С. 23-30.

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Лизакова Р. А., канд. экон. наук, доцент
кафедра «Теоретическая и прикладная экономика»
УО «Барановичский государственный университет»
г. Барановичи, Беларусь

ВЛИЯНИЕ УРОВНЯ КОНТЕКСТНОСТИ КУЛЬТУР В ПРОЦЕССЕ УСТАНОВЛЕНИЯ ТОРГОВО-ЭКОНОМИЧЕСКИХ ОТНОШЕНИЙ

Аннотация. *В статье оценивается вопрос важности фактора культуры деловых отношений при формировании торгово-экономических соглашений Беларуси и КНР, даются характеристики деловых культур Беларуси и КНР в аспекте их различия и схожести.*
Ключевые слова: *Беларусь, КНР, экспорт, культура*

Lizakova R. A., Candidate of Economic Sciences, Associate
Professor, Associate Professor of the Department of Theoretical and
Applied Economics, Baranovichi State University,
Baranovichi, Belarus

HE PROCESS OF ESTABLISHING TRADE AND ECONOMIC RELATIONS

Annotation. *The article assesses the importance of the culture factor of business relations in the formation of trade and economic agreements between Belarus and the People's Republic of China, gives characteristics of the business cultures of Belarus and the People's Republic of China in terms of their differences and similarities.*
Keywords: *Belarus, China, export, culture*

Отношения между Беларусью и Китаем находятся на особом уровне. Подписан ряд документов, выражающих общее стремление к повышению уровня двухсторонних отношений, образцовость и большое значение связей между государствами, заинтересованность в последующем продвижении сотрудничества. Внешнеторговый оборот за небольшой промежуток времени вырос с 3866 млн долл (2017 г.) до 8,44 млрд долл (2023 г.). В 2023 году из Беларуси в Китай было поставлено 330 различных товарных позиций [1]. Беларусь и Китай заинтересованы во взаимном сотрудничестве, хотя и находятся на большом расстоянии друг от друга, и имеют разный вес в мировой экономике. Беларуси важен огромный китайский рынок и тот фактор, что с введением западных санкций КНР стала поставщиком в Беларусь альтернативных технологий и комплектующих. Для Китая Беларусь интересна как транспортный коридор для доставки товаров в Европу. Эти базовые обстоятельства открывают возможности для белорусского бизнеса.

У торговых партнёров во взаимоотношениях могут существовать две дистанции: географическая и психологическая. Между Республикой Беларусь и Китайской Народной Республикой присутствует не только географическая, но и психологическая дистанция, которая заключается в различном восприятии мотивов, разных темпераментов и т. д. Любое партнёрство предполагает знание специфики социокультурной среды потенциального партнёра и является условием успешной разработки экспортной стратегии. Психологическая дистанция между славянской (белорусской) и китайской культурой достаточно значительна, но не разнополярна. Если говорить о контекстуальности наших культур, то Республика Беларусь и Китайская Народная Республика имеют разные сравнительные характеристики культур.

Эдвард Холл ввел понятие высокого и низкого контекста в 1960 году, чтобы определить культурную ориентацию общества. По словам Холла, трудности межкультурного общения в первую очередь связаны с непониманием контекста, а вовсе не с незнанием языка. Информация в данном случае не может восприниматься полным образом без учёта контекста. Представители низкоконтекстной культуры полагают, что их информацию декодируют адекватно отправленному содержанию, что не является обязательным фактом. В лестнице контекстности на первом месте у Э.Холла стоит Китай [2]. Здесь важна манера речи, не что сказано, а как сказано, какие были паузы и т.п. Славянская культура достаточна полна эмоциональных категорий, большое значение, например, имеет улыбка, что позволяет судить о высоком контексте русской (белорусской) культуры. Следует отметить, что процессы глобализации затронули не только белорусскую экономику, но и повлияли на культуру общения, приблизив ее к западной (низкоконтекстной манере коммуникаций), что и необходимо при деловых переговорах с западными партнёрами. Однако, традиции национальной культуры позволяют белорусам оставаться на «золотой середине».

Р.Льюис в своей теории выделил три типа культур по критерию анализа организации деятельности человека во времени, где сравнивает не только культурные особенности различных наций, но и особенности их мышления, характер взаимоотношений: полиактивные, моноактивные и реактивные [3]. По данной классификации Китай относится к реактивным культурам, у которой стиль делового общения отличается дипломатичностью, осторожностью и сдержанностью. Основные ценности – гармония в отношениях, почтительность, терпеливость, бережное отношение к своей репутации и репутации других. Данная культура ориентирована на процедуру взаимодействия, придающая наибольшее значение вежливости и уважению.Что касается славянского менталитета, то здесь по Р.Льюсу идет приближение к полиактивной культуре. В данном случае основными ценностями являются — ориентация на людей при выполнении задач. Представители данной культуры считают, что межличностное взаимодействие —это лучшая форма инвестирования времени в отличие от моноактивной культуры, где чувства и эмоции в деловых переговорах исключены. Такая классификация подтверждает вывод о том, что белорусская культура делового общения занимается среднюю позицию. В бизнесе представители полиактивных культур могут использовать связи, доверять информации из устной коммуникации, что характерно и для реактивного типа.

Следовательно, можно сделать вывод о том, что в вопросах взаимоотношений и установлении торгово-партнерских отношений между беларусами и китайцами имеются трудности так как это представители стран с разными путями исторического и экономического развития. Однако и в данном случае, можно найти общие характеристики, в которые будут вписываться две стороны. Например, как беларус так и китаец большое значение придаёт личным взаимоотношениям и устным договоренностям: установление взаимовыгодных связей, обмен услугами между людьми одинакового социального статуса. В китайской и русской (белорусской) культуре в личных отношениях наблюдаются формальные подходы к общению: присутствует обращение на «Вы» и «ты», обращение по этикету. Также между этими культурами присутствует в ряде случаев низкая причинно-следственная связь между явлениями. Например, всем нам знакомое: «мне захотелось», «так получилось», «авось пронесёт». что характерно для высококонтекстных культур.

Таким образом, можно сказать, что психологическая дистанция между этими двумя культурами не является полярно противоположной. Обе нации очень гостеприимны, любят создавать вокруг себя тёплую, приятную атмосферу, что, естественно влияет и на установление длительных торгово-экономических отношений.

Использованные источники:

1. Экономика [Электронный ресурс] // Мінская праўда URL: https://mlyn.by/05032024/eksport-tovarov-iz-belarusi-v-kitaj-vyros-na-20-v-2023-godu/ (дата обращения 25.10.2024)
2. Холл Эдвард и его концепции [Электронный ресурс]. — Режим доступа: https://fb.ru/article/290465/holl-edvard-i-ego-kontseptsii (дата обращения 25.10.2024)
3. Классификация деловых культур по Р. Льюису [Электронный ресурс] // Кипер-Педия URL: https://cyberpedia.su/16x13eb4.html (дата обращения 25.10.2024)

Мадаминов А.А.
старший преподаватель
международный институт пищевых технологий и инженерии
г. Фергана, Республика Узбекистан.

ВЛИЯНИЕ ИННОВАЦИОННЫХ ТЕХНОЛОГИЙ НА УВЕЛИЧЕНИЕ ЧЕЛОВЕЧЕСКОГО КАПИТАЛА

Аннотация: *в статье описываются инновационные технологии - методы, приемы и процедуры, а также влияние инновационных технологий на увеличение человеческого капитала.*

Ключевые слова: *Технологии, информационный век, инновационные технологии, политические и технологические средства, человек, человеческий капитал, увеличение человеческого капитала.*

Madaminov A.A.
senior lecturer
at the International Institute of Food Technologies and Engineering
Fergana, Republic of Uzbekistan

THE IMPACT OF INNOVATIVE TECHNOLOGIES ON THE INCREASE OF HUMAN CAPITAL

Abstract: *The article describes innovative technologies - methods, techniques and procedures, as well as the impact of innovative technologies on increasing human capital.*

Key words: *Technologies, information age, innovative technologies, political and technological means, man, human capital, increase of human capital.*

На современном этапе развития узбекское общество достигло значительных успехов во всех сферах своей жизнедеятельности. Важную роль при этом сыграл процесс общения как основа передачи опыта из поколения в поколение. В XX веке в мире произошел «взрыв» информационно-коммуникативных технологий, которые сегодня стали неотъемлемой частью жизни каждого человека, поскольку они обеспечивают создание, сохранение, обработку и доступ к информации.

При этом особенное внимание в Узбекистане следует обратить на коммуникативные процессы в политике. Ведь здесь необходимым является наличие постоянной связи между властными структурами, политическими партиями, общественными организациями, объединениями, лоббистскими группировками, средствами массовой информации и гражданами по поводу актуальных проблем общественно-политической и социально экономической жизни, который обеспечивается политической коммуникацией.

Влияния политических технологий на увеличение человеческого капитала для Узбекистана предопределена такими причинами: высокая степень недоверия граждан к действующей власти, разногласие в ожидании избирателей во время голосования и нереализованных обещаний победителей, отсутствие компромисса между ветвями власти, невозможность создания эффективно действующей парламентской коалиции через разногласия между ее потенциальными участниками, нарушения координации в действиях между центральным и местными ячейками политических партий.

Процесс приобретения человеком политических свойств, происходит под воздействием социальной и политической системы, референтных социальных групп и индивидуального осознания (рефлексии) значимости тех или других проявлений системы и своего участия в ней.

При изучении проблемы использования политических технологий для увеличения человеческого капитала обычно обращаются к двум основным принципам. Первым из них является «принцип первичности», в соответствии с которым лучше всего усваиваются те ценности, которые закладываются еще в детстве. Вторым является «принцип структуры», суть которого заключается в том, что первичное усвоение знаний структурирует вторичное.

Последнее десятилетие открыло новую эпоху для телевизионного рынка, дало ему как широкие технические возможности, так и серьезные вызовы со стороны Интернета. Вместе с ростом количества телеканалов увеличилось количество платформ предоставления ТВ-контента. Сегодня множество сайтов и приставок к телевизорам предлагают зрителям многообразный контент и интерактивные сервисы. Все эти совершенствования разрабатывались ради предоставления каждому конкретному зрителю интересного ему контента в наиболее удобной форме.

На протяжении последних десяти лет в телевещании Узбекистана появлялось все больше новых форматов, лиц, проектов и телеканалов. За этот период увеличилось авторских программ, разработанных профессионально и с учетом аудитории. Вошел в практику интерактивный опрос. Но заметная еще одна важная тенденция - возникновение нишевых деловых телеканалов. Их появление связывается со значительным увеличением экономических сообщений в телеэфире[1].

Одним из самых распространенных видов масмедийного политического дискурса являются теледебаты, в центре которых находится конфликтная ситуация между его участниками, суть которой заключается в стратегическом противоборстве представителей противоположных политических партий, которые претендуют на один пост [2].

Для разработки перспективных инновационных политтехнологий в Узбекистане особое значение имеет Стратегия действий по пяти приоритетным направлениям развития Республики Узбекистан в 2017-2021 гг. предусматривает совершенствование системы общественного управления по таким направлениям, как: внедрение эффективных механизмов диалога с народом; развитие современных форм осуществления общественного контроля, повышение эффективности социального партнерства; развитие институтов гражданского общества, повышение их общественной и политической активности

Наряду с традиционными СМИ в Узбекистане могут быть использованы другие инновационные политтехнологии, к которым относится в частности волонтерское движение

Определение путей эффективного привлечения социальных ресурсов гражданского общества, в том числе волонтерских организаций, нуждается в разработке соответствующей стратегии привлечения этих ресурсов для решения актуальных общественных проблем, реализация которой содействовала бы развитию гражданского общества и становлению демократии в Узбекистане.

Особенное внимание в Узбекистане следует обратить на коммуникативные процессы в политике. Ведь здесь необходимым является наличие постоянной связи между властными структурами, политическими партиями, общественными организациями, объединениями, лоббистскими группировками, средствами массовой информации и гражданами по поводу актуальных проблем общественно-политической и социально экономической жизни, который обеспечивается политической коммуникацией.

Использованные источники:

1. Худайбердиев А.К. Узбекистан: проблемы защиты молодежи от вредной информации в условиях глобализации (социально-философский анализ) //Россия и мусульманский мир. 2019. – № 3 (313). – С. 36
2. Ярматов Ф.Д. Позитивные изменения в системе социальной защиты населения Узбекистана (1991-2019 гг., на примере южных регионов) //Бюллетень науки и практики. 2020. Т. 6. № 8. С. 295.
3. Мадаминов А.А. Морально-нравственное формирование человека в трактатах учёных Фараби и Беруни. Достижение науки и образования. №13(35), 2018. Стр. 48-51.
4. Мадаминов А.А. Политические технологии как важный фактор развития общества в эпоху глобализации. Вестник науки и образования. 2019. №19(73).Ч.3. октябр59-60стр.

Мадаминов З.Х., доктор философии (PhD) по географическим наукам
заведующий кафедрой географии
Ферганский государственный университет
Республики Узбекистан, г.Фергана

РЕГИОНАЛЬНЫЕ ОСОБЕННОСТИ ПРОИЗВОДСТВА ПРОДУКТОВ ПИТАНИЯ И ПУТИ ЕГО СОВЕРШЕНСТВОВАНИЯ (НА ПРИМЕРЕ ФЕРГАНСКОЙ ОБЛАСТИ)

Аннотация: *В данной статье рассмотрены виды потребления населения, географические аспекты обеспечения населения продуктами питания. Также были проанализированы показатели самообеспеченности продуктами питания.*
Ключевые слова: *антропогенная нагрузка, коэффициент самообеспеченности, потребление населения, рациональная норма, физиологическая норма.*

Madaminov Z.Kh.
Doctor of Philosophy (PhD) in Geographical Sciences,
Head of the Department of Geography
Fergana State University
Republic of Uzbekistan, Fergana

REGIONAL FEATURES OF FOOD PRODUCTION AND WAYS OF ITS IMPROVEMENT (ON THE EXAMPLE OF FERGANA REGION)

Abstract: *This article examines the types of population consumption, geographical aspects of providing the population with food products. The indicators of self-sufficiency in food products were also analyzed.*
Keywords: *anthropogenic load, self-sufficiency coefficient, population consumption, rational norm, physiological norm.*

Из мирового опыта известно, что важное значение имеет определение минимального набора продуктов, товаров и услуг, необходимых для поддержания жизни и здоровья человека на определенный период времени. Такие показатели отражаются в потребительской корзине стран.

Президент Шавкат Мирзиёев в своем Послании к Парламенту от 22 декабря 2017 года, касаясь приоритетных направлений развития социальной сферы отметил: «На основе передового зарубежного опыта нам нужно закрепить в законодательстве и создать механизмы практического применения понятия "потребительская корзина", необходимого для выявления уровня доходов, достаточного для достойной жизни населения»[3].

21 ноября 2019 года на совещании, посвященном обсуждению первоочередных задач в сфере социальной защиты населения, Президент пригласил экспертов международных организаций в Министерство финансов, Министерство экономики и промышленности, Государственный комитет по статистике, поставив перед ними задачу по разработке порядка расчета потребительской корзины и прожиточного минимума, а также норм потребления[4].

Насыщение внутреннего потребительского рынка в первую очередь связано с производством товаров народного потребления. Комплекс отраслей, производящих товары народного потребления, включает легкую и пищевую промышленность, частично машиностроительную промышленность. В настоящее время ряд отраслей тяжелой промышленности также принимают участие в производстве товаров народного потребления.

Товары народного потребления, в частности, основная часть продуктов питания производится промышленностью. В настоящее время, несмотря на то, что среди отраслей народного хозяйства увеличивается доля сферы услуг, промышленность имеет ведущее положение среди отраслей народного хозяйства.

Факторы, влияющие на производство и потребление потребительской продукции, в том числе продукты питания, можно разделить на четыре группы (см.: рисунок 1):

- природно-географические
- социально-демографические
- уровень материального обеспечения
- политические и экономические (экспорт-импорт)

На различия в потреблении населения в определенной степени оказывают влияние природно-географические факторы. К этим факторам относятся климат, рельеф и другие факторы.

При оценке потенциала обеспечения территорий продуктами питания был использован метод баланса, разработанный и усовершенствованный Э.Н.Антамошкиной. Этот метод осуществляется следующим образом.

1. Выбор критерия оценки продуктовой безопасности региона (уровень продовольственной независимости региона - это состояние удовлетворения физиологической потребности населения потребляемой продукцией) 2. Наличие экономических возможностей для населения покупать продукты

[3] Послание Президента Республики Узбекистан Шавката Мирзиёева Олий Мажлису от 22 декабря 2017 года. (https://uz.fundamental-economic.uz/?p=1424)
[4] https://www.gazeta.uz/uz/2019/11/22/social-protection

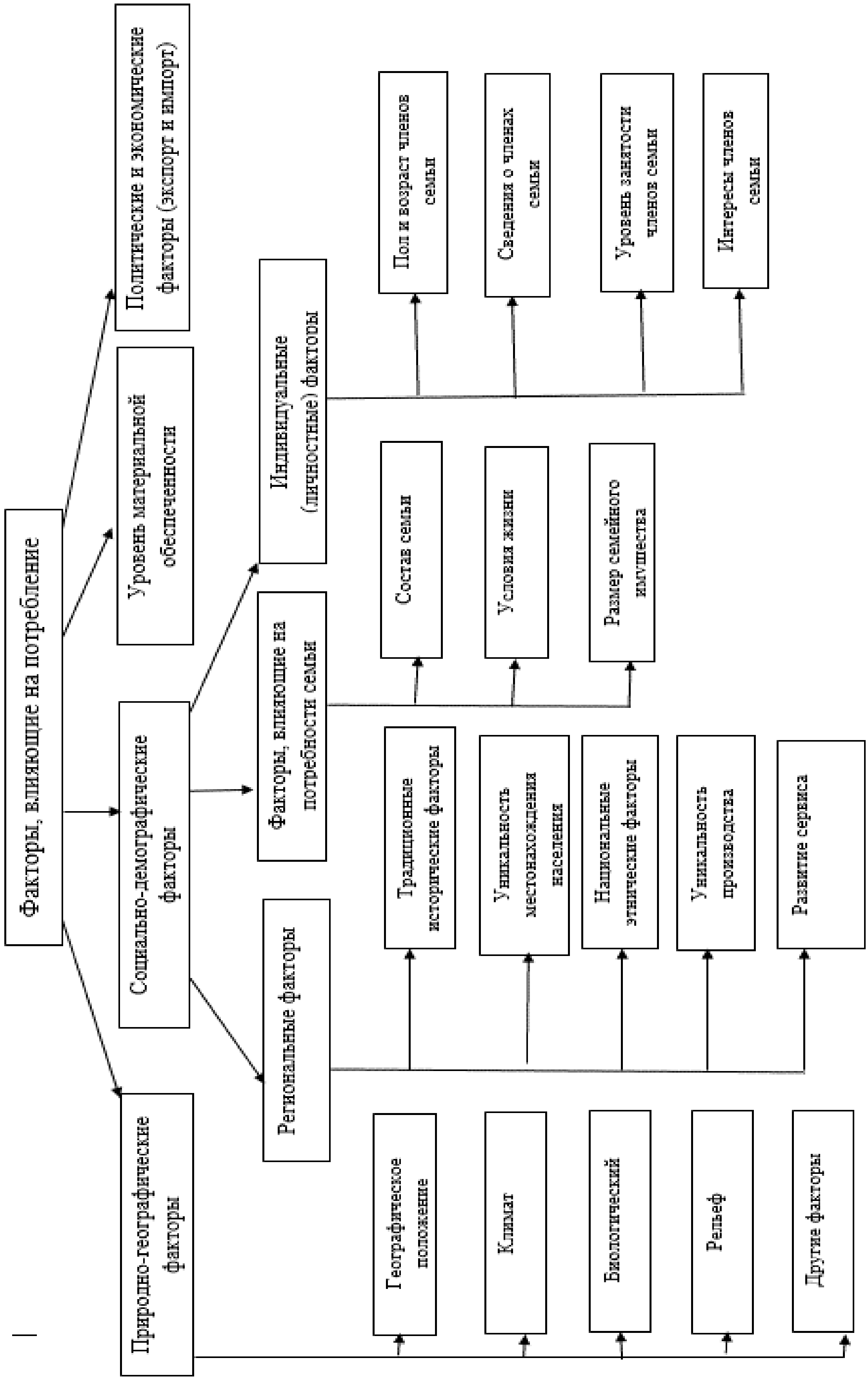

Рис. 1. Факторы, влияющие на потребление

*-Рисунок составлен автором на основе сведений сайта https://lex.uz/docs/2222065

питания. 3. Определение показателей оценки по каждому критерию (коэффициент самообеспечения продуктами питания и другое)

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Коэффициент самообеспечения продуктами питания определяется по следующей формуле:

$$\mathbf{K_{o'z}=Q/(n*Q_p)}$$

Q–объем произведенных продуктов питания, n – численность населения, Qp – рациональная величина потребления.

На основе предложенного метода была осуществлена оценка самообеспечения продуктами питания в административно-территориальных единицах области.

Критерий и значения показателя оценки самообеспечения продуктами питания

Критерий	Значение показателя
Уровень продовольственной независимости региона (самообеспечение)	*Кўз ≤ 0,5 низкий;* *0,5 ≤ Кўз ≤ 0,9 – допустимый;* *0,9 ≤ Кўз ≤ 1,1 – оптимальный* *$К_{ўз}$ 1,1 ≤ выше нормы*

В настоящее время в области зарегистрировано 1919 предприятий, производящих товары народного потребления. Из них 42,9% или 825 предприятия производят продукты питания. Территориальная структура предприятий, производящих продукты питания не одинакова. В частности, 15,3% пищевых предприятий раположены в городе Фергане, 13,5% - в городе Маргилане, 12% - в городе Коканде, в сельских районах больше всего предприятий, производящих продукты питания, расположены в Кувинском районе, что составляет 10,1% таких предприятий в области.

Основная часть предприятий, производящих продукты питания, в области являются предприятиями производящими муку и мучные изделия, их число составляет 528. В процентном соотношении предприятия, производящие муку и мучные изделия составляют 64% всех предприятий (см.: таблица 1). В структуре предприятий, производящих продукты питания, последнее место занимают предприятия, производящие молоко и молочные изделия. В области их число составляет 80, что соответствует 9,7% всех предприятий. В области хорошо развито производство кондитерских изделий, в период бывшего Союза область также занимала свое место в производстве кондитерской продукции.

Таблица 1.

Структура предприятий производства продуктов питания в Ферганской области (2021 год)

№	**Административно-территориальные единицы**	Мука и мучные изделия	Мясо и мясная продукция	Молоко и молочная продукция	Кондитерские изделия	Производство безалкогольных напитков (минеральная вода, соки)	Продукция мукомольно-крупяной промышленности	Переработка и консервирование фруктов и овощей	Морепродукты	Алкогольная продукция	Специи и лекарственные изделия	Чай и кофе	Соль	Готовые продукты питания	Производство растительных и животных жиров и масел	Продукты питания другой категории	Всего
	Область	**528**	**27**	**80**	**54**	**11**	**36**	**42**	**2**	**2**	**11**	**14**	**2**	**3**	**4**	**10**	825
1.	г. Фергана	89	4	10	13	1	1			1	3	1		1	1	1	126
2.	г. Коканд	60		12	15		2	2		1		3		1	2	1	99
3.	г. Кувасай	15	1				1	3									20
4.	г. Маргилан	64	7	10	11	2	3	3			3	5				3	111
	Районы:																
5.	Багдад	24	5	2	2		5	3			1					1	43
6.	Бешарик	31	3	3				3	1								41
7.	Бувайда	8		2			1										11
8.	Дангара	13	1	5				1				2					22
9.	Язъяван	11		1			1										13
10.	Кува	65	1	12	1		1	2							1		83
11.	Куштепа	18	3	1	3	1	4				1			1			32
12.	Алтыарык	31		4		5		2				1				1	44
13.	Риштан	28		2	1			1	1								33
14.	Сох	2				1	1	1									5
15.	Ташлак	16		4	1		4	1			1						27
16.	Узбекистан	16		4			1	6			1					1	29
17.	Учкуприк	7	1	2	4		9	9			1	2	1			2	38
18.	Фергана	19		4	1		1	5					1				31
19.	Фуркат	11	1	2	2	1	1										17

***- Таблица составлена автором на основе данных Управления статистики области.**

В настоящее время функционирует 54 предприятий, производящих кондитерскую продукцию, что составляет 6,55% всех таких предприятий в области. Вместе с тем в области зарегистрировано 42 предприятия, связанных с переработкой фруктов и овощей, что составляет 5,9 % всех предприятий области. Отмечено, что в области зарегистрировано небольшое число предприятий, производящих морепродукты (2 предприятия) и соль (2 предприятия). Производство муки и мучной продукции хорошо развито, в основном, в городе Фергане (89), городе Коканде (60), городе Маргилане (64), в Кувинском районе (65). Наименьшее число таких предприятий расположены в таких районах, как Сох (2), Учкуприк (7), Бувайда (8).

На основе результатов исследования региональных особенностей и путей совершенствования производства продуктов питания в Ферганской области разработаны следующие предложения и рекомендации:
1. В природном, историческом, социально-экономическом географическом аспекте изучены и проанализированы проведенные за рубежом, в государствах СНГ и республике исследования, посвященные производству товаров народного потребления, в том числе продуктов питания. Дано определение понятия потребитель, потребительская корзина. Проанализирована региональная структура производства товаров народного потребления, в том числе продуктов питания, а также раскрыты географические аспекты и их классификации.

2. Определены современное состояние и проблемы производства продуктов питания в Ферганской области. Усовершенствована региональная структура производства продуктов питания с использованием природного, социально-экономического потенциала Ферганской области.

3. Осуществлено определение территориальных различий потребления продуктов питания и типология районов в Ферганской области, предложена региональная структура, обеспечивающая пропорциональность производства и потребления продуктов питания.

ИСПОЛЬЗОВАННЫЕ ИСТОЧНИКИ:

1. Мадаминов З. Х. ИСТОРИЯ ПРОМЫШЛЕННОГО РАЗВИТИЯ ФЕРГАНСКОЙ ОБЛАСТИ //Экономика и социум. – 2021. – №. 11-2 (90). – С. 955-958.

2. Мадаминов З. Х., Дададжонова Р. Т. РЕГИОНАЛЬНЫЕ АСПЕКТЫ ПРОИЗВОДСТВА ТОВАРОВ НАРОДНОГО ПОТРЕБЛЕНИЯ В ФЕРГАНСКОЙ ОБЛАСТИ //Экономика и социум. – 2019. – №. 11 (66). – С. 943-945.

3. Мадаминов З. Х. ГЕОГРАФИЧЕСКИЕ АСПЕКТЫ ПОТРЕБЛЕНИЯ НАСЕЛЕНИИ //Экономика и социум. – 2019. – №. 10 (65). – С. 485-488.

4. Мадаминов З. Х., Салиджанов С. О., Сабиров Т. С. ТЕРРИТОРИАЛЬНЫЕ УСТРОЙСТВА ДЛЯ ПРОИЗВОДСТВА ТОВАРОВ НАРОДНОГО ПОТРЕБЛЕНИЯ В СИСТЕМЕ ПРИРОДА-НАСЕЛЕНИЕ-ХОЗЯЙСТВО (НА

ПРИМЕРЕ КОМПЛЕКСНОЙ АГРОПРОМЫШЛЕННОСТИ) //Экономика и социум. – 2019. – №. 10 (65). – С. 481-484.
5. Komilova N. K. et al. Economic and geographic problems of improvement of industrial sectors and local structure of Uzbekistan //Journal of Advanced Research in Law and Economics. – 2019. – Т. 10. – №. 6 (44). – С. 1916-1928.
6. Kh M. Z. PRODUCTION AND CONSUMPTION OF GOODS OF PEOPLE'S CONSUMPTION AS AN OBJECT OF GEOGRAPHICAL RESEARCHES //Экономика и социум. – 2020. – №. 1 (68). – С. 61-63.
7. Мадаминов З. Х., Абдукаххоров Л. Ш., Алижонова Н. У. ОЗИҚ-ОВҚАТ МАҲСУЛОТЛАРИ ИШЛАБ ЧИҚАРИШ ВА ИСТЕЪМОЛ ҚИЛИШГА ТАЪСИР ҚИЛУВЧИ ОМИЛЛАР //Academic research in educational sciences. – 2022. – Т. 3. – №. 5. – С. 88-93.
8. Мадаминов З. Х., Абдуганиев О. И. ИЗУЧЕНИЕ ПОТРЕБИТЕЛЬСКОЙ ГЕОГРАФИИ //Экономика и социум. – 2021. – №. 11-2 (90). – С. 959-962.

Максимова О. К.
преподаватель
кафедра «Узбекского языка и литературы»
Андижанский государственный медицинский институт

ГУМАНИЗАЦИЯ ОБРАЗОВАТЕЛЬНОГО ПРОЦЕССА

Аннотация: *в статье анализируются актуальные проблемы современности, а именно, вопросы гармоничного развития человека, его гуманистических ориентацией, психологической защиты и психологического здоровья. Проблема гуманизации образования, прежде всего, связана с восстановлением его культурообразующей и личностно-развивающей функций.*

Ключевые слова: *гуманизация, психологические задачи, компетенция, самооценка, психологического здоровья.*

Maksimova O.K.
Lecturer
of the Department of "Uzbek Language and Literature"
Andijan State Medical Institute

HUMANIZATION OF THE EDUCATIONAL PROCESS

Abstract: *the article analyzes the current problems of our time, namely, the issues of harmonious development of man, his humanistic orientation, psychological protection and psychological health. The problem of humanization of education, first of all, is connected with the restoration of its culture-forming and personality-developing functions.*

Keywords: *humanization, psychological tasks, competence, self-esteem, psychological health.*

Приоритетное направление гуманитарных наук на развивающуюся личность, возрождение гуманистической традиции, — важнейшая задача, поставленная самой жизнью. Отличительная особенность современного Узбекистана — его устремленность в будущее, которое невозможно без высокоразвитых членов общества. Стало понятно, что необходимо развивать человека как созидателя, готовить к свободному и творческому труду. На этом этапе образования первостепенное значение приобрели такие качества индивидуальности личности, как: социальная, интеллектуальная, коммуникативная и физическая компетентность, эмоциональность, креативность, произвольность и инициативность, самостоятельность и ответственность, а также самооценка и свобода поведения.

Среди актуальных проблем современности оказались вопросы гармоничного развития человека, его гуманистических ориентацией, психологической защиты и психологического здоровья. Проблема гуманизации образования, прежде всего, связана с восстановлением его культурообразующей и личностно-развивающей функций. Гуманистическая ориентация изменяет представление о целях образования, которое транслирует ценности общечеловеческой и национальной культуры. Это в свою очередь требует пересмотра содержания и технологий обучения и воспитания, изменения структур различных образовательных институтов, в том числе и дошкольных образовательных учреждений.

Понятие «гуманизация» является производным от термина «гуманизм», толкований которого существует множество. По определению И. Канта, это «чувство блага в отношениях с другими». Нам представляется правомерным определение гуманизма как «исторически обусловленную систему воззрений, которая признает человека самодовлеющей ценностью, рассматривает его как сознательного субъекта своих действий, развитие которого по законам собственной деятельности является необходимым условием развития общества». Оно более других соответствует культурно-историческому подходу к личности [5].

Гуманизация образования большинством исследователей понимается как создание условий, направленных на раскрытие и развитие способностей человека, его позитивную самореализацию, в основе чего лежит уважение к человеку и вера в него, определение целей, содержания, организации и средств его жизнедеятельности, а также характер взаимодействия с окружающими людьми, в целом — средой. Согласно культурно-исторической концепции Л. С. Выготского личность является участником историко-эволюционного процесса, выступает носителем социальных ролей и обладает возможностью выбора жизненного пути, в ходе которого ею осуществляется преобразование природы, общества и самой себя.

В традиционной педагогике именно таким пониманием человека (как объекта) определялись цели и задачи образования, методы и приемы обучения, понимаемого как воздействие. Изучение сущностных характеристик, психолого-педагогических механизмов гуманистической парадигмы образования, опыт и результаты исследований позволяют выделить педагогические условия, способствующие гуманизации обучения [3].

При гуманизации обучения учитываются психолого-возрастные особенности обучающихся, специфика содержания и методика преподавания как школьного предмета, так и вузовской дисциплины. Возрастные особенности изменяют восприятие содержания обучения и оценку взаимоотношений в учебном процессе, иногда — в значительной степени.

Гуманистически ориентированное обучение строится на этических основаниях, требует взаимодействия обучающего и обучаемого с целью содействия в созидании своей личности, установлении собственного отношения к миру и людям. Характер межличностного взаимодействия по типу субъект-субъектных отношений является обязательным условием гуманизации обучения.

Еще одним условием гуманизации процесса обучения является дифференцированный подход, при котором учитываются потребности, особенности и склонности обучающихся. Составление программы, планирование, подбор учебников, учебных пособий и других материалов осуществляются не только в соответствии с требованиями государственных стандартов, но и с учетом уровня знаний, форм и условий обучения.

Существующая ныне вариативность содержания обучения позволяет предоставлять давать учащимся право выбора на различных этапах учебной деятельности, что соответствует личностным устремлениям подростков и молодежи и высоко ими ценится. Даже при наличии авторского учебника преподаватель все-таки должен ориентироваться на право выбора учебника или пособия студентами при самостоятельной работе над материалом.

При обучении, ориентированном на личность, построении субъект-субъектных отношений основной технологической единицей обучения становится ситуация общения. Ситуация общения как особый вид учебной ситуации — это поле совместной деятельности тех, кто учит, и тех, кто учится, организованное на гуманистических принципах. Такая психолого-педагогическая среда — и условие, и средство становления личности, а реализация подобной учебной ситуации имеет развитие личности своим конечным результатом.

Учебная ситуация общения реализуется через диалог. Такой подход изменяет роль педагога и характер образовательного процесса. Под диалогом в данном случае понимается не столько способ вербального общения, сколько специально организованная коммуникативная среда, которая способствует самоактуализации, саморазвитию личности и в которой реализуется и развивается не только личность ученика, но и личность учителя.

Обучение должно быть направлено на результативную и процессуальную стороны учебной деятельности обучающегося, на результат усвоения учебного материала и на развитие мыслительных процессов, формирование культуры умственного труда. Процесс обучения должен способствовать раскрытию личностной значимости знаний для каждого обучающегося. Важно создать условия, при которых поддерживается мотивация к обучению, существует атмосфера творческого поиска, предоставляется свобода выбора и «право на ошибку».

Наиболее продуктивной учебной деятельностью в ситуации общения, способствующей созданию особой коммуникативной среды, открытому обмену мнениями, эффективному разрешению проблем, реализации творческих замыслов является работа в группах, особенно в школе — при слабом навыке диалогического общения — ученики активнее делятся мыслями в группе.

Критерии эффективности обучения при гуманистическом подходе имеют свои отличительные особенности. Эффективность обучения не сводится к оценке знаний, определяемой по конечному результату усвоения:

уровню воспроизведения знаний, применению знаний по образцу, оперированию знаниями в нестандартной ситуации.

Важнейшим условием гуманизации обучения является создание ситуации успеха на всех этапах учебной деятельности. Очевидно, что обучающиеся имеют различную самооценку, то или иное отношение к себе: уверенность в собственных силах, убежденность в правильности своих действий или, наоборот, боязнь предъявить выполненную работу, страх неудачи, ожидание критики и осуждения своих действий. Задача учителя — найти индивидуальный подход к каждому, заставить поверить в свои силы, изменить взгляд на свои действия и мнения как на заведомо неверные, суметь вызвать ощущение ожидания успеха [5].

Личностно-ориентированные технологии. «Технология» в широком смысле этого слова — наука о мастерстве. Технология обучения — системная категория, структурными составляющими которой являются цели обучения; содержание обучения; средства педагогического воздействия; организация учебного процесса; ребенок, педагог; результат деятельности. Принципиально важной стороной в педагогической технологии является позиция ребенка в образовательном процессе, отношение к ребёнку со стороны взрослого. Здесь выделяются несколько типов технологий: авторитарные, дидактические, личностно-ориентированные, в рамках которых самостоятельными направлениями выделяются гуманно-личностные технологии, технологии сотрудничества и технологии свободного воспитания [4].

Личностно-ориентированные технологии ставят в центр образовательной системы личность ребенка, обеспечение комфортных, бесконфликтных и безопасных условий ее развития, реализации ее природного потенциала. Личность обучающегося в этой технологии не только субъект, но субъект приоритетный; она является целью образовательной системы, а не средством достижения какой-либо отвлеченной цели. Технология сотрудничества реализует демократизм, равенство, партнерство в субъектных отношениях педагога и ученика. Педагог и воспитанник совместно вырабатывают цели, содержание занятия, дают оценки, находясь в состоянии сотрудничества, сотворчества. Технология свободного воспитания акцентирует свое внимание на предоставлении ребенку свободу выбора и самостоятельности. Осуществляя выбор, ребенок наилучшим способом реализует позицию субъекта, идя к результату от внутреннего побуждения, а не от внешнего воздействия.

Таким образом, личностно-ориентированные технологии характеризуются антропоцентричностью, гуманистической и психотерапевтической направленностью и имеют целью разностороннее, свободное и творческое развитие ребёнка как субъекта деятельности [2].

Использование данных технологий требует от участников образовательного процесса создания ряда условий, а именно:

- разрабатываются индивидуальные программы обучения, моделирующие исследовательское (поисковое) мышление;

- организуются групповые занятия на основе диалога и имитационно-ролевых игр;

- учебный материал конструируется для реализации метода исследовательских проектов, выполняемых самими учениками.

Таким образом, гуманно-личностные технологии, следует отметить, что она, отвергая принуждение, «исповедует» идеи всестороннего уважения и любви к ребенку, оптимистическую веру в его творческие силы. Гуманизация — ключевой элемент нового педагогического мышления, утверждающего полисубъектную сущность образовательного процесса. Основным смыслом образования в этом случае становится развитие личности. А это означает изменение задач, стоящих перед педагогом. Если раньше он должен был передавать учащемуся знания, то гуманизация выдвигает иную задачу — способствовать всеми возможными способами развитию ребенка [3]. Гуманизация требует изменения отношений в системе «учитель — ученик» — установления связей сотрудничества. Подобная переориентация влечет за собой изменение методов и приемов работы учителя. Приоритетными для педагога становятся знания о взаимоотношении учителя и ученика и реализация этих знаний в процессе взаимодействия с учащимися на урок. Таким образом, в ситуациях, при которых педагог понимает и принимает внутренний мир своих воспитанников, естественно ведет себя, и, в соответствии со своими внутренними переживаниями, доброжелательно относится к учащимся, он создает все необходимые условия для гуманистического общения.

Использованные источники:

1. Бондаревская, Е. В. Гуманистическая парадигма личностно-ориентированного образования и целостная педагогическая теория / Е. В. Бондаревская // Педагогика. — 2007. — № 4. — С. 11–17.
2. Колесникова, И. А. О критериях гуманизации образования / И. А. Колесникова // Педагогическая наука: Теория. Практика. — СПб, 2004. — С. 37–45.
3. Шиянов, Е. Н. Гуманизация педагогического образования: состояние и перспективы / Е. Н. Шиянов. — Москва; Ставрополь, 2001. — 206 с.
4. Якиманская, И. С. Личностно-ориентированное обучение в современной школе / И. С. Якиманская. — М.: Сентябрь, 2006. — 96 с.

Максимова О.К.
преподаватель
кафедра «Узбекского языка и литературы»
Андижанский государственный медицинский институт

МЕТОДОЛОГИЧЕСКИЕ ОСНОВЫ КОМПЕТЕНТНОСТНОГО ПОДХОДА В ОБРАЗОВАНИИ

Аннотация: *в статье рассматриваются понятия «компетенция» и «компетентность», анализируются признаки и свойства данных понятий. Выявлено, что трактовки понятий разнообразны по смыслу как сами по себе, так и в сравнении друг с другом, что выражается в использовании одинаковых терминов, характеризующих сущностные признаки разных явлений.*

Ключевые слова: *компетенция, компетентность, системный подход, личностный подход, способности, деятельность.*

Maksimova O. K.
Lecturer
of the Department of "Uzbek Language and Literature"
Andijan State Medical Institute

METHODOLOGICAL BASIS OF THE COMPETENCE-BASED APPROACH IN EDUCATION

Abstract: *the article examines the concepts of «competence», analyzes the features and properties of these concepts. It is revealed that the interpretations of the concepts are diverse in meaning both in themselves and comparison with each other, which is expressed in the use of the same terms characterizing the essential features of different phenomena.*

Key words: *competence, competency, system approach, personal approach, abilities, activity.*

На методологическом уровне поиск сути компетенции и компетентности предполагает, прежде всего, выявление существенных признаков данных явлений с позиций системного, целостного, личностного и деятельностного подходов. Прежде всего, отметим, что определения понятий компетенции и компетентности не отражают однозначного и достаточно точного представления о них. Компетенции трактуют как:

- *квалификационную характеристику* индивида, взятую в момент его включения в деятельность;
- *круг вопросов*, в которых человек хорошо осведомлен, обладает познаниями и опытом;
– *общую способность*, основанную на знаниях, опыте, ценностях, склонностях, которые приобретены благодаря обучению;

– *совокупность взаимосвязанных качеств личности* (знаний, умений, навыков, способов деятельности), задаваемых по отношению к определенному кругу предметов и процессов, и необходимых для качественной продуктивной деятельности по отношению к ним;

– *совокупность взаимосвязанных смысловых ориентаций, знаний, умений, навыков и опыта деятельности* ученика, необходимых, чтобы осуществлять личностно и социально значимую продуктивную деятельность по отношению к объектам реальной действительности;

– *способность реализации знаний и умений* в конкретной ситуации;

– *способность индивида к активному, ответственному жизненному действию*, осуществляемому на основе ценностного самоопределения, способность активно взаимодействовать с миром, в ходе взаимодействия понимать, изменять себя и мир.

Аналогично представляют и понятие «компетентность»:

- *способность* человека успешно *взаимодействовать* как с физическим, так и с социальным окружением;

– это есть *мера освоения компетенции*, определяемая *способностью* решать предписанные задачи;

– *владение,* обладание человеком соответствующей *компетенцией*, включающей его *личностное отношение* к ней и предмету деятельности;

– *специфическая способность*, необходимая для эффективного выполнения конкретного действия в конкретной предметной области и включающая узкоспециальные знания, особого рода предметные навыки, способы мышления, а также понимание ответственности за свои действия.

Как видим, трактовки понятий разнообразны по смыслу как сами по себе, так и в сравнении друг с другом, что выражается в использовании одинаковых терминов, характеризующих сущностные признаки разных явлений (хотя и связанных между собой). Рассмотрим компетенцию как систему. Системный подход ориентирует не только на выявление структурных составляющих каждого явления и связей между ними, но и на выяснение связей каждого явления, сложного, системного само по себе, с элементами других систем, в которые оно включено и от которых зависит его функционирование и развитие.

Компетенция – это характеристика требований к человеку, которые позволят стать ему компетентным в *определенном виде деятельности*. Именно деятельность диктует требования к человеку, осуществляющему эту деятельность. В соответствии с теорией деятельности (А.Н. Леонтьев, Б.Ф. Ломов, В.Д. Шадриков и др.) структура деятельности включает в качестве основных компонентов цель, мотив, средства и результат. Поэтому к человеку предъявляются следующие основные требования: наличие целей, мотивов, заставляющих его быть активным, наличие знаний о предмете деятельности, о способах деятельности, наличие умений действовать с предметом.

Следовательно, с точки зрения деятельностного подхода компетенции как требования можно определить только на основе анализа той деятельности, применительно к которой определяются требования. Компетенции не могут рассматриваться в отрыве от какой-либо деятельности, поэтому они и включают в качестве структурных составляющих знания, умения, важные свойства и качества личности, которые человек реализует в процессе деятельности, значимые для данного вида деятельности.

В теории деятельности Р.Х Шакурова [1; 2] обращается внимание на то, что стимулирующую функцию выполняет не только цель деятельности, но и задачи, которые необходимо человеку решить, чтобы достичь поставленной цели. А поскольку этого элемента в традиционной модели деятельности нет, то трудно объяснить, почему человеку необходимы те или иные умения, способности, тем более что он может в отличие от другого по-своему распорядиться своими знаниями и способностями. Все это подводит к мысли о том, что важно сложить такой состав компетенций, который позволит человеку успешно и самостоятельно справиться с поставленной задачей (решение задачи может быть сделано на уровне репродукции, или творчества, изобретательства и др.). Отсюда вытекает вывод о необходимости такой компетенции (обобщенно), как способность. Благодаря своим способностям человек может преодолевать барьеры, принимать решения, выполнять действия и пр., т.е. решать задачи. В зависимости от развитости способностей (общих и специальных) деятельность и ее результаты характеризуются тем или иным качеством.

Способности человека, определяемые как особая чувствительность организма к воздействиям окружающего мира, выражаются в реакции человека на требования деятельности. Способности имеют отношение к любым психическим проявлениям человека: к интеллектуальным, эмоциональным, волевым и т.д. Если человек слабо реагирует на требования деятельности, то это объясняется слабым развитием способностей. Способность как психологическая категория не может не быть в составе компетенций, к какому виду деятельности она не относилась бы. Усвоение компетенций, таких как знания и умения, невозможны без развитых способностей. И напротив, развитие способностей возможно при условии овладения знаниями и умениями. Положения из теории способностей Б.П. Теплова дают основания для указания на такие чрезвычайно важные компетенции, как способности.

Сказанное по поводу состава компетенций уже показывает, что между названными элементами должны существовать определенные связи и зависимости. Однако необходимо добавить к составу компетенций еще свойства и качества личности, имеющие определенное значение для выполняемой деятельности. Выше уже было сказано по этому поводу, что в зависимости от интеллекта, воли, отношения человека к окружающему миру, обществу, природе и др. проявление человека в разных видах деятельности различно. С точки зрения личностного подхода важно выявить те свойства и качества, которые либо тормозят, либо активизируют действия человека, то есть способствуют или не способствуют его успешности в определенных видах деятельности. Все сказанное выше позволяет обобщенно представить следующие сущностные признаки компетенции:

- требования к человеку, необходимые для успешного выполнения определенного вида деятельности;
- объективный характер требований
- совокупность требований, включающих в качестве компонентов знания, умения, способности, личностные качества, важные для успешного выполнения определенного вида деятельности, а в качестве элементов – перечни конкретных знаний, конкретных умений, способностей и личностных качеств;
- взаимосвязи между требованиями – компонентами и элементами компетенций (прямые, непосредственные и функциональные связи между способностями, знаниями, умениями и личностными качествами, которые обусловливают друг друга).

Компетенция, как составляющая другой системы, в которую она включена, зависит от тех изменений, которые образуются в другой, более сложной системе, составной частью которой она является, - в обществе, в социальной сфере, в производстве, в культуре и др. Компетенция – это объективное явление, заданное обществом, обусловленное уровнем развития общества, уровнем развития экономической, производственной, культурной, образовательной и др. сфер. Поскольку функционирование общества есть динамичный процесс, развивающийся, изменчивый, то это определенным образом отражается на содержании компетенций, характеризующих конкретного специалиста, которые в свою очередь, корректируются под воздействием инновационных процессов в науке, культуре, производстве, образовании.

По словам Дж. Равена, зарождаясь «внутри» человека в виде его биологической наследственности, способностей, склонностей и других индивидуальных особенностей, компетентность, будучи по природе качеством субъективным, формируется и развивается в зависимости от объективных условий. Компонентами компетентности Дж. Равен считает те «характеристики и способности людей, которые позволяют им достигать личностно значимых целей – независимо от природы этих целей и социальной структуры, в которой эти люди живут и работают» [3, 280].

Опираясь на системный подход, отметим, что данное явление характеризуется не столько составом элементов, сколько разнообразием связей между ними. За состав «отвечает» компетенция – это в ней установлена совокупность элементов, составляющих систему. А вот связи между ними, устанавливаемые человеком в процессе деятельности, характеризуют качество его деятельности, его поведения и обусловливают его компетентность.

Согласно модели Равена, отдельные виды компетентности могут в разных ситуациях выступать в качестве компонентов определенной компетентности и наоборот [3, 259]. Эти компоненты компетентности разделены на когнитивные (определение препятствий на пути достижения целей), аффективные (удовольствие от работы) и волевые (настойчивость, решимость, воля). Было установлено, что развитие новых навыков, умений и видов компетентности происходит в зависимости от тех целей, которые значимы для индивида в настоящее время [там же, 297]. По мере взросления развиваются не все компетентности, а преимущественно те, которые определяются ценностными установками индивида. Чем старше становится человек, тем большую значимость в формировании и развитии компетентности приобретают не его способности, а ценностные установки.

Компетентности могут быть развиты и проявлены только в тех ситуациях, где выполняемая деятельность приобретает личностную значимость. Имеются и другие многочисленные взгляды на структуру компетентности. Например, М.А. Холодная [4] выделяет содержательный, деятельностный и личностный компоненты компетентности, которые отражают названные ранее компетенции – знания, умения, способности, личностные качества.

Таким образом, *системный подход* позволяет определить состав и связи между отдельными элементами компетенций и компетентности, *деятельностный подход* обеспечивает включение в состав компетенций способностей и умений, обеспечивающих практическую направленность на овладение компетенциями и их реализацию; *личностный подход* позволяет увидеть составляющие компетенций, обусловленные свойствами и качествами личности, значимыми для усвоения и реализации компетенций в определенных ситуациях; *целостный подход* направлен на выявление всех возможных сторон компетенций и их координацию, взаимозависимость, что позволит привести формирование компетентности к наиболее совершенному варианту.

Использованные источники:

1.Шакуров Р.Х. Эмоция. Личность. Деятельность (механизмы психодинамики). – Казань: Центр инновационных технологий, 2001. – 180с.

2. Шакуров Р.Х. Барьер как категория и его роль в деятельности // Вопросы психологии. – 2001. - №1. – С. 3-18.

3. Равен Дж. Компетентность в современном обществе: выявление, развитие и реализация / Пер. с англ. – М., «Когито-Центр», 2002. – 396 с.

4. Холодная М.А. Психология интеллекта. - СПБ., 2002.

Мамадалиева Н.А., доцент
кафедра экономики и информационных технологий Инновационного университета
Хамроев Б.Б.
преподаватель
кафедра экономики и информационных технологий Инновационного университета
Ирисов А.А.
преподаватель
кафедра экономики и информационных технологий Инновационного университета

СОВЕРШЕНСТВОВАНИЕ ОРГАНИЗАЦИОННО-ЭКОНОМИЧЕСКИХ МЕХАНИЗМОВ УПРАВЛЕНИЯ ДЕЯТЕЛЬНОСТЬЮ СУБЪЕКТОВ ПРЕДПРИНИМАТЕЛЬСТВА

Аннотация: *Устойчивое социально-экономическое развитие страны и ее регионов тесно связано с эффективностью функционирования предпринимательских структур в территориальном пространстве национальной экономики. Двигателем этого процесса являются предприниматели, которые играют немаловажную роль в социально-экономической и политической жизни страны и стабильном развитии национальной экономики. При этом, региональный уровень в силу специфических особенностей отдельных территориальных образований обусловливает поиска приоритетных направлений развития предпринимательских структур с учетом роста значимости и эффективности организационно-экономического механизма регулирования и поддержки предпринимательской деятельности.*

Ключевые слова: *социально-экономическое развитие страны, региональный уровень, развития предпринимательских структур, эффективность организационно-экономического механизма, предпринимательская деятельность.*

Mamadalieva N.A.
Associate Professor
of the Department of Economics and Information Technologies of the Innovation University
Khamroev B.B.
Lecturer
at the Department of Economics and Information Technology of the Innovation University
Irisov A.A.
Lecturer
at the Department of Economics and Information Technology of the Innovation University

IMPROVEMENT OF ORGANIZATIONAL AND ECONOMIC MECHANISMS FOR MANAGING THE ACTIVITIES OF BUSINESS ENTITIES.

Abstract: *The sustainable socio-economic development of the country and its regions is closely related to the efficiency of the functioning of business structures in the territorial space of the national economy. The engine of this process is entrepreneurs, who play an important role in the socio-economic and political life of the country and the stable development of the national economy. At the same time, the regional level, due to the specific features of individual territorial entities, determines the search for priority areas for the development of entrepreneurial structures, taking into account the growing importance and effectiveness of the organizational and economic mechanism for regulating and supporting entrepreneurial activity.*
Keywords: *socio-economic development of the country, regional level, development of entrepreneurial structures, effectiveness of the organizational and economic mechanism, entrepreneurial activity*.

Актуальность темы: В «Национальной стратегии развития Республики Узбекистан на период до 2030» особое внимание уделено развитию предпринимательских структур в регионах страны с учетом обеспечения их территориально-сбалансированного развития. В этом документе отмечается, что проводимые в стране реформы были в большей степени сосредоточены на центральном уровне, в связи с чем «…на местах» (в регионах страны) накопилось множество нерешенных проблем, что негативно сказывается на показателях сводных индексов социально-экономического положения районов страны. Внутренняя политика должна быть направлена на снижение уязвимости экономики страны от потенциальных внешних угроз, поиск и разработку эффективных механизмов и внутренних источников устойчивого экономического развития, обеспечение стабильного экономического роста, продуктивной занятости и благоприятной предпринимательской среды».[94]

В этих условиях важным представляется решение проблем совершенствования организационно-экономического механизма развития предпринимательских структур в регионах страны как наиболее важной предпосылкой обеспечения их стабильного роста. Последнее имеет особое значение с позиции наращивания экспортного потенциала регионов страны и роста их конкурентоспособности на внутренних и внешних рынках.

Самаркандская область Республики Узбекистан обладает достаточным экономическим потенциалом, основанным на развитие предпринимательских структур. В настоящее время регион отличается развитостью форм и масштабами предпринимательской деятельности. Однако этого недостаточно для эффективной реализации экспортного потенциала региона, более рационального использования природно-ресурсного потенциала, а также расширения продуктивной занятости населения. Для раскрытия потенциала регионального предпринимательства необходимо провести специальные исследования на базе системного подхода с учетом совершенствования организационно-экономического механизма развития предпринимательских структур в регионе.

Возросшая актуальность выбранной темы исследования также тесно связана с необходимостью дальнейшего улучшения результативности и повышения эффективности действий различных субъектов предпринимательской деятельности путем усиления государственной поддержки и стимулирования устойчивого роста, как важнейшего элемента организационно-экономического механизма развития предпринимательских структур, связанных с расширением масштаба инновационного развития предпринимательской деятельности в регионе.

В целом, актуальность исследования заключается в новом подходе к развитию механизма адресной и постоянной поддержки региональных предпринимательских структур с учетом развития их инновационного и экспортного потенциала. Последнее подтверждает особую значимость проведения системных исследований, направленных на совершенствование организационно-экономического механизма развития предпринимательских структур в регионе.

Однако, по вопросам совершенствования организационно-экономического механизма развития предпринимательских структур и поддержки предпринимательства на региональном уровне существуют расхождения в подходах к решению данной проблеме. При этом, все еще недостаточно исследованными остаются проблемы, связанные с:

- развитием механизма селективной адресной поддержки предпринимательских структур с учетом специфических особенностей протекания социально-экономических процессов в регионах страны;

[94] Указ Президента Республики Узбекистан, от 11.09.2023 г. № УП-158

- совершенствованием организационных аспектов стимулирования предпринимательской деятельности с учетом более эффективного использования компонентов природно-ресурсного потенциала регионов;

- обеспечением инновационного развития предпринимательских структур в регионах страны с учетом усиления их экспортного потенциала и др.

Вышесказанное определило актуальность темы настоящей работы, ее практическую значимость в решение проблем организационно-экономической поддержки развития предпринимательских структур на уровне регионов Узбекистана.

Целью исследования является обоснование теоретических аспектов совершенствования организационно-экономического механизма развития предпринимательских структур и разработки практических рекомендации по обеспечению их стабильного функционирования в регионе. Для достижения этой цели поставлены и решены следующие задачи:

- исследовать теоретические аспекты формирования и развития организационно-экономического механизма поддержки развития предпринимательских структур;

- изучить методические основы организационно-экономического механизма поддержки предпринимательства в экономической системе;

- проанализировать зарубежный опыт развития предпринимательства и возможность его применения в условиях региональной экономики;

- изучить этапы формирования и выявить региональные особенности развития предпринимательских структур в регионе;

- оценить эффективность механизма региональной поддержки развития предпринимательских структур с учетом стимулирования их инновационной составляющей;

- разработать экономико-математическую модель оценки факторов развития предпринимательской деятельности в Самаркандской области Республики Узбекистан с учетом наращивания ее экспортного потенциала;

- обосновать основные направления совершенствования организационно-экономического механизма развития предпринимательских структур в Самаркандской области Республики Узбекистан.

Объектом исследования является организационно-экономический механизм развития предпринимательских структур на региональном уровне.

Предметом исследования выступают социально-экономические отношения, возникающие в процессе совершенствования организационно-экономического механизма развития предпринимательских структур в регионе.

Методической основой исследования послужил системный подход, который позволяет осуществить комплексный анализ проблем стабильности развития и поддержки предпринимательства с учетом региональных особенностей.

Научная новизна исследования состоит в обосновании теоретических аспектов совершенствования механизма организационно-экономической поддержки развития предпринимательской деятельности и разработке конкретных предложений по развитию инновационной и экспортной деятельности предпринимательских структур в регионе. В ходе исследования получены следующие результаты, обладающие элементами научной новизны:

- развиты теоретические аспекты совершенствования организационно-экономического механизма функционирования предпринимательских структур на базе уточнения функциональных задач органов государственного управления по стимулированию инновационной деятельности субъектов предпринимательства с опорой преимущественно на стратегию импортозамещания и усиления экспортного потенциала региона, позволяющие обеспечить стабильное функционирование предпринимательских структур в условиях конкурентной среды;

- обоснованы основные принципы и условия совершенствования организационно-экономического механизма функционирования предпринимательских структур в регионе с выделением системообразующих факторов/принципов обеспечения конкурентоспособности субъектов предпринимательства, отражающих возможность активизации/стимулировании их инновационной деятельности на базе селективной адресной государственной поддержки с учетом эффективного использования кластерного подхода к развитию малого и среднего бизнеса в сочетании с реализацией концепции регионального предпринимательского университета;

-предложен организационно-экономический механизм стимулирования экспортной деятельности предпринимательских структур региона на базе оптимизации схем взаимодействия институтов развития и поддержки усиления экспортного потенциала субъектов предпринимательства с учетом:

1) создания Центра поддержки экспортной деятельности, позволяющего координировать реализацию функциональных задач институтов/нормативно-правовых актов;

2) разработки дифференцированных схем налогообложения по регионам страны путем предоставления определенных льгот отраслям, обладающим конкурентные преимущества при производства экспортоориентированной и импортозамещающей продукции. При этом, обоснована необходимость институционального закрепления критерий выделения определенных льгот субъектом малого и среднего предпринимательства;

3) совершенствования механизма использования потенциала сотрудничества с международными организациями в области наращивания экспортоориетированного производства;

- обоснована стратегия оптимизации организационно-экономического механизма взаимодействия предпринимательских структур и научно-образовательных учреждений в контексте инновационного развития региональной экономики с учетом реализации концепции предпринимательского университета, и кластеризации субъектов малого и среднего предпринимательства с целью эффективного использования инновационного потенциала предприятий региона;

- обобщены положения о роли предпринимательства и его месте в региональной экономической системе, позволяющие выделить его основные функции и характеристики как вида деятельности, основанного на принципах предприимчивости, креативности, информационной осведомленности и созидательности на базе максимального использования возможностей воспроизводственного процесса в рамках институциональных ограничений, накладываемых организационно-экономическим механизмом осуществления хозяйственной деятельности на уровне отдельных регионов;

- дана оценка организационно-экономическим аспектам становления и развития предпринимательства в экономике страны с учетом выделения региональных особенностей функционирования механизма развития предпринимательских структур, позволяющие уточнить признаки чувствительности субъектов предпринимательства к влиянию определенных стимулов, направленных на усиление их инновационной и экспортной деятельности;

- на базе экономико-математического моделирования выделаны основные факторы, способствующие/ограничивающие инновационную и экспортную деятельность субъектов предпринимательства в Самаркандской области Республики Узбекистан, позволяющие уточнить перспективы их деятельности в рамках реализации оптимистической, ускоренной и поступательной сценариях развития региональной экономики.

Основная часть.

Решение задачи обеспечения конкурентоспособности и достижения высоких темпов развития региональной экономики в значительной степени обусловлено стабильным функционированием предпринимательских структур с учетом наращивания их инновационного и экспортного потенциала на базе всемерной государственной поддержки, в первую очередь, малого и среднего предпринимательства. Последнее требует постоянного совершенствования организационно-экономического механизма развития предпринимательских структур, учитывающие влияния факторов внешней и внутренней среды с ориентиром на стимулирование их инновационной и экспортной деятельности. При этом, с позиции оптимизации организационно-экономического механизма развития предпринимательских структур, региональный уровень управления предпринимательской деятельности имеет особое значение в силу специфических особенностей отдельных территориальных образований.

В работе отмечается, что существующие трактовки понятия «предпринимательство», отражающие специфику функционирования экономических систем прошлых времен и характера поведения субъектов предпринимательства в них, не достаточным образом соответствует возросшей ролью предпринимателя в условиях креативной и цифровой экономики. Нынешние реалии требуют нового подхода к осмыслению роли и значения предпринимательства, в частности, с учетом усиливающей тенденции институционального регулирования развития национальных экономик как стратегического подхода к обеспечению конкурентоспособности внутренних производителей. Предпринимательство в настоящее время характеризуется как вид деятельности, основанного на предприимчивости, креативности, информационной осведомленности и созидательности на базе максимального использования возможностей воспроизводственного процесса в рамках институциональных ограничений, накладываемых организационно-экономическим механизмом осуществления хозяйственной деятельности на уровне отдельных регионов. При этом, в качестве важнейшего фактора эффективного управления предпринимательской деятельности выступает организационно-экономический механизм, состоящий из набора программ, правил, процедур и инструментов государственного регулирования данного процесса.

В работе глубокому анализу подвергается содержательная сущность организационно-экономического механизма регулирования предпринимательской деятельности. Анализ показал, что понятия организационно-экономический механизм многими авторами рассматривается как аппарат, машина, система, действующие независимо от сознания субъектов управления, подчиняя в себе их волю, ограничивая их возможности и свободу действия. Авторское определение организационного экономического механизма представлена как система взаимосвязанных между собой элементов - субъектов, объектов, принципов, методов, инструментов и стимулов достижения определенных целей, динамично приспосабливающая себя к изменениям внешней среды с учетом максимизации получаемых выгод и эффекта от процесса управления социально-экономическими системами разного уровня. Данный механизм функционирует как живой системы, исключает субъективного подхода к решению тех или иных проблем, изначально устанавливает порядок ведения изменений в параметрах своего функционирования, а также включает в себя элементов мониторинга, оценки и обратной связи независимо от времени и пространства функционирования.

В работе существенное значение придается вопросам обеспечения оптимального взаимодействия организационных и экономических мер, направленных на эффективное регулирование предпринимательской деятельности. Последнее обусловливает глубокого анализа эффективности системы налоговой поддержки производственного предпринимательства, механизма активизации инвестиционных процессов, системы государственной поддержки импортозамещения и стимулирования инновационной деятельности предпринимательских структур в регионе и др. По результатам анализа вырабатываются меры, способствующие улучшению институционального и инфраструктурного обеспечения развития предпринимательской деятельности с учетом оптимизации схем организационно-экономического механизма регулирования данного процесса, учитывающий роста диверсификации региональной экономики, основанная на принципах инновации и импортозамещения (рис. 1).

При этом, государственно-частное партнерство, основанное на оптимизации размещения предпринимательских структур в регионе, призвано способствовать инновационной и экспортной деятельностью предпринимательских структур. В свое очередь, формирование благоприятного инвестиционного климата и оптимизация схем размещения предпринимательских структур в регионе сможет обеспечить оптимальность организационно-экономического механизма поддержки развития предпринимательских структур в регионе. Однако плавный переход к данному этапу предполагают создания определенных предпосылок. При этом растет значимость мер, связанных с реализацией региональной социально-экономической политики на основе инвестиционного обеспечения развития предпринимательства в регионе (рис. 2).

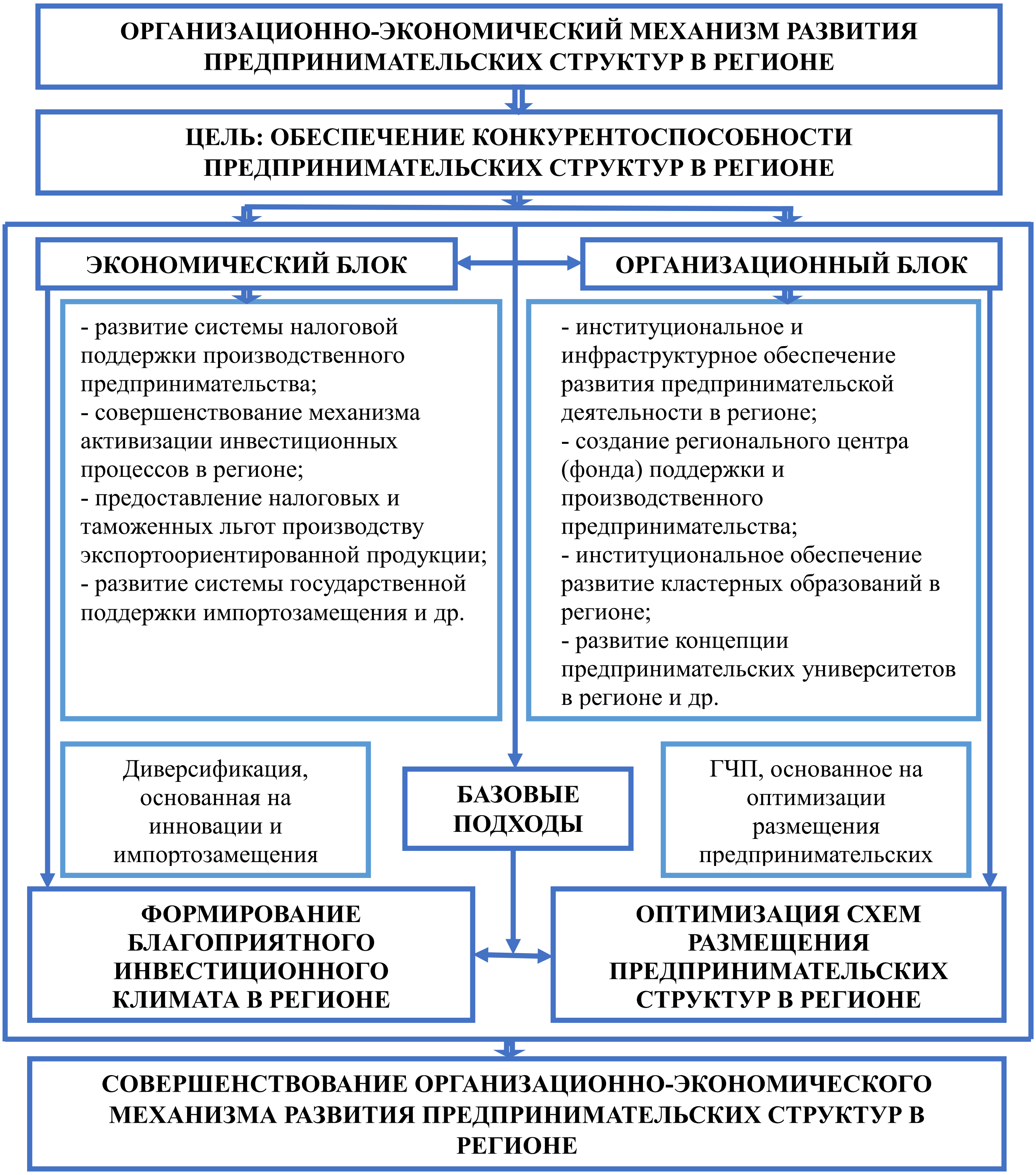

Рисунок 1. Структурная схема организационно-экономического механизма развития предпринимательских структур в регионе.

В работе анализируется зарубежный опыт развития предпринимательских структур в регионах. Анализ показал, что современная рыночная экономика отличается развитыми производственными связями между средним и малым бизнесом. Предпринимательские структуры стали неотъемлемой частью производственной структуры крупных компаний, которые использовали их рыночную гибкость, динамизм и инновационные возможности как важный фактор повышения общей культуры хозяйствования и эффективности производства в целом и на уровне регионов, в частности.

РЕГИОНАЛЬНАЯ ПОЛИТИКА ФОРМИРОВАНИЯ ПРЕДПОСЫЛОК РАЗВИТИЯ ПРЕДПРИНИМАТЕЛЬСКИХ СТРУКТУР

ОСНОВНЫЕ НАПРАВЛЕНИЯ РЕАЛИЗАЦИИ РЕГИОНАЛЬНОЙ ПОЛИТИКИ

Обеспечение конкурентоспособности региона	**Оптимизация межрегиональных и районных пропорций**
- повышение социально-экономической эффективности развития региона, улучшение управляемости региона; - финансирование регионального развития и межбюджетных отношений на основе активизации использования региональных источников доходов, аккумуляции свободных финансовых ресурсов; - совершенствование экспортно-импортных операций, импортозамещения, повышение конкурентоспособности товаров, работ и услуг; - эффективное использование природных ресурсов и охрана окружающей среды; - оптимизация структуры энергетического баланса, использование альтернативных источников получения энергии, развитие механизма энергосбережения; - улучшение инвестиционного климата в регионе и его районах; - развитие и расширение масштабов предпринимательской деятельности в районах и др.	- учет межрайонных различий по показателям экономического, социального и инновационного развития; - формирование оптимальной территориальной и отраслевой структуры экономики; - сбалансированное региональное развитие в условиях рынка; - максимально полное и эффективное использование природных и трудовых ресурсов региона; - применение инструментов государственной селективной структурной политики; - учет экологического фактора при разработке и принятии инвестиционных решений; - формирование инфраструктуры информационного обеспечения; - улучшение параметров социального развития территориальных образований; - сохранение и укрепление общественно-культурного потенциала, развитие народных традиций и ремесла, улучшение правовой информированности населения и

ФОРМИРОВАНИЕ БЛАГОПРИЯТНОЙ СРЕДЫ РАЗВИТИЯ ПРЕДПРИНИМАТЕЛЬСКИХ СТРУКТУР

Рисунок 2. Основные направления формирования региональной экономической политики развития предпринимательства.

При этом предпринимательская деятельность, особенно малые и средние формы предпринимательства почти во всех странах без исключения пользуются государственной поддержкой. На региональном уровне разработаны и реализуются эффективные формы поддержки малого и среднего предпринимательства, учитывающие совершенствование организационных экономических механизмов стимулирования их экспортной деятельности на базе широкого внедрения инновационных технологий. Инновационное составляющее развития малого среднего предпринимательства вступает в качестве ориентира достижения стратегических задач национальной и региональной экономики. Между тем, в странах в СНГ, имеющих определенное сходство в развитии социально-экономических процессов с Республикой Узбекистан, система поддержки малого и среднего предпринимательства находиться на стадии трансформации и поиска путей оптимизации механизмов стимулирования производственного предпринимательства.

В работе проведен опрос экспертов о влиянии отдельных факторов на развитие предпринимательский деятельности в регионе. По результатам опроса составлен рейтинг факторов, имеющих определенное влияние на развитие предпринимательской деятельности в регионе (табл.1).

Таблица 3.

Факторы развития предпринимательства в Согдийской области, %

ФАКТОРЫ/ОТВЕТЫ	Малые предприятия	Большие предприятия	Другие сферы
Низкий уровень знаний	12,8	5,7	5,0
Неразвитость инфраструктуры	11,5	11,3	15,0
Незнание своих прав	5,5	7,5	10,0
Бюрократизм чиновников	14,9	18,9	16,0
Недостаток опыта	17,0	13,2	10,0
Отсутствие программы поощрения	21,3	20,7	17,5
Ограничение прав	10,6	18,9	15,0
Другие проблемы	6,4	3,8	11,5

Анализ данных таблицы 1 показал, что как на уровне малых предприятий, так и больших предприятий фактор «Отсутствие программы, поощряющей и поддерживающей предпринимательство» имеет наиболее отрицательное влияние на их стабильное развитие. Следующим, наиболее отрицательно влияющим, фактором выступает «Бюрократизм местных чиновников». Фактор «Неразвитость инфраструктуры» тоже имеет существенное влияние на медленный темп развития предпринимательской деятельности в регионе.

Анализ факторов и условий функционирования предпринимательских структур в экономике Согдийской области Республики Таджикистан показал важность наращивания экспортного потенциала хозяйствующих субъектов как фактора обеспечения их конкурентоспособности с учетом, в первую очередь, реализации институциональных изменений. Следует обратить внимание на взаимодействие институтов/организации и институтов нормативно-правовых актов, направленных на поддержку и стимулирование экспортной деятельности субъектов малого и среднего предпринимательства (рис. 3) с учетом корректировки в нем.

Разработки методического пособия по определения критериев выделения средств субъектам предпринимательского сектора в поддержке их экспортной деятельности, способствующий в соответствии с специфическими особенностями регионов Узбекистана установить критерии поддержки субъектов малого и среднего предпринимательства, ориентированных на экспорт и импортозамещание, в том числе, за счет средств международных доноров. Следует в дальнейшем акцентировать внимание на усиление экспортного потенциала с учетом тесного сотрудничества с международными донорами, способными инвестировать в процесс становления малого и среднего бизнеса в республике.

В работе отмечается, что устойчивое развитие региональной экономики напрямую связывается с решением проблем успешного внедрения концепции инновационного развития предпринимательских структур.

Рисунок 3. Структурная схема взаимодействия институтов поддержки экспортной деятельности предпринимательских структур

Заключение:

Проведенные исследования позволили сформулировать следующие основные выводы и предложения:

1. Устойчивое развитие региональной экономики в большей степени обусловлено стабильным функционированием предпринимательских структур. Последнее требует постоянного совершенствования организационно-экономического механизма развития предпринимательских структур, учитывающие влияния факторов внешней и внутренней среды с ориентиром на более эффективного использования инновационного и экспортного потенциала отечественных предприятий. Региональный уровень оптимизации предпринимательской деятельности в плоскости эффективного использования инновационного и экспортного потенциалов отечественных производителей приобретает особое значение в силу специфических особенностей отдельных территорий.

2. Реалии современного периода развития региональной экономики обусловливает необходимость осмысления сущности предпринимательства как вид деятельности, основанного на предприимчивости, креативности, информационной осведомленности и созидательности на базе максимального использования возможностей воспроизводственного процесса в рамках институциональных ограничений, накладываемых организационно-экономическим механизмом осуществления хозяйственной деятельности на уровне отдельных регионов.

3. Организационно-экономический механизм развития предпринимательских структур представляет собой систему взаимосвязанных между собой элементов - субъектов, объектов, принципов, методов, инструментов и стимулов, динамично себя приспосабливающих к изменениям внешней среды с учетом максимизации получаемых выгод и эффекта от процесса управления предпринимательской деятельности. Экономический блок охватывает меры, связанные с развитием системы государственной поддержки и стимулирования предпринимательской деятельности. Организационный блок охватывает меры, направленные на улучшение институционального и инфраструктурного обеспечения развития предпринимательской деятельности в регионе с учетом роста диверсификации региональной экономики, основанный на принципах инновации и импортозамещения. Немаловажное значение имеет также государственно-частное партнерство, основанное на оптимизации размещения предпринимательских структур в регионе.

4. Проведенный анализ зарубежного опыта показал, что современная рыночная экономика отличается развитыми производственными связями между крупным и малым бизнесом, которые можно охарактеризовать как кооперацию в условиях конкуренции. Роль малого бизнеса в системе этих отношений стала возрастать, начиная с 70-х годов в ходе массового технического перевооружения производства и сферы услуг. Малые предприятия вошли неотъемлемой частью в производственную структуру

крупных корпораций, которые использовали их рыночную гибкость, динамизм и др. возможности как важного фактора повышения общей культуры хозяйствования и роста эффективности производства с учетом перехода на качественно новый, инновационный, этап своего развития.

5. Анализ организационно-экономических аспектов регулирования предпринимательских структур в Республике Узбекистан обусловил этапизацию периодов становления предпринимательской деятельности в стране. Анализ показал, что на каждом этапе развития предпринимательской деятельности формируется соответствующий задачам и целями развития региональной экономики организационно-экономический механизм его поддержки. Действующий механизм регулирования и развития предпринимательской деятельности за эти годы себя оправдал, но и отчасти исчерпывал. Нынешние реалии требует построение нового организационно-экономического механизма, ориентированного на стимулировании и активизации инвестиционной деятельности с акцентом на достижении параметров инновационного развития региональной экономики.

Использованные источники:

1. Постановление Президента Республики Узбекистан от 7 марта 2019 года № ПП-4231 «О дополнительных мерах по вовлечению населения предпринимательство и развитию семейного предпринимательства в регионах».

2. Совершенствование институциональных основ стимулирования экспортной деятельности субъектов предпринимательства в регионе//Азимут научных исследований. - Тольятти, 2020 - Том 10 № 2 - С.124-135.

3. Моделирование связей предпринимательской активности и показателей развития страны//Молодые исследователи - регионам/Материалы международной научной конференции (г. Вологда, 18-19 апреля, 2017 г.). - Вологда: Вологодский государственный университет, 2017 - Том 2 - С.23-25.

4. Инструментарий исследования развития предпринимательской деятельности//Социально-экономические системы в цифровой экономике: опыт, проблемы и направления развития/Материалы международной научно-практической конференции, посвященной 100-летию ФГБОУ ВО «Финансовый университет при Правительстве Российской Федерации» и 25-летию Новороссийского филиала финуниверситета (г. Краснодар, 21 марта 2019 г.). - Краснодар, 2019 - С.15-20.

5. Минченкова А.М. Развитие форм взаимодействия малых и крупных предпринимательских структур. / Материалы 15-й международной научно-практической конференции «Актуальные проблемы управления - модернизация и инновации в экономике»/Государственный университет управления. Вып. 2.- М.:ГУУ, 2010 с.191-194.

6. Вебер М. Пратестанкская этика и дух капитализма. Пер. с немецкого. М.: Прогресс, 2010, 85-б.

7. Друкер П. Рынок: как выйти в дилеры. Практика и принципы. – М.: 2009 с. 98.

8. Хоскинг А. Курс предпринимателъства.М., 2009, с.28.

9. Olim Sabirovich Kazakov, & Ilhom Mahamadjanovich Kamoliddinov. (2021). SOME QUESTIONS OF INCREASE OF EFFICIENCY IN ACTIVITY ENTERPRISE SUBJECTS. Journal of Central Asian Social Studies, 2(01), 160-169. https://doi.org/10.37547/jcass/volume02issue01-a24

10. Muhammadjanovich K. I. EFFECTIVE DIRECTIONS OF DEVELOPMENT OF ENTREPRENEURSHIP //Conference Zone. – 2022 – С. 129-133.

11. Nabijanovich, D. B. (2019). Issues of support and stimulation of exporting enterprises and ways of their elimination. American Journal of Economics and Business Management, 2(3), 44-56.

12. Аминов, Х.И. Сдерживающие факторы развития предпринимательства в Республике Таджикистан / И. Аминов, Х.И. Аминов // Менеджмент, экономика, этика, технология – МЕЕТ 2022: сборник тезисов докладов VIII Международной конференции. Санкт-Петербург, 06-07 октября 2022 г. – СПб.: Санкт-Петербургский горный университет, 2023 – С. 19-20.

13. Маннопова, М. С. (2023). Развитие плодоовощных кластеров и совершенствование организационных структур управления ими. Образование наука и инновационные идеи в мире, 19(7), 54-61.

14. Халилдинов, А. А. (2023). Кичик бизнес ва хусусий тадбиркорликни ташкилий-иқтисодий механизмини такомиллаштириш. Journal of new century innovations, 21(2), 87-96.

15. Kazakov O. (2020). Кичик бизнеснинг экспорт салоҳиятини ошириш. Архив научных исследований, 1(2).извлечено от https://tsue.scienceweb.uz/index.php/archive/article/view/3725

Мамарасулова Н.И.
преподаватель
Самаркандский Государственный медицинский университета

ПЕЙЗАЖ САЛЬМОНЕЛЛ, ВЫДЕЛЕННЫХ ОТ БОЛЬНЫХ ЗА 10 ЛЕТ

Аннатация. *В последние годы кишечная инфекция приобретает все большую актуальность в связи с ростом заболеваемости ею. В то же время в условиях, когда по клиническим и эпидемиологическим признакам проведение дифференциальной диагностики сальмонеллезов и других остро кишечниых заболеваний не всегда возможно, выделение и идентификация возбудителя служат основным диагностическим критерием.*

В настоящей работе мы приводим серотипы сальмонелл, выделенных за 10 лет, а также частоту выделения того или иного вида, процент отдельных серотипов в структуре заболеваемости, результаты исследований крови, желчи, мочи и некоторые другие данные.

Ключевые слова: *брюшного тифа, сальмонеллез, уринокультур, S.typhimurium, серологические группы*

Mamarasulova N.I.
Lecturer
Samarkand State Medical University

LANDSCAPE OF SALMONELLA ISOLATED FROM PATIENTS OVER 10 YEARS

Abstract. *In recent years, intestinal infection has become increasingly relevant due to the increase in its incidence. At the same time, in conditions where differential diagnostics of salmonellosis and other acute intestinal diseases is not always possible based on clinical and epidemiological features, isolation and identification of the pathogen serve as the main diagnostic criterion.*

In this paper, we present the serotypes of salmonella isolated over 10 years, as well as the frequency of isolation of a particular species, the percentage of individual serotypes in the structure of morbidity, the results of blood, bile, urine tests and some other data.

Key words: *typhoid fever, salmonellosis, urine cultures, S. typhimurium, serological groups*

Введение. В последние годы кишечная инфекция приобретает все большую актуальность в связи с ростом заболеваемости ею [1]. В то же время в условиях, когда по клиническим и эпидемиологическим признакам проведение дифференциальной диагностики сальмонеллезов и других остро кишечниых заболеваний не всегда возможно, выделение и идентификация возбудителя служат основным диагностическим критерием [2,4].

В настоящее время, но данным литературы, известно около 2000 серологических типов микроорганизмов, объединенных в род Salmonella по общим морфологическим, тинкториальным, биохимическим и антигенным свойствам [5].

По классификации все сальмонеллы подразделяются на серологические группы (по общему 0-антигену), которые обозначаются буквами латинского алфавита (А. В. С, D, Е, F, G, Н, I и т.д.) [6].

Этиологическая роль разных серотипов сальмонелл в патологии человека неодинакова. Сейчас насчитывается около 800 серотипов, выделенных от человека, однако только 85-90 встречаются сравнительно часто. Из числа последних 10-12 серотипов сальмонелл обусловливают более 90% заболеваемости [7,8].

Материалы и методы. В настоящей работе мы приводим серотипы сальмонелл, выделенных за 10 лет, а также частоту выделения того или иного вида, процент отдельных серотипов в структуре заболеваемости, результаты исследований крови, желчи, мочи и некоторые другие данные.

В 2013-2022 гг. от больных, находившихся на лечении в клинике СамМУ, выделено 72 серотипа сальмонелл, в том числе возбудители брюшного тифа и паратифов А и В, т. е. *S. typhi, S. paratyphi A* и *S. paratyphi B*, а также 5 видов нетипированных сальмонелл, у которых была определена групповая принадлежность (В, С, Е, М и N). Диагноз сальмонеллеза был подтвержден бактериологическим методам.

Результаты и их обсуждение. К группе В относится 14 серотипов, к группе С-17, к группам D и Е-по 8, к группам F и G-по 1, к группе Н-2, к группам I, М и N -по 1 и к так называемым редким группам-10 серотипов сальмонелл. В то же время наиболее часто обнаруживались *S. typhimurium, S. oranienburg, S. newport, S. anatum* (в течение всех 10 лет), *S- heidel-berg, S. tennessee, S. london* (в течение 8 лет), *S. reading, S. derby* (в течение 7 лет), *S. Stanley, S. mission. S. bovis morbificans, S. dublin, S. enteritidis* (в течение 6 лет), что указывает на распространенность этих серотипов. Остальные встречались значительно реже, а 25 серотипов в течение этих 10 лет высевались всего по 1 разу.

Представляет интерес количество выделенных копрокультур серотипов сальмонелл по годам, что соответствует количеству находившихся на лечении больных, так как у каждого больного учитывали одну культуру, а также процент тех или иных серотипов в общем количестве сальмонеллезных культур. Эти данные приведены в табл. 1.

7Таблица 1

Количество выделенных копрокультур сальмонелл в 2013-2022 гг и процент преобладающих серотипов

Год	Количество выделенных культур	Количество серотипов	Преобладающий серотип	%
2013	76	15	*S. typhimurium,* *S. anatum* *S. heidelberg*	34,3 17,1 11,8
2014	87	18	*S. newport* *S, typhimurium* *S. anatum*	26,4 24,1 16,1
2015	215	27	*S. anatum* *S. newport* *S. typhimurium*	45,6 27,4 10,3
2016	170	20	*S. Newport* *S. typhimurium* *S. mission* *S. anatum*	32,9 15,3 14,1 13,0
2017	265	25	*S. newport,* *S. reading*	45,7 26,0
2018	73	16	*S. newport,* *S. typhimurium,* *S. bovis morbificans*	34,2 16,4 16,4
2019	155	19	*S. typhimurium,* *S. anatum,* *S. newport,* *S. derby*	27,1 21,9 18,7 14,2
2020	274	16	*S. typhie urine* *S. derby*	64,4 16,1
2021	211	21	*S. tvphimimum*	41,7

			S. virchow *S. newport* *S. mission*	16,1 11,4 10,0
2022	160	23	*S. typhimurium* *S. newport* *S. oranienbaum*	55,0 13,7 10,0

Примечание. В таблице не указаны серотипы сальмонелл, которые составили менее 10,0%.

Из таблицы видно, что в разные годы выделялось от 15 до 27 различных серотипов, заболеваемость же сальмонеллезом ежегодно определялась 2-4 серотипами, что, очевидно, указывает на их более широкую распространенность по сравнению с другими серотипами.

Процент остальных серотипов значительно меньше, а некоторые встречались в единичных случаях. Это, видимо, объясняется как малой распространенностью, так и меньшей их патогенностью для человека.

Такая же закономерность наблюдалась нами при выделении от больных уринокультур, учет которых ведется с 2013 г., что отражено в табл. 2.

Таблица 2

Количество выделенных уринокультур сальмонелл и процент отдельных серотипов в 2013-2022 гг.

Год	Количество выделенных культур	Количество серотипов	Преобладающий серотип	%
2013	7	4	*S. newport*	42,8
2014	2	1	*S. anatum*	100,0
2015	7	3	*S. newport*	57,1
2016	39	5	*S. newport*	66,6
2017	7	4	*S. newport*	57,1
2018	17	5	*S. tvphimimum*	47,0
2019	33	6	*S. tvphimimum*	72,7

2020	26	5	*S. tvphimimum*	53,8
2021	22	6	*S. tvphimimum*	54,5

Помимо указанных в таблице 2 трех преобладающих серотипов, от больных в разные годы выделялась *уринокультуры S. Heidelberg, S. london, S. enteritidis, S. reading. S oranienbur, S. saint-payl, S. san-diego, S. Chester, S. potsdam, S. derby. S. arnager, S. virchow, S. bovis morbificans и S. brandenburg.* все выделенные из мочи серотипы относятся к группам В, С, D, Е.

Характерно, что уринокультуры сальмонелл выделяли, как правило, от больных с патологией почек и мочевых путей.

Полученные данные позволяют утверждать, что так называемое мочевое носительство сальмонелл встречается не так уж редко и в основном связано с патологическими изменениями в почках и мочевых путях.

Что касается гемо- и биликультур сальмонелл, то имеющиеся у нас данные немногочисленны и, видимо, не отражают истинной частоты генерализованных форм сальмонеллезов и формирования хронического носительства, ибо далеко не у всех больных с температурной реакцией производили посев крови на желчный бульон, а также дуоденальное зондирование с посевом желчи при выписке.

Тем не менее пейзаж выделенных из крови и желчи сальмонелл представляет определенный интерес.

Из 20 гемокультур сальмонелл, выделенных в разные годы, *S. typhimurium* встречалась 9 раз, *S. newport* 3 раза, *S. cholerae suis* 2 раза и по одному разу *S. reading, S. Stanley, S. virchow, S. bovis morbificans, S. dublin и S. rostock.* Все выделенные из крови серотипы сальмонелл относятся к группам В, С и D.

В посевах желчи были обнаружены следующие серотипы сальмонелл*: S. typhimurim* 6 раз, *S. newport* 2 раза и по одному разу *S. anatum, S. cholerae suis, S. bovis morbificans и S. virchow,* т. е. всего 12 культур, относящихся к группам В, С и Е.

Таким образом, среди урино-, гемо- и биликультур нет того разнообразия серотипов, которое имеет место в копрокультурах, и пейзаж серотипов, выделенных из мочи, крови и желчи, ограничивается двумя десятками серотипов, относящихся к группам В, С, D и Е.

Выводы. Заболеваемость сальмонеллезом обусловлена в основном 10 серотипами, которые в разные годы являлись этнологическим фактором 63,1-83,3% случаев заболеваний. Эти серотипы, по-видимому, наиболее патогенны для человека, так как обусловливают генерализованные формы инфекции, а также формирование носительства (выделение сальмонелл с мочой и желчью).

Сальмонеллы, относящиеся к группам F, G, H, I, M. X и другим редким группам, а также, отдельные серотипы из групп B. C. D и E, которые высевались в единичных случаях, обладают, видимо, малой патогенностью для человека и могут вызывать только локализованные формы заболевания. Необходимо обеспечить бактериологические лаборатории более широким набором диагностических сывороток, так как некоторая часть выделенных культур остается неидентифицированной и в лучшем случае определяется их групповая принадлежность.

Исползование источники

1. Одилова Г. и др. СЫВОРОТОЧНЫЕ ИММУНОГЛОБУЛИНЫ ПРИ САЛЬМОНЕЛЛЕЗНОЙ ИНФЕКЦИИ У ДЕТЕЙ //Евразийский журнал академических исследований. – 2022. – Т. 2. – №. 11. – С. 1197-1199.

2. Шайкулов Х. Ш., Исматиллоевич Ю., Махсудовна О. Клинико-лабораторная характеристика сальмонеллезной инфекции у детей //Биология. – 2021. – Т. 5. – С. 130.

3. Одилова Гулноза Максудовна, Рустамова Шахло Абдухакимовна, Муротова Зебарзият Тагировна Клинико-лабораторные особенности течения кишечных инфекций сальмонеллёзной этиологии у детей // Педиатр. 2017. №S. URL: https://cyberleninka.ru/article/n/kliniko-laboratornye-osobennosti-techeniya-kishechnyh-infektsiy-salmonellyoznoy-etiologii-u-detey (дата обращения: 12.11.2024).

4. Одилова Г. М., Рустамова Ш. А., Муминова Ш. Ш. Анализ антибактериальной резистентности S. Typhmurium по Самаркандской области //Молодежь и медицинская наука в XXI веке. – 2019. – С. 178-179.

5. Болтаев К. С., Одилова Г. М. ВЗАИМОДЕЙСТВИИ R-ЭПИСОМНЫХ ФАКТОРОВ С ХРОМОСОМНЫМИ ГЕНАМИ АНТИБИОТИКОУСТОЙЧИВОСТИ У КИШЕЧНЫХ ПАЛОЧЕК И ШИГЕЛЛ ЗОННЕ //Экономика и социум. – 2024. – №. 2-1 (117). – С. 922-926.

6. Одилова Г. М. Changes in the Properties of Enterococci in Intestinal Infections in Children //world of Medicine: Journal of Biomedical Sciences. – 2024. – Т. 1. – №. 9. – С. 56-60.

7. Одилова Г. М. СЕЗОННОСТЬ ДИЗЕНТЕРИИ В УСЛОВИЯХ Г. САМАРКАНДА // Экономика и социум. 2022. №10-1 (101). URL: https://cyberleninka.ru/article/n/sezonnost-dizenterii-v-usloviyah-g-samarkanda (дата обращения: 12.11.2024).

8. Isrofilovna M. N., Qizi O. B. Q., Qizi S. M. R. ICHAK INFEKTSIYALARINING PATOGENEZI VA DIAGNOSTIKASIDA ALLERGIYANING ROLI //Talqin va tadqiqotlar ilmiy-uslubiy jurnali. – 2023. – Т. 1. – №. 17. – С. 252-256.

Маматкулов С.
Докторант
Ташкентский государственный университет востоковедения
Узбекистан

ПРОБЛЕМА СОХРАНЕНИЯ ГЕОПОЛИТИЧЕСКОГО БАЛАНСА ВО ВНЕШНЕЙ ПОЛИТИКЕ ПАКИСТАНА

Аннотация: *В статье анализируется история внешней политики Пакистана и отношения с крупными центрами силы в рамках этой внешней политики. Также раскрываются проблемы, стоящие перед внешней политикой Пакистана в условиях глобализации, особенно вопрос сохранения баланса в отношениях с геополитическими силами.*

Ключевые слова: *Пакистан, внешняя политика, геополитический баланс, США, Россия, Китай, Индия, Кашмир, Иран, ислам, региональная безопасность, арабские государства Персидского залива.*

Matatqulov S.
Doctoral candidate
Tashkent State University of Oriental Studies, Uzbekistan

THE PROBLEM OF MAINTAINING GEOPOLITICAL BALANCE IN PAKISTAN'S FOREIGN POLICY

Abstract*: The article analyzes the history of Pakistan's foreign policy and relations with major centers of power within the framework of this foreign policy. It also reveals the problems facing Pakistan's foreign policy in the context of globalization, especially the issue of maintaining balance in relations with geopolitical forces.*

Keywords*: Pakistan, foreign policy, geopolitical balance, USA, Russia, China, India, Kashmir, Iran, Islam, regional security, Arab states of the Persian Gulf.*

В эпоху биполярного мира, то есть во время Холодной войны (1947-1991), международная политика в основном основывалась на соперничестве между Соединенными Штатами и Советским Союзом. В этот период внешняя политика Пакистана была ориентирована на тесное сотрудничество с Соединенными Штатами, одним из двух центров силы. В многополярном мире страны сталкиваются с новыми реалиями и трудностями в выработке своей внешней политики. Поскольку многие страны и организации стали различными центрами силы в мировой политике, внешняя политика должна быть более прагматичной и диверсифицированной. В то же время существует ряд проблем и трудностей в выработке новой внешнеполитической идентичности Пакистана в условиях многополярного мира. Эти проблемы зависят от различных геополитических, экономических, безопасности и внутренних факторов. Основными задачами являются поддержание баланса между крупными державами, такими как США, Китай и Россия, обеспечение региональной безопасности и борьба с терроризмом.

После Второй мировой войны страны мира разделились на две группы — сторонников рыночной экономики во главе с США и сторонников идеи коммунизма во главе с СССР. В этот период каждая страна старалась проводить свою внутреннюю и одновременно внешнюю политику, опираясь на эти два полярных государства. Хотя такие организации, как Движение неприсоединения, были созданы для того, чтобы бросить вызов политике двух основных идеологий, это не сделало политику малых и средних держав полностью независимой. Члены этой организации и даже основатели таких организаций, как Индия и Югославия, опирались на тот или иной центр силы при определении своей внешней политической агентуры.

Во второй половине XX века Пакистан также стремился установить тесные отношения с западными странами, возглавляемыми США в своей внешней политике. Прежде всего, в основе национальной идентичности коммунистическая идея лежала против ислама. Вторая причина — теплые отношения между СССР и главным соперником и врагом Пакистана — Индией. К последнему десятилетию XX века в мире в результате поражения коммунизма и распада СССР в борьбе двух идей была создана биполярная система и создан однополярный мировой порядок. С 90-х годов XX века и первого десятилетия XXI века мир находился под влиянием гегемонии США. Однако сегодня формируется многополярный мировой порядок. Многополярность означает сдвиг в распределении власти между несколькими крупными державами в международной системе. Сейчас в мире существуют крупные и региональные центры силы, и эти центры силы играют большую роль в определении региональной политики.

Пакистану необходимо обратить внимание на несколько факторов при разработке новой внешнеполитической идентичности в многополярном мире. Во-первых, это проблема сохранения геополитического баланса между ведущими странами мира. Многополярный мир основан на конкуренции между многими могущественными странами. В игре влияния между Китаем, США, Россией, Индией и региональными державами Пакистану приходится балансировать, чтобы защитить свои национальные интересы. Пакистан имеет тесные связи с Китаем, особенно через проект Китайско-Пакистанского экономического коридора (КПЭК). В то же время она обязана поддерживать стратегические отношения с США. В результате возникает проблема предотвращения предвзятости в конкуренции между двумя странами.

Что касается Пакистана, то многовекторная внешняя политика предполагает всестороннее национальное развитие. Признавая важность экономических инвестиций и сотрудничества в области безопасности, Пакистан стремится сбалансировать свои отношения с крупными державами, которые выгодны стране. Баланс в отношениях с государствами важен для управления конфликтующими интересами и устранения давления со стороны различных держав. Такой подход требует политической стабильности, устойчивого экономического роста и стратегического сотрудничества с крупными державами, особенно с Соединенными Штатами и Китаем. Адаптация к меняющейся глобальной политике требует тонких и гибких стратегий, которые позволяют избежать глубоких союзов с крупнейшими мировыми державами и различными лагерями. Исторически нестабильные отношения с США «отдалялись» после вывода войск США из Афганистана. Кроме того, такие события, как усиление оборонного сотрудничества между США и Индией, нарушили региональный баланс и вынудили Пакистан сблизиться с Китаем.

Однако визит премьер-министра Какара в США в середине сентября 2023 года, включая встречу на 78-й Генеральной Ассамблее ООН (ГА ООН) и переговоры с представителями МВФ, является попыткой восстановить отношения. В то же время визит посла США в Гвадар и визит командующего пакистанской армией в Вашингтон показывают, что существует стремление поддерживать прочные связи в условиях неопределенности, возникшей после вывода войск США из Афганистана. В ходе визита командующий пакистанской армией генерал Асим Мунир изложил сбалансированную стратегию, позволяющую избежать глобальной политической запутанности, уделив особое внимание экономической безопасности и военной обороне.

А перед новоизбранным премьер-министром Пакистана Шехбазом Шарифом стоит непростая задача справиться с растущим соперничеством между Соединенными Штатами и Китаем, одновременно обеспечивая столь необходимую экономическую помощь от обеих стран. Однако переосмысление пакистано-американских отношений будет трудной задачей в изменившемся контексте вывода войск США из Афганистана и Индии, являющейся их стратегическим партнером в регионе в стратегии сдерживания Китая. Правительство Шарифа унаследовало значительное внутреннее давление, включая экономические проблемы и политические волнения. Хотя Шахбаз Шариф в своих предвыборных манифестах пообещал не присоединяться ни к одной из сил, этот хрупкий баланс становится все более трудным по мере того, как растет критика США в отношении китайских инвестиций в Пакистане.

Соединенные Штаты являются потенциальным источником льготных кредитов МВФ, необходимых для экономики Пакистана. А Китай очень важен для экономической стабильности Пакистана, поскольку он может оказать немедленную финансовую поддержку без каких-либо административных препятствий. Ожидается, что Шариф будет уделять приоритетное внимание активизации проектов Китайско-Пакистанского экономического коридора (КПЭК) и привлечению дополнительных китайских инвестиций. Однако углубление связей с Китаем не должно происходить за счет отношений Пакистана с США. Управление этой сложной геополитической ситуацией требует ловкой дипломатии и стратегического маневрирования со стороны пакистанских политиков.

Использованные источники:

1.Basira Omeed. “Pakistan’s Evolving Foreign Policy amid Emerging Multipolarity.” – Islomobod, 2023. Centre for strategic and comtemporary research – Report.
2.Arif Rafiq. “Pakistan tilts back to the West in multipolar era.” – Washington, 2023. Middle East Institute -Report.
3.J. A. Jilani, M. Lodhi, N. Rao, A. Singh. “India and Pakistan at 75: Prospects for the Future.” (20.08.2024)
4.Waleed Sami. “Navigating the Shifting Sands of Global Power: Pakistan’s Imperatives Amid the Evolving Global Landscape.” – Sopot, 2024. Modern Diplomacy – Report.
5.N. Benhassine, M Raiser. “Could 2024 mark Pakistan’s economic turnaround moment?” – Washington, 2024. World Bank – Report.
6.Noah Berman, Clara Fong. “Pakistan Is on Edge Ahead of 2024 Elections.” – New York, 2024. Council on Foreign Relations – Report.
7.S. Mamatqulov. “Xitoy bilan strategik hamkorlik Pokiston mustaqillik omili sifatida.” // “Xorijiy Sharq mamlakatlaridagi tarixiy jarayonlar va ularni o’rganishning dolzarb masalalari.” Tashkent, 2024. Vol.11. – P. 356.

Маматов Б.Ю.
доцент
кафедра Анестезиологии – реаниматологии и ЭМП
АГМИ
Муминов Б.Э.
старший преподаватель
кафедра Анестезиологии – реаниматологии и ЭМП, АГМИ
Махмуджонов А.Л., Магистр
кафедра Анестезиологии – реаниматологии и ЭМП, АГМИ

ГЕМОРРАГИЧЕСКИЙ СИНДРОМ ПРИ КАТЕТЕРИЗАЦИИ ЦЕНТРАЛЬНЫХ АРТЕРИЙ

Материал и методы. *В ретроспективное исследование включены 562 катетеризации артерий (481 бедренная артерия и 81 лучевая) у больных с заболеваниями системы крови. Результаты. В 93% случаев показаниями для катетеризации артерий были септический шок и острое легочное повреждение. У 410 (73%) больных перед катетеризацией артерий выявлялась тромбоцитопения 109—150·109/л) (медиана 46·109/л). Уровень тромбоцитов менее 30·109/л был у 25% больных. У 298 (53%) больных АЧТВ было более 40 с (колебания 41—60 с, медиана 51 с). У 317 (56%) больных выявлено снижение уровня протромбина по Квику < 70% (колебания 18—69%, медиана 44%; норма 70—120%). В 177 (32%) случаях перед катетеризацией отмечалось сочетание тромбоцитопении с нарушениями коагуляционного гемостаза. У 118 (21%) из 562 больных перед катетеризацией проводилась коррекция выявленных нарушений. Геморрагические осложнения после катетеризации артерий развились у 93(16,5%) больных: кровоточивость из места пункции (у 48), гематомы, объем которых не превышал 50 мл, — у 42, массивная гематома мягких тканейбедра — у 3. Факторами риска геморрагических осложнений были тромбоцитопения <30·109/л (от-ношение шансов 1,8; 95% доверительный интервал 1,04—3,12) и количество попыток пункции артерии более 1 (отношение шансов 2,83; 95% доверительный интервал 1,68—4,77). Применение ультразвукового контроля достоверно повысило эффективность катетеризаций артерий с первой попытки с 62 до 88%.Заключение. Катетеризация артерий может выполняться у больных с нарушениями системы гемостаза. При катетеризации артерий уровень тромбоцитов <30·109/л является показанием для трансфузии концентрата тромбоцитов. Для уменьшения геморрагических осложнений, а также для повышения эффективности кате-теризации артерий необходимо ограничить количество попыток пункции артерии до 2 и выполнять процедуру под ультразвуковым контролем.*

Ключевые слова: *катетеризация артерий; тромбоцитопения; коагулопатия; геморрагические осложнения.*

Mamatov B.E.
associate professor
Department of Anesthesiology - Reanimatology and EMC
ASMI
Muminov B.E.
senior lecturer
Department of Anesthesiology – Reanimatology and EMC, ASMI
Makhmudjonov A.L., Master
Department of Anesthesiology – Reanimatology and EMC
ASMI

HEMORRHAGIC SYNDROME DURING CENTRAL ARTERY CATHETERIZATION

Purpose of the study: *To analyze complications of the pulmonary artery catheterization in patients with blood diseases. Materials and methods: 93 cases of pulmonary artery catheterization in patients with blood diseases were included in the retrospective study. Results: Indications for pulmonary artery catheterization were septic shock (78.5%) and acute respiratory failure (21.5%). In 31 cases (33.3%) pulmonary artery catheterization was performed in conditions of agranulocytosis and in 81 cases (87%) in conditions of thrombocytopenia (platelets median 43×109 per liter, minimal 7×109, maximal 150×109 per liter). Patients received transfusions of platelets in case of thrombocytopenia less than 30×109 per liter. Early complications of pulmonary artery catheterization occurred in 5 patients with thrombocytopenia (5.4%), the complications was connected with bleeding (hematoma, bleeding from place of puncture, lung bleeding) and mechanical (arterial puncture, pneumothorax, hemothorax). Number of attempts of the central vein catheterization was risk factor the complications. The frequency of catheterassociated sepsis was 5.89 cases each 1000 catheter-days and the frequency of infections of the soft tissues was 9.78 cases each 1000 catheter-days. Catheterassociated infection complications occurred in cases of catheter use over 5 days. Catheter-associated sepsis occurred in 2 of 3 patients with agranulocytosis. Other complications included intermittent arrhythmias during catheter moving in the heart chambers (58), catheter balloon rupture (4), and thrombosis of catheter lumen (3). Conclusions: Pulmonary artery catheterization can be used in patients with blood diseases and first of all in cases of septic shock and acute respiratory failure. Alternative less invasive methods of monitoring should be used in patients with agranulocytosis.*

Key words: *pulmonary artery catheterization, thrombocytopenia, agranulocytosis, catheter-associated sepsis, blood diseases*

Введение. Катетеризация артерий является наиболее частой манипуляцией в отделениях интенсивной терапии, занимая 2-е место по частоте применения после катетеризации вен [1]. Первое упоминание о пункции артерии принадлежит английскому священнику S. Hales в 1714 г., а первое описание катетеризации артерии у людей сделано в 1856 г. [2]. В последующем установку радиального артериального катетера путем хирургического разреза описал S. Radner в Швеции в 1948 г. [2]. Постоянное интраоперационное измерение артериального давления (АД) через неболь-шой пластиковый катетер, установленный в плечевую артерию через металлическую иглу, впервые использовал L.H. Peterson в 1949 г. В 1951 г. впервые описана [2] кате-теризация крупных артерий у людей с помощью полиэ-тиленовых катетеров, а уже в 1953 г. шведский радиолог S. Seldinger предложил технику катетеризации сосудов по струне, которая получила широкое распространение [3]. В настоящее время в США ежегодно устанавливается от 6 до 9 млн артериальных катетеров [4]. В отделениях интенсивной терапии США, Европы [2, 5, 6] артериаль-ный катетер, как правило, установлен у каждого третьего больного.

Основными показаниями к катетеризации артерий в интенсивной терапии являются постоянное измерение АД, а также взятие образцов крови для исследования ее газового состава и кислотно-основного состояния. По дан-ным многоцентрового исследования [7], необходимость в катетеризации артерий возникает в 41,4% случаев при тя-желом сепсисе и септическом шоке, в 20,2% при неясном волемическом статусе больного, в 28,4% при циркулятор-ной недостаточности, в 18,3% при острой дыхательной недостаточности, в 7,2% при почечной недостаточности и в 13,8% при хирургических вмешательствах. В последние годы наряду с измерением АД и исследованием образцов крови появилось еще одно показание к катетеризации артерий — функциональные гемодинамические параметры, анализируемые по пульсовой волне: вариация пульсовой волны, вариация систолического давления, непрерывное определение сердечного выброса [8, 9]. Эти параметры позволяют выявить состояния гипо- или гиперволемии, предсказать ответ на инфузионную нагрузку. Относительными противопоказаниями к катетериза-ции артерий являются тромбоцитопения и коагулопатия [2]. Тромбоцитопения считается одним из наиболее частых нарушений системы гемостаза, которое определяется у больных, находящихся в отделении реанимации и интенсивной терапии [10, 11]. По данным ряда авторов [12—14], частота возникновения тромбоцитопении варьирует от 15 до 60%. Нарушения коагуляционного звена гемостаза, такие как удлинение активированного частичного тромбопластинового времени (АЧТВ) или снижение протромбина по Квику, определяются у 14—28% больных отделения интенсивной терапии [15, 16].

В литературе крайне мало работ, которые оценивали бы безопасность катетеризации артерий у больных с нарушениями системы гемостаза.

Цель работы — изучить осложнения катетеризации артерий и факторы риска их развития у больных с тромбоцитопенией и коагулопатией.

Материал и методы. В ретроспективное исследование включены все случаи катетеризации артерий у больных с заболеваниями системы крови, поступавших в отделение анестезиологии, реаниматологии и интенсивной терапии Клиника АГМИ 2018 по 2021 г. Для катетеризации бедренной артерии использовали катетер Certofix Mono 18G (B. Braun Melsungen AG, Германия). Катетеризация выполнялась по методу Сельдингера [17]. Место пунк-ции бедренной артерии определяли по пульсации в проекции бедренной артерии в области бедренного треугольника, ниже паховой складки на 1—2 см. Перед катетеризацией лучевой артерии предварительно проводили модифицированный тест Аллена с использованием пульсоксиметрии [18]. Далее кисть укладывали в положении ладонью вверх, разгибая в лучезапястном суставе. Определяли пульсацию на лучевой артерии у дистального конца лучевой кости. После этого обрабатывали эту область раствором антисептика и пунктировали кожу артериальной канюлей Floswitch tm (Becton Dickinson, Великобритания) 22 калибра срезом вверх, направляя иглу под углом 45° к поверхности кожи. В случае использования артериальной канюли Arteriofix®V (20G и 22G, B. Braun Melsungen AG, Германия) пункцию и катетеризацию артерии осуществляли по методике Сельдингера [17]. С 2012 г. все катетеризации артерий выполняли только под ультра-звуковым контролем (аппарат M-Turbo, SonoSite, США). Для этого использовали линейный датчик с частотой 5—10 МГц, стерильный гель. Для визуализации артерии выводили по короткой оси.

У включенных в исследование больных регистрировали демографические показатели, нозологическую форму заболеваний системы крови, показания к катетеризации артерий, число попыток катетеризации, ранние и поздние осложнения. До катетеризации артерии определяли число тромбоцитов в периферической крови, АЧТВ, протромбин по Квику.

При	переливани и	концентрат ов	тромбоцит ов	регистриров али	число
перелитых тромбоцитов, число тромбоцитов крови после трансфузии.					
Данные ретроспективног					

о исследования подвергали ста						
тистическому анализу и выражали в виде медианы, среднего ± стандартное						
отклонение.	Достоверность	различий	определяли по z-критерию,			
непараметрическому	тесту	U	Манна—Уитни.	Различия	считали	
достоверными при p <0,05. Риски развития осложнений, связанных с						
катетеризацией	артерий,	определяли	с	помощью	частотного	и

регрессионного анализа. Статистическая обработка данных проводилась с помощью программы Statistica (версия 6.0) [18].

Результаты исследования и их обсуждение. С 1996 по 2012 г. выполнены 562 катетеризации артерий (481 бе-дренная и 81 лучевая). В среднем ежегодно из 200 больных с заболеваниями системы крови, находящихся в критическом состоянии, у 40 выполняли катетеризации артерий. Среди больных, которым выполнялись катетеризации артерий, было 387 мужчин и 268 женщин. Возраст пациентов составлял от 19 до 77 лет (медиана возраста 48 лет). Показанием для установки артериального катетера были необходимость инвазивного измерения АД, мониторинга параметров центральной гемодинамики, взятия образцов крови для исследования газового состава, кислотно-основного состояния при различных критических состояниях (табл. 1), а также у больных, которым предполагалось выполнить большие по объему операции или операции, которые могут сопровождаться массивной кровопотерей. У 410 (73%) больных перед катетеризацией артерий выявляласькоагуляционного гемостаза. У 298 (53%) больных АЧТВ было более 40 с(колебания 41—60 с, медиана 51 с; норма 30—35 с). У 317 (61%) больных выявлено снижение уровня протромбина по Квику < 70% (колебания 18— 69%, ме-диана 44%; норма 70—120%). У 5 больных гемофилией А отмечалось увеличение АЧТВ более 60 с. снижение активности фактора свертывания крови VIII от 4 до 17%. У

1 больного ингибиторной формой гемофилии А активность фактора VIII

тромбоцитопения	1·109—150·109/л	(медиана	46·109/л).	Уровень	
тромбоцитов менее 30·109/л был у 25% больных.					
Кроме	тромбоцитопении	у	больных	были	нарушения

была < 1%, АЧТВ — 120 с. У 2 больных гемофилией В отмечалось снижение активности фактора IX (3 и 6%). У больной с болезнью Виллебранда перед катетеризацией артерии выявлено снижение активности фактора Виллебранда до 10%.

В 177 (27%) случаях перед катетеризацией отмечалось сочетание тромбоцитопении с нарушениями коагуляционного гемостаза (удлинение АЧТВ и/или снижение уровня протромбина по Квику).Катетеризация лучевой и бедренной артерий проводилась врачами, имеющими различный стаж и опыт работы. Результаты катетеризаций артерий представлены в табл. 2.

С первой попытки катетеризация выполнена у 377 (67%) из 562 больных.

Частота успешных катетеризаций с первой попытки лучевой и бедренной артерий составила 66 и 56% соответственно. Общее количество предпринятых попыток пункций лучевой и бедренной артерий статистически значимо не различалось. Технические сложности наблюдались чаще при катетеризации лучевой артерии, чем при бедренной (12% против 8,6%). При катетеризации лучевой артерии по сравнению с бедренной чаще возникали сложности при проведении проводника (6% против 2,9%) (см. табл. 2). В 2012 г. выполнено 76 катетеризаций артерий под ультразвуковым контролем, из них 88% с первой попытки. В сравнении с 2011 г., когда с первой попытки катетеризация артерии была выполнена у 43 (62%) из 69 пациентов, применение ультразвукового контроля достоверно повысило эффективность катетеризаций артерий (p <0,001). Несмотря на часто выявляемые нарушения гемостаза, лишь у 118 (21%) из 562 больных перед катетеризацией проводилась коррекция выявленных нарушений. У остальных больных катетеризация артерий осуществлялась по экстренным показаниям, когда не было времени и возможности проводить гемостатическую терапию.

В	57(10,1%) из	562	случаев	перед	катетеризацие й	артери и
выполнялис ь трансфузии концентрато в тромбоцито в. Количество перелитых тромбоцито в составило от 1,5·10 11до 8·1011 (медиана 4,8·1011). Число						
тромбоцито в	крови	пере д	трансфузиям и	концентрато в	тромбоцитов	

варьировало от 1·109до 48·109/л (медиана 25·109/л), после трансфузии — 27·109—101·109/л (медиана 48·109/л). У 20 (3,6%) больных выявлены нарушения коагуляционного гемостаза, и перед катетеризацией им выполняли трансфузию от 600 до 2100 мл (медиана 800 мл) свежезамороженной плазмы.

У 33 (6%) больных с сочетанными нарушениями гемостаза перед катетеризацией артерий проводили заместительную терапию концентратами тромбоцитов и свежезамороженной плазмой. Семи больным гемофилией А и В катетеризацию артерий выполняли после введения факторов свертывания крови. Дозы факторов свертывания крови VIII и IX варьировали от 2000 до 3000 МЕ (в среднем 30 МЕ/кг). У больного с ингибиторной формой гемофилии А катетеризацию артерии выполняли после введения рекомбинантного активированного фактора VII ("NovoSeven", Novo Nordisk, Дания) в дозе 120 мкг/кг. Геморрагические осложнения после катетеризации артерий развились у 93 (16,5%) больных; наиболее частыми были кровоточивость из места пункции (у 48 больных), гематомы, объем которых не превышал 50 мл (у 42 больных). У 3 больных развилась массивная гематома мягких тканей бедра. Геморрагических осложнений было больше после катетеризации бедренной артерии, чем после лучевой (86 и 7 случаев соответственно, p =0,06).

Установлено, что факторами риска геморрагических осложнений были тромбоцитопения < 30·109/л (отношение шансов — 1,8; 95% доверительный интервал 1,04—3,12) и количество попыток пункции артерии более 1 (от-ношение шансов — 2,83; 95% доверительный интервал 1,68—

4,77). Не обнаружено зависимости развития геморрагических осложнений от заболевания системы крови и критического синдрома. Ишемические осложнения, возникшие после катетеризации артерий, выявлены у 21 (3,7%) больного: 13 (2,3%) случаев ишемических осложнений возникли после катетеризации лучевой артерии и 8 (1,4%) — после катетеризации бедренной артерии. У 19 (3,4%) больных были преходящие нарушения кровообращения, которые исчезали после удаления катетера, у 2 (0,3%) больных развился тромбоз артерий, приведший к недостаточности артериального кровообращения в конечности, потребовавшего выполнения тромбэктомии.

Во всех случаях возникновения ишемических осложнений у больных была тромбоцитопения от 5·109до 137·109/л. Системная инфекция выявлена у 18 (86%) из 21 больного, включая 2 больных с артериальным тромбозом. У 5 больных ишемические осложнения возникали на фоне септического шока, низкого АД, применения вазопрессоров. Несмотря на то что у 78% больных с заболеваниями системы крови перед катетеризацией артерий выявлялись выраженные нарушения в системе гемостаза, геморрагические осложнения возникали лишь у 16,5% больных. Факторами риска возникновения осложнений явилась не только тромбоцитопения < 30·109/л, но и число попыток пункций артерий более 2. По данным Е.М. Шулутко и соавт. [20], у больных с заболеваниями системы крови безопасным является уровень тромбоцитов перед катетеризацией вен более 30·109/л. Такой уровень тромбоцитов являлся достаточным для обеспечения гемостаза и при катетеризации артерий. При тромбоцитопении < 30·109/л частота геморрагических осложнений увеличивалась почти в 2 раза. У больных с числом тромбоцитов менее 30·109/л перед пункцией проводили заместительную трансфузию концентрата тромбоцитов, и достигался уровень тромбоцитов в среднем 48·109/л.

В отличие от катетеризации центральных вен при катетеризации артерий место пункции можно легко при-жать, тем самым остановив кровотечение. Поэтому геморрагические осложнения катетеризации артерий не являются серьезными, угрожающими жизни, как при катетеризации центральных вен (гемоторакс при катетеризации подключичной вены, нарушение проходимости дыхательных путей при катетеризации внутренней яремной вены и т. д.) [20, 21]. Тем не менее в литературе описаны случаи массивных забрюшинных гематом при катетеризации бедренной артерии, образования обширных гематом с имбибицией грудной мышцы, мышц плечевого пояса после катетеризации плечевой артерии, развития компартмент-синдрома после катетеризации лучевой артерии [22—24].

У больных без заболеваний системы крови нарушения гемостаза часто встречаются при сепсисе и септическом шоке. Это происходит из-за того, что система гемостаза реагирует на сепсис активацией свертывания крови, снижением активности антикоагулянтов и фибринолитической активностью плазмы, отмечаются потребление тром-боцитов и их секвестрация, нарушение тромбоцитопоэза [14, 25]. Хирургические и травматологические больные имеют выше риск развития тромбоцитопении и нарушений коагуляционного звена гемостаза, чем терапевтические [13, 14].

Число попыток пункции артерии как фактор геморрагических осложнений выделяют и другие авторы [26, 27]. P.F. Mansfield и соавт. [28] показали, что те катетеризации, при которых выполнялись 2 попытки пункции сосуда и более, сочетались с частотой неудач 43% и частотой механических осложнений 24%. В нашем исследовании успешная катетеризация артерий с первой попытки была выполнена в 67% случаев. В работе других авторов [4] катетеризация артерий с первой попытки выполнялась в среднем в 70—80% случаев. Однако в этом исследовании нет данных об опыте врачей, выполнявших манипуляцию. В нашем исследовании катетеризацию артерий выполняли не только опытные, но и молодые врачи, клинические ординаторы. Другим фактором, влияющим на частоту успешной катетеризации артерий с первой попытки, явилось более частое (54% против 45%) выполнение в нашем исследовании по сравнению с другими авторами [4] этой манипуляции у больных с септическим шоком. У таких больных с низким АД трудно пальпировать артериальную пульсацию. Этим же можно объяснить большие технические сложности при катетеризации лучевой (25,2%) по сравнению с бедренной артерией (7%). Для уменьшения неудач при пункции и катетеризации центральных сосудов рекомендуется выполнять процедуру под ультразвуковым контролем и ограничить количество попытко до двух [29]. O. Dudeck и соавт. [30], исследуя катетеризации бедренной артерии у 116 реанимационных больных, заключили, что ультразвуковой контроль должен использоваться в тех случаях, когда не удается пальпировать или слабо пальпируется пульс на артерии, а также у больных с окружностью бедра более 60 см. Рутинное использование ультразвукового контроля позволило повысить эффективность катетеризаций артерий и у больных с заболеваниями системы крови: число успешных катетеризаций с первой попытки выросло с 67 до 88%. По данным ряда исследований [31], при использовании ультразвукового контроля лучевая артерия была катетеризирована с первой попытки в 62% случаев, в то время как при использовании только пальпации — в 34%. В другом исследовании [32], проведенном у больных в критических состояниях, катетеризация лучевой артерии с первой попытки под ультразвуковым контролем выполнена в 87% случаев, а при использовании пальпации — в 50%. Геморрагические осложнения в нашем исследовании возникали чаще при катетеризации бедренной артерии, чем лучевой (17,9% против 8,6%). Противоположные дан-ные получили B.V. Scheer и соавт. [27] в исследовании, проведенном у больных без заболеваний системы кро-ви.

Авторы выявили, что геморрагические осложнения встречались в 7,7% случаев катетеризаций бедренной и в 14,9% — лучевой артерии. Ишемические осложнения встречались реже, чем геморрагические, которые мы выявили у 3,7% больных и которые чаще возникали после катетеризации лучевой, чем бедренной артерии (соответственно 2,3 и 1,4%). Важно, что эти осложнения возникали у больных с тромбоцитопенией, т. е. само по себе низкое число тромбоцитов крови не предотвращает ишемические осложнения. При установке катетера в артерию возможно развитие ишемических нарушений в конечности, сосудистого тромбоза, дистальной эмболии, проксимальной эмболии, сосудистого спазма [27, 33]. Образование тромба и развитие окклюзии артерии происходит из-за изменений в стенке сосуда, вызванных наличием катетера в сосуде [26]. В большинстве случаев происходит реканализация тромба, однако процесс восстановления может длиться до 75 сут [26]. С возрастанием диаметра катетера происходит уменьшение площади просвета сосуда, и вероятность тромботических осложнений повышается [33]. Это может объяснить большую частоту в нашем исследовании ишемических осложнений при катетеризации лучевой артерии. Еще одним фактором риска ишемических осложнений является материал, из которого сделан артериальный катетер. В рандомизированном исследовании F.M. Davis и соавт. [34] показали, что после катетеризации лучевой артерии катетерами из полипропилена частота артериальных тромбозов достигала 34%, в то время как при использовании катетеров, сделанных из тефлона, за этот же период не было ни одного случая тромбоза. В нашем исследовании как для лучевой, так и бедренной артерии мы использовали катетеры из полиуретана, которые при катетеризации артерий являются менее тромбогенными, чем даже тефлоновые катетеры [35]. Тромбоз бедренной артерии часто возникает при наличии заболеваний периферических сосудов, повторных попытках установки катетера в бедренную артерию, при длительном и чрезмерном надавливании на место пункции для предотвращения кровотечения после удаления катетера [36]. Множественные пункции артерии в качестве фактора риска ишемических осложнений выделяют и другие авторы [26, 27]. В нашем исследовании не было статистически значимого различия в числе попыток пункции лучевой и бедренной артерий, однако максимальное количество попыток пункции лучевой артерии было больше, чем бедренной (соответственно 5 к 3). Другим возможным фактором риска тромботических осложнений является инфекция, которая приводит к дисбалансу в системе гемостаза [25]. Мы выявили, что у 86% больных с ишемическими осложнениями был сепсис.

Таким образом, катетеризация артерий может выполняться у больных с нарушениями системы гемостаза. При катетеризации артерий уровень тромбоцитов менее 30·109/л является показанием для трансфузии концентрата тромбоцитов. В случаях, когда нет возможности провести коррекцию выраженных нарушений системы гемостаза, методом выбора является катетеризация лучевой артерии. Для уменьшения геморрагических осложнений, а также для повышения эффективности катетеризации артерий необходимо ограничить количество попыток пункции артерии до двух и выполнять процедуру под ультразвуковым контролем. Ишемические осложнения могут возникать у больных с тромбоцитопенией преимущественно в тех случаях, когда имеется системная инфекция, шок.

Использованные источники:

1. Rowley D.D., Mayo D.F., Durbin C.G. Initial experience with a respiratory therapist arterial line placement service. Respir. Care. 2000; 45 (5): 482—5.
2. Tiru B., Bloomstone J.A., McGee W.T.Radial artery cannulation: A review article. J. Anesth. Clin. Res. 2012; 3 doi: 10.4172/2155-6148.
3. Seldinger S.I.Catheter replacement of the needle in percutaneous arteriography; a new technique. Acta Radiol. (Stockh.). 1953; 39 (5): 368—76.
4. Garland A., Connors A.F.,Indwelling arterial catheters in the intensive care unit necessary and beneficial, or a harmful crutch? Am. J. Respir. Crit. Care Med. 2010; 182: 133—7.
5. Cardner R. Direct arterial pressure monitoring. Curr. Anaesth. Crit. Care. 1990; 1: 239—46.6. Tiru B., Bloomstone J.A., McGee W.T. Radial artery cannulation: A review article. J. Anesth. Clin. Res. 2012; 3 doi: 10/4172|2155-6148.1000209.
7. Belda F.J., Aguilar G., Teboul J.L., Pestan D., Redondo F.J., Malbrain M. et al. PICS Investigators Group. Complications related to less-invasive haemodynamic monitoring. Br. J. Anaesth. 2011; 106 (4): 482—6.
8. Maarek J.M., Holschneider D.P., Harimoto J., Yang J., Scremin O.U., Rubinstein E.H. Measurement of cardiac output with indocyanine green transcutaneous fluorescence dilution technique. Anesthesiology. 2004; 100 (6): 1476—83.
9. Pulsion PiCCOplus operator’s manual. Pulsion medical systems. Munich; 2002.
10. Vanderschueren S., De Weerdt A.Thrombocytopenia and prognosis in intensive care. Crit. Care Med. 2000; 28: 1871—6.
11. Strauss R., Wehler M., Mehler K. Thrombocytopenia in patients in the medical intensive care unit: bleeding prevalence, transfusion requirements, and outcome. Crit. Care Med. 2002; 30: 1765—71.

Маматов Б.Ю.
доцент
кафедры Анестезиологии – реаниматологии и ЭМП, АГМИ
Адихамжонов Ш.Б.
ассистент
кафедры Анестезиологии – реаниматологии и ЭМП, АГМИ
Рафиков А.А., магистр
кафедры Анестезиологии – реаниматологии и ЭМП, АГМИ

ГНОЙНО-СЕПТИЧЕСКИЕ ОСЛОЖНЕНИЯ КАТЕТЕРИЗАЦИИ ПОДКЛЮЧИЧНОЙ ВЕНЫ (ОБЗОР ЛИТЕРАТУРЫ)

Аннотация: Несмотря на совершенствование хирургической техники, применение современных средств и методов консервативной терапии, результаты лечения больных с осложнением в области катетеризации подключичной вены остаются неудовлетворительными. Летальность при развитии гнойно-септических осложнений кавакатетеризации, в частности, при тяжелом сепсисе, достигает высоких цифр - 50-80%. В Америке инфекции кровотока вошли в десятку заболеваний, лидирующих как причина смерти (NNIS System Report, 2004).
Ключевые слова: гнойно септические осложнения, катетеризация подключичной вены.

Mamatov B.Yu.
associate professor
Department of Anesthesiology - Reanimatology and EMC, ASMI
Adihamjonov Sh.B.
assistant
Department of Anesthesiology – Reanimatology and EMC, ASMI
Rafikov A.A.
Master
Department of Anesthesiology – Reanimatology and EMC, ASMI

PURULENT-SEPTIC COMPLICATIONS OF SUBCLAVIAN VEIN CATHETERIZATION (literature review)

Abstract: Despite the improvement of surgical techniques, the use of modern means and methods of conservative therapy, the results of treatment of patients with complications in the field of catheterization of the subclavian vein remain unsatisfactory. Mortality in the development of purulent-septic complications of cavacatheterization, in particular, in severe sepsis, reaches high numbers - 50-80%.

In America, bloodstream infections are among the ten leading causes of death (NNIS System Report, 2004).
Key words: purulent septic complications, subclavian vein catheterization.

Этиология, патогенез, частота и классификация осложнений катетеризации подключичной вены.

Впервые методика пункции подключичной вены из подключичного доступа была описана в 1952 г. французским хирургом R. Aubaniac. Десятью годами позже J.N. Wilson и его коллеги применили подключичный доступ для введения катетера в верхнюю полую вену. С тех пор катетеризация подключичной вены стала широко использоваться для диагностических исследований и лечения больных. В настоящее время большинство авторов применяют методику введения катетера по проводнику (S.I. Seldinger, 1953) из подключичного доступа [1,2].

Опыт применения этой методики показал, что несмотря на существенные достоинства, катетеризация подключичной вены может сопровождаться грозными осложнениями [3,4].

Вопрос о классификации осложнений катетеризации подключичной вены остается дискутабельным. Попытки классифицировать осложнения, развивающиеся после введения подключичного катетера предпринимали [5,6].

Так, Р.Н.Калашников и соавт. (2014), различают три группы осложнений катетеризации:

1. Осложнения, связанные с техникой пункции: пневмоторакс, пункция подключичной артерии, гемоторакс, пневмогемоторакс, гидроторакс, воздушная эмболия, повреждение грудного лимфатического протока, повреждение трахеи.
2. Осложнения, вызванные положением катетера: аритмии, перфорация стенки вены или предсердия, миграция катетера в полость сердца или легочную артерию, выхождение катетера из вены наружу, паравазальное введение жидкости, срезание лески проводника острием иглы и эмболия им полости сердца, длительное кровотечение из пункционного отверстия.
3. Осложнения, обусловленные длительным нахождением катетера в вене: флеботромбоз, тромбоэмболия, сепсис, нагноение мягких тканей по ходу стояния катетера.

С.А.Шишкин (2012) выделяет всего две группы осложнений:

1. Осложнения, связанные с катетеризацией подключичной вены и пребыванием в ней катетера: неудавшаяся катетеризация, аспирация воздуха, наружное кровотечение из пункционной ранки, паравенозное введение жидкости, появление болезненности в области шеи на стороне катетеризации, пневмоторакс, гематома подключичной области, тромбофлебиты, флеботромбоз, сепсис, нагноение в области пункционной ранки.
2. Осложнения, связанные с дефектами ухода за подключичным катетером: выпадение катетера, тромбирование катетера, перелом катетера.

Наиболее приемлемой может считаться классификация С.А.Симбирцева

(2014), согласно которой все осложнения делятся на две группы: возникающие при пункции подключичной вены (гематома области пункции, ошибочная пункция артерии, прокол плевры, повреждение лимфатического протока, воздушная эмболия) и не связанные с манипуляцией по установке катетера (тромбирование катетера, тромбофлебит и тромбоз вены, бактериальное загрязнение катетера, местные воспалительные изменения вокруг катетера). Ко второй группе осложнений относятся одни из самых грозных - флеботромбозы и тромбофлебиты с последующим развитием ангиогенного «катетерного» сепсиса.

Частота развития осложнений катетеризации подключичной вены, по данным различных авторов, весьма вариабельна и зависит от многих факторов, в том числе от возраста, пола, конституции и заболевания пациента. Установлено, что более подвержены развитию осложнений дети до 14 лет; женщины страдающие ожирением; больные с ожогами и гемофилией; пациенты подвергающиеся хроническому гемодиализу [5].

C.Burri (2008) на основании анализа литературных источников (77 авторов, 20451 случай катетеризации) и собственных клинических наблюдений приводит следующие данные о частоте осложнений катетеризации подключичной вены (табл.1). В эту таблицу включены материалы Е.М. Шулутко и соавт. (2009) и С.А. Шишкина (2012).

Таблица 1

Частота осложнений катетеризации подключичной вены

Характер осложнений	Частота развития осложнений %			
	Цит. по Burri C.,1978 (п=20451)	Burri C, 1978 (п=1098)	Шулутко Е.М., 2009 (п=2553)	Шишкин С.А., 2012 (п=250)
Невозможность выполнить пункцию	6,18	27,8	--	1,64
Неправильное положение катетера	5,96	9,3	4,5	0
Тромбоз	0,34	1,4	—	0,96
Эмболия	0,04	0	0,12	0,34
Флебиты	0,12	0,6	—	0,82
Сепсис	0,49	0	—	0,07
Прокол артерии	1,39	1,0	3	1,23
Пневмоторакс	1,08	0,82	0,5	0,14
Смерть больного	0,14	0	0	0

Как видно из табл. 1, наиболее частыми осложнениями являются неправильное положение катетера в вене и повреждение подключичной артерии. При этом в работе Е.М. Шулутко и соавт. (2009) учитываются только те осложнения, которые возникают в момент пункции подключичной вены.

Что касается причин развития осложнений кавакатетеризации, то они до сих пор являются предметом научных споров [2,7].

В.М. Игнатавичус (2016) причины и неудачи при пункции подключичной вены делит на следующие группы:

1. Причины организационного характера (отсутствие навыков, слабая теоретическая подготовка, не укомплектованность наборов для пункции).
2. Причины, обусловленные анатомо-топографическими факторами (неправильная укладка больного, несоблюдение ориентиров и направления введения иглы, особенности конституции пациента).
3. Технические причины (недостаточная анестезия, затруднения при введении проводника, отсутствие тактильного контроля положения иглы во время пункции).

По мнению других исследователей, самая тяжелая группа осложнений кавакатетеризации - гнойно-септические осложнения - имеет другой этиопатогенез [8,16].

К гнойно-септическим осложнениям катетеризации подключичной вены большинство авторов относят нагноение мягких тканей в зоне нахождения кавакатетера, флебит, тромбофлебит, сепсис. При этом чаще всего данную группу осложнений называют общим термином: «ангиогенный» или «катетерный» сепсис [2,21].

Механизм развития осложнений представляется следующим образом. Вначале происходит колонизация подключичного катетера микроорганизмами, затем формируется первичный гнойный очаг либо в мягких тканях в месте стояния катетера, либо в самом катетеризированном сосуде или его притоках, либо в тканях, окружающих эти сосуды. В последующем патогенные микроорганизмы поступают непосредственно в кровоток, минуя естественные биологические барьеры, и развивается развернутая картина сепсиса.

В Российской Федерации на данную проблему впервые обратили внимание ученые Военно-медицинской академии [10,11]. В 2017 году ими был предложен термин «ангиогенный сепсис». В дальнейшем большой вклад в изучение этого вопроса внесли [3,12].

Частота катетерного сепсиса, по данным различных авторов колеблется от 0,07 до 17,5% (табл. 2). Столь значительная вариабельность показателей обусловлена различным числом больных в анализируемых группах, сроками наблюдений, критериями оценки развившихся осложнений. Согласно расчетным данным Центров контроля за заболеваемостью и Национальной системы контроля нозокомиальных инфекций США (NNIS) в конце 80-х годов XX столетия число больных с катетерассоциированной инфекцией составляло около 300 тыс. в год.

Таблица 2

Частота катетерного сепсиса

Авторы	Год публикации	Число больных с катетеризацией подключичной вены	Больные с катетерным сепсисом, %
Щурова Л.А.	2013	520	1,15%
Лыткин М.И., Шанин С.С.	2016	3294	0,1%
Дякин В.М. и соавт.	2017	1261	3,2%
Агеев А.К., и соавт.	2012	569	1,93%
Рунович А.А. и соавт.	2012	1000	0,8%
Гологорский В.А., и соавт.	2018	262	2,1%
Хабиб О.	2012	231	12,5%
Стойко Ю.М. и соавт.	2016	12 тыс.	17,5%
Шишкин С.А.	2012	1464	0,07%
Pigrau C. et al.	2013	213	7,5%
Sadoyama G., Gontijo Filho P.P.	2013	116	4,1%
Klein M.D. et al.	2013	179	2,4%
Ben Hamida F. et al.	2015	533	7,7%

В конце 2000-х гг. зарегистрированное число больных с инфекцией данного вида снизилось до 87 тыс. В 2008-2011 гг. в различных стационарах и отделениях больниц США эти осложнения составляли от 2,9% до 11,3% на 1000 дней катетеризации, в среднем - 200 тыс. случаев инфекции кровотока в год (NNIS System Report, 2013). По данным P.J. Collignon (2014), за полтора года в 15 больницах Австралии зарегистрировано 4957 случаев катетерной инфекции, из них 491 случай был причиной сепсиса. В России, и в частности, в Санкт-Петербурге, систематического учета подобных осложнений не ведется. Косвенно о частоте катетерного сепсиса можно судить по данным обследования пациентов в нескольких многопрофильных стационарах города, проведенное в 2016 г, которое выявило бактеремию в 9,3% [16]. Касаясь морфологических изменений при катетеризации сосудов, одни авторы указывают на наличие флебита, тромбофлебита или пристеночных тромбов в месте введения катетера [4,13], другие - на нагноение мягких тканей в зоне нахождения подключичного катетера [14,15].

Образование и рост тромба происходит чаще всего в месте, где была пунктирована вена, и в месте размещения конца катетера. При введении лески проводника и катетера интима может быть травмирована, что создает условия для образования тромбов. Расположение катетера в вене, препятствующего нормальному кровотоку и вызывающему турбулентное течение крови, также способствует образованию тромбов. Опасность возникновения тромбов наиболее велика в местах анатомического изгиба венозного русла, то есть в местах впадения одной вены в другую. Поэтому пристеночные тромбы наблюдаются в устьях подключичной, внутренней яремной, плечеголовной, а также верхней полой вены [16,17].

Тромбозы подключичной вены в месте ее катетеризации возникают значительно чаще, чем диагностируются. Полноценное развитие клиники возникает при полном блоке вены, когда прекращается отток крови через подключичную вену и наступает стаз в верхней конечности, над- и подключичной области. После удаления катетера или при частичной отслойке тромба проходимость вены восстанавливается, что создает ложное впечатление отсутствия тромботических масс. Особенно неблагоприятна ситуация, когда смещение катетера происходит не в направлении правого предсердия, а в один из притоков верхней полой вены - внутреннюю яремную вену: это нередко приводит к тромбозу этой вены [18].

Смещение катетера во внутреннюю яремную вену вследствие анатомических особенностей левой подключичной вены встречается чаще, поэтому тромботические осложнения при катетеризации левой подключичной вены встречаются в 4 раза чаще, чем при доступе справа [6]. По данным Е.М. Шулутко и соавт. (2016) различная степень венозного тромбирования выявляется у 37-66% пациентов: неполные тромбозы - у 45%, полные - у 10%. Так называемый «фибриновый» чехол вокруг дистального конца катетера выявляется в 78-90% случаев и даже не расценивается как осложнение.

Мнения ученых в отношении причин возникновения гнойно-септических осложнений катетеризации подключичной вены кардинально расходятся. Так, Ю.Л. Шевченко, Н.Н. Шихвердиев (2016) к факторам, способствующим развитию ангиогенного сепсиса, относят наличие тяжелой «фоновой» патологии: злокачественные опухоли, лейкозы, алкоголизм, гормональные расстройства (сахарный диабет), оперативные вмешательства, особенно выполняемые по поводу заболеваний, связанных с перфорацией полых органов или с воспалением органов брюшной и грудной полости, наличие инородных тел (различные протезы), предшествующая иммуносупрессивная терапия.

А.А. Масчан (2012) факторами риска развития катетерной инфекции считает: 1) неадекватный материал катетеров (по его мнению, наилучшими материалами для изготовления катетера являются полиуретан или силикон, уступают им тефлон и поливинилхлорид, а наихудшими являются полиэтиленовые катетеры); 2) неадекватная асептика при постановке и уходе за катетером; 3) длительное стояние катетера; 4) специальные ситуации (парэнтералыюе питание); 5) несоответствие диаметра катетера диаметру катетеризированной вены.

По данным А.Л. Костюченко и соавт. (2016), к развитию ангиогенного «катетерного» сепсиса предрасполагают: 1) предельное истощение больного; 2) активный очаг высокоинвазивной инфекции в других областях тела больного; 3) снижение иммунорезистентности к условно патогенной инфекции и ее извращение.

По вопросу о длительности нахождения катетера в вене мнения также разноречивы. Одни авторы [19] утверждают, что развитие ангиогенного сепсиса не зависит от срока интраваскулярного пребывания катетера, другие придерживаются противоположной точки зрения [4,8]. По данным Е.А. Алексеевой и соавт. (2014), риск инфицирования катетера повышается по мере продолжительности нахождения катетера в ПВ от 5 до 26% (до 3 суток и более 2-х недель). Б.Р. Гельфанд и соавт. (2016) на основании данных о 277 катетеризации сделали вывод, что частота инфекционных осложнений возрастает пропорционально срокам нахождения катетера в вене с 5,3% до 25,5% начиная с 3-х суток до 14 и более, соответственно. А.Л. Костюченко и соавт. (2016) изучили результаты бактериологических посевов на жидкие питательные среды кончиков 126 стерильно извлеченных кавакатетеров, которые были установлены пункционно через подключичную вену. Микробное загрязнение обнаружено в 19,8%, причем при длительности пребывания катетера в вене до 5 суток роста микрофлоры не было получено ни разу. Таким образом, можно утверждать, что пребывание катетера в центральной вене более 5 суток является неблагоприятным фактором в связи с возрастающим риском контаминации катетера и повышенной опасности развития гнойного тромбофлебита в месте катетеризации.

Имеются также различные точки зрения о влиянии материала катетера на развитие осложнений катетеризации. С точки зрения одних авторов, он не имеет никакого значения [20]; В.П. Сухоруков, А.С. Бердикян (2010), Ferretti G. et al. (2012) считают, что при использовании полиуретановых катетеров вместо полиэтиленовых частота развития тромбофлебитов в месте стояния катетера значительно снижается. A. Pascual (2012) также придает большое значение материалу катетера, предлагая использовать так называемые «биоспецифические полимеры», не вызывающие процессов тромбообразования, однако подобные материалы находятся в стадии разработки.

Банальными причинами развития гнойно-септических осложнений катетеризации подключичной вены могут стать несоблюдение принципов асептики при постановке и уходе за катетером и вливание бактериально загрязненных жидкостей [7,21]. Согласно данным, приведенным на Калужской согласительной конференции РАСХИ (2014) основными возбудителями катетерной инфекции являются: St. epidermidis и St. aureus, реже Enterococcus spp. и Candida spp.

Обычно эти осложнения входят в общую классификацию осложнений катетеризации [18].

Предложено несколько классификаций катетерной инфекции.

С.А. Сидоренко, СВ. Яковлев, 2013; Н.А. Ефименко и соавт., 2014; специалисты центров контроля и профилактики болезней США (CDC, 2015) предлагают следующую классификацию и критерии диагностики катетер-ассоциированных инфекций:

1. Колонизированный катетер.
2. Инфекция места введения - эритема, уплотнение или нагноение кожи в пределах 2 см от места введения.

3. Инфекция кармана - эритема и некроз в месте стояния катетера.
4. Туннельная инфекция - эритема, напряжение и уплотнение тканей более чем в 2 см от места введения катетера.
5. Инфекция, связанная с инфузатом — выделение одного и того же микроорганизма из раствора и периферической вены.
6. Катетер-ассоциированная инфекция кровотока:
- выделение одного и того же микроорганизма из удаленного катетера и периферической вены у пациента с клинической картиной инфекции кровотока при отсутствии других очагов;
- исчезновение клинической картины при удалении катетера.

А.А. Масчан (2012) приводит другую клиническую классификацию катетерной инфекции:
1. инфекция места входа катетера;
2. туннельная инфекция;
3. не осложненный тромбофлебит;

4. осложненный тромбофлебит: тромбоэмболия легочной артерии, синдром нижней полой вены, хилоторакс;
5. катетер-ассоциированная бактеремия;
6. катетер-ассоциированный сепсис.

А.Л. Костюченко и соавт. (2016), С.А. Шляпников и соавт. (2013) выделяют первичную инфекцию кровотока (инфекция, возникающая у пациента при отсутствии других явных очагов инфекции), она разделяется на лабораторно подтвержденные инфекции и клинический сепсис и вторичную инфекцию кровотока (инфекция, развивающаяся при наличии очага инфекции другой локализации, вызванная тем же возбудителем). Инфекции, связанные с применением устройств внутрисосудистого доступа, всегда классифицируются, как первичные даже при наличии в области доступа местных признаков инфекции.

Следует подчеркнуть, что приведенные классификации трудно применить в обычной практике, они сложны для формулирования диагноза и выработки тактики лечения.

Использованные источники:

1. Агеев А.К. Гнойно-септические осложнения катетеризации магистральных вен / А.К. Агеев, А.А. Балябин, В.М. Шипилов // Клинич. медицина. - 2012. - Т.60, № 6. - С.91-95.
2. Баймышев Е.С. Тромбоз - осложнение пункционной катетеризации подключичной вены / Е.С. Баймышев, И.Г. Блойда, И.А. Юнгблюд // Хирургия. - 2016. -№ 9. - С. 100-102.
3. Веденский А.Н. Ошибки, опасности и осложнения в хирургии вен: Рук. для врачей / А.Н. Веденский, Ю.Л. Шевченко, М.И. Лыткин и др.; Ред. Ю.Л. Шевченко. - СПб.: Питер, 2017. - 308 с.
4. Гостищев В.К. Оперативная гнойная хирургия: рук. для врачей / В.К. Гостищев. - М.: Медицина, 2018. - 415 с.
5. Алексеева Е.А. Инфекционные осложнения при длительной катетеризации центральных вен в практике интенсивной терапии / Е.А.

Алексеева, Л.А. Головина, Е.Н. Топазова // VII Всерос. съезд хирургов: Тез. докл. - Краснодар, 2015. - С.427.
6. Духин В.А. Сравнительная оценка различных методик экстренного венозного доступа / В.А. Духин, Ф.К. Байшев, В.А. Ваганов, И.С. Эдельштейн // Материалы IV Всерос. съезда анестезиологов и реаниматологов. - М., 2018. - С.45-46.
7. Белобородов В.Б. Сепсис - современная проблема клинической медицины / В.Б. Белобородов // Рус. мед. журн. - 2017. - Т.5, № 24. - С.1589-1596.
8. Беляев А.В. Принципы рациональной антибактериальной терапии // Руководство по интенсивной терапии / А.В. Беляев; Ред. А.И. Трешинский, Ф.С. Глумчер. - Киев: Вища шк., 2014. - Разд. 19. - С.555-562.
9. Гельфанд Б.Р. Инфекционные осложнения длительной катетеризации сосудов в практике интенсивной терапии / Б.Р. Гельфанд, Е.А. Алексеева, Ш.М. Гаймуллин // Вестн. интенсив, терапии - 2018. - № 1. — С.37-40.
10. Богомолов Б.Н. Справочные материалы // Руководство по анестезиологии и реаниматологии / Б.Н. Богомолов, А.Г. Новиков; Ред. Ю.С. Полушин. - СПб.: ЭЛБИ-СПб, 2014. - С.696-719.
11. Вафин А.З. Осложнения катетеризации подключичных вен и их профилактика / А.З, Вафин, В.С. Марочкин, Л.И. Власов // Вестн. хирургии.-2017.- Т.117, №9.-С.99-103.
12. Болбас А.С. Возможности ультразвукового метода в определении положения центрального венозного катетера / А.С. Болбас, Г.М. Громыко, Д.В. Новиков, Г.М. Карпелев // Новости лучевой диагностики. -2018. -№ 5. -С. 18-20.
13. Глумчер Ф.С. Клиническая физиология дыхания // Руководство по интенсивной терапии / Ф.С. Глумчер; Ред. А.И. Трешинский, Ф.С. Глумчер. - Киев: Вища шк., 2014. - Разд.З. - С.74-97.
14. Гайдаенко В.М. Ошибки и осложнения при катетеризации верхней полой вены и их профилактика / В.М. Гайдаенко, Ю.А. Титовский, В.Б. Оскирко // Анестезиология и реаниматология. - 2018. — № 5. — С.70-71.

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Мамулян А.Р.
студент
Борисова Т.Г., к.э.н. доцент
Заведующая кафедрой инновационных технологий в экономике и управлении
Научный руководитель: Борисова Т.Г., к.э.н. доцент
Сочинский государственный университет

ОСОБЕННОСТИ БУХГАЛТЕРСКОГО И НАЛОГОВОГО УЧЁТА В СФЕРЕ ОБРАЗОВАНИЯ

Аннотация*: в данной статье речь пойдет об особенностях бухгалтерского и налогового учета. Будут рассмотрены особенности и основные аспекты учета.*
Ключевые слова*: код бюджетной классификации, финансирование, бухгалтерский и налоговый учет, образовательное учреждение, бюджетное образовательное учреждение.*

Mamulyan A.R.
student
Borisova T.G., Ph.D. in Economics, Associate Professor
Head of the Department of Innovative Technologies in Economics and Management
Scientific Supervisor: Borisova T.G., Ph.D. in Economics Associate Professor
Sochi State University

FEATURES OF ACCOUNTING AND TAX ACCOUNTING IN THE FIELD OF EDUCATION

Abstract: *this article will discuss the features of accounting and tax accounting. The features and main aspects of accounting will be considered.*
Keywords*: budget classification code, financing, accounting and tax accounting, educational institution, budgetary educational institution.*

В зависимости от организационно-правовой формы образовательного учреждения, бухгалтерский и налоговый учет может иметь достаточно сложную структуру. К образовательной сфере относятся несколько видов учреждений, среди которых государственные и муниципальные, составляющие бюджетную часть, а также коммерческие и частные, которые к бюджетной сфере не относятся. Структура бухучета в школах бюджетного финансирования и аналогичных частных заведениях несколько отличается.

Федеральный закон № 273-ФЗ в ст. 23 предусматривает деление образовательных организаций только на типы в соответствии с образовательными программами, реализация которых является основной целью их деятельности.

Всего рассматриваемым Федеральным законом предусмотрено 6 типов образовательных организаций: 4 типа образовательных организаций, реализующих основные образовательные программы, и 2 – реализующих дополнительные образовательные программы.

На рисунке 1 представим типы образовательных организаций, реализующих основные образовательные программы и реализующих дополнительные образовательные программы.

Образовательные организации, реализующие основные образовательные программы

- дошкольная образовательная организация
- общеобразовательная организация
- профессиональная образовательная организация
- образовательная организация высшего образования

Образовательные организации, реализующие дополнительные образовательные программы

- организация дополнительного образования
- организация дополнительного профессионального образования

Рисунок 1 - Типы образовательных организаций

Бухгалтерский учёт в бюджетных учреждениях, безусловно, осуществляется с учётом специфических особенностей, которые регулируются нормативно-правовыми актами и законодательством Российской Федерации в области бюджетного устройства и функционирования. К нормативно-правовой документации можно отнести, например, инструкцию по бухгалтерскому учёту для учреждений и организаций, финансируемых из бюджета, которая была утверждена приказом Министерства финансов РФ от 3 ноября 1993 года № 122.

Осуществление учёта в контексте статей (кодов) бюджетной классификации; контроль точного исполнения сметных расходов; разделение в бухгалтерском учёте кассовых (фактически выплаченных) и фактических (начисленных в программе) расходов; особенности учёта по отраслям (здравоохранение, образование, наука), все это особенности бухгалтерского и налогового учета.

Примером бюджетной организации в области образования может служить любая школа или детский сад. Учреждение выполняет основную функцию, связанную с предоставлением образовательных услуг в соответствии с муниципальным заданием.

Учреждение самостоятельно осуществляет бухгалтерский учет средств, которые выделяются в виде субсидий на выполнение муниципального задания, на иные цели, от оказания платных образовательных услуг, поступающих на лицевой казначейский счёт бюджетного учреждения.

Ключевыми задачами бухгалтерского учёта в бюджетной организации являются: создание полной, актуальной и достоверной информации о деятельности учреждения и его имущественном состоянии; контроль за использованием материальных, трудовых и финансовых ресурсов в соответствии с установленными нормативами и планами; предотвращение и оперативное реагирование на возникновение негативных факторов в финансово-хозяйственной деятельности; а также выявление и активизация внутренних резервов.

Бухгалтерский и налоговый учет осуществляется исключительно на основе первичных документов, которые предварительно проверяются сотрудниками бухгалтерии учреждения в соответствии с Положением о внутреннем финансовом контроле.

Бухгалтер учреждения обязан осуществлять электронный документооборот и соответственно иметь электронную подпись. Так как взаимодействует удаленно с территориальным органом Федерального казначейства. Также производится передача бухгалтерской отчётности учредителю (Управление образования муниципального образования); передача отчётности по налогам, сборам и иным обязательным платежам в инспекцию Федеральной налоговой службы; передача отчётности по налогам, сборам и иным обязательным платежам в инспекцию Федеральной налоговой службы. При любом изменение в плане финансово-хозяйственной детальности учреждения необходимо размещать информацию на официальном сайте bus.gov.ru.

Для обеспечения целостности и сохранности электронных данных бухгалтерского учёта и отчётности в бюджетном учреждении необходимо проводить следующие мероприятия: на сервере еженедельно создавать резервные копии баз данных «Бухгалтерия» и «Зарплата»; по завершении квартальной и ежегодной отчётности записывать копию базы данных на внешний носитель, который должен храниться в опечатанном сейфе главного бухгалтера; по итогам каждого календарного месяца распечатывать бухгалтерские регистры на бумажном носителе и организовывать их в отдельные папки в хронологическом порядке.

Основными элементами плана организации бухгалтерского учёта в бюджетных организациях являются план финансовой и налоговой, статистической отчётности, план проведения и документального оформления инвентаризации имущества, финансовых активов и обязательств.

Важно понимать, что анализ бухгалтерской информации имеет решающее значение для наиболее эффективного функционирования бюджетных организаций и принятия управленческих решений, поскольку отражает реальное положение дел в экономике.

В связи с этим необходимо постоянно и своевременно совершенствовать методологию бухгалтерского учета, который является основным поставщиком и транслятором информации о финансовом положении организации и ее перспективах.

Использованные источники:

1. Постановление администрации муниципального образования городской округ город-курорт Сочи Краснодарского края от 27 марта 2024 года № 688 «О внесении изменений в постановление администрации муниципального образования городской округ город-курорт Сочи Краснодарского края от 22 января 2021 года № 50 «Об утверждении положения об отраслевой системе оплаты труда работников муниципальных образовательных учреждений и муниципальных учреждений образования муниципального образования городской округ город-курорт Сочи Краснодарского края» – Текст: электронный // Гарант: [сайт]. – URL: https://base.garant.ru/193507/ (дата обращения: 01.10.2024)
2. Воробьева И. П. Бухгалтерский учет в бюджетных учреждениях: Учебное пособие / И.П. Воробьева, А.Л. Спесивцева, Г.А. Барышева. – Томск: Изд-во ТПУ, 2012. – 252 с.
3. Воронченко, Т. В. Бухгалтерский учет : учебник и практикум для среднего профессионального образования / Т. В. Воронченко. — 3-е изд., перераб. и доп. — Москва : Издательство Юрайт, 2024. — 727 с. — (Профессиональное образование). — ISBN 978-5-534-17609-4. — Текст : электронный // Образовательная платформа Юрайт [сайт]. — URL: https://urait.ru/bcode/545071 (дата обращения: 01.10.2024)
4. Ираева, Н.Г. Финансы, анализ бюджетных учреждений: учебное пособие / Н.Г. Ираева, Г.Х. Азнабаева; Министерство образования и науки Российской Федерации, Федеральное государственное бюджетное образовательное учреждение высшего профессионального образования «Уфимский государственный университет экономики и сервиса». - Уфа: Уфимский государственный университет экономики и сервиса, 2014. - 124 с.: ил., табл. - Библиогр. в кн. - ISBN 978-5-88469 663-9; [Электронный ресурс]. - URL: http://biblioclub.ru/index.php?page=book&id=272474 (01.10.2024)
5. Полещук, Т. А. Бухгалтерский учет в бюджетных организациях : учебное пособие / Т.А. Полещук, О.В. Митина. — 2-е изд., испр. и доп. — Москва : Вузовский учебник : ИНФРА-М, 2020. — 138 с. - ISBN 978-5-9558-0351-7. - Текст : электронный. - URL: https://znanium.com/catalog/product/1065813 (дата обращения: 01.10.2024). – Режим доступа: по подписке
6. Солодова, С. В. Бухгалтерский учет в организациях государственного сектора : учебник для среднего профессионального образования / С. В. Солодова. — 3-е изд., перераб. и доп. — Москва : Издательство Юрайт, 2024. — 360 с. — (Профессиональное образование). — ISBN 978-5-534-

16318-6. — Текст : электронный // Образовательная платформа Юрайт [сайт]. — URL: https://urait.ru/bcode/540906 (дата обращения: 01.10.2024)

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Мирзаалимов С.
преподаватель фармацевтических наук
Андижанский государственный медицинский институт

РАЗРАБОТКА ХИМИКО-ТОКСИКОЛОГИЧЕСКИХ МЕТОДОВ АНАЛИЗА ПЕСТИЦИДА НИТЕПИРАМ

Аннотация:*В данной статье описывается разработка и валидация методов химико-токсикологического анализа пестицида нитепирам. Методики, основанные на высокоэффективной жидкостной хроматографии (ВЭЖХ), газовой хроматографии-масс-спектрометрии (ГХ-МС) и УФ-спектрофотометрии, были исследованы на предмет их эффективности для точного определения нитепирама в образцах. Проводилась оценка аналитических характеристик, таких как чувствительность, специфичность, пределы обнаружения и количественного определения, для обеспечения надежности данных.*

Ключевые слова: *НИТЕПИРАМ, ВЭЖХ, ГХ-МС, фармацевтика, токсикология.*

Mirzaalimov S.
Lecturer
of Pharmaceutical Sciences
Department at Andijan State Medical Institute

DEVELOPMENT OF CHEMICAL-TOXICOLOGICAL METHODS FOR ANALYSIS OF NITEPIRAM PESTICIDE

Abstract:*This article describes the development and validation of methods for the chemical-toxicological analysis of the pesticide nitepiram. Techniques based on high performance liquid chromatography (HPLC)), gas chromatography-mass spectrometry (GC-MS) and UV spectrophotometry, were examined for their effectiveness in accurately determining nitepyram in samples. Analytical performance such as sensitivity, specificity, limits of detection and quantitation were assessed to ensure the reliability of the data.*

Key words: *NITEPIRAM, HPLC,GC-MS,pharmaceuticals, toxicology*

Введение

Нитепирам – это системный инсектицид, применяемый для борьбы с насекомыми-вредителями в сельском хозяйстве и ветеринарии. Повышенное использование нитепирама вызывает обеспокоенность из-за возможного накопления остатков в продуктах питания и окружающей среде, что требует разработки эффективных методов анализа. Целью данной работы является создание и валидация методов, обеспечивающих высокую точность и чувствительность в определении содержания нитепирама.

Обзор литературы

В предыдущих исследованиях показано, что методы ВЭЖХ и ГХ-МС являются эффективными инструментами для анализа пестицидов в различных матрицах. УФ-спектрофотометрия также широко используется в химическом анализе благодаря простоте и доступности метода. Однако специфические методы анализа нитепирама до сих пор нуждаются в дальнейшей разработке и валидации.

Материалы и методы

Пробоподготовка

Для выделения нитепирама из образцов использовались экстракционные методы с применением органических растворителей. Оптимизированный метод экстракции был выбран для получения максимального выхода вещества при минимальных потерях.

Аналитические методы

1. **Высокоэффективная жидкостная хроматография (ВЭЖХ)**: Метод использовался для разделения и количественного анализа нитепирама. Условия проведения анализа включали использование градиентного режима растворителей и детектирование при длине волны 254 нм.
2. **Газовая хроматография-масс-спектрометрия (ГХ-МС)**: ГХ-МС использовалась для подтверждения состава нитепирама и определения возможных продуктов его разложения. Проба подвергалась термическому разложению в колонке и последующему масс-спектральному анализу.
3. **УФ-спектрофотометрия**: Анализ проводился с использованием УФ-спектрофотометра при длине волны, соответствующей максимальному поглощению нитепирама. Метод использовался для быстрого количественного анализа образцов с известным содержанием нитепирама.

Валидация методов

Валидация каждого метода проводилась по следующим параметрам:

- **Чувствительность**: Предел обнаружения и предел количественного определения рассчитывались для каждого метода.
- **Специфичность**: Способность методов избирательно определять нитепирам в присутствии других соединений.
- **Точность и воспроизводимость**: Оценивались путём многократного анализа контрольных образцов с известным содержанием нитепирама.

Результаты и обсуждение

Таблица 1. Показатели валидации методов анализа нитепирама

Параметр	**ВЭЖХ**	**ГХ-МС**	**УФ-спектрофотометрия**
Лимит обнаружения (LOD), мг/л	0.05	0.02	0.10
Лимит количественного определения (LOQ), мг/л	0.10	0.05	0.20

Параметр	**ВЭЖХ**	**ГХ-МС**	**УФ-спектрофотометрия**
Специфичность	Высокая	Высокая	Умеренная
Чувствительность	98%	99%	95%
Точность (RSD, %)	2.5	1.8	3.0

Примечание: LOD – предел обнаружения; LOQ – предел количественного определения; RSD – относительное стандартное отклонение.

Таблица 1 показывает, что методы ВЭЖХ и ГХ-МС обладают высокой чувствительностью и специфичностью для анализа нитепирама. УФ-спектрофотометрия также демонстрирует приемлемые показатели чувствительности, хотя её точность немного ниже.

Таблица 2. Результаты количественного анализа нитепирама в контрольных образцах

Образец	**Ожидаемое содержание нитепирама, мг/л**	**Измеренное содержание (ВЭЖХ), мг/л**	**Измеренное содержание (ГХ-МС), мг/л**	**Измеренное содержание (УФ), мг/л**
A	0.50	0.48 ± 0.02	0.49 ± 0.01	0.47 ± 0.03
B	1.00	0.98 ± 0.03	1.01 ± 0.02	0.96 ± 0.04
C	5.00	4.95 ± 0.05	5.02 ± 0.03	4.88 ± 0.06

Из таблицы 2 видно, что измеренные значения содержания нитепирама близки к ожидаемым, что указывает на высокую точность методов ВЭЖХ и ГХ-МС. УФ-спектрофотометрия также показала удовлетворительные результаты, однако наблюдается небольшое снижение точности при высоких концентрациях.

Заключение

Разработанные и валидированные методы анализа нитепирама обеспечивают надёжное и точное определение данного пестицида. Эти методы могут быть использованы для мониторинга содержания нитепирама в пищевых продуктах и окружающей среде, что способствует повышению безопасности и снижению рисков для здоровья человека.

Использованные источники:

1. Axmatoxunova, M., & Shokirov, A. (2024). *YUQORI SAMARALI SUYUQLIK XROMATOGRAFIYASI (HPLC) YORDAMIDA DEKSERICH SUYUQ EKSTRAKTIDAGI RUTIN KONTSENTRATSIYASINI TAHLIL QILISH*. Journal of Integrated Education and Research, 2024(5), 112-118.
2. 2.O‘G‘Li, S. A. S. (2024). *Comparative UV Spectrophotometric Analysis of Ethanol Extract of Local Papaya Carica and Indian Papaya Carica Plant*. Universum: медицина и фармакология, 2024(6), 93-99.
3. 3. Dias, D. A., Urban, S., & Roessner, U. (2012). *A historical overview of natural products in drug discovery*. Metabolites, 2(2), 303-336.
4. 4. Newman, D. J., & Cragg, G. M. (2016). *Natural products as sources of new drugs from 1981 to 2014*. Journal of Natural Products, 79(3), 629-661.

5. 5. Shokirov, A., & Abdug'Aniyev, H. (2023). *Using GC-MS Analyzing Method to Monitor Medications in the Market*. Экономика и социум, 2023(11), 45-52.

Мирзаева Д. Ш.
Бухарский государственный институт

ИСПОЛЬЗОВАНИЯ АРТ-ПЕДАГОГИКИ В ДОШКОЛЬНЫХ ОРГАНИЗАЦИЯХ ДЛЯ ПОВЫШЕНИИ КАЧЕСТВА СИСТЕМЫ ДОШКОЛЬНОГО ОБРАЗОВАНИЯ

Аннотация. *В данной статье освещены вопросы, касающиеся артпедагогики. В педагогической среде понятие «артпедагогика» недостаточно используется, в то время как отдельные идеи данной развивающейся области педагогического знания приобретают все большую популярность в работе в дошкольных образовательных учреждений. В статье рассмотрены основы артпедагогической деятельности, перечислены принципы и использования артпедагогики в процессе нравственного воспитания дошкольников.*
Ключевые слова: *АРТ-педагогика, изобразительное искусство, творчество, искусство, умение, рисунок, форма, цвет, образ, мышление, критерии, фактор креативности, параметры креативности, новаторство, интеллект.*

Mirzaeva D. Sh.
Bukhara State Institute

USING ART PEDAGOGY IN PRESCHOOL ORGANIZATIONS TO IMPROVE THE QUALITY OF THE PRESCHOOL EDUCATION SYSTEM

Annotation. *This article covers issues related to art pedagogy. In the pedagogical environment, the concept of "art pedagogy" is underused, while individual ideas of this developing area of pedagogical knowledge are becoming increasingly popular in work in preschool educational institutions. The article examines the basics of art pedagogical activity, lists the principles and use of art pedagogy in the process of moral education of preschoolers.*
Keywords: *ART pedagogy, fine art, creativity, art, skill, drawing, form, color, image, thinking, criteria, creativity factor, creativity parameters, innovation, intelligence.*

По мнению Президента Республики Ш.М.Мирзиёева, что Дошкольное образование считается основной частью системы непрерывного образования, оно имеет большое значение в воспитании здорового и всесторонне развитого ребенка и подготовке его к школе.

На основе научно обоснованных подходов определены такие важные задачи, как совершенствование, воспитание на основе инновационной интеграции, гармонии всестороннего развития субъектов дошкольного образования.

В нашей стране реализуются широкомасштабные реформы, направленные на коренное совершенствование системы дошкольного образования, создание инновационной системы дошкольного образования, направленной на внедрение эффективных форм и методов обучения и воспитания с учетом передового зарубежного опыта. В концепции развития системы дошкольного образования Республики Узбекистан до 2030 года необходимо создать условия «для всестороннего интеллектуального, этического, эстетического и физического развития детей дошкольного возраста», внедрить инновации, передовые педагогические и информационные и Определенные приоритетные задачи системы дошкольного образования, такие как «публикация». Реализация этих задач показывает необходимость разработки программ музыкального образования и обучения детей дошкольного возраста в соответствии с государственными требованиями, а также совершенствования технологий формирования творческих способностей учащихся на основе компетентностного подхода. Ведь от педагога, его уровня, подготовки, самоотверженности, его отношения к делу воспитания и воспитания молодого поколения зависит будущее нашего народа, будущее нашего независимого государства.

На новом этапе развития Узбекистана усилилось внимание во всех сферах образования, включая систему дошкольного образования. Принят Закон Республики Узбекистан о дошкольном образовании и воспитании, а также нормативные правовые документы, определяющие долгосрочную и краткосрочную перспективу системы дошкольного образования и создана правовая база. Указанные работы по увеличению охвата детей дошкольным образованием, внедрению в учебный и воспитательный процесс современных инноваций, новых педагогических и информационно-коммуникационных технологий и передовых методов, развитию материально-технической базы проводятся постоянно.

Использование АРТ-педагогики как средства в развитии творческих способностей детей в процессе дошкольного образования является основой развития их деятельности в конкретной области с помощью специфических талантов детей подготовительной группы. Это создает потенциальные возможности для развития молодого поколения. Развитие творческих способностей, повышение познавательной активности молодого поколения напрямую связано с существующими условиями и содержанием образования. Выражение социального опыта людей в содержании образования является основой создания творческой активности субъектов процесса. Это гарантирует, что в них ярко проявляются способности, талант.

Одной из наших важных задач является создание в нашей стране эффективной системы дошкольного образования, направленной на здоровое и зрелое взросление молодого поколения, внедрение эффективных форм и методов в образовательном процессе и продвижение инновационных идей. В то же время, проведенный анализ, обеспечение охвата детей дошкольным образованием, наполнение организаций учебно-методическими материалами и художественной литературой, привлечение в сферу квалифицированных педагогических и управленческих кадров, внедрение инновационных технологий в образовательный процесс показывает необходимость решения проблемы вопросы.

Эффективная реализация этих задач возлагает большую ответственность на педагогов, методистов и психологов, работающих в организациях дошкольного образования. Обеспечение современного образования детям начиная с дошкольного возраста, активное их умственное, интеллектуальное и социальное развитие-одна из актуальных задач, которые сегодня необходимо решать в организациях дошкольного образования.

Ученые-педагоги о проблеме обучения и воспитания детей в дошкольнной образовательной системе Ф.Р. Кадирова, Л.Р. Моминова, Г.Е. Джанпеисова, Ш.А. Содикова, Г.А. Мардонова, Г.Назирова, Н.Ш. Абдуллаева, Д.А. Абдурахимова, М. Абдуллаева, З.А. Ботырова, А.Е. Рустамова посвятила свои научные исследования. Ф.Р. Кадирова, Ш.К. Тошполатова, Н.М. Каюмова, М.Н. Азамова и Ш.А. В своих научных исследованиях по повышению качества образовательного процесса в организации дошкольного образования Содикова изучила научно-теоретические основы теории и методики дошкольного образования, методы научных исследований, этапы дошкольной педагогики, биологические и биологические факторы, социальные факторы влияющие на развитие детей. Основные этапы психического развития дошкольников, дидактические принципы обучения, педагогическое воздействие на детей, формы и методы организации дошкольного образования, а также теоретические основы использования педагогических технологий в дошкольном образовании и воспитании.

Научная работа Мардоновой посвящена проблеме определения педагогических возможностей духовно-нравственного воспитания детей в семье средствами алла. С педагогической точки зрения исследователь интерпретировал социально-идеологическое содержание слова «алла», его воспитательное воздействие, а также этимологическое значение и историческое формирование слова «алла». Анализируя философско-педагогическую и психологическую ситуацию духовно-нравственного воспитания детей средствами алла, он классифицировал виды алла, направленные на духовно-нравственное воспитание, по дидактическому содержанию детей в зависимости от их возраста, психологического и духовного развития. Кроме того, на основе сотрудничества «Семья-соседство-дошкольная образовательная организация» усовершенствован социально-педагогический механизм повышения эффективности духовно-нравственного воспитания детей средствами алла, а также методика нравственного воспитания детей средствами аллы, разработаны научно-методические рекомендации, направленные на повышение эффективности.

В диссертации Абдуллаевой о совершенствовании дошкольного образования на основе творческого подхода в целях повышения качества дошкольного образования в образовательных программах учитываются возрастные, психологические и интеллектуальные особенности детей, а также технологии, основанные на индивидуализации и дифференциации детей. образования достаточно используются в образовательном процессе, обоснована необходимость разработки и внедрения методического обеспечения, направленного на развитие творческих способностей детей, формирование самостоятельного мышления. Он особо подчеркнул «многообразие образовательных технологий», «образовательную траекторию» и «индивидуализацию образования» как основу вариативного подхода. Развивать компетенции руководителей и педагогов, работающих в научно-исследовательских дошкольных образовательных организациях, по внедрению вариативного подхода в практику, разработать специальные методические пособия и рекомендации для эффективной реализации образовательных программ с вариативным подходом в дошкольных образовательных организациях, и широко использовать их.

М.Н. Хушназарова исследовала вопросы повышения профессиональной компетентности педагогов дошкольных образовательных организаций и пришла к выводу, что целесообразно организовать и скоординировать систематическую ориентацию педагогов на научно-методическую деятельность, уделить особое внимание широкому внедрению инновационного обучения.

Задача дошкольного образования – познакомить детей с богатым национальным, культурным и историческим наследием народа, воспитать их духовно и нравственно, сформировать у детей национальный патриотизм, сформировать у дошкольников потребность в образовании, воспитать их регулярно и состоит из подготовки к учебному процессу, развития мышления детей, формирования навыков самостоятельного и свободного выражения мыслей, обеспечения физического и психического здоровья. С этой точки зрения развитие творческих способностей дошкольников посредством нестандартных и инновационных методов является одной из главных задач педагогов.

Реализация государственной учебной программы «Первый шаг» в дошкольных образовательных организациях [26;], а также государственных требований по развитию детей младшего и дошкольного возраста Республики Узбекистан [27;] высокоэффективного современного образования и инновационных технологий, изменения в в области образования - начиная с системы дошкольного образования, низшего звена системы непрерывного образования, в качестве важных задач указывается воспитание и подготовка здорового и всесторонне развитого ребенка к школе, подготовка зрелых кадров.

В условиях глобализации среда рукотворного цивилизованного общества оказывает свое влияние на образование и воспитание молодого поколения, и в результате чрезмерного увеличения потока информации воспитание сегодняшних детей с помощью простых занятий и традиционных методы обучения, результат обучения снизился.

Современному педагогу, работающему в организациях дошкольного образования, необходимо знать новинки в области дошкольного образования, неустанно работать над собой, обеспечивать свою готовность к практической деятельности в постоянно меняющихся нестандартных условиях инновационными и комплексными знаниями, которые и это порождает необходимость создания дополнительных, нетрадиционных, параллельных независимых систем образования. На наш взгляд, важнейшей среди вышеперечисленных проблем является необходимость оснащения педагогических кадров дошкольных образовательных организаций творческим подходом к образовательному процессу, инновациями и инновационными образовательными технологиями. Содержательная организация процесса развития творческих способностей дошкольников с помощью АРТ-педагогики зависит от того, насколько хорошо освоена основная учебная программа.

Использованные источники::

1. Постановление Кабинета Министров Республики Узбекистан 11 июня 2019 года № 487 «О мерах по внедрению передовых информационных и педагогических технологий в систему дошкольного образования»

2. Постановление Кабинета Министров Республики Узбекистан «Об утверждении Государственного стандарта дошкольного образования и обучения» №802 от 22.12.2020 г.

3. Абдураимова Г.О. метод использования технологии STEAM в начальных классах

4. Aldemir J., Kermani H. Integrated STEM curriculum: improving educational outcomes for Head Start children //Early Child Development and Care. – 2017. – T. 187. – №. 11. – С. 1694-1706;

5. An D. A meta-analysis of the effectiveness of STEM-programs in the United States. – Cleveland State University, 2013.

6. Anisimova T., Sabirova F., Shatunova O. Formation of design and research competencies in future teachers in the framework of STEAM education //International Journal of Emerging Technologies in Learning (iJET). – 2020. – T. 15. – №. 2. – С. 204-217.

7. Boltayev Sh.T. Boshlang‘ich ta’limda o‘quvchilar ijodiy faoliyatini shakllantirish // Monografiya. N.:2012

Музаффарова К. З.
старший преподаватель
Университет информационных технологий и менеджмента
Узбекистан

МЕТОДЫ ОЦЕНКИ ЭФФЕКТИВНОСТИ ИСПОЛЬЗОВАНИЯ ИНОСТРАННЫХ ИНВЕСТИЦИЙ В РЕГИОНЕ

Аннотация. *В данной статье через модели выражаются теоретические основы связи между темпами экономического роста и инвестициями, а также обосновывается высокая эффективность привлечения прямых инвестиций в экономику.*

Ключевые слова: *инвестиции, иностранные инвестиции, прямые инвестиции, портфельные инвестиции, мультипликатор, акселератор, реинвестирование, инвестор.*

Muzaffarova K. Z.
Senior Lecturer
University of Information Technology and Management
Uzbekistan

METHODS OF ASSESSING THE EFFICIENCY OF USING FOREIGN INVESTMENTS IN THE REGION

Annotation. *This article expresses the theoretical foundations of the relationship between economic growth rates and investments through models, and also substantiates the high efficiency of attracting direct investment into the economy.*

Key words: *investments, foreign investments, direct investments, portfolio investments, multiplier, accelerator, reinvestment, investor.*

Введение. В условиях глобализации ослабление процессов государственного регулирования национальных рынков, дальнейшая либерализация этих процессов, ускорение разработки и внедрения высоких информационных и коммуникационных технологий, связанных с цифровой экономикой, наличие возможностей использования дешевых и эффективные информационно-коммуникационные инструменты позволят участникам рынка расширить свое участие на зарубежных рынках и обеспечить развитие международной интеграции. В результате рост трансграничных потоков капитала, особенно в форме прямых иностранных инвестиций (далее — ПИИ), стал основным фактором, определяющим качество и масштабы интеграционных процессов в мировой экономике.

Инвестиции играют важную роль в процессе устойчивого социально-экономического развития любой страны. Инвестиции, осуществляемые в различных формах, от материальных активов до интеллектуального и человеческого капитала, также в значительной степени способствуют росту эффективности компании-инвестора. Не отрицая положительных сторон инвестиций, в то же время необходимо не упускать из виду их негативное влияние на экономику страны-получателя. Например, есть отрасли и отрасли экономики, которые часто страдают от перенасыщения инвестициями. Это, в свою очередь, отражается на неэффективном использовании ресурсов и избыточной производительности активов. Инвестиционные потоки также могут быть направлены в отрасли, которые не обеспечивают достаточной эффективности, имеют положительный социальный профиль и даже наносят значительный ущерб окружающей среде. Факт, что масштабы и описание воздействия на рост и развитие экономики страны-получателя инвестиций сегодня во многом зависят не от количественных характеристик инвестиционного процесса, а от их качественных аспектов [1].

Теоретическая основа взаимосвязи экономического роста и инвестиций представлена моделями мультипликатора и акселератора. Влияние инвестиций на рост национального дохода отражено в модели инвестиционного мультипликатора Дж. М. Кейнса:

$$(I_t - I_{t-1}) = m(Y_T - Y_{t-1})$$

Здесь: It - объем инвестиций в определенный период времени;

m - мультипликатор (показывает, на сколько единиц изменится национальный доход при увеличении объема инвестиций на 1 единицу)

Yt - национальный доход в момент времени t (t-1 – предыдущий период).

Эта модель показывает, что если мультипликатор больше 1, изменение инвестиций приводит к увеличению национального дохода. Валовой внутренний продукт можно определить, выполнив математические действия из модели:

$$Y = Y_{t-1} + \frac{1}{m}(I_{Tt} - I_{t-1})$$

Существует также обратная зависимость между инвестициями и ВВП, что отражено в модели акселератора, предложенной Дж. Кларком:

$$I_t = a(Y_T - Y_{t-1})$$

Здесь: а – инвестиционный акселератор (показывает реинвестируемую долю национального дохода).

Модель акселератора описывает связь между ростом национального дохода и дополнительным ростом инвестиций, то есть показывает, какая часть дополнительного роста национального дохода будет конвертирована в инвестиции, которые в дальнейшем приведут к мультипликативному эффекту в течение определенного периода.

Выражаем объем валового внутреннего продукта (Yt) из модели акселератора:

$$Y = Y_{t-1} + \frac{1}{a} I_t$$

Таким образом, делая вывод из вышеизложенного, можно сказать, что объем валового внутреннего продукта участвует в функции его предыдущих значений, инвестиций, текущего и предыдущего значений.

Процесс прямых иностранных инвестиций характеризуется своей сложностью, сложностью и высоким уровнем риска в связи с переводом инвестиционной деятельности в международный масштаб. Таким образом, для достижения стабильного, долгосрочного развития, регулирования инвестиционной деятельности иностранных инвесторов и формирования эффективной государственной политики по привлечению ПИИ в принимающую страну необходимо в полной мере учитывать все внутренние и внешние факторы среды, и прежде всего, характер прямых иностранных инвестиций и их особенности.

Закон Республики Узбекистан от 25 декабря 2019 года №598 «Об инвестициях и инвестиционной деятельности» является важным правовым документом, регулирующим отношения в сфере инвестиций и инвестиционной деятельности, осуществляемой иностранными и местными инвесторами. Согласно статье - 3 этого Закона: прямые иностранные инвестиции - вложения иностранного инвестора без государственных гарантий, за счет собственных средств или заемных средств в рискованных условиях, а иностранные инвестиции - иностранным инвестором в объекты социальной сферы, предпринимательства, научная и иные виды деятельности материальные и нематериальные активы и права на них, в том числе права на объекты интеллектуальной собственности, а также реинвестиции.

Закон уточняет понятие иностранного инвестора и включает в себя административные или территориальные органы иностранных государств, международные организации, созданные в соответствии с соглашениями или иными соглашениями между странами или являющиеся субъектами международного публичного права, юридические лица, созданные и действующие в соответствии с законодательством Российской Федерации. иностранные государства, любые другие компании, организации или объединения, граждане иностранных государств и лица без гражданства, постоянно проживающие за пределами Республики Узбекистан [2].

Хотя в большинстве случаев иностранному инвестору не предоставляется полный контроль над предприятием-объектом инвестиций, инвестор в виде прямых иностранных инвестиций пытается установить контроль над предприятием-объектом инвестиций. Это основная мотивация иностранных инвесторов вкладывать средства.

Согласно определению Организации экономического сотрудничества и развития и Международного валютного фонда, инвестор, владеющий 10%

голосующих акций или долей акций, равной правам голоса, может непосредственно участвовать в управлении предприятием или оказывать влияние по управлению предприятием [3]. Статья 3 Закона Республики Узбекистан от 25 декабря 2019 года № 598 «Об инвестициях и инвестиционной деятельности» предусматривает, что не менее пятнадцати процентов акций (долей, долей) или уставного капитала (уставного капитала) предприятий в на территории Республики Узбекистан с участием иностранных инвестиций определяются как предприятия, организующие инвестиции [2].

Таким образом, отношения между инвестором и стороной-получателем носят долгосрочный характер, и обе стороны могут участвовать в управлении объектом инвестирования на основе определенных процедур и принципов, объекты прямых инвестиций не всегда являются высоколиквидными объектами, инвестиционные операции являются -временного описания, не имея, напротив, следует подчеркнуть, что они создают непрерывные и непрерывные отношения в товарной, финансовой, технологической и тому подобных формах на протяжении длительного периода времени. По мнению экспертов Международного валютного фонда, прямые иностранные инвестиции в экономику страны уйдут через 8 лет в различных формах и формах прибыли и доходов [4]. Однако бывают случаи, когда прямой инвестор или группа инвесторов покупает конкретное предприятие с целью продажи его убыточных активов или реструктуризации предприятия с целью его перепродажи другим инвесторам. В этой ситуации, хотя отношения между инвестором и предприятием не являются долгосрочными, большое значение имеет влияние инвестора.

Покупка предприятия или активов, расположенных в другой стране, и последующие отношения и операции между донорами и получателями включаются в прямые иностранные инвестиции. Инвестиции осуществляются путем реинвестирования собственного капитала инвестора, что позволяет приобрести определенную долю капитала реципиента-реципиента инвестиций, нераспределенной прибыли в виде дивидендов, представляющих собой ресурсный источник прямых иностранных инвестиций, внутренних кредитов предприятия, долговые операции между материнской компанией и ее зарубежными филиалами могут быть увеличены [5]. Кроме того, прямые иностранные инвестиции могут осуществляться в форме нематериальных активов, таких как передача технологий, товарные знаки, ноу-хау, опыт управления.

Инвестируя в портфель, инвестор не ставит перед собой цели управлять деятельностью объекта инвестирования. Согласно определению Международного валютного фонда и Организации экономического сотрудничества и развития, портфельные инвестиции включаются в трансграничные операции с долговыми ценными бумагами или другими ценными бумагами, кроме ценных бумаг, включенных в прямые инвестиции или резервные активы Все остальные инвестиции, не включенные в прямые и портфельные инвестиции, включаются в группу инвестиций других категорий[6]. В рамках общепринятых определений и пояснений можно выделить следующие специфические аспекты прямых инвестиций:

- долгосрочные взаимодействия и отношения;
- высокий уровень ответственности и подотчетности инвестора перед получателем;
- владение не менее 10% уставного капитала получателя;
- наличие влияния или управленческого контроля над объектом инвестирования;
- передача нематериальных активов;
- что уровень ликвидности объектов инвестирования не столь высок;
- возможность влиять на ситуацию на рынке труда страны-реципиента;
- способность влиять на другие отрасли и отрасли экономики страны-реципиента.

Определение прямых инвестиций и анализ их конкретных аспектов показывают, что именно прямые инвестиции дают большой импульс развитию стабильных и долгосрочных отношений между странами, участвующими в инвестиционных процессах. В условиях наличия благоприятных условий, позволяющих осуществлять инвестиции и развивать их положительный эффект, прямые инвестиции вносят большой вклад в развитие предприятий, отраслей и секторов экономики страны-реципиента и, в свою очередь, , развитию экономики страны-получателя инвестиций. Оно позволяет национальным компаниям выйти на мировой рынок и создает основу для расширения глобальных экономических связей посредством передачи знаний. В то же время прямые инвестиции способствуют развитию рынков труда и финансовых рынков, служат эффективному обмену технологиями на международном уровне, оказывают эффективное воздействие на все аспекты экономической деятельности участников инвестиционного процесса и, в конечном счете, на все аспекты экономической деятельности участников инвестиционного процесса. это ведет к дальнейшему расширению международных экономических связей и ведет к росту мировой экономики.

Использованные источники:

1.OECD. Policy framework for investment. Pocket Edition,2015.-P.6
2.Закон Республики Узбекистан от 25 декабря 2019 года №598 «Об инвестициях и инвестиционной деятельности» https://lex.uz/docs/4664142
3.OECD. Benchmark Definition of Foreign Direct Investment. Fourth edition,2008.P.17ва IMF. Balance of Payments and International Investment Position Manual, Sixth Edition.2007.P.101
4.Костюнина Г.М. Иностранные инвестиции (вопросы теории и практики зарубежных стран). М.: ИНФРА-М, 2014.-С.7
5.OECD. Foreign Direct investment statistics. Explanatory notes.-P.2
6.IMF. Balance of Payments and International Investment Position Manual, Sixth Edition,2007.

7. Salyaevich, J. Q., & Pardaev, O. C. (2021). Digital Transformation: The Role of a Digital Platform based on Business Model. Middle European Scientific Bulletin, 10, 280-284.
8. Botirovich, K. A. (2022). ADVANCED EXPERIENCES OF FOREIGN COUNTRIES AND MODERN WAYS TO USE THEIR OPPORTUNITIES OF LOCAL BUDGETS TO ENSURE SUSTAINABILITY. Thematics Journal of Education, 7(4).
9. Boboyeva, S., & Ergashev, J. (2024). YOSH TADBIRKORLARNI QO'LLAB QUVVATLASHDA IMTIYOZLI KREDITLARNI AHAMIYATI. Инновационные исследования в науке, 3(4), 34-39.
10. Boboyeva, S., & Sa'dullayeva, F. (2024). AHOLINING MOLIYAVIY SAVODXONLIGINI OSHIRISHDA TIJORAT BANKLARINING ROLI. Общественные науки в современном мире: теоретические и практические исследования, 3(4), 40-43.
11. Ochilova N. A. Farming Management and their Economic Efficiency //Innovation in the Modern Education System. – 2023. – Т. 3. – №. 28. – С. 177-184.
12. Ochilova N. A. Economic performance of dehkan farms in kashkadarya region //GWALIOR MANAGEMENT ACADEMY. – 2022. – Т. 117.
13. Akramovna O. N. SCIENTIFIC ON INCREASING THE EFFICIENCY OF CROP PRODUCTION ON FARMS AND PEOPLE'S HOMESTEADS RECOMMENDATION ANALYSIS //" ONLINE-CONFERENCES" PLATFORM. – 2022. – С. 300-303.
14. Xo‘jaqulova N. Dorivor o ‘simliklarni yetishtirish va qayta ishlashda davlat tomonidan qo ‘llab-quvvatlashning ahamiyati. – 2023.
15. Khujakulova N. R. Economic Efficiency of Using Innovative Technologies In the Cultivation of Medicinal Plants //The Journal of Economics, Finance and Innovation. – 2023. – С. 198-202.

Муйдинов Э.К.
курсант 3-го разряда Академии внутренних дел
Республики Узбекистан

ОРГАНИЗАЦИЯ И КООРДИНАЦИЯ ДЕЯТЕЛЬНОСТИ ИНСПЕКТОРОВ ПРОФИЛАКТИКИ ПРЕСТУПНОСТИ

Абстрактный. *В данной статье проводится анализ регулирования преступности и профилактической деятельности, ее роль и значение в жизни общества, а также анализ практических возможностей реализации.*

Ключевые слова. *преступность, профилактика, безопасность граждан, инспектор, дисциплина, преступность, правовая культура, камеры наблюдения, автоматизированная информационная система, сходы граждан.*

Muydinov E. K..
3rd category cadet
of the Academy of Internal Affairs
of the Republic of Uzbekistan

ORGANIZATION AND COORDINATION OF THE ACTIVITIES OF CRIME PREVENTION INSPECTORS

Annotation. *This article analyzes the regulation of crime and preventive activities, its role and importance in the life of society, as well as an analysis of the practical possibilities for implementation.*

Key words: *crime, prevention, citizen safety, inspector, discipline, crime, legal culture, surveillance cameras, automated information system, citizen gatherings.*

Ввведение. Предупреждение преступности, то есть профилактическая деятельность, играет важную роль в поддержании порядка в обществе и обеспечении безопасности граждан. В этом направлении роль профилактических инспекторов бесподобна, а их деятельность направлена на выявление, предупреждение и минимизацию нарушений. В данной статье речь пойдет о деятельности инспекторов профилактики в организации и координации профилактики правонарушений, важных аспектах и особенностях этого процесса.

Основная часть. Основные цели и задачи профилактической деятельности. На профилактических инспекторов возлагаются задачи по предотвращению преступлений в обществе, поддержанию порядка, снижению уровня преступности и других преступлений. Они устанавливают непосредственный контакт с гражданами, дают консультации по различным вопросам, проводят разъяснительную работу, проводят мероприятия, направленные на раннее обнаружение опасности.

Основными целями профилактических мероприятий являются:

- предупреждение преступности и нарушений, выявление и устранение опасных ситуаций.

- формирование правовых знаний и правовой культуры среди граждан.

- проведение профилактических бесед с гражданами, повышение их правовых знаний и помощь им в воздержании от противоправных действий.

- анализ преступлений посредством специальных анализов и выявление зон повышенного риска, реализация в них дополнительных профилактических мер.

Организация и координация деятельности. Эффективная организация и координация деятельности инспекторов профилактики осуществляется на основе ряда принципов. Они работают во взаимодействии с органами внутренних дел, районными управлениями и гражданами. Ниже приведены основные составляющие этого процесса:

1. Создание региональных планов профилактики: Для каждого региона разрабатывается специальный план, в котором наиболее вероятны виды преступлений и правонарушений и определяются меры по их ликвидации.

2. Прямое общение с гражданами: инспекторы часто встречаются и беседуют с местными жителями. Посредством этих диалогов выявляются проблемы и проблемные места, проводится разъяснительная работа в целях информирования граждан и повышения их правовой культуры.

3. Организация специальных профилактических мер: Инспекторы проводят специальные профилактические мероприятия с учетом факторов, повышающих риск в определенный период или ситуацию. Например, накануне больших праздников меры безопасности усиливаются.

4. Аналитические и мониторинговые работы: Превентивные инспекторы готовят регулярные аналитические отчеты о допущенных нарушениях. Благодаря этому будет определено, какие меры предпринять в будущем и на каких направлениях сосредоточить внимание.

5. Использование технологического оборудования и инструментов. Современные технологии помогают профилактическим инспекторам в аналитических процессах. В частности, использование камер наблюдения, обработка данных посредством автоматизированных информационных систем помогают инспекторам во многих случаях выявлять нарушения и принимать оперативные меры.

Сотрудничество и участие сообщества. Одним из важных аспектов работы профилактических инспекторов является работа в тесном сотрудничестве с общественностью. В частности, сотрудничество с районными активистами, сходами граждан, представителями образовательных учреждений повышает эффективность работы проверяющих. Работа с общественностью осуществляется по следующим направлениям:

- организация пропагандистской деятельности по вопросам безопасности и предотвращения преступности в микрорайоне и образовательных учреждениях.

- борьба с социальными проблемами, в том числе с преступностью среди молодежи и подростков.

- формирование групп волонтеров, которые помогают выявлять нарушения среди местного населения.

Краткое содержание. Инспекторы по профилактике играют важную роль в предупреждении преступности. Хорошо спланированные и скоординированные профилактические меры имеют большое значение для повышения эффективности их деятельности. На основе общения с населением, специальной деятельности и аналитического подхода инспекторы могут успешно выполнять свои задачи. Преступность и правонарушения также можно снизить за счет использования технологий и партнерства с сообществами. Таким образом, профилактические инспекторы эффективно выполняют свои обязанности по обеспечению мира и безопасности общества.

Использованные источники:

1. Каримов О., Турсунов Б., «Правовые основы профилактической инспекции», Журнал «Правоведение и общество», 2020. В статье анализируется превентивно-правовой статус и деятельность инспекции.
2. Махмудов И., Содикова Р.» Юридические вопросы пропаганды и молодые люди от нарушений защиты дела пути». Проблемы молодежи и социальная безопасность, Ташкент, 2022.

Мустафаева З. С.
преподаватель
Джизакский государственный педагогический университет
Республика Узбекистан, г. Джизак

ВЫСОКОТЕХНОЛОГИЧНЫЙ МЕТОД РАЗВИТИЯ РЕЧИ ДЕТЕЙ ДОШКОЛЬНОГО ВОЗРАСТА, ВНЕДРЕНИЕ ИННОВАЦИЙ В ПРАКТИКЕ СТУДЕНТОВ ДЖИЗАКСКОГО ПЕДАГОГИЧЕСКОГО УНИВЕРСИТЕТА

Аннотация: *В данной работе рассматривается использование интерактивных игровых технологий для развития речи детей дошкольного возраста. Анализируются результаты внедрения данной методики в образовательный процесс, а также её влияние на активизацию речевых навыков и коммуникативных способностей детей. Предоставляется подробный обзор ключевых аспектов применения цифровых инструментов и игр, направленных на расширение словарного запаса, улучшение произношения и грамматической правильности речи. Оценка эффективности методики основывается на данных о процентном улучшении речевой активности детей, а также на откликах педагогов, внедривших методику в практическую работу.*

Ключевые слова: *интерактивные технологии, развитие, речь, дети, дошкольный возраст, методика, игры, словарный запас, коммуникативные навыки, педагогика.*

Mustafayeva Z. S.
Lecturer
Jizzakh State Pedagogical University
Republic of Uzbekistan, Jizzakh

HIGH-TECH METHOD OF SPEECH DEVELOPMENT IN PRESCHOOL CHILDREN, IMPLEMENTATION OF INNOVATIONS IN THE PRACTICE OF STUDENTS OF JIZZAKH PEDAGOGICAL UNIVERSITY

Abstract: *This paper examines the use of interactive gaming technologies for the speech development of preschool children. The results of the implementation of this methodology in the educational process, as well as its impact on the activation of speech skills and communication abilities of children are analyzed. A detailed overview of the key aspects of the use of digital tools and games aimed at expanding vocabulary, improving pronunciation and grammatical correctness of speech is provided. The assessment of the effectiveness of the methodology is based on data on the percentage improvement in children's speech activity, as well as on the feedback from teachers who have implemented the methodology in practical work.*

Key words: *interactive technologies, development, speech, children, preschool age, methodology, games, vocabulary, communication skills, pedagogy.*

Введение: Развитие речи детей дошкольного возраста является основой их успешной социализации и будущего обучения. Современные образовательные подходы в дошкольных учреждениях требуют использования инновационных технологий, которые способствуют более эффективному обучению и воспитанию. В этой связи внедрение высокотехнологичных методов в образовательную практику студентов педагогических вузов, таких как Джизакский педагогический университет, становится важной составляющей подготовки будущих воспитателей и педагогов. Эти методы не только развивают речевые навыки у детей, но и обеспечивают педагогам доступ к современным инструментам и стратегиям для работы с детьми.

Методология: Методика Интерактивные игровые технологии для развития речи у детей дошкольного возраста. Эта методика направлена на активное вовлечение детей дошкольного возраста в процесс развития речи через использование интерактивных игровых технологий. Основой методики является создание увлекательных ситуаций, в которых дети активно взаимодействуют с педагогом и с одногруппниками, развивая не только речь, но и коммуникативные навыки. Важной частью методики является использование различных цифровых платформ и приложений, которые предлагают детям разнообразные игры для формирования и совершенствования речевых навыков, таких как рассказывание историй, диалоги с персонажами и творческие задания, связанные с построением речевых конструкций. В рамках этой методики педагог использует разнообразные электронные и виртуальные игры, которые стимулируют речевую активность детей через элементы конкурсов, викторин и других образовательных форматов. Каждый элемент игры направлен на развитие конкретных аспектов речи — от формирования словарного запаса до правильного построения предложений и улучшения произношения. Для студентов Джизакского педагогического университета данная методика служит важным инструментом для обучения и практики использования современных технологий в педагогической деятельности. Студенты учатся эффективно внедрять интерактивные игровые технологии в процесс развития речи у детей дошкольного возраста, что значительно повышает качество их подготовки к работе в современных образовательных учреждениях.

Результат: Результаты проведённого исследования по методике Интерактивные игровые технологии для развития речи у детей дошкольного возраста показали значительное улучшение речевых навыков у детей, а также положительное влияние на их коммуникативные способности. В исследовании приняли участие 40 детей дошкольного возраста из трёх групп.

В процессе обучения с использованием интерактивных игр и мультимедийных материалов было отмечено следующее:

Таблица 1.

Результаты применения интерактивных игровых технологий для развития речи у детей дошкольного возраста

Параметр	Процент улучшения	Положительный эффект	Минусы
Активизация словарного запаса	75%	75% детей расширили словарный запас	Не все дети усвоили все новые слова
Увеличение речевой активности	80%	80% детей стали более активными в общении	Некоторые дети продолжали оставаться пассивными
Коррекция произношения	70%	70% детей улучшили произношение	Остались трудности у 30% детей

Заключение: Внедрение высокотехнологичных методов в развитие речи детей дошкольного возраста является необходимым шагом в модернизации образовательной практики. Использование инновационных методов, таких как игровые конструкции и цифровые технологии, не только способствует более эффективному развитию речи у детей, но и подготовке студентов педагогических вузов к работе в условиях современных образовательных стандартов. Практическое применение этих методов в Джизакском педагогическом университете будет способствовать улучшению качества образования и воспитания в дошкольных учреждениях.

Использованные источники:

1. Буранова, Ш. А., & Пак, Д. А. (2021). Развитие навыков письма у дошкольников в раннем возрасте. In НОВАЯ НАУКА: ИСТОРИЯ СТАНОВЛЕНИЯ, СОВРЕМЕННОЕ СОСТОЯНИЕ, ПЕРСПЕКТИВЫ РАЗВИТИЯ (pp. 142-143).
2. Пак, Д. А., Абдурахмонов, А. М., & Рафиев, Ф. А. (2021). СОЦИАЛЬНАЯ И ЭМОЦИОНАЛЬНАЯ ПОДГОТОВКА ДЕТЕЙ ДОШКОЛЬНОГО ВОЗРАСТА. In Advances in Science and Technology (pp. 78-79).
3. Рафиев, Ф. А., Пак, Д. А., & Абдурахманов, А. М. МНОГОКРАТНОЕ ИНТЕРАКТИВНОЕ ЧТЕНИЕ ДЕТЕЙ В ДОШКОЛЬНОМ ВОЗРАСТЕ.
4. Мустафаева, З. С. (2022). РАЗВИТИЕ ФОРМ ОБЩЕНИЯ У ДОШКОЛЬНИКОВ. PEDAGOG, 5(7), 17-21.
5. Мустафаева, З. С. (2022). ФОРМИРОВАНИЕ НАВЫКОВ САМООБСЛУЖИВАНИЯ У ДЕТЕЙ ДОШКОЛЬНОГО ВОЗРАСТА

MAKTABGACHA YOSHDAGI BOLALARDA O'ZO'ZIGA XIZMAT QILISh KONIKMASINI SHAKLLANTIRISH FORMATION OF SELF-SERVICE SKILLS IN PRESCHOOL CHILDREN. O'ZBEKISTONDA FANLARARO INNOVATSIYALAR VA ILMIY TADQIQOTLAR JURNALI, 1(12), 787-791.
6. Saidkulovna, M. Z. (2022). Teaching Preschool Children In Expressive Reading Of Poems. Journal of Pedagogical Inventions and Practices, 14, 76-77.
7. Мустафаева, З. С. (2022). LITERACY TEACHING IN PRESCHOOL EDUCATIONAL ORGANIZATIONS, International Journal of Pedagogics, 11-26
8. Мустафаева, З. С. (2023). Культура речи учителя, Xalqaro onlayn ilmiy-amaliy konferensiya, 411-415
9. Мустафаева, З. С. (2023). ПСИХОЛОГО-ПЕДАГОГИЧЕСКАЯ ПОМОЩЬ В СЕМЬЕ В ВОСПИТАНИИ И РАЗВИТИИ ДОШКОЛЬНИКОВ, Xalqaro onlayn ilmiy-amaliy konferensiya Джизак. 219-224
10. Мустафаева, З. С. (2021). SHAXSNING KOMMUNIKATIV KOMPETENTSIYAGA EGA BO’LISHINING AXAMIYATI, АКТУАЛЬНЫЕ ВЫЗОВЫ СОВРЕМЕННОЙ НАУКИ, 15-17

Одилова Г.М.
преподаватель
Самаркандский Государственный медицинский университета

ОСОБЕННОСТИ КЛИНИЧЕСКОГО ТЕЧЕНИЯ, ДИАГНОСТИКИ И ЛЕЧЕНИЯ ХРОНИЧЕСКОГО НЕСПЕЦИФИЧЕСКОГО КОЛИТА

Аннотация. *В статье представлены данные исследования особенности клинического течения неспецифического хронического колита в связи с упорством и тяжестью этого заболевания, а также неясностью этиологии и патогенеза, отсутствием единой классификации, рационального патогенетического лечения является одной из актуальных в современной медицине. Наиболее спорен вопрос о причине возникновения язвенных колитов.*

В 2013-2022 годах был проведен ретроспективный анализ историй болезни пациентов, в терапевтическом отделении больницы госпитализированных 98 больных (женщин-55, мужчин-43). По возрасту больных распределили таким образом: до 20 лет было 8 больных, до 30 лет-14, до 40 лет-13, до 50 лет-21, до 60 лет-31 и старше 60-11. Анализируя данные, мы пришли к выводу, что у указанных больных течение заболевания было легким, процесс приобрел затяжной характер с периодами длительной ремиссии.

Ключевые слова: *кишечные инфекции, энтериты, пищевая токсикоинфекция, хронический колит.*

Odilova G.M.
Lecturer
Samarkand State Medical University

FEATURES OF THE CLINICAL COURSE, DIAGNOSIS AND TREATMENT OF CHRONIC NON-SPECIFIC COLITIS

Abstract*. The article presents the data of the study of the clinical course of non-specific chronic colitis in connection with the persistence and severity of this disease, as well as the uncertainty of the etiology and pathogenesis, the lack of a unified classification, rational pathogenetic treatment is one of the most pressing in modern medicine. The most controversial issue is the cause of ulcerative colitis.*

In 2013-2022, a retrospective analysis of patient records was conducted in the therapeutic department of the hospital, 98 patients (women-55, men-43) were hospitalized. The patients were distributed by age as follows: 8 patients under 20, 14 under 30, 13 under 40, 21 under 50, 31 under 60, and 11 over 60. Analyzing the

data, we came to the conclusion that the disease in these patients was mild, and the process became protracted with periods of long-term remission.
Keywords: *intestinal infections, enteritis, food poisoning, chronic colitis.*

Введение. Проблема неспецифического хронического колита в связи с упорством и тяжестью этого заболевания, а также неясностью этиологии и патогенеза, отсутствием единой классификации, рационального патогенетического лечения является одной из актуальных в современной медицине [1,4]. Наиболее спорен вопрос о причине возникновения язвенных колитов. Сочетание рецидивов и ремиссий заставляет предполагать существование неблагоприятно протекающих иммунологических процессов [2].

В развитии и течении колитов имеет значение специфика жаркого климата и фактора питания. Продолжительное жаркое и сухое лето, повышенная ветреность значительно меняют водно-солевой обмен, снижают кислотность желудочного сока и сопротивляемость инфекции [3,5], локализованной в кишечнике. Кроме того, жаркий климат приводит к активизации функции надпочечников с последующими стрессовыми реакциями и состояниями [6,7]. Принятая на Востоке острая, с большим содержанием белка, сокогонная пища предрасполагает к секреторному дискомфорту [8]. Если учесть повышенное употребление поваренной соли, недостаточно термически обработанных продуктов (шашлыки), большое количество овощей и фруктов, содержащих клетчатку, возросшую химизацию пищевых продуктов, потребление аллергенов (томаты, клубника, дыни), становится понятной актуальность изучаемой проблемы в условиях [9,10].

Цель исследования явилось изучение особенности течения, хронического неспецифического колита.

Материалы и методы исследования. Материалом для изучения являются больные, обратившиеся в Областную клиническую больницу Самаркандской области за последние 10 лет (2013-2022 год), и их истории болезни. При наблюдении за больными, основное внимание уделялось течение и диагностики данного заболевания, возрастным особенностям и сопутствующим заболеваниям больных. При обследовании больных, были использованы клинические, эпидемиологические, лабораторные - общий анализ крови, общий анализ мочи, общий анализ кала, биохимические, серологические, и статистические методы. В комплексе со стандартными методами обследования у отдельных больных при необходимости проводился анализ протромбинового индекса, свертывающей системы крови, белка и белковых фракций, определение уровня щелочной фосфатазы, амилазы и холестерина. Из специальных методов исследования использовали рентгенографии (иррогоскопии), ректоромоноскопии и фиброколоноскопии.

Результаты и их обсуждение. В 2013-2022 годах был проведен ретроспективный анализ историй болезни пациентов, в терапевтическом отделении больницы госпитализированных 98 больных (женщин-55, мужчин-

43). По возрасту больных распределили таким образом: до 20 лет было 8 больных, до 30 лет-14, до 40 лет-13, до 50 лет-21, до 60 лет-31 и старше 60-11. Анализируя данные, мы пришли к выводу, что у указанных больных течение заболевания было легким, процесс приобрел затяжной характер с периодами длительной ремиссии. Больные лечились много лет.

У большинства больных в анамнезе были указания на перенесенные кишечные инфекции: энтериты и энтероколиты - у 43, дизентерию - 17, осложненные формы острого аппендицита - у 8, вирусный гепатит В и С- у 25, брюшной тиф - у 6 и неустановленной этиологии пищевая токсикоинфекция - у 20. Инфекционными заболеваниями страдали 35 больных, сопутствующим деформирующем и инфекционном полиартритом - 6, ревматизмом в разных проявлениях и в разной фазе активности - 29; указания на ревматизм в анамнезе, который амбулаторно был излечен, отмечены у 3.

Все разбираемые случаи мы отнесли к рецидивирующим, с легким течением. У 28 больных отмечено тотальное поражение кишечника, у 33-правостороннее, у 6-левостороннее (регионарный тип) и у 31-сегментарное. Топографию поражения устанавливали при помощи ректоскопии, ирригоскопии и в отдельных случаях фиброколоноскопии.

Клиническая картина у больных имела сходный характер. Жалобы при поступлении на общую слабость, адинамию, апатию предъявляли 64 человека. Неприятные ощущения по ходу всего кишечника отмечали 35 больных, боли справа -8, слева-37; во всех остальных случаях больные не могли указать на локализацию болей, отмечали лишь некоторое усиление их перед дефекацией. Характер стула имеет немаловажное значение в диагностическом аспекте. У 69 больных были запоры, у 17-поносы, у 12-неустойчивый стул, до 3-4 раз в сутки, с редкими тенезмами, у 6 больных отмечался зуд в области анального отверстия. У 21 больного с длительными запорами отмечались боли в области сердца с иррадиацией в левую руку и лопатку. У больных с заболеванием толстого кишечника отсутствуют специфические, характерные лишь для данного заболевания симптомы, а наличие множества жалоб и проявлений говорит о поражении сопряженных с кишечником органов.

Что касается общего облика больных, то питание часто были не нарушено, у 2 человек даже была склонность к ожирению, у 24-повышенная упитанность, у 62-нормальное питание и у 10-пониженное.

Показатели гемодинамики были обычно стабильны. Нормальный уровень артериального давления отмечен у 74 больных, наклонность к гипотонии - у 17, повышение артериального давления (без указания на гипертоническую болезнь в анамнезе) – у 7. Частота пульса существенно не менялась. Со стороны нейростатуса значительных изменений нет, хотя отмечаслось нарушение сна у- 16, головные боли – у 26, раздражительность – у 20 и быстрая утомляемость – у 15. При пальпации живота отмечен пневмотоз кишечника у 24 больных, боли в правой подвздошной области - у 13, в правом подреберье - у 5 и в эпигастральной области - у 7. У остальных больных с невыраженной подкожно жировой клетчаткой при пальпации живота отмечалась тяж по ходу толстого кишечника, а легкое массирование вызывало урчание. Наличие большого количества мышечных сфинктеров по ходу толстого кишечника и четкообразное сокращение говорят о гипертонусе его мышечного аппарата.

Связь колита с изменениями в ряде органов и клинические проявления хронических колитов разнообразны. Лабораторные исследования были направлены на выявление этих отклонений.

У всех больных при поступлении было проведено ЭКГ исследование и отмечено, что отклонения от нормы не было лишь у 27 больных. В остальных случаях отмечены нарушения ритма, снижение зубца Т (у 11 больных), снижение интервала S-T (у 17 больных), удлинение интервала Q-T (у 43 больных). Все это свидетельствует о значительных нарушениях проводимости и предсердно-желудочковой сократимости, которые мы рассматриваем как неотъемлемый фактор гипокалиемии. Обращает на себя внимание резкое снижение калия в эритроцитах-86-100 мэкв/л, в то время как в плазме содержание калия стабильно - от 4,4 до 5,1.

Кислотность желудочного сока у 39 больных была не измененной; у 49 значительно снижена и у 2 отсутствовала вовсе, у 8 была повышена. Гиперсекреция отмечена лишь у 21 больного, и этот факт расценен нами как компенсаторно-приспособительный механизм во всей системе пищеварения. При рентгенологическом исследование желудка у 54 больных выявлено функциональный пилороспазм, у 16- гипертрофический гастрит, у 2- дивертикул пищевода, у остальных 26 патологии в желудке не обнаружено.

Показатели крови значительно не страдали, хотя при неизменном количестве эритроцитов отмечалось снижение показателей гемоглобина до 56—60 ед. с умеренной гиперхромией и анизопойкилоцитозом. Однако такие изменения найдены лишь у 48 больных. Во всех остальных случаях изменений в гепатограмме не выявлено. СОЭ несколько увеличена и составляет 20-28 мм/ч. При исследовании белкового спектра обнаружено повышение α-глобулинов при показателях общего белка до 7-8%, т. е. обнаружена диспротеинемия. По мнению авторов, увеличение показателей а-глобулинов служит критерием активности и распространенности деструктивного процесса в очаге поражения.

У всех больных кал в основном был оформленным, обычного цвета, реакция щелочная, слизь в кале была у 37 больных. При его исследовании обращали внимание на микроскопическую картину: отмечались мышечные волокна (+), клетки плоского эпителия (+), мыла (+): лейкоциты единичные, эритроциты не найдены, простейшие и яйца глист не обнаружены, посев отрицательный, лишь у 13 больных обнаружены Blastocystis. При ректоскопии у 6 больных обнаружено сфинктерит, у 3-проктит, у 12-единичные полипы, но на широком основании; у 43- резкая равномерная гиперемия слизистой прямой кишки, без изъязвлений; у 34 патологии не обнаружено. При ирригоскопии у 27 больных заподозрен язвенный колит, у 42- четкообразное строение толстого кишечника, у 20 при опорожнении его остается мраморность рисунка вследствие фиксации бария на складках слизистой (с преобладанием контраста в нисходящей и сигмовидной кишках), у 7 такой рисунок отмечен и в слепой, восходящей, поперечно-ободочной кишках. Долихосигма обнаружена у 2 больных.

Для проведения курса лечения больные находились в стационаре 24-30 дней. Оно начиналось с правильного чередования сна, отдыха, занятий физкультурой и водолечения, что стимулировало процесс пищеварения. Пищу давали в строго определенное время, небольшими порциями (5-6 раз в день). Исключали вещества, вызывающие химическое или механическое раздражение стенки кишки. Химический состав суточного рациона: белков-100-120 г, жиров-60-70, углеводов-200-300, поваренной соли-5,0. Калорийность рациона -2800-3000 кал. В пищу вводили повышенное количество витаминов А, С, В1, В12, РР.

С противовоспалительной целью и в борьбе с микробным фактором всем больным назначали антибиотики широкого спектра. Для нормализации флоры кишечника применяли пробиотики. В качестве противовоспалительного средства широко использовали облепиховое масло, а в качестве рассасывающего - лидазу.

Нормализации функции пищеварения достигали введением внутрь соляной кислоты с пепсином, разного вида алмагелей; функцию желчного пузыря активизировали аллохолом, нормализации процессов в кишечнике достигали с помощью ферментативными препаратами.

Сосудорасширяющие препараты применяли для снятия болей; назначали также витаминотерапию (аскорутин, глюконат кальция, поливитамины).

В качестве антиспастического средства применяли миорелаксанты, а для усиления перистальтики-интестопан; в качестве слабительных использовали настой ромашки, женьшеня, растворы магнезии и слабительные средства.

Лечение колита клизмами предусматривает изменение среды кишечника, которое ведет к изменению флоры, а также снятие чрезмерного возбуждения парасимпатической нервной системы. Пользовались лечебными клизмами из 0,25-процентного раствора новокаина, облепихового и шиповникового масла. С лечебной целью использовали свечи с левомицетином, анестезином, глицерином и др.

Благодаря комплексу примененных мероприятий у больных наступала длительная ремиссия (до 2-5 лет). Выписывались больные в хорошем состоянии, прибавив в весе до 2-4 кг.

Вывод. В заключение необходимо отметить, что хронический неспецифический колит составляет значительный процент среди заболеваний желудочно-кишечного тракта. Жаркий и сухой климат нашей республики предрасполагает к возникновению и развитию этого заболевания, которое должно рассматриваться как краевая патология.

Использованные источники:
1. Луговкина А. А., Рудакова Л. О., Крюкова Н. А., Бессонов А. А., Скворцов В. В. Особенности диагностики и лечения неспецифического язвенного колита // ЭиКГ. 2019. №4 (164). URL: https://cyberleninka.ru/article/n/osobennosti-diagnostiki-i-lecheniya-nespetsificheskogo-yazvennogo-kolita (
2. Одилова Г. М. УСЛОВНО ПАТОГЕННЫЕ КИШЕЧНЫЕ БАКТЕРИЙ ПРИ ПИЩЕВЫЕ ТОКСИКОИНФЕКЦИИ НЕУСТАНОВЛЕННОЙ ЭТИОЛОГИИ //INDEXING. – 2024. – Т. 1. – №. 1. – С. 36-42.
3. Одилова Г. М. РОЛЬ АЛЛЕРГИИ В ПАТОГЕНЕЗЕ И ДИАГНОСТИКЕ КИШЕЧНЫХ ИНФЕКЦИЙ БАКТЕРИАЛЬНОЙ ЭТИОЛОГИИ //Innova. – 2023. – Т. 9. – №. 1.
4. Dildora S. et al. BACILLUS PUMILIS BAKTERIYALARI MIKROBIOLOGIK TAHLILI VA BIOTEXNOLOGIYADAGI AHAMIYATI //ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ. – 2023. – Т. 22. – №. 2. – С. 154-161.
5. Mamarasulova N. I. et al. BERBERIS INTEGERRIMA BUNGENING IKKILAMCHI METABOLITLARINING DORIVORLIK XUSUSIYATLARI VA BIOTEXNOLOGIK AHAMIYATI //GOLDEN BRAIN. – 2023. – Т. 1. – №. 10. – С. 33-43.
6. Yusupov M. et al. Rannee vыyavlenie rotavirusnoy infeksii u detey //Katalog monografiy. – 2023. – Т. 1. – №. 1. – С. 1-68.
7. Ташпулатов Ш., Ҳўжақулов Д., Болтаев К. Особенности внешнего дыхания при пищевом ботулизме у детей //Журнал вестник врача. – 2019. – Т. 1. – №. 2. – С. 105-108.
8. Болтаев К. С. и др. МЕТОДЫ ОЧИСТКИ ОРГАНИЗМА ОТ ТОКСИНОВ: СОВРЕМЕННЫЕ ПОДХОДЫ И ЭФФЕКТИВНЫЕ МЕТОДИКИ //AMALIY VA TIBBIYOT FANLARI ILMIY JURNALI. – 2024. – Т. 3. – №. 3. – С. 5-8.
9. Abdikhakimovich K. D. PERFORMANCE OF INDEPENDENT WORK OF STUDENTS IN THE DEPARTMENT OF MICROBIOLOGY, VIROLOGY AND IMMUNOLOGY //TADQIQOTLAR. – 2024. – Т. 31. – №. 2. – С. 57-61.
10. Sultonovich B. K. et al. A comparative study of nematoda-fauna of pastural plants in forest biotopes. – 2022.

Озодбеков Ю. Ш.
ассистент
кафедра Анестезиологии – реаниматологии
и экстренной медицинской помощи
Андижанский государственный медицинский институт

ПРОЦЕССЫ ПРИСПОСОБЛЕНИЯ СЛИЗИСТОЙ ОБОЛОЧКИ ТОЛСТОГО КИШЕЧНИКА ПРИ ПИТАНИИ НЕРАЦИОНАЛЬНОЙ БЕЛКОВОЙ НАГРУЗКЕ

Резюме: *Увеличение белка в суточном потребление в составе питательных веществ или при попадании большого количества белка в организм приводит к неблагоприятным последствиям. Белки усвоенные в виде питательных веществ не могут накапливаться как запас. Лишние белки в печен превращаются в глюкозу. При этом образуется промежуточные вещества вредные для организма. Так же, лишнее количество принятых белков увеличивает кислотность мочи, и к высвобождению кальция из костей, что приводит к остеопорозу. Было изучено гистоструктурные сдвиги слизистой оболочки толстого кишечника при выше указанных явлениях.*

Ключевые слова: *Нерациональное белковое питание, белки, углеводы, жиры, витамины, гипотрофия, спортсмены, диетология, толстый кишечник, остеопороз****.***

Ozodbekov Y. Sh.
Department of Anesthesiology - Reanimatology
and emergency medical care
Andijan State Medical Institute

THE PROCESS OF ADAPTATION OF THE MUCOSA OF THE COLON DURING IRRATIONAL PROTEIN LOAD

Resume: *An incrense of consumption of proteins in dagly ration with other nutrients, or getting a big amount of proteins to the organism lends to the negative results. Assimilated proteins as metrients can not be assumulated in organism as a reserve.Exess of proteins turn info glucose in liver forming trasitional substanus harm ful for the human organism. Hove over, excess of proteins incrense the aciditg of urine and leads to the osteoporosys. Due to the relense of la from bones. Hystostructural shitts of mucosa of colon as a result of processes mentioned abore have also bun studies.*

Keywords: *Monotonous protein food, protein, fat and carbs,vitamins, hypotrofhy,shortsman,colon during,dietology,osteoporosus.*

Актуальность темы: Несмотря на важность качества и количества повседневной пищи для нормального роста и развития организма, в нашей повседневной жизни часто наблюдается нарушение рациональной гигиены питания.

Недостаток питательных веществ в пище может, с одной стороны, нарушить иммунный ответ и нарушить жизненно важные метаболические процессы, а с другой стороны, это может привести к таким проблемам, как переедание, атерогенность и канцерогенность, ожирение и т.д., который является одним из факторов, делающих организм подверженным различным инфекциям: бактериальным, паразитарным, вирусным заболеваниям. Недоедание чаще встречается среди длительно госпитализированных пациентов, особенно тех, кто питается парентерально.

Факторы, способствующие недоеданию, включают: первичное недоедание (голод или недоедание, длительное употребление одной и той же пищи), вторичное недоедание, то есть нарушение всасывания и пищеварительных процессов (заболевания пищеварительного тракта, недостаток пищеварительных соков).

Немаловажную роль играет недостаток или увеличение количества белка, жира, витаминов, микроэлементов на основе патологических состояний, возникающих в органах и тканях организма в результате нарушения рационального питания. В белковой диете значительно снижается поступление в организм углеводов и жиров.

В результате в организме возникает чувство голода и увеличивается расщепление резервов углеводов за счёт компенсаторно-приспособительного процесса в организме. В этом процессе также участвует вода, в результате чего организм начинает терять много воды и углеводов.

Роль потребляемых в организме углеводов компенсируется образованием глюкозы из резервных белков в мышечной ткани. Эти процессы заставляют человека быстро худеть и долгое время не возвращать его в прежнее состояние.

Нехватка углеводов, жиров, витаминов и микроэлементов в белковой диете, недостаток растительных продуктов негативно сказываются на организме. Цвет волос становится тусклым и ломким, кожа становится сухой и белой, бывают случаи быстрой утомляемости. Кроме того, когда потребляется чрезмерное употребление белка, большая нагрузка ложится на почки в результате потребления большого количества воды для его переваривания. Это связано с тем, что промежуточные продукты, образующиеся при переваривании белка, растворяются в воде и выводятся почками в виде мочи. Поэтому при белковой диете рекомендуется пить больше жидкости. С увеличением потребления белка из года в год актуальной проблемой становится полное изучение морфофункциональных сдвигов органов пищеварительной системы.

Объект и предмет исследования: подопытные крысы: 70 белых самцов 90-дневного возраста постнатального онтогенеза.

Подопытные животные были разделены на две группы. Первая группа была контрольной и получала вивариантный рацион. Вторая группа -

экспериментальные животные на 60 дней во время этого же вида пищи скармливали вареным яичным белком. Объектом исследования была толстая кишка.

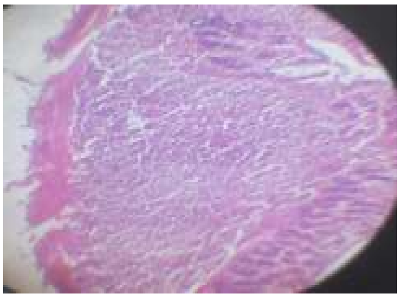
Анализ полученных результатов: В эксперименте морфометрическими исследованиями выявлены криптографические параметры слизистой оболочки толстой кишки, изменение количества энтероцитов и клеток стекловидного тела. С первого дня до конца экспериментов наблюдались различные уровни изменений и сдвигов гистоструктурных параметров толстой кишки.

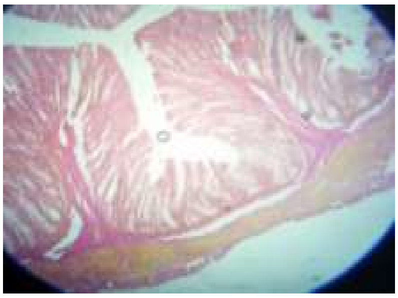
Толщина стенок экспериментальных животных, нагруженных белком, варьировала от 315,4 ± 5,2 мкм до 318,6 ± 5,2 мкм. Глубина крипт, образованных проникновением эпителия на поверхности слизистой оболочки в закрытый слой, уменьшилась с 115,2 + 4,1 мкм до 46,6 + 5,2.

Общая толщина слизистой оболочки варьировала от 121,5 +2,7 мкм до 106,7 +2,7 мкм. Количество ячеек в стенке крипты уменьшилось с 33,2 +1,4 до 30,2 + 1,4, из которых количество бокаловидных ячеек уменьшилось с 9,3 +3,2 до 8,06 +3,2, а общее количество других ячеек уменьшилось на 5 +3, Было обнаружено уменьшение до 2.

Лимфоидные фолликулы толстого кишечника

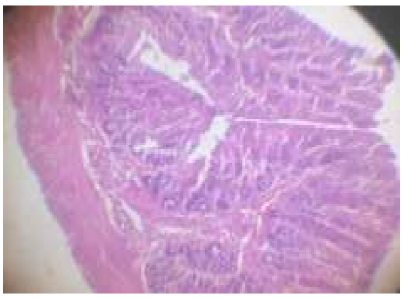
Стенка толстого кишечника

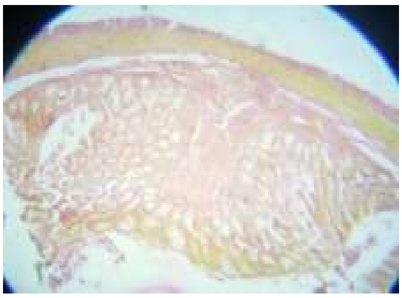




Контроль 60 сутки.
Окраска -гематоксилин-эозином. 7ок. x10об.

Контроль. 60 сутки.
Окраска-ван-гизон. 7ок. x10об.





Эксперимент 60 сутки.

Эксперимент 60 сутки.

Окраска-гематоксилин-эозином. 7ок. x10об.   Окраска-ван-гизон. 7ок. x10об.

При микроскопическом исследовании, наблюдались отчетливо выраженные атрофические и склеротические изменения слоев мышечной и серозной оболочек толстой кишки, переполнение сосудов, рост и утолщение грубой соединительной ткани.

Вывод: В результате воздействия белковой нагрузки происходят атрофические изменения слизистой оболочки толстой кишки, процессы абсорбции замедляются за счёт уменьшения глубины крипт и количества энтероцитов в ней, а также слизистой оболочки кишечника, подслизистой оболочки, вызывает атрофические, склеротические изменения в мышцах и интерстициальной соединительной ткани**.**

Использованные источники:

1. Аль-Раяши Салим Нассир. Морфологические изменения лимфоидных образований желудка при экспериментальном геморрагическом инсульте (экспериментально-морфологическое исследование): автореф. дис. . канд. мед. наук / Аль-Раяши Салим Нассир. М., 2006. 25 с.
2. Дилекова О. В. Морфофункциональная характеристика многокамерного желудка овец в; пренатальном онтогенезе: дис. канд. ветеринар, наук / О. В: Дилекова. М., 2006. - 133с.
3. Покровский В. И. Политика здорового питания. Федеральный и региональный уровни / В. И. Покровский, Г. А. Романенко, В. А. Княжев. Новосибирск: СУМ, 2002. - 19 с
4. Санжапова А.Ф. Особенности постнатального морфогенеза слизистой оболочки фундального отдела желудка белых крыс при длительном потреблении диспергированной пищи / автореф. дис. канд. мед. наук / Санжапова А.Ф.Ульяновск 2008 г.

Орипова Л.Н.
старший преподаватель
кафедра «Нефтегазовое дело»
Каршинский инженерно-экономического институт
Республика Узбекистан, г.Карши

МЕТОДЫ ОЧИСТКИ ГАЗА ОТ КИСЛЫХ КОМПОНЕНТОВ ПРИ ПОМОЩИ ЖИДКИМИ АБСОРБЕНТАМИ

Аннотация: *В статье указан процесс поглощения серы и углекислого газа (CO_2) из природного газа. Процесс абсорбции на фазоразделительной поверхности. Абсорбционный метод очистки воздуха заключается в улавливании загрязняющих веществ всем объемом абсорбента. Самыми распространенными аппаратами абсорбционного метода очистки газов являются скрубберы, в которых для улавливания вредных компонентов отходящего потока используются жидкие химические растворы или вода.*

Ключевые слова: *сера, CO_2, процесс, газ, жидкость, абсорбер, метод, тарелка кислый газ, амин, абсорбент.*

Oripova L.N.
senior teacher
of the department
of "Oil and gas oil and gas affair" of the
Karshi engineering-economic institute
Republic of Uzbekistan, Karshi

METHODS FOR PURIFYING GAS FROM ACIDIC COMPONENTS USING LIQUID ABSORBENTS

Abstract: *The article describes the process of absorption of sulfur and carbon dioxide (CO_2) from natural gas. Absorption process on a phase separating surface. The absorption method of air purification involves capturing pollutants with the entire volume of the absorbent. The most common devices for the absorption method of gas purification are scrubbers, in which liquid chemical solutions or water are used to capture harmful components of the waste stream.*

Key words: *sulfur, process, gas, liquid, absorber, method, acid gas plate, amine, absorbent.*

Абсорбционной метод основан на избирательном поглощении компонентов газа жидкими веществами. В процессе отделения соединений серы и углекислого газа (CO_2) из природного газа используется абсорбер. Процесс абсорбции осуществляется на фазоразделительной поверхности. Поэтому необходимо увеличить поверхность столкновения газа и жидкости в абсорбере. В соответствии с методами образования столкновения абсорберы условно делится на следующие группы:

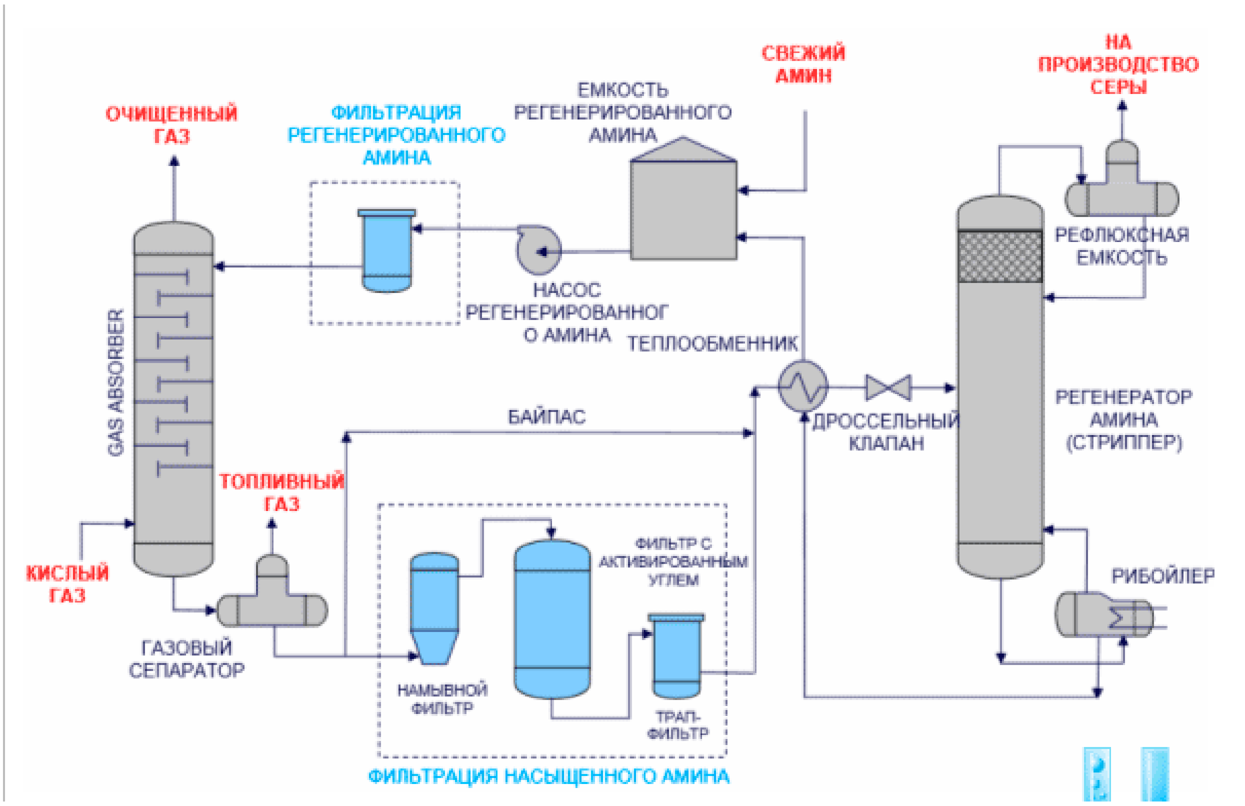
1. Поверхностный и тонкослойный
2. Барботажный (тарельчатый)
3. Распрыскивательный

Современных предприятиях часто используют устройства, работающие бесперебойно. Для очищения природного газа от соединений серы и окиси углерода также используется непрерывно функционирующий абсорбер. Для увеличения столкновения между газом и жидкостью желательно использовать ситовидный тарельчатый абсорбер. Эффективное функционирование тарелок зависит от режима гидродинамического движения. В зависимости от скорости газов и распределения жидкости в тарелках абсорберы работают в трёх разных режимах:

1. Пузырчатый
2. Пенный
3. Гидродинамический с тонким потоком

Хотя эти режимы отличаются друг от друга в зависимости от состава барботажного слоя, размер контактной поверхности определяет количество и высоту гидравлического сопротивления.

Когда скорость газа мала, он проходит через жидкие слои в состоянии отдельных пузырьков. Контактная поверхность газа и жидкостей на этих тарелках мала. Это состояние составляет пузырчатый режим.



1-рисунок. Установка абсорбционной очистки газа с аминами.

Когда потребление газа увеличивается, отдельные пузырьки объединяются, образуя одну линию потока. В результате сопротивления барботажного слоя единая линия потока нарушается и образуется большие пузыри. В это время в тарелках образуется дисперсная система жидкого газа или пена.

Эта система нестабильна и не создает пены при остановке газа. В устройствах такого типа при выделении серы и углекислого газа из природного газа поверхность ситообразной тарелки закрывается углеводородами парафинового ряда, смешанного с жидкостью и газом. В результате поверхность столкновения газа и жидкости уменьшается и формируется пенный режим.

В таких случаях в бесперебойно работающих установках сероводород и оксид углерода, имеющийся в составе природного газа, не поглощаются жидкостью (амином).

Содержание газа выходит из абсорбера в неочищенном состоянии. Поскольку этот процесс предназначен для очистки газа, при возникновении пенного режима нарушается процесс очистки газа.

На основе именно этого режима с 1971 года осуществляются технологические процессы на ООО «Мубарекский газоперерабатывающий завод». В этих процессах в некоторой степени возникают трудности. Ситовидные тарелки абсорберов разработаны в соответствии с давлением газа в 5 - 5,5 МПа. Вся поверхность тарелки состоит из отверстий диаметром 25 мм, выполненных в соответствии с давлением газа и давлением жидкости.

В настоящее время давление входящего газа на ООО «МГПЗ» составляет 3,9 - 4,5 МПа. Процесс проводится в соответствии давления жидкости давлению газа.

Тарелки расположены с расчётом перемещения жидкости с одной тарелки на другую с высотой слоя жидкости в 25-30 мм.

Газ, проходя через отверстия тарелки, распределяется в слое жидкости в виде пузырьков. При уменьшении скорости потока газа жидкость через отверстия в верхней тарелке стекает в нижнюю тарелку. В результате малой поверхности столкновения жидкости и газа сероводород и CO_2 мало поглощается в составе жидкости. По этой причине необходимо принять меры по сужению отверстий ситовидных тарелок в абсорберах в соответствии с давлением газа и поднятию слоя жидкости в тарелке.

При проектировании тарелок установки определяется скорость газа, соответствующая нижней и верхней части тарелок, и рабочая скорость газа. В установках этого типа внутри вертикальной цилиндрической оболочки устанавливаются горизонтальные тарелки.

Сужение отверстий ситовидных тарелок в абсорберах в соответствии с давлением газа и поднятию слоя жидкости в тарелке способствует качественному процессу поглощения сероводорода и сернистого углерода в составе газа. Если в колонне абсорбера не сузить диаметр отверстий тарелок, процесс поглощения будет некачественным и на поверхности тарелки будет наблюдаться процесс вспенивания. В процессе вспенивания молекулы газы выносят из колонны молекулы амина. В таком случае во всей системе нарушается режим уменьшения количества амина, количество же сероводорода из очищенного газа становится выше требуемого количества. Для приведения процесса производства в норму приходится повышать температуру в процессе десорбции. В таком случае повышается температура кислого газа, выделяемого из природного газа, а для охлаждения кислого газа охлаждаемые установки работают с дополнительным мощностью. В результате этого повышается потребление электроэнергии.

Использованные источники:

1. Лобар Норбоевна Орипова, Руслан Рустамжонович Хайитов. Получение активированного угля из древесного и косточкового сырья// Universum: Технические науки: электрон. научн. журн. – Москва (РФ), 2021. – № 9 (90). – С. 14-17.

2.Л.Н. Орипова. Изучение физико-химических свойств и технических характеристик, промышленных алканоламинов, применяемых для аминовой очистки природного газа// Academic research in educational sciences. ООО «Academic Research».– Ташкент, 2022.-№3.-С. 431-438.

3.Oripova Lobar Norboyevna, Hotamov Tolibjon Narzulloevich, Hayitov Ruslan Rustamjonovich. Obtaining activated carbon from the shells of apricot and peach seeds// International journal on orange technologies.Volume: 02 Issue: 11 | 2020- C.33-36

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Паязов Ш. Н.
ассистент
кафедра клинической анатомии
Самаркандский государственный медицинский университет
г. Самарканд Узбекистан

ОСОБЕННОСТИ ФУНКЦИОНИРОВАНИЯ ПЕЧЕНИ ПРИ РЕВМАТОИДНОМ АРТРИТЕ

Аннотация. *В данном исследовании была изучена глюконеогенная функция печени у пациентов с ревматоидным артритом (РА). Установлено, что у больных РА наблюдается усиление глюконеогенеза, что выражается в повышенной способности печени превращать неуглеводные соединения, в частности, глицерин, в глюкозу.*

Полученные результаты свидетельствуют о существенных нарушениях углеводного обмена у пациентов с ревматоидным артритом. Усиление глюконеогенеза и сниженная толерантность к глюкозе могут играть важную роль в патогенезе РА и способствовать развитию сопутствующих заболеваний, таких как сахарный диабет.

Ключевые слова: *ревматоидный артрит, глюконеогенез, глицерин, глюкоза, толерантность к глюкозе, углеводный обмен.*

Payazov Sh.N.
Assistant Professor
Department of Clinical Anatomy
Samarkand State Medical University
Samarkand, Uzbekistan

FEATURES OF LIVER FUNCTION IN RHEUMATOID ARTHRITIS

Abstract: *This study investigated the gluconeogenic function of the liver in patients with rheumatoid arthritis (RA). It was found that patients with RA exhibit increased gluconeogenesis, manifested by the liver's enhanced ability to convert non-carbohydrate compounds, particularly glycerol, into glucose. The obtained results indicate significant disturbances in carbohydrate metabolism in patients with rheumatoid arthritis. Increased gluconeogenesis and reduced glucose tolerance may play a significant role in the pathogenesis of RA and contribute to the development of concomitant diseases such as diabetes mellitus.*

Keywords: *rheumatoid arthritis, gluconeogenesis, glycerol, glucose, glucose tolerance, carbohydrate metabolism.*

Введение. Ревматоидный артрит (РА) – это хроническое аутоиммунное заболевание, которое поражает не только суставы, но и многие внутренние органы. Одним из важных аспектов РА является его влияние на метаболические процессы и функцию различных органов.

Проблема нарушения метаболизма и функции внутренних органа при ревматоидном артрите (РА) все еще остается недостаточно изученной. Механизмы развития метаболических нарушений при РА: Постоянное воспаление, характерное для РА, приводит к повышению уровня провоспалительных цитокинов, что, в свою очередь, нарушает нормальную работу многих органов и систем; РА может сопровождаться изменениями в гормональном балансе, что влияет на обмен веществ и функцию органов; Часто РА сочетается с другими заболеваниями, такими как сахарный диабет, гипертензия, ожирение, которые сами по себе могут усугублять метаболические нарушения.

Изучение взаимосвязи между РА и заболеваниями печени является актуальной проблемой современной медицины, поскольку позволяет более полно оценить тяжесть заболевания, прогнозировать его течение и разрабатывать новые подходы к лечению.

Целью исследования было изучение глюконеогенной и мочевинообразовательной функции печени у больных ревматоидным артритом в зависимости от клинических характеристик заболевания.

Материал и методы исследования. Под нашим наблюдением находилось 100 больных РА в возрасте от 18 до 63 лет. Женщин было - 62, мужчин - 38. Средний возраст больных, составил 43,6 ±4,6 лет, длительность заболевания -7,5 ± 0,8 лет.

Активность РА 1 ст. отмечена 0 у 19, 2 ст. - у 52, 3 ст. - у 29 больных. У 13 больных выявлено быстро прогрессирующее, у 87 - медленно прогрессирующее течение заболевания. Серо-позитивный вариант РА был у 85, серонегативный - у 15 больных,1 рентгенологическая стадия РА была установлена у 19 больных, 1 стадия - у 45,3 стадия - у 25 и 4 стадия - у 11.

У 35 больных была сохранена профессиональная активность, у 56 она оказалась утраченной и 9 потеряли способность к самообслуживанию.

Системные проявления РА были диагностированы у 18 больных: у 9 было выявлено поражение почек, у 4 - поражение сердца, у 2 - поражение легких. У всех больных РА, помимо основного суставного синдрома была обнаружена гипотрофия мышц, 38 - умеренная гепатомегалия, у 27 - гинербилирубинемия (от 25 до 32 мкмоль/л) у 20 - лимфоаденопатия и у 10 - субфебрильная лихорадка.

Для изучения глюконеогенной и мочевинообразовательной функции печени у больных РА, нами была применена методика Н.В. Блиновой (2018). Принцип данной методики состоит в том, что у больных, обследованных натощак, из локтевой вены забирается 5 мл крови и в ней определяется содержание глюкозы, глицерина, пировйноградной и молочной кислот, аммиака, глутамина и мочевины. Затем перораљно однократно дается нагрузка - 30 мл глицерина в 200 мл теплой воды. Через 0,5, 1 и 2 часа в крови определяется содержание глюкозы. А через 3 часа после нагрузки вновь определяется содержание указанных показателей углеводного и азотистого обмена. Это позволяет судить о динамике глюконеогенной, мочевинообразовательной функции печени в интегративной связи с углеводным и азотистым метаболизмом. Контрольную группу составили 20 практически здоровых лиц (доноры).

Результаты и обсуждение. Нами было установлено, что у больных РА при поступлении их в стационар натощак, концентрация глюкозы в крови была статистически достоверно выше, чем в группе здоровых лиц и равнялась 4,593 ± 0,162 ммоль/л. После нагрузки с глицерином уровень глюкозы в крови у них всегда был выше, чем у доноров и постепенно нарастал к 3 часу исследования. Прирост новообразованной глюкозы у больных РА к 0,5; 1; 2 и 3 часам наблюдения равнялся соответственно 0,602; 0,925; 1,03,5 и 1, 127 ммоль/л. Средняя скорость синтеза глюкозы из глицерина была равна 1,163 ± 0,201 ммоль/г или в 1,9 раза превышала данные доноров (0,600 ±0,03 ммоль/л/г). Значит, у больных РА усиливается глюконеогенная функция печени, т.е, повышается ее способность трансформировать неуглеводные соединения, в частности, глицерин в глюкозе.

Более того, у больных РА оказалась значительно нарушенной толерантность периферических тканей к новообразованной глюкозе. В количественном отношении она была равна 1,113 ± 0,213 ммоль/л, т.е. в 4 раза превышала аналогичный показатель практически здоровых людей (0,260 ± 0,03 ммоль/л.

Можно было допустить, что увеличение образования глюкозы у больных РА после глицериновой нагрузки будет связано со снижением уровня глицерина в крови.

Как оказалось, у больных РА концентрация глицерина была равна 6,054 ± 0,168 ммоль/л или на 300% ниже, чем у доноров. Через 3 часа после нагрузки уровень глицерина повышался и составил 6,460 ± 0,176 ммааь/л, что на 320% ниже, чем у практически здоровых лиц. Значит, вклад глицерина у больных РА в синтезе новообразованной глюкозы весьма значителен. Подтверждается сделанное заключение и коэффициент корреляции (ч=0,75).

Содержание пировиноградной кислоты у больных РА в крови натошак было в 3 раза больше, чем у доноров, и равнялось 334,8 ±11,3 мкмоль/л. После нагрузки глицерином концентрация пирувата в крови у больных повысилась и через три часа достигла 397,6 ± 10,5 мкмоль/л. Содержание другого метаболита углеводного обмена - молочной кислота в крови, натощак было у больных РА 2,9 ± 0,2 ммоль/л, что в 1,6 раза больше, чем у доноров. Через 3 часа после нагрузки уровень лактата в крови у больных был равен 3,3 ±0,1 ммоль/л.

Если содержание пирувата у доноров через 3 часа после нагрузки повышалось со скоростью 11,134 мкмоль л/ч, а лактата - 0,096 ммоль/л/ч, то у больных РА скорость повышения этих метаболитов более высокая и равнялась соответственно 20,9 мкмоль л/г и 1,013 ммоль л/г.

Итак, у больных РА усиливается глюконеогенная функция печени отражением чего является значительная трансформация глицерина в глюкозу, повышение толерантности периферической ткани к глюкозе, увеличение концентрации пирувата и лактата.

Взаимоотношение концентраций лактата и пирувата позволяют считать, что для больных РА характерно состояние тканевой гипоксии, которое, как известно, способствует усилению деструктивных процессов.

В последующем учитывая тесную взаимосвязь углеводного и азотистого обмена в реакциях гяюконеогенеза, мы изучили изменения показателей азотистого обмена и мочеобразовательной функции печени у больных РА.

Было установлено, что при РА усилен распад белков и дезаминирование аминокислот. Так, уровень аммиака у больных РА (0,0413 ± 0,0016 ммоль/л) был в 1,58 раза выше, чем у доноров (0,0262 ± 0,0012 мкмоль/л).

Напротив, при РА концентрация глутамина (0,0632 ± 0,002 ммоль/л) оказалась в 1,3 раза ниже, чем в норме (0,0813 ±0,0031 ммоль/л). По-видимому, система глутанат-глутамин недостаточно эффективно участвует в обезвреживании аммиака.

Что касается мочевины, то уровень этого конечного продукта азотистого обмена у больных РА (8,064 ± 0,181 ммоль/л), в 1,31 раза превышает норму.

Проведенная глицериновая нагрузка позволила выявить у больных РА скрытое нарушение мочевинообразования в печени. Если у практически здоровых лиц, спустя 3 часа после нагрузки содержание мочевины в крови повысилось на 48%, то у больных РА - всего лишь на 9%. Наряду с этим, глицериновая нагрузка у больных РА еще более глубже раскрыла недостаточность системы глутаминовой кислоты - глутамин.

Действительно, если содержание глутамина в крови к 3-му часу после нагрузки глицерином у здоровых лиц увеличилось в 1,25 раза, то при РА - в 1,07 раза. Поэтому, несмотря на известный гипоастматический эффект глицерина, уровень аммиака в крови у больных РА превышал норму в 1,3 раза. Мы считаем, что у больных РА гипераммопения явилась следствием усиленной деструкции соединительной ткани, нарушения транспорта аминокислот, недостатка витаминов группы В, дисбаланса в гормонах эндокринной системы, усиленного глюконеогенеза из аминокислот, недостаточности мочевинообразовательной функции печени и системы глутамат – глутамин обезвреживания аммиака.

Выводы. Таким образом, при РА значительно нарушаются специфические функции печени. Особенно значительное повышение глюконеогенной и угнетение мочевинообразовательной функции печени отмечено у больных РА с системным поражением, высокой степенью активности патологического процесса и быстро прогрессирующим течением заболевания. Также для них характерен дисбаланс углеводного азотистого метаболизма; гиперлактацидемией, гапераммонией, повышением содержания мочевины при низком уровне глутамина и глицерина. Весьма вероятно, что у больных РА ряд клинических проявлений заболевания, опосредствован нарушениями метаболизма.

Использованные источники.

1. Akbarovich, A. A., Murodullayevich, T. O., & Shodievich, S. H. (2023). OG ‘IZ BO ‘SHLIG ‘I SHILLIQ QAVATLARINING ZAMBURUG ‘LI KASALLIKLARIDA EOZINOFIL KO ‘RSATKICH. INTERNATIONAL JOURNAL OF RECENTLY SCIENTIFIC RESEARCHER'S THEORY, 1(6), 116-119.
2. Giyosovna, S. D., Maqsudovna, O. G., Isrofilovna, M. N., & Shodiyevich, S. H. (2023). BACILLUS AVLODIGA MANSUB BAKTERIYALARNING BIOTEXNOLOGIK POTENSIALI. Innovations in Technology and Science Education, 2(7), 1154-1162.
3. Mardanovna, I. M., & Shodievich, S. H. (2023). GEMOLITIK ESHERIXIYALARNING ADGEZIVLIK XOSSALARI. INTERNATIONAL JOURNAL OF RECENTLY SCIENTIFIC RESEARCHER'S THEORY, 1(6), 198-202.
4. Sh, S. X., & Sa’dinov, P. O. (2014). Rol gemoliticheskix esherixiy v strukture ostrых kishechnых infeksiy u detey i effektivnost primeneniya probiotikov v ix lechenii.
5. Shayqulov H. S. et al. DIAREYA BILAN KASALLANGAN BOLALARDA AJRALUVCHI ICHAK MIKROFLORALARI //GOLDEN BRAIN. – 2023. – T. 1. – №. 6. – С. 20-24.
6. Shayqulov, H. S., & Mamarasulova, N. I. O'TKIR DIAREYALARDA ESHERIXIYALARNING AJRALISHI.«. МИКРОБИОЛОГИЯНИНГ ДОЛЗАРБ МУАММОЛАРИ» МАВЗУСИДАГИ РЕСПУБЛИКА ИЛМИЙ-АМАЛИЙ АНЖУМАНИ, 103.
7. Shodievich, S. H., & Ubaydullaevich, N. D. (2023). BAKTERIAL ICHBURUG ‘BILAN OG ‘RIGAN BEMORLARNING IMMUN KO ‘RSATKICHLARIDAGI AYRIM O ‘ZGARISHLAR. GOLDEN BRAIN, 1 (5), 163–167.
8. Маматова, М. Н., & Шайкулов, Х. Ш. (2024). Применение реакции непрямой гемагглютинации для определения антител к стафилококковому токсину. *Журнал «Экономика и социум*, (7), 122.
9. Нарзиев Д.У., & Шайкулов Х.Ш. (2024). ТЕЧЕНИЕ ОСТРОЙ ПНЕВМОНИИ У ДЕТЕЙ РАННЕГО ВОЗРАСТА В ЗАВИСИМОСТИ ОТ ВЫДЕЛЕННОЙ МИКРОФЛОРЫ. Экономика и социум, (2-1 (117)), 1636-1642.
10. Шайкулов Х. Ш., Шоназаров С. И., Хасанова Д. Б. ВЫДЕЛЕНИЕ ФЕРМЕНТОВ ПОДЖЕЛУДОЧНОЙ ЖЕЛЕЗОЙ ЧЕЛОВЕКА ПРИ РАЗНЫХ ВИДАХ ПИЩИ //INTERNATIONAL JOURNAL OF RECENTLY SCIENTIFIC RESEARCHER'S THEORY. – 2024. – Т. 2. – №. 1. – С. 216-221.
11. Шайкулов, Х. Ш., & Исокулова, М. М. (2023). Характеристика энтеропатогенных кишечных палочек, выделенных у детей раннего возраста. *Экономика и социум*, (1-1 (104)), 489-494.

Пирогова Н. Б.
студент 3 курса заочной магистратуры
направления подготовки «Управление персоналом»
Брянский филиал РАНХ и ГС
Зимонина О.В., канд. пед. наук, доцент
Брянский филиал РАНХиГС
Россия, г. Брянск

ВИДЫ И ТЕХНОЛОГИИ ОБУЧЕНИЯ ПЕРСОНАЛА В СОВРЕМЕННОЙ ОРГАНИЗАЦИИ

Аннотация. *Успех любой организации во многом зависит от её персонала и его знаний, умений и навыков. В процессе своей деятельности организация должна обеспечить развитие и приобретение новых компетенций у своих сотрудников через обучение. Кроме того, важно оценить эффективность такого обучения. Обучение и повышение квалификации персонала являются важнейшим фактором повышения производительности труда и одним из ключевых «мотиваторов» для увеличения рабочей инициативы и повышения лояльности сотрудников к компании. Однако остаётся актуальным вопрос о том, как эффективно выстроить процесс обучения персонала. Это делает особенно актуальной задачу поиска направлений для совершенствования обучения сотрудников предприятия.*

Ключевые слова: *обучение, повышение квалификации, эффективность, персонал, методы обучения, развитие персонала, виды и формы обучения персонала, эффективность обучения.*

Pirogova N. B.
3rd year student of the correspondence master
's degree in the field of training "Personnel Management"
Bryansk branch of the Russian Academy of Sciences and GS
Zimonina O.V., Candidate of Pedagogical Sciences
Associate Professor
Bryansk branch of RANEPA
Russia, Bryansk

TYPES AND TECHNOLOGIES OF PERSONNEL TRAINING IN A MODERN ORGANIZATION

Abstract. The success of any organization largely depends on its personnel and their knowledge, skills and abilities. In the course of its activities , the organization should ensure the development and acquisition of new competencies among its employees through training. In addition, it is important to evaluate the effectiveness of such training. Training and professional development of personnel are the most important factor in increasing labor productivity and one of the key "motivators" for increasing work initiative and increasing employee loyalty to the company. However, the question of how to effectively build the process of training the Company's personnel remains relevant. This makes it particularly important to find directions for improving the training of employees of the enterprise.

Keywords: training, professional development, efficiency, personnel, training methods, personnel development, types and forms of personnel training, effectiveness of training.

В современном мире традиционные методы обучения персонала организаций уступают место более инновационным подходам. Эти методы, несмотря на свою новизну, преследуют те же цели: подготовить сотрудников к выполнению своих обязанностей и решению задач компании, повысить эффективность их работы и улучшить качество выполняемых задач.

Оценка эффективности обучения персонала представляет собой комплексный процесс анализа полученных знаний, приобретенных навыков и общего развития сотрудников. Она помогает определить, оправдывают ли себя финансовые вложения. Современные методы позволяют оценить, насколько увеличилась эффективность сотрудников, улучшились их компетенции и уровень профессионализма. Это, в свою очередь, помогает прогнозировать целесообразность дальнейших инвестиций.

Оценка эффективности обучения персонала является заключительным этапом этого процесса.

Существуют разнообразные подходы к обучению сотрудников. Рассмотрим некоторые из них:

1. Самообразование. Сотрудники самостоятельно изучают специализированную литературу, посещают тематические выставки и семинары, собирают и систематизируют информацию. В отличие от дополнительного образования, самообразование не всегда носит системный характер и может не быть связано со стратегическими целями компании.
2. Долгосрочное дополнительное обучение. Этот подход связан со стратегическими задачами компании и включает в себя получение второго высшего образования, степени MBA, а также участие в долгосрочных обучающих программах и мероприятиях. С точки зрения бизнеса такое обучение можно рассматривать как инвестиции в персонал, которые начинают приносить результаты через некоторое время.
3. Краткосрочное обязательное и дополнительное обучение. Этот подход связан с оперативными задачами компании и включает в себя широкий спектр мероприятий, необходимых для эффективного оперативного управления. В эту категорию входят семинары и бизнес-тренинги, которые представляют интерес для компании как в настоящее время, так и в перспективе. Также это могут быть конференции и выставки, где происходит обмен опытом. Кроме того, сотрудники могут участвовать в работе профессиональных клубов и сообществ.

Основные виды обучения персонала в зависимости от цели обучения представлены на рисунке 4.

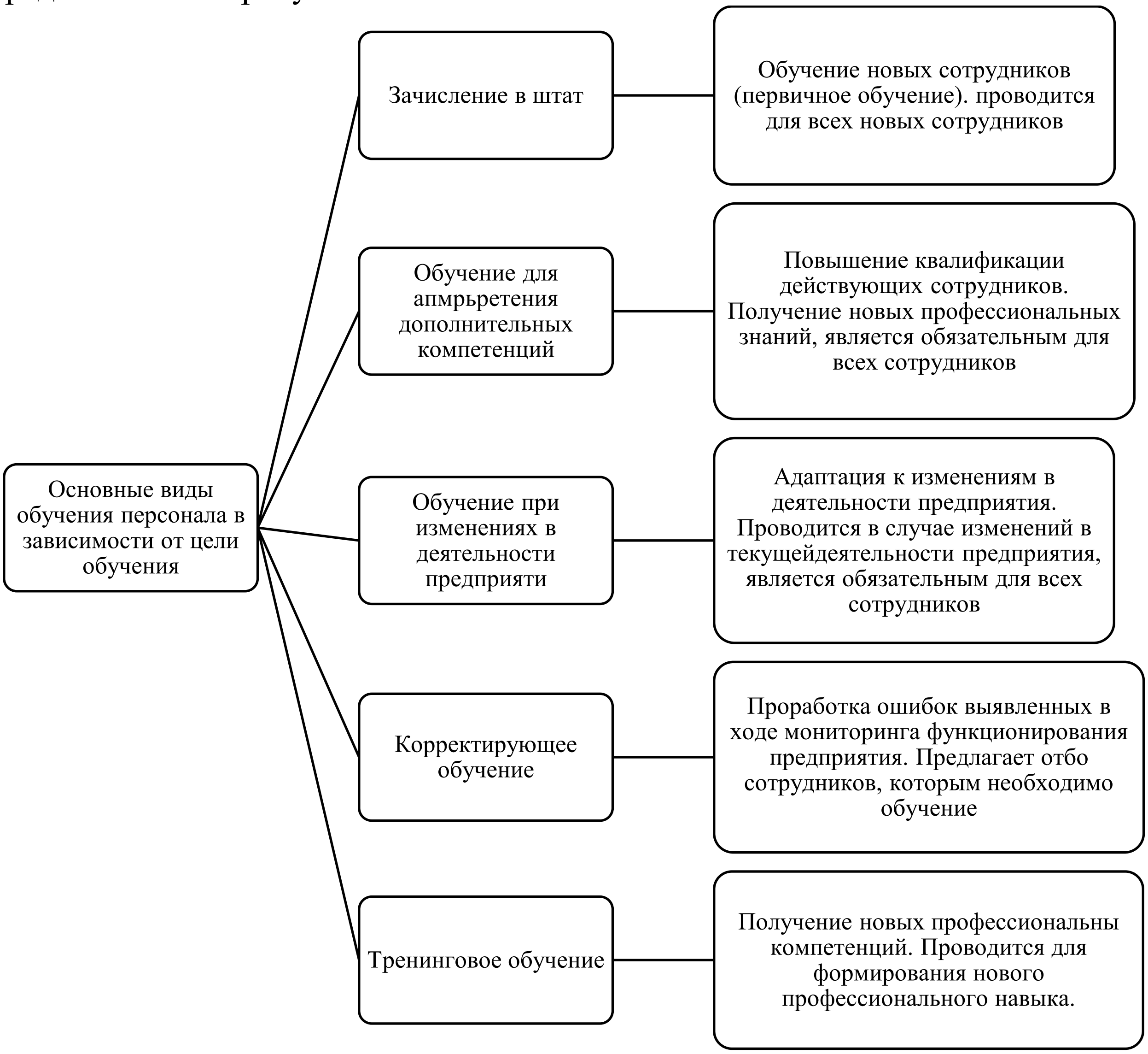


Рисунок 4 – Основные виды обучения персонала в зависимости от цели обучения[95]

Вместе с тем, по целевой функциональной направленности обучение разделяют на следующие виды, представленные на рисунке 5.

[95] Алхастова М. В., Амерханова Ф. Ш., Амадаев А. А.Совершенствование системы обучения персонала организации // Экономика:вчера, сегодня, завтра. 2022. Т. 12.№ 9-1. С. 483-490; Богачева А. М., Соколова Е. Л. Система развития персонала и ее структурные элементы // Управление человеческими ресурсами – основа развития инновационной экономики. 2019. № 6. С. 334–339

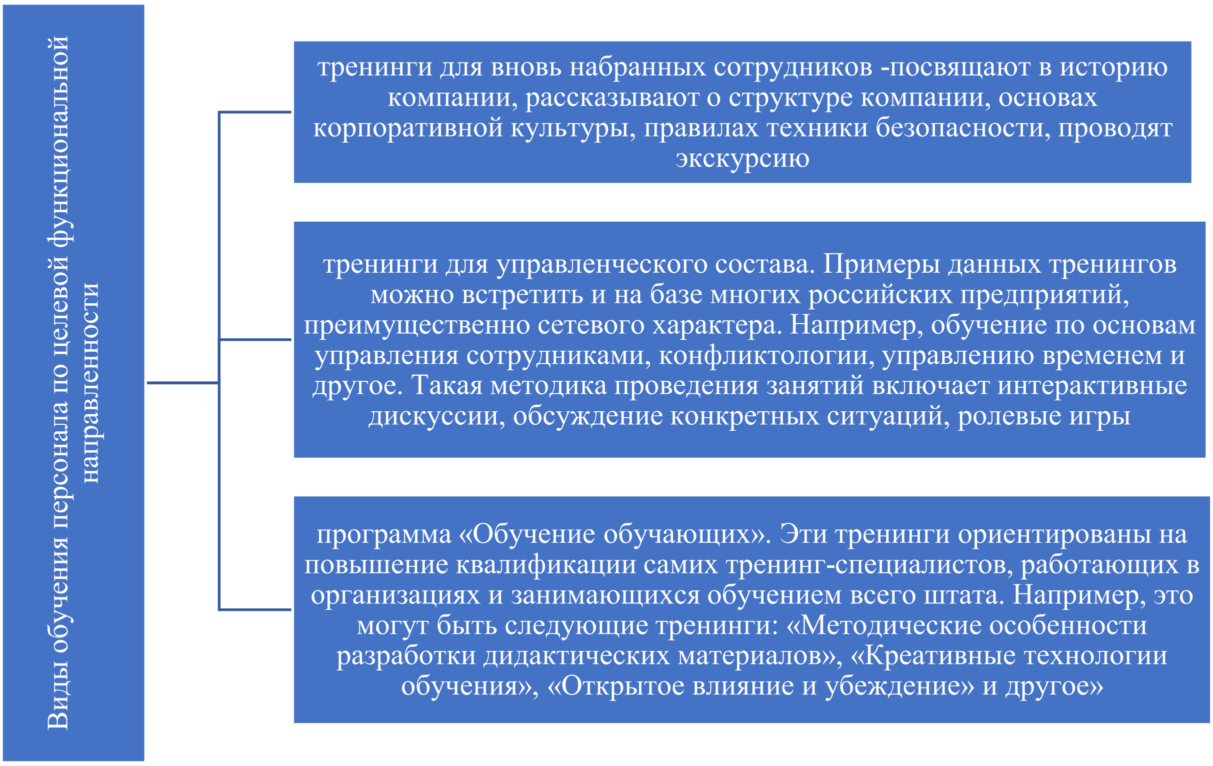


Рисунок 5 – Виды обучения персонала по целевой функциональной направленности[96]

Задачи обучения сотрудников в организации должны соответствовать стратегическим и тактическим целям компании. Поэтому разработка образовательных программ, выбор методов и форматов обучения, привлечение внутренних или внешних специалистов, а также формирование у работников мотивации к обучению — все эти действия взаимосвязаны и направлены на достижение результата.

Выбор методов обучения зависит от типа и формата обучения, которые, в свою очередь, определяются целями обучения. Например, для обучения на рабочем месте можно использовать инструктаж, ротацию, наставничество, делегирование полномочий и работу в проектных группах. Для обучения вне рабочего места можно выбрать лекции, деловые игры, стажировки, выездные мероприятия и другие форматы.

Чтобы компания оставалась успешной в условиях быстро меняющегося мира информационных и бизнес-технологий, необходимо постоянно повышать квалификацию своих сотрудников. Поэтому всё больше компаний рассматривают корпоративное обучение как непрерывный процесс и включают расходы на него в свой бюджет.

Однако не все компании могут позволить себе часто инвестировать в развитие персонала. Тем не менее, есть ситуации, когда это становится критически важным для бизнеса:

[96] Кирищиева И. Р. Современная система профессионального развития персонала в таможенных органах / И. Р. Кирищиева, Д. А. Молокотина. Текст: непосредственный // Молодой ученый. 2020. № 15 (305). С. 319-321.

1. Внедрение новых производственных технологий. В условиях быстрого технологического прогресса компании должны быть готовы к адаптации и использованию новых методов производства. Это требует обучения сотрудников работе с новыми инструментами и технологиями.

2. Изменение стратегии компании. Когда компания меняет свою стратегию, это часто требует переобучения сотрудников новым навыкам и знаниям, необходимым для достижения поставленных целей.

В идеале обучение персонала должно включать следующие этапы:

1. **Определение стратегических или тактических задач организации**: на этом этапе руководство компании определяет, какие задачи стоят перед бизнесом на текущем этапе развития. Это может включать внедрение новых технологий, поддержание стабильной работы или улучшение качества продукции.

2. **Построение модели компетенций**: создание идеального портрета работника на каждой должности, включающего 5–7 профессиональных и корпоративных знаний, умений и навыков, необходимых для решения бизнес-задач.

3. **Составление перечня программ обучения**: на основе понимания задач бизнеса и модели компетенций выбираются соответствующие образовательные программы.

4. **Оценка текущего уровня знаний и навыков**: проведение тестов и опросов для определения текущих знаний и навыков сотрудников.

5. **Разработка индивидуальных планов обучения**: составление персонализированных планов обучения для каждого сотрудника, учитывающих их текущие компетенции и потребности в развитии.

6. **Проведение обучения**: организация и проведение тренингов, семинаров и других форм обучения, направленных на развитие необходимых навыков.

7. **Поддержка в применении знаний**: обеспечение сотрудников необходимыми ресурсами и поддержкой для применения полученных знаний на практике.

8. **Оценка эффективности обучения**: проведение пост-тестов и опросов для оценки усвоения материала и эффективности обучения.

9. **Анализ результатов и корректировка программ**: регулярный анализ результатов обучения и внесение корректировок в программы при необходимости.

10. **Постоянное обновление программ обучения**: постоянное обновление и адаптация программ в соответствии с изменениями в бизнесе и технологиях.

Обучение играет ключевую роль в подготовке персонала к решению широкого спектра задач и обеспечению высокой эффективности работы. Оно не только способствует повышению уровня знаний и профессиональных навыков сотрудников, но и помогает сформировать систему ценностей и установок, которые соответствуют современным реалиям и поддерживают рыночную стратегию организации.

В современных условиях, когда внешние факторы, такие как экономическая политика государства, законодательство, система налогообложения и появление новых конкурентов, быстро меняются, большинство компаний сталкиваются с необходимостью подготовки персонала к работе в новых условиях. Реструктуризация предприятий, изменение стратегий и организационной структуры компаний, технологические инновации, появление новых рабочих мест и другие факторы ставят большинство компаний перед необходимостью адаптации своих сотрудников к быстро меняющейся среде.

Принципы управления персоналом также претерпевают изменения. Новые организационные стратегии требуют существенных изменений в системе кадрового менеджмента, и обучение персонала становится ключевым элементом этого процесса. Многие организации стремятся найти наиболее эффективные пути повышения производительности и эффективности труда. Работодатели теперь все больше заинтересованы в высококвалифицированном и компетентном персонале, способном создавать конкурентоспособные товары и услуги.

Обучение направлено на то, чтобы помочь сотрудникам успешно справляться с разнообразными задачами и работать с высокой эффективностью. Оно не только способствует улучшению знаний и развитию необходимых профессиональных навыков, но и помогает сформировать у работников ценности и установки, соответствующие современным требованиям и соответствующие рыночной стратегии организации.

Использованные источники:

1. Дудникова Г. Ю. Управление системой обучения персонала в таможенных органах // Матрица научного познания. 2022. № 12-1. С. 127-132.

2. Журавлева О. В., Комиссарова Т. А., Митрофанова О. Н., Голикова И. С. Корпоративное обучение и его влияние на ключевые компетенции сотрудников в организации // Инновационная экономика и право. 2022. № 3 (22). С. 107-114.

3. Ильина А. П., Лебедева Т. Е., Прохорова М. П. Обучение персонала: значение и развитие // Актуальные вопросы современной экономики. 2019. № 5. С. 437–442;

4. Казакова М. И., Селиванова Т. В. Оценка эффективности обучения персонала в условиях цифровизации / Казакова М. И., Селиванова Т. В. // Вестник Кемеровского государственного университета. Серия: Политические, социологические и экономические науки. 2022. Т. 7. № 4 (26). С. 435-443

5. Плетенева О. Г. Виды и технологии обучения персонала в современной организации // E-Scio. 2024. № 10 (73). С. 142-149.

6. Шафиуллин Р. М. Электронная система дистанционного обучения в рамках профессионального развития персонала // Академическая публицистика. 2024. № 12-1. С. 106-113.

Рахматуллаева Ф. З.
преподаватель
кафедра «Узбекского языка и литературы»
Андижанский государственный медицинский институт

КУЛЬТУРА КЛИНИЧЕСКОЙ РЕЧИ И ПРАВИЛЬНОГО УПОТРЕБЛЕНИЯ КЛИНИЧЕСКИХ ТЕРМИНОВ

Аннотация: *в данной статье рассматриваются некоторые вопросы употребления медицинских терминов и выражений, которые ввёл в обиход врач, терапевт, исследователь С.П. Боткин. Автор считает, что данная информация послужит медицинской осведомлённости студентов-медиков.*

Ключевые слова: *клиническая медицина, боткинская школа, инфекционные болезни, культура врачебного дела.*

Rakhmatullaeva F. Z.
Lecturer
of the Department of "Uzbek Language and Literature"
Andijan State Medical Institute

CULTURE OF CLINICAL SPEECH AND CORRECT USE OF CLINICAL TERMS

Annotation: *this article discusses some issues of the use of medical terms and expressions that were introduced by the doctor, therapist, researcher S.P. Botkin. The author believes that this information will serve the medical awareness of medical students.*

Key words: *clinical medicine, Botkin school, infectious diseases, culture of medical practice.*

Непревзойдённым образцом медицинского языка была культура клинической речи и правильного пользования клиническими терминами Сергея Петровича Боткина (1832 - 1889), великого русского терапевта, профессора военно-медицинской академии. С.П. Боткин был основоположником российской терапевтической школы; клинический язык его и сейчас звучит как слово великого учителя, как поистине verba magistri.

Боткин ввёл клиническую медицину в разряд естественных наук, освободив от присущего ей чистого эмпиризма. Единство клиники, науки и постоянное стремление к совершенствованию – одна из важнейших черт боткинской школы. В формировании взглядов Сергея Петровича определённую роль сыграла его многолетняя дружба и научное сотрудничество с Сеченовым. Строго говоря, Боткин создал в России первую научную клиническую школу.

Талант, удивительное клиническое мышление, интуиция, новаторские подходы и широкий взгляд на проблему позволили сделать Сергею Петровичу множество открытий и нововведений.
Он впервые стал широко использовать лабораторные исследования (биохимические, микробиологические) в практической деятельности, а также ввёл обязательное измерение температуры каждого пациента, аускультацию, перкуссию и осмотр больного.

Боткин установил различие между гипертрофией и дилатацией сердца, описал диастолический шум при стенозе левого атриовентрикулярного отверстия, отметил значение селезёнки в депонировании крови; впервые в мировой литературе дал клиническое описание атеросклероза. Сергей Петрович первым в России описал В12-дефицитную анемию, отметил возникновение приступов стенокардии при ней, описал ботриоцефальную анемию как разновидность пернициозной и указал на роль широкого лентеца в её развитии.

Боткин – создатель нейрогенной теории патогенеза тиреотоксикоза, он впервые в России описал клинику микседемы. Он отметил многообразие клинических проявлений желчнокаменной болезни, описал бронхоспастический синдром при сердечной астме, впервые в истории медицины прижизненно диагностировал тромбоз воротной вены.

Отдельно стоит отметить его вклад в инфекционные болезни. Именно Боткин высказал предположение об инфекционной природе острого эпидемического гепатита, который теперь носит его имя. Он подробно описал целый ряд инфекционных болезней: сыпной, брюшной и возвратный тиф, чуму, холеру, натуральную оспу, дифтерию и скарлатину.

Столетие отделяет нас от первой профессорской лекции Боткина. Его прекрасная чистая русская речь с проникновенным творческим прогрессивным пониманием клиники внутренних болезней и по сей час имеет неувядаемое и поучительное значение для читателя-врача.

Мы приведём некоторые особенности и черты клинического языка С.П. Боткина, которые смогут послужить культуре клинической речи современного врача и студента-медика.

С.П. Боткин редко пользовался иностранными терминами, словами и выражениями. Употребляемые им иностранные клинические термины были словами известными и понятными, и действительно, трудно заменимыми одним коренным русским словом. Сюда можно отнести следующие термины: атеромоторное перерождение, атрофия, гидремичность, гипертрофия, галлюцинация, компенсация, кумуляция, метастаз, невралгия, патология, стенокардия, эксудат.

Вышли из употребления, как устаревшие, некоторые клинические термины Боткина, естественные для речи врача 100 лет назад, как например: вздох (вдох), возвышенная (температура, чувствительность), горячительный напиток, личный нерв, ожесточение (воспаление, катара), подкожный жирный слой, серцевой (толчок, мышца).

Вполне уместны в речи современного врача такие русские клинические термины из лекции С.П. Боткина, как возврат (вместо рецидив), выздоровление (вместо реконвалесценция), выслушивание (вместо аускультации), недостаточность (вместо инсуффициенция), перерождение (вместо дегенерация), постукивание (вместо перкуссия), расширение (вместо дилатация).

Некоторые положения, защищаемые С.П. Боткиным, имеют общеметодическое значение для врачебной работы, они способны повысить культуру врачебного дела. Учитывая их учебно – воспитательное значение для студентов-медиков, мы приведём высказывания С.П. Боткина, которые в комплексе и составят то, что история медицины назовёт “Боткинской врачебной школой”.

О тернистом пути практического применения знаний у постели больного Боткин говорил своим ученикам:... “нелегко даётся это применение их к индивидуальным случаям, и каждый из нас проходит через целый ряд мучительных сомнений и ошибок, прежде чем достигнет умения правильно применять свои теоритические врачебные сведения, со спокойной совестью, без последующих нравственных пыток”.

С.П.Боткин первый описал форму “острого инфекционного паренхиматозного гепатита”, получившего в медицине название “болезнь Боткина”. Об этом важном открытии Боткин с величайшей скромностью сообщил своим ученикам: “Я пришёл постепенно к убеждению, что icterus catarhalis (катаральная желтуха), которую прежде считали за желудочно - кишечный катар с механической задержкой жёлчи, на самом деле есть только один из симптомов общего заболевания, проявляющегося не только желтухой, но и увеличением селезёнки и иногда нефритом с самостоятельным поражением печени”.

Поиск нового в науке , “чувство нового” было сильно в Боткине. Он говорил: “Современные способы исследования, наблюдения и лечения больного человека, освобождая медицину от старой рутины, открывают вместе с тем неисчерпаемые источники для разработки различных вопросов по части патологии и терапии”. Основой клиники он считал физиологию. Он был, как характеризовал его Иван Петрович Павлов, лучшим “олицитворением законного и плодотворного союза медицины и физиологии”.

Живым было в Боткине драгоценное для каждого научного работника чувство научного братства в коллективе и чувство общественника. Гениальный клиницист и клинический учитель, С.П.Боткин открыто и искренне признавал научное влияние на него наблюдений своих учеников, ординаторов клиники: “Я считаю святым долгом высказать сердечную благодарность моим неутомимым и усердным сотрудникам по клинике в течение всех девяти лет; я тем более считаю это обязательным, что вполне сознаю влияние этих соединённых трудов на наше обоюдное развитие”

Здоровый оптимизм научного медицинского работника создал его уверенность в светлое будущее народа, и пророческими звучали его слова:

“Утешительно только одно, что невежество и безнадёжность сотрутся и обязательно почувствуется значение знания, ума и таланта”.

Таким образом, медицинская терминология и знание её единиц поможет в обучении студентов медвузов. Медицинские открытия и лексика великого учёного, врача С.П. Боткина сделали свой вклад в учебно-воспитательной работе и развитии культуры клинической речи студентов-медиков.

Использованные источники:

1. Белоголовый А. Н., С. П. Боткин, его жизнь и врачебная деятельность, Спб., 1892;
2. Гукасян А. Г., С. П. Боткин — основоположник русской клиники внутренних болезней (К 50-летию со дня смерти), Сов. мед., № 5-6, с. 8, 1940;
3. Молчанов Н. С. Развитие идей С. П. Боткина в современной клинической медицине, в кн.: Боткинские чтения 1970 года, с. 7, М., 1972.

Рзаев Р. М.
доцент
Нукусский филиал Самаркандский государственный университет ветеринарной медицины, животноводства и биотехнологии
Каллиева Р.
ассистент
кафедра общей биологии и физиологии
Каракалпакский государственный университет

ИССЛЕДОВАНИЕ ФУНКЦИОНАЛЬНОГО СОСТОЯНИЯ СЕРДЕЧНО-СОСУДИСТОЙ СИСТЕМЫ У МОЛОДЕЖИ В УСЛОВИЯХ КАРАКАЛПАКСТАНА

Аннотация: *В статье представлены результаты исследования функционального состояния сердечно-сосудистой системы у молодежи, проживающей в Республике Каракалпакстан. В зависимости от места жительства среди возрастных групп молодежи максимальные значения артериального давления были обнаружены у людей, проживающих в южных и центральных регионах Каракалпакстана. Анализ гемодинамических параметров и стабильности сердечного ритма указывает на наличие определенных гендерных и возрастных различий у индивидов с различными типами реактивности вегетативной нагрузки.*

Ключевые слова: *Каракалпакстан, гемодинамика, молодые люди, экологические условия, частота сердечных сокращений.*

Rzayev R.M.
Associate Professor
of the Nukus branch of the Samarkand State University of Veterinary Medicine
Animal Husbandry and Biotechnology
Kalliyeva R.
Assistant
of the Department of General Biology and Physiology
of the Karakalpak State University

STUDY OF THE FUNCTIONAL STATE OF THE CARDIOVASCULAR SYSTEM IN YOUNG PEOPLE IN KARAKALPAKSTAN

Abstract: The article presents the results of a study of the functional state of the cardiovascular system in young people living in the Republic of Karakalpakstan. Depending on the place of residence among the age groups of young people, the maximum values of blood pressure were found in people living in the southern and central regions of Karakalpakstan. Analysis of hemodynamic parameters and heart

rate stability indicates the presence of certain gender and age differences in individuals with different types of autonomic stress reactivity.

Keywords: Karakalpakstan, hemodynamics, young people, environmental conditions, heart rate.

Введение. В настоящее время вопросы здоровья занимают одно из приоритетных мест в социальной и общественной повестке любого государства, что определяет актуальность и необходимость проведения соответствующих научных исследований, а также разработки методических и организационных подходов к поддержанию здоровья, его формированию и развитию. Подростковый возраст с онтогенетической точки зрения — это период завершения биологического созревания человека, когда все морфологические и функциональные показатели достигают своих окончательных значений. В этот момент происходит развитие взаимодействия различных частей физиологических систем и взаимосвязь органов и систем [1]. Регуляция физиологических взаимодействий в организме основывается на использовании минимально необходимого количества связей и согласовании взаимодействующих систем [4], а также совершенствовании центральных механизмов соматического и вегетативного контроля [2]. Таким образом, уровень развития здоровья в этот период может служить показателем эффективности всей системы гигиенических мероприятий, проводившихся на предыдущих этапах онтогенеза в сложившихся условиях жизни, и может определять дальнейшие оздоровительные меры [3, 4].

Материал и методы. Артериальное давление измеряли аускультативным методом Н.С. Короткова. Продолжительность сердечного цикла - частоту сердечных сокращений (ЧСС) - определяли методом электрокардиографического исследования (ЭКГ). Измерения артериального давления (АД), систолического давления (САД) и диастолического давления (ДАД) проводились в состоянии покоя и при физической нагрузке. Физическая нагрузка выполнялась всеми испытуемыми на велоэргометре LifeFitness C3-5 (Венгрия) со скоростью 35 км/ч в течение 10 минут и дозировалась из расчета 3,3 Вт на 1 кг массы тела. Мы провели территориальную дифференциацию Республики Каракалпакстан: северные районы - зоны высокого экологического риска - Муйнак, Чимбайский, Тахтакупырский и Кунградский, и южные районы - зоны с более оптимальными условиями проживания - Амударьинский, Берунийский и Элликкалинский районы. Все обследованные спортсмены являются коренными жителями вышеуказанных районов. В процессе работы использовался комплекс методических приемов, который позволил провести всестороннюю индивидуальную оценку функционального состояния и физического развития каждого студента.

Результаты и обсуждение. Согласно исследованиям, системная гемодинамика у обследованных лиц не выходит за пределы возрастных норм других регионов страны [4,5]. Электрическая активность сердца у обследованных лиц не имеет клинических проявлений и характеризуется относительно стабильными показателями; по некоторым характеристикам ЭКГ отмечается возрастная динамика [5]. Так, по мнению специалистов, у юношей к концу подросткового возраста по сравнению с 17-18-летними, при сохранении продолжительности деполяризации желудочков, увеличивается время проведения возбуждения по миокарду желудочков и уменьшается время реполяризации желудочков, при этом амплитуда желудочкового комплекса выше на 16% ($p<0,001$). Однако эти изменения не приводят к клиническим проявлениям и могут рассматриваться как варианты нормы.

Анализ показал, что в зависимости от места проживания (рис. 1) у юношей возрастных групп (21-22 года) по значениям систолического артериального давления (САД) максимальные значения наблюдаются у лиц, проживающих в южных районах Каракалпакстана, а также у юношей из северных районов в возрасте 22 лет.

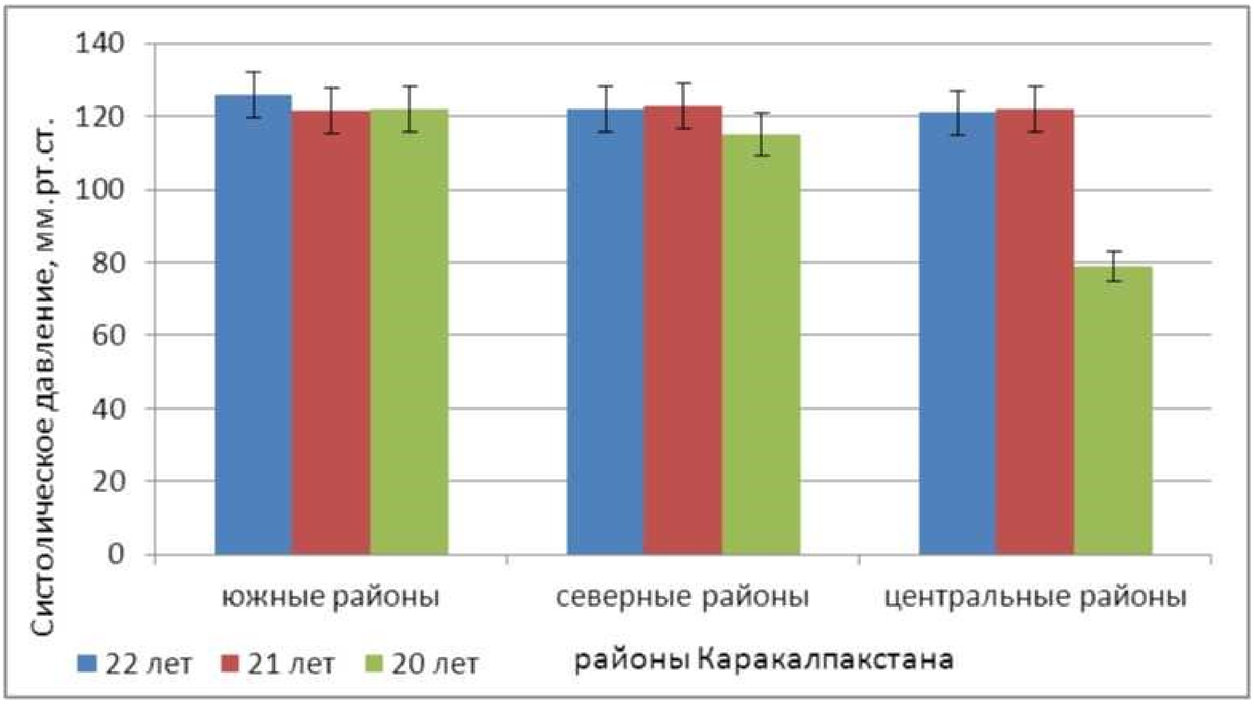


Рисунок 1: *Динамика показателей САД (мм рт. ст.) у юношей, проживающих в Каракалпакстане, в зависимости от возраста.*

Минимальные уровни САД были обнаружены у юношей младшей возрастной группы (20 лет) — 79 мм рт. ст. При сравнении результатов диастолического артериального давления (ДАД) у юношей из разных регионов республики (рис. 2) установлено, что у юношей старшей возрастной группы (22 года) наблюдались самые высокие значения во всех трех зонах республики, которые варьировались от 80 до 82 мм рт. ст. Вероятно, это связано с высоким напряжением адаптивных реакций в организме обследуемых в процессе обучения. Самые низкие значения наблюдаются у лиц младшей возрастной группы из северных регионов Каракалпакстана. Также было установлено, что у юношей первой возрастной группы уровень функционирования основных систем находится в пределах нормы.

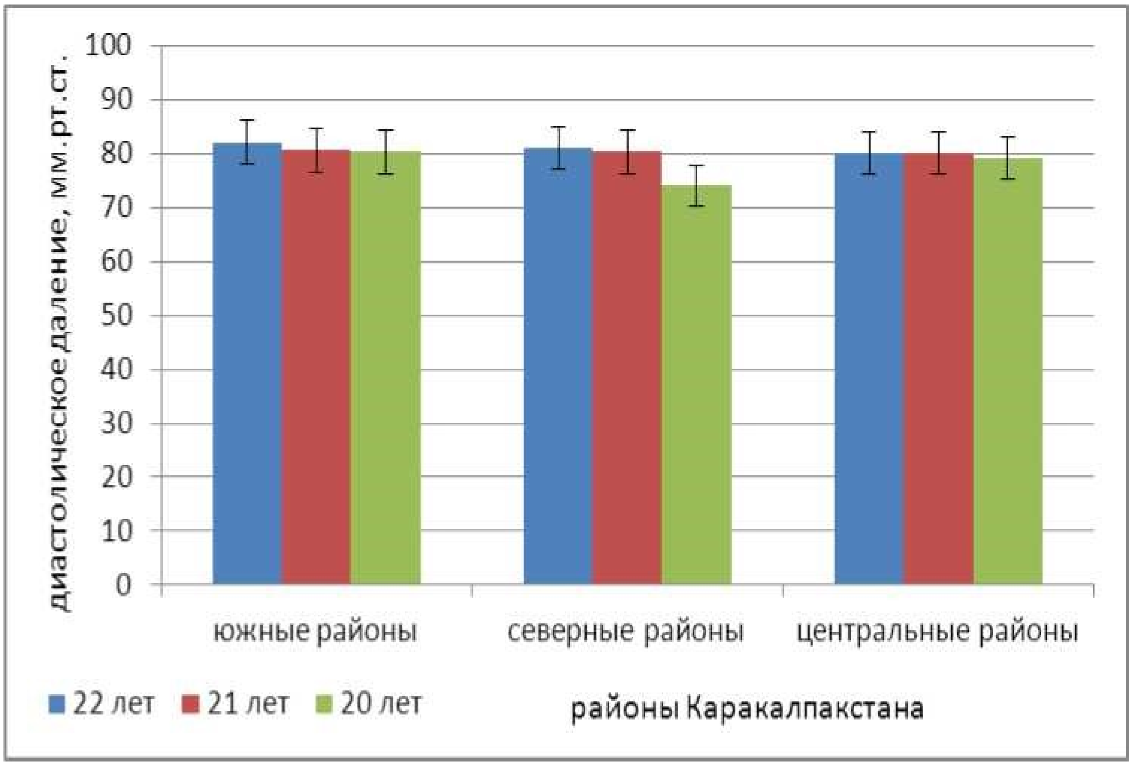
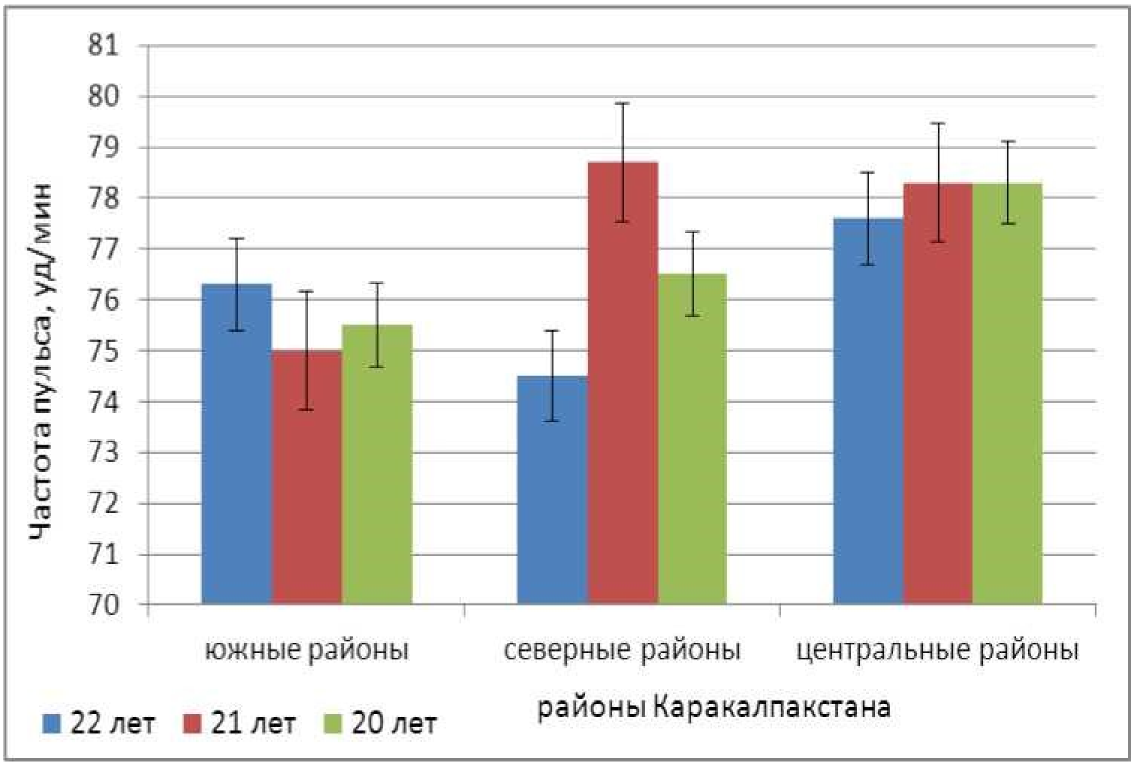


Рисунок 2: *Динамика показателей ДАД (мм рт. ст.) у юношей, проживающих в Каракалпакстане, в зависимости от возраста.*

При определении типа вегетативной регуляции у юношей старшей возрастной группы (вторая группа) отмечалось преобладание ваготоников (66%), а среди юношей младшей группы (первая группа) преобладали нормотоники (62%). Изучение частоты сердечных сокращений (ЧСС) имеет большое клиническое значение, так как позволяет получить очень ценную и объективную информацию об изменениях в сосудистой системе, связанных с деятельностью сердца (рис. 3). Пульс — это толчкообразные колебания стенок артерий, связанные с сердечными циклами. Ритм сердечной активности можно определить по частоте сердечных сокращений. Для характеристики мышечной работы учитываются как частота пульса во время работы, так и скорость восстановления после работы. Анализ показателей ЧСС среди юношей, проживающих в южных регионах Каракалпакстана, выявил наибольший уровень в возрасте 21 года, тогда как у юношей старшей группы наибольший уровень наблюдался в возрасте 22 лет. Что касается динамики показателей ЧСС у юношей из северных регионов, максимальный уровень ЧСС был установлен у 21-летних, минимальный — у 22-летних. У юношей из центральных регионов показатели ЧСС значительно увеличиваются с возрастом (p>0,05).

Важнейшей физиологической особенностью развития вегетативных процессов является резкое расширение резервных возможностей всех органов и систем. Это расширение происходит в организме двумя путями: за счет развития функциональных возможностей периферических органов (к 17 годам система вегетативного обеспечения достигает зрелого уровня функционирования) и за счет совершенствования центральных механизмов управления [2, 3]. Стабильность сердечного ритма и поддержание параметров гемодинамики на соответствующем уровне во многом определяются



экстракардиальными влияниями со стороны высшей нервной системы.

Рисунок 3: *Динамика показателей экстренного (мм рт. ст.) у юношей, проживающих в Каракалпакстане, в зависимости от возраста (по отдельности).*

Таким образом, исследования также позволили установить, что в зависимости от места проживания у юношей возрастных групп (21-22 года) максимальные значения артериального давления (систолического и диастолического) были обнаружены у людей, проживающих в южных и центральных регионах Каракалпакстана. Анализ гемодинамических параметров и стабильности частоты сердечных сокращений указывает на наличие определенных половых и возрастных различий у лиц с различными типами реактивности вегетативной нагрузки.

Использованные источники:

1. Агаджанян Н. А., Бутова О. А., Цатурян Л. Д. Спектральный анализ в оценке уровней управления ритмом сердца в юношеском периоде // Эко лого-физиологические проблемы адаптации: XII Междунар. симпозиум. М., 2007. - С. 13-14.
2. Атрощенко, Н. Н. Влияние занятий по физкультуре на сердечно -сосудистую и дыхательную системы студентов / Н. Н. Атрощенко, И. Н. Сахарова // Гигиена и санитария. 2005. - №1. - С. 41 - 42.
3. Бойцов, С. А. Возрастные особенности изменения показателей вариабельности сердечного ритма у практически здоровых лиц // Вестник аритмологии. 2002. - № 26. - С. 57-60.
4. Дмитриев Д. А., Дмитриев А. Д., Карпенко Ю. Д. и др. Влияние экзаменационного стресса психоэмоциональных особенностей на уровень артериального давления и регуляцию сердечного ритма у студенток // Физиология человека. 2008. - №5. - С. 89-96.
5. Соколов С.Ф., Малкина Т.А., Алексеева Ю.М. Показатели вариабельности ритма сердца в норме у взрослых: коррекция по возрасту и частоте сердечных сокращений // Функциональная диагностика. -2007. -№3. С. 6-16.

Садыков С. С.
преподаватель
Ферганский филиал
Тошкентский университет информационных технологий

ДУХОВНЫЙ ПОТЕНЦИАЛ -КАК ВАЖНЫЙ ФАКТОР РАЗВИТИЯ ОБЩЕСТВА

Аннотация: *В статье раскрывается роль духовного потенциала молодежи в процессе построения и модернизации правового демократического государства в условиях Нового Узбекистана. Проанализировано, что повышение духовного потенциала молодежи является важным фактором формирования сознания современной молодежи, рассмотрена важность стремления молодежи к инновациям и подъема ее интеллектуального потенциала.*

Ключевое слово: *потенциал, духовный потенциал, национально-исторические ценности, нравственный наклон, общественная деятельность, позиция, активная позиция, общественная жизнь, Вера.*

Sadykov S. S.
teacher
Fergana branch
of the Tashkent University of Information Technologies

SPIRITUAL POTENTIAL AS AN IMPORTANT FACTOR IN THE DEVELOPMENT OF SOCIETY

Abstract: *The article reveals the role of spiritual potential of young people in the process of building and modernization of a legal democratic state in the conditions of New Uzbekistan. It has been analyzed that raising the spiritual potential of young people is an important factor in the formation of the consciousness of modern youth, and the importance of young people's desire for innovation and the rise of their intellectual potential has been considered.*

Key words: *potential, spiritual potential, national-historical values, moral image, social activity, position, active position, social life, faith.*

Необходимо, чтобы государство проводило специфическую духовную политику по повышению духовного потенциала членов общества, особенно молодежи. Деятельность, которую осуществляют молодежь с высокими духовными потенциалами во всех сферах, обеспечивает их активность и в экономической сфере. Активность молодежи в области духовности, любые ее инициативы, которые служат развитию общества в этой области, должны поддерживаться государством и обществом, а также подчиняться и направляться интересам развития нашей страны. Политика государства должна быть направлена не только на экономическую сферу и экономический прогресс, но и на повышение факторов, обеспечивающих развитие духовной сферы.

«Одной из важнейших направлений государственной духовной политики должно быть связано с сохранением, повышением и управлением духовным потенциалом общества. Духовный потенциал также будет развиваться благодаря усилиям различных социальных групп и институтов. Однако координация и управление этим процессом со стороны государства придает стратегическое значение развитию духовного потенциала, гармонизирует его с целями-сроками социального развития. Потому что именно государственный институт обладает мощным потенциалом в обеспечении здоровья духовно-психологической среды, повышении культурного уровня членов общества, развитии национальной идеи, поддержке творчества, ускорении развития науки, литературы и искусства, сохранении и передаче духовного наследия будущим поколениям, укреплении духовной безопасности. Рациональная реализация этих возможностей средствами государственной духовной политики ускорит общественный прогресс, а их предоставление замедлит темпы прогресса"[1].

Важной проблемой является не только сохранение, но и повышение духовного потенциала. Существует ряд факторов, влияющих на повышение духовного потенциала, каждый из которых также влияет на духовное развитие, повышение духовного потенциала молодежи. К таким факторам относятся:

духовная атмосфера; духовные отношения; духовные потребности; духовные ценности.

В последнее время национальная безопасность становится одной из главных проблем во всех обществах. Проблема обеспечения национальной безопасности связана не только с экономическим прогрессом. Безусловно, экономический прогресс является важным фактором национальной безопасности. Но проблема национальной безопасности связана с национальной духовностью и ее подъемом. Национальная духовность выступает важным фактором, определяющим этностатус нации и обеспечивающим ее жизнеспособность с аксиологической точки зрения, атакже сохранение жизнеспособности нации в историческом процессе посредством передачи ее культурных и национальных ценностей будущим поколениям.

В Узбекистане необходимо выполнить задачу, связанную не только с сохранением и выводом на поверхность национального потенциала, но и с его дальнейшим возвышением и целенаправленной реализацией. С этой точки зрения исследователь С.Джаббарова государству необходимо обеспечить выполнение следующей задачи: "На современном этапе развития общества в Узбекистане для сохранения и повышения духовного потенциала нации прежде всего необходимо нейтрализовать влияние факторов, угрожающих ей. Следовательно, основные задачи политики государства, направленные на сохранение и повышение духовного потенциала, должны быть соразмерны этим факторам” [2].

В результате нынешних процессов глобализации и интеграции прогресс инноваций стал важной чертой нашего времени. В этих условиях стратегической задачей является то, чтобы узбекское общество смогло утвердиться в огромном международном экономико-культурном пространстве, влиться в ряды развитых стран, создать достойные условия жизни для нашего народа, повысить уровень жизни народа, обеспечить молодежи возможности для проживания и деятельности на Родине. Правильная ориентация на активную позицию и потенциал молодежи в реализации такой задачи-одна из актуальных проблем, решение которой ждет общество Узбекистана.

Необходимо сказать, что система дошкольного и высшего образования, основанная на предоставлении молодым людям знаний, является важным фактором в обеспечении им хороших рабочих мест в будущем, обеспечивая им разнообразие профессий, рост их интеллектуального потенциала. Занятость молодежи оказывает большое влияние на снижение безработицы в нашей стране. В этом контексте уместно привести следующую статистику. За последние 8 лет охват дошкольным образованием увеличился с 27% до 74%, охват высшим образованием увеличился с 9% до 38% были построены новые школы, и создано дополнительно 800 тысяч ученических мест, в ближайшие 3-4 года планируется довести охват дошкольным образованием не менее чем до 80%, с 2025 года планируется вводить в эксплуатацию 100 новых школ ежегодно на основе государственно-частного партнерства, учитывая, это, можно признать, что работа в этом направлении в нашей стране действительно выходит на новый уровень.

На основе инициатив Президента Узбекистана Ш.М.Мирзиёева, в первую очередь, такие процессы, как реализация комплексной экономической, политической, культурной, образовательной политики с соседними странами, странами Центральной Азии и другими странами мира, и начало реализации различных проектов с их помощью, повышающих экономическую и инвестиционную привлекательность нашей страны на международной арене. Эти процессы создают большие возможности для населения нашей страны, особенно для молодежи. Эти возможности считаются огромным фактором налаживания текущей и перспективной деятельности молодежи страны в различных сферах, выявления и реализации ее способностей. В некоторой степени этот фактор препятствует выезду молодых интеллектуалов в другие страны.

Президент Узбекистана Ш.М.Мирзиеев подчеркнул, что развитие сферы малого бизнеса и предпринимательства является важнейшим фактором и источником трудоустройства молодежи для достижения ею экономической независимости и достижения места в жизни. Вместе с тем, в условиях либерализации экономики одним из актуальных вопросов являются экономические реформы, направленные на развитие предпринимательства, укрепление его правовых и нормативных основ” [3].

С философской точки зрения, на развитие системы экономического потенциала оказывают влияние такие существенные элементы, как: экономическое мышление, экономическое сознание, экономическая культура, предпринимательская культура. Соответственно, требуется теоретический анализ вопросов, касающихся этих явлений.

Проблема развития экономического мышления молодежи требует также анализа проблем, связанных с тем, насколько их экономическое сознание вовлечено в экономические отношения в обществе. Экономическое мышление в самом общем виде можно понимать как отражение сложившихся в обществе экономических отношений в сознании его членов, в частности молодежи. При этом экономическое мышление является одной из форм общественного сознания общества (экономической, политической, культурной, научной, религиозной, нравственной, эстетической и др.). Развитие экономического мышления молодежи позволяет понять роль, которые они занимают в обществе, их активность, а также влияние, которое они оказывают на жизнь обўества. В этом контексте развитие экономического мышления молодых людей означает развитие их экономического потенциала.

Духовный потенциал-важная форма человеческого потенциала, он является неотъемлемым атрибутом, свойством человека. В этом смысле духовный потенциал составляет сущность человека. В Узбекистане всегда уделялось большое внимание духовности и ее развитию. Культура, духовность, духовные ценности нашей страны, сложившиеся на протяжении веков, пронизывают кровь, жизнь и образ жизни нашего народа. Особенно после обретения независимости эта сфера наряду с экономикой и политикой была определена как приоритет нашей страны. Первый президент Узбекистана Ислам Каримов признал, что духовная сфера имеет стратегическое значение наравне с экономикой. Он признал прочность и прогресс народной духовности одной из важнейших задач государства и общества в Узбекистане [4]. Позже Ислам Каримов в своей работе “высокая духовность – непобедимая сила” уделял большое внимание духовной сфере общества, национальной духовности, духовному обновлению и духовному прогрессу[5].

Использованные источники:

1. Жабборова С.С. Маънавий салоҳиятни юксалтириш ва бошқаришда давлатнинг роли. // Current Approaches and new Research in Modern Sciyencyes. International sciyentific-online conferencye. – Poland, 2023. - B. 32-35

2. Ш.Мирзиёевнинг Ўзбекистон ёшлари Форумида сўзлаган нутқи. 18 декабр, 2021 йил.

3. Каримов И.А. Узбекистан. Национальная независимость, экономика, политика, идеология. -Т.: Узбекистан,1996. -С.77.

5. Қаранг: Каримов И.Юксак маънавият-енгилма куч.

6. А.А.Мадаминов. ACTUAL PROBLEMS OF YOUTH SOCIALIZATION IN THE CONTEXT OF GLOBALIZATION. Экономика и социум. 2019. №4(59). 62-64стр.
https://www.iupr.ru/_files/ugd/b06fdc_0d8e3a360c514eab84f18bb092e3a7fb.pdf?index=true

Самадов А.Х.
и.о.доцент
кафедра «Нефтегазовой дело»
Каршинский инженерно-экономического институт.
Узбекистан г. Карши.
Бойқобилова М.М.
ассистент
кафедра «Экономики и инженерии»
Каршинский инженерно-экономического институт.
Узбекистан г. Карши
Мажидова Ю.С.
студентка
кафедра “Нефтегазовой дело”
Каршинский инженерно-экономического институт.
Узбекистан г. Карши.

НАУЧНЫЕ ОСНОВЫ И ТЕХНОЛОГИЧЕСКИЕ ПРОЦЕССЫ ПОДГОТОВКИ НЕФТИ И КИПЯЩИХ ГАЗОВ К ПЕРЕРАБОТКЕ

Аннотация:*Помимо сопутствующих газов, нефть содержит различные виды солевых растворов. В статье рассматривается технология добычи нефти на месторождениях нашей республики. В настоящее время снижение пластового давления на большинстве наших нефтяных месторождений и повышение степени гидратации добываемой нефти обусловливают необходимость использования новых технологий.*

Ключевые слова: *попутный газ, минералы, эмульсии, соединения серы, кокс, коррозия, стабилизация*

Samadov A.Kh., Acting Associate Professor
of the Department of Oil and Gas working
Karshi Engineering and Economics Institute.
Uzbekistan, Karshi.
Boikobilova M.M.
Assistant
of the Department of Economics and Engineering,
Karshi International University.
Uzbekistan, Karshi.
Mazhidova Yu.S.
Student
of the Department of Oil and Gas working
Karshi Engineering and Economics Institute.
Uzbekistan, Karshi.

SCIENTIFIC FOUNDATIONS AND TECHNOLOGICAL PROCESSES FOR THE PREPARATION OF OIL AND BOILING GASES FOR PROCESSING

Annotation:*In addition to the accompanying gases, oil contains various types of salt solutions. The article discusses the technology of oil production in the fields of our republic. Currently, a decrease in reservoir pressure in most of our oil fields and an increase in the degree of hydration of the extracted oil necessitate the use of new technologies.*

Keywords: *associated gas, minerals, emulsions, sulfur compounds, coke, corrosion, stabilization*

Добытая из скважины нефть содержит попутный газ, механические примеси и пластовую воду, содержащую растворы различных солей, т.е. хлоридов натрия, кальция и магния, а в редких случаях - карбонатов и сульфатов. В начальный период эксплуатации месторождений нефть добывают без воды и под водой, а в дальнейшем при добыче обводненность увеличивается и достигает 90-98% [1]. Понятно, что из-за наличия в составе «грязной» и сырой нефти летучих органических (от метана до бутана) и неорганических (H2S, CO2) газовых компонентов ее транспортировка и переработка в НКС без качественной очистки невозможны. в горных условиях.

Наличие пластовой воды в составе нефти увеличивает реальные затраты на ее транспортировку по трубопроводам и переработку. Увеличение количества воды в составе масла увеличивает энергетические затраты на его испарение и конденсацию (по сравнению с бензином в 8 и более раз) [2]. Наряду с увеличением транспортных расходов при перегоне балластных вод увеличивается и вязкость нефти за счет водной эмульсии пластовых вод.

Например, при увеличении содержания воды в масле с 5% до 20% вязкость увеличивается с 17 до 33,3 сСт. Механические примеси в нефти, то есть частицы высокодисперсного песка, глины, известняка и других горных пород, адсорбируются на поверхности глобул воды и приводят к стабилизации нефтяных эмульсий. Образование устойчивой эмульсии увеличивает затраты на обезвоживание и опреснение сырой нефти и оказывает вредное воздействие на окружающую среду. При разделении вод нефтесодержащего пласта в отстойниках и резервуарах часть нефти выбрасывается вместе с водой в виде эмульсии и загрязняет сточные воды. Эта часть эмульсии улавливается ловушками, собирается и хранится на свалках и в нефтяных озерах, где восстановление или утилизация являются дорогостоящими. Увеличение количества механических примесей в составе масла увеличивает образование отложений в нефтяном оборудовании и коррозию трубопроводов, снижает коэффициент теплопередачи и КПД устройства.

По сравнению с водой и механическими примесями соли хлора в нефти оказывают более негативное влияние на работу оборудования в промысле и подготовку нефти к переработке. Хлориды, соли кальция и магния гидролизуются при низких температурах с образованием соляной кислоты [4]. Под воздействием соляной кислоты металл технологических устройств разрушается. Конденсатно-охлаждающее оборудование рециклеров быстро подвергается коррозии под действием продуктов гидролиза хлоридов. Кроме того, в остатках нефтепродуктов накапливаются соли – они ухудшают свойства мазута, гудрона и кокса.

В результате переработки сернистых и высокосернистых нефтей выделяются сернистые соединения, которые вместе с хлористым водородом вызывают сильную коррозию нефтяного оборудования.

$$Fe + H_2S —— FeS + H_2,$$

$$FeS + 2HCl —— FeCl_2 + H_2S.$$

Хлоридное железо переходит в водный раствор, а выделившийся сероводород снова вступает в реакцию с железом.

Таким образом, присутствие в нефти хлорида железа и сероводорода вместе образует взаимосвязанную цепочку во влажной среде и начинает распространять металл. Скорость коррозии низкая, когда в масле мало солей хлора, защитная пленка, образующаяся в сульфите железа, защищает металл от коррозии [5].

Поэтому товары, произведенные на рудниках, оцениваются по следующим международным требованиям:

— Четыре класса по общему содержанию серы;

— на пять типов по плотности при 20 °С;

— на три группы по составу воды и солей хлора;

- три типа по составу серы и легких меркаптанов.

Марки масла условно определяются четырьмя цифрами, обозначающими класс, тип, группу и внешний вид. Например, при обозначении марки нефти цифрами 2,2,1,2 она сернистая, экспортная, средней плотности, соответствует 1-й группе по качеству промысловой подготовки и относится ко 2-му типу по показателям содержания серы и легких меркаптанов.

Первичная нефть, добытая на месторождении, направляется в НКИЗ на вторичную переработку, в результате глубокой переработки количество солей доводится от 5 мг/л, воды до 0,1% по массе.

На нефтяных месторождениях используются различные системы сбора и подготовки нефти. Шахты перешли от незагерметизированных систем к экологически закрытым системам сбора, очистки и хранения из-за потерь отработанного газа и легких фракций нефти. Нефть из группы скважин поступает в ловушки-сепараторы, где после последовательной разгерметизации происходит отделение содержащегося в жидкости попутного газа (воды и нефти), а затем в промежуточных ресиверах отделяется конденсат и направляется на газопереработку. заводов (или для поддержания пластового давления закачивают из скважин).

Марка и качество нефти, добываемой на месторождениях, по требованию

Таблица 1

Индикатор	**Сорт**	**Хили**	**Группа**			**тип**		
Массовая доля серы, %: до 0,6 — малосернистые 0,6…1,8 — высокосернистые 1,8…3,5 — высокосернистые крупные 3,5 — значительные серы	**1 2 3 4**							
Плотность при 20°С, кг/м3: До 830 - очень легкий 830,0- 850,0— светлый		0 (0Э) 1 (1Э) 2 (2Э) 3 (3Э) 4 (4Э)						
Массовая доля воды, %, невелика			**0,5**	**0,5**	**1,0**			
Концентрация солей хлора, мг/дм3, невелика.			**100**	**300**	**900**			
Состав механических соединений, мас.%, невелик.			**0,05**	**0,05**	**0,05**			
Давление насыщенного пара: кПа			**66,7 500**	**66,7 500**	**66,7 500**			
Массовая доля, %, содержание серы, метил- и этилмеркаптанов недостаточно.						**20 40**	**50 60**	**100 100**

Таблица 2

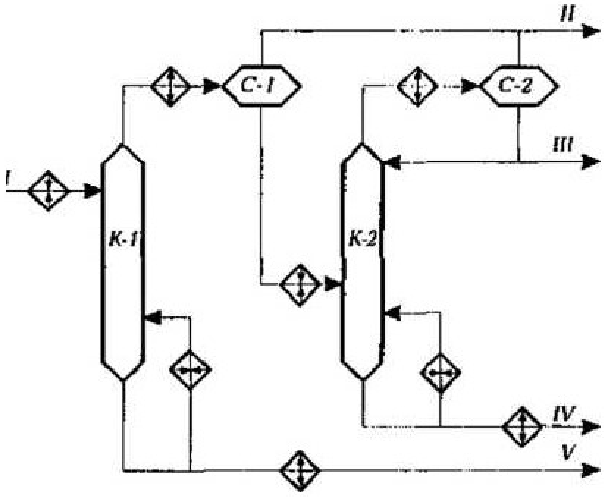
Кроме того, сорт нефти, подлежащей экспорту, оценивается по показателям плотности при 15°С:

Выход фракции, в %, не мал	**$0_э$**	**$1_э$**	**$2_э$**	**$3_э$**	**$4_э$**
до температуры 200°С	**30**	**27**	**21**		
300 °С	**52**	**47**	**42**	—	—
400 °С	**62**	**57**	**53**	—	—
Массовая доля парафина, %, не ката	**6,0**	**6,0**	**6,0**	—	—

После ловушек-сепараторов в масле остается 4% растворенных газов. Одновременно с выделением газа в ловушках-газоотделителях оседают и механические примеси из состава сырой нефти и главным образом шахтных вод – поэтому эти устройства называются трапперами. После газификаторов нефть поступает в отстойники, откуда направляется на установку подготовки нефти (ОПТ) и подвергается обезвоживанию, обессоливанию и стабилизации.

На основе процесса обезвоживания нефтяная эмульсия воды, закачиваемой в пласт через скважины, разрушается и отделяется. При опреснении обезвоженной нефти ее смешивают с пресной водой, в результате чего образуется и разрушается искусственная эмульсия. На буровой установке вода очищается и закачивается обратно в пласт для сжатия нефти и поддержания пластового давления.

Одноколонные устройства применяются для стабилизации в горных условиях, когда количество растворенных газов в составе нефти невелико. Двухколонное устройство применяют при содержании газа в масле выше 1,5%, вторая колонна служит для стабилизации газообразных бензинов [4]. Двухступенчатая схема стабилизации нефти представлена на рисунке 1.



1 - картинка. Принципиальная схема устройства стабилизации масла.

I – нестабильное масло; II- сухой газ; III- сжиженный газ; IV- газ бензин; V- стабильное масло

Целью стабилизации нефти является предотвращение потерь из-за испарения и снижение затрат при доставке в НКИЗ для переработки. Кроме того, когда нефть содержит газ, это создает засоры в трубопроводах и затрудняет повторное вождение.

Нестабильная нефть в промысловых пластах подается на первую тарелку колонны К-1 после нагрева до 60°С в теплообменниках и подогревателях. Для создания хороших условий для конденсации паров бензина с водой или воздухом давление в колонне К-1 поддерживают от 0,2 до 0,4 МПа.

Температура в кубе колонны К-1 поддерживается в пределах 130...150°С, обеспечивается стабильная циркуляция масла в нагретой печи. Стабильная нефть отбирается со дна К-1 после охлаждения в теплообменнике и холодильнике, направляется в резервуар и далее транспортируется в НКИЗ. Легкая фракция нефти, отбираемая из верха колонны К-1, охлаждается в конденсаторе-охладителе и подается в газификатор С-1, откуда сверху отсасывается сухой газ, состоящий из метана и этана, и получается сжиженный бензин. снизу и после нагрева в теплообменнике направляется в К-2 для стабилизации. Давление в колонне К-2 поддерживается в пределах

1,3-1,5 МПа (давление здесь выше, чем в колонне К-1, поскольку требуется конденсация газов, состоящих из пропана и частично бутана). Температура в кубе колонны К-2 поддерживается в диапазоне 130 - 160°С, так как часть стабилизированного бензина рециркулируется через пароподогреватель. Требуемая температура в верху колонны К-2 (40 - 50°С) передается для подачи части сжиженного газа на холодное орошение колонны. Газ отводится из верха колонны К-2, тяжелая часть газа (пропан и бутан) конденсируется в конденсаторе-охладителе, а несконденсировавшийся сухой газ отделяется в газификаторе С-2.

Использованные источники:

1. Самадов, А. Х., & Ахадова, Г. (2023). ПРИЧИНЫ ВОЗНИКНОВЕНИЯ СЛОЖНОСТЕЙ ПРИ ПРОВЕДЕНИИ БУРОВЫХ РАБОТ НЕФТЕГАЗОВЫХ МЕСТОРОЖДЕНИЙ. Новости образования: исследование в XXI веке, 1(7), 577-582.

2. Самадов, А. Х., & Салохиддинов, Ф. А. (2021). Состояние изученности проблемы и геолого-физическое условия объектов исследования. Школа Науки, (1), 27-29.

3. Aziz, S., Malika, S., & Kasimova, A. (2022). Justifying the Use of Lightening Drilling Mixtures Used in Drilling Low Pressure Formations. Eurasian Journal of Engineering and Technology, 10, 125-127.

4. Мирзаев, Э. С., & Самадов, А. Х. (2023). ТЕХНОЛОГИЧЕСКИЕ ОСНОВЫ БУРЕНИЯ РАПАЛЬНЫХ ОТЛОЖЕНИЙ В СЛОЖНЫХ УСЛОВИЯХ. Universum: технические науки, (2-3 (107)), 64-66.

5. Самадов, А. Х., & Ахадова, Г. (2022). ОЧИСТКА, ОПРЕДЕЛЕНИЕ И УТИЛИЗАЦИЯ ОТХОДОВ БУРЕНИЯ. Экономика и социум, (6-1 (97)), 855-858.

6. Samadov A.X., Shukrullayev D.D., Shodmonqulov A.O PARRAKLI BURG‘ILARNING TURLARI VA TUZILISHINI O’RGANISH // Экономика и социум. 2024. №5-2 (120). URL: https://cyberleninka.ru/article/n/parrakli-burg-ilarning-turlari-va-tuzilishini-o-rganish (дата обращения: 18.09.2024).

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Самъяев А. К.
и.о. доцент
Центр педагогического мастерства
Самаркандской области, г.Самарканд, Узбекистан

ПОЧВЕННЫЙ ПОКРОВ НИЖНЕГО ЗАРАФШАНА И ЕГО ИЗМЕНЕНИЯ ПОД ВОЗДЕЙСТВИЕМ ЧЕЛОВЕКА

Аннотация. *В статье представлена информация о почвах, распространенных в нижнем Зарафшане, их изменении под влиянием человеческого фактора, загрязнении, засолении почв, а также об их экологическом состоянии.*

Ключевые слова: *пустынные песчаные, серо-бурые, песчаные, такыры, солончаковые, лугово-болотные, аллювиально-луговые и окультуренные , засоление, эрозия, пестициды.*

Samyaev A.K.
Acting Associate Professor
Center of Pedagogical Excellence of the Samarkand Region
Samarkand, Uzbekistan

THE SOIL COVER OF LOWER ZARAFSHAN AND ITS CHANGES UNDER HUMAN INFLUENCE

Annotation. *The article provides information about soils common in Lower Zarafshan, their changes under the influence of human factors, pollution, soil salinization, as well as their ecological condition.*

Key words: *sandy desert, brown, sandy, barren, saline, meadow-desert, irrigated meadow-alluvial, meadow and meadow-swamp, salinity, erosion, pesticides*

Введение. Дельта реки Зарафшан — один из регионов, где на протяжении многих веков развивалось орошаемое земледелие. Основную площадь дельты реки Зарафшан занимают Бухарский и Каракульский оазисы. Большинство из этих оазисов, которые с древних времен являлись сельскохозяйственными центрами, засажены хлопчатником. Основная территория Бухарскую и Каракульскую оазисов состоит из аллювиальных луговых почв.

В Нижнем Заравшане в 60-70-х годах прошлого века резко увеличились посевные площади хлопчатника, а в сельском хозяйстве использовалось большое количество ядохимикатов. Для получения высоких урожаев хлопчатника в почву были внесены минеральные удобрения в количестве, превышающем норму. Не соблюдались агротехнические правила севооборота, во многих местах при орошении использовалось больше нормы воды, что привело к повышению уровня грунтовых вод и повышенной засоленности почвы. После 60-годов прошлого столетия в связи с интенсивным освоением приоазисных земель, Маликчуля лежащего на северо восточной части Бухарского оазиса и Уртачуля разположенное на севере Тудакульского водохранилища поступление количество солей в Бухарский оазис увеличилось. Это связано с тем что в Маликчуле и Уртачуле на глубине 50-80 см лежит гипсовый горизонт, который с орошением растворяясь начал мигрироваться вниз поверхностными и подземными стоками.

Основная часть. Различные типы почв распространяются под влиянием природных факторов, таких как структура поверхности, отложения, характеристики подземных вод, климат, растительности Нижнего Зарафшана. Наиболее распространенными типами почв на участке являются пустынные песчаные, серо-бурые, песчаные, такыры, солончаковые, лугово-болотные, аллювиально-луговые и окультуренные почвы.

Песчаные почвы пустынь широко распространены в отдаленных частях региона, например, вблизи песчаных дюн Кызылкум, Кемиреккум, Сандыклы, Эшакчи, а также на некоторых небольших участках в глубине дельты. Гумуса в этом типе почв очень мало, он составляет 0,1-0,5%. Площадь этого типа почв составляет 2 миллиона гектаров или занимает 58% площади. Эта часть территории широко используется в качестве пастбищ для скота.

Типы серо-бурых почв распространены в некоторых местах Бухарской и Каракульской дельт, а также расположены на плато Кызылтепа, Денгизкуль, Азкамара и Каракир и холмах, окружающих дельту. Этот тип почвы содержит небольшое количество гумуса, около 0,3-0,6%. Слой гумуса тонкий, 20-70 см. В ее состав входит гипс, поэтому она сильно минерализована. В некоторых случаях эти типы почв также используются в орошаемом земледелии.

Такыры и такырные почвы встречаются на окраинах Бухара-Каракульской дельты в долинах Эчкилисай и Дарьясай, в дельте Вабкентдарьи, в окрестностях Махандарья, Гурдуша и Тайкира. Такыры также встречаются на древних орошаемых территориях, особенно на развалинах Варахши. Площадь такыров составляет 400 000 гектаров. Содержание гумуса в почве очень низкое, до 0,5%. Количество гипса в почве составляет около 7-9% (Бабаев, Фрейкин, 1977).

Солончаки встречаются почти во всех частях Нижнего Зарафшана. Солончаки особенно распространены в низменных районах Бухара-Каракульской дельты, где грунтовые воды выходят на поверхность, в частности, в Шуркульской, Денгизкульской, Ходжакобской, Тудакульской котловинах, а также в засушливых районах Гурдуша, Махандарья и Тайкира. Засоленные почвы также распространены на орошаемых территориях, особенно в районах, где грунтовые воды находятся близко к поверхности, а также в районах, где канавы и дренажные системы функционируют плохо.

В оазисной части Бухарской и Каракульской дельты распространены преимущественно орошаемые луга (луга-оазисы), лугово-аллювиальные почвы. В результате освоения эти типы почв изменили свои природные характеристики и превратились в окультуренные почвы. Количество гумуса в этих типах почв достигает 1,4-6%. Особенно много гумуса в орошаемых лугово-болотных почвах, до 6%.

В Бухарской и Каракульской дельтах вокруг русла реки Зарафшан распространены лугово-болотные почвы, где грунтовые воды залегают близко к поверхности (0,5-1,0 м).Таким образом, из вышеизложенного известно, что орошаемые почвы в районе Нижнего Зарафшана в той или иной степени засолены из-за поверхностных грунтовых вод, испарения, что, в свою очередь, требует постоянного улучшения их мелиоративного состояния.

Вплоть до 60-х годов XX века экологические изменения в Бухарского и Каракульского оазиса не оставались незамеченными. Освоение новых земель, избыток влаги, несоблюдение правил севооборота в течение многих лет, несвоевременная обработка земли, чрезмерное использование минеральных удобрений и пестицидов, использование канавной воды для орошения, неправильное планирование привели к переувлажнению почвы, истощению, засолению и загрязнению различными химическими веществами во многих местах.

В последующие годы засоление почв в северной части региона начало усиливаться. Этот процесс связан со строительством Шуркульского водохранилища, и уровень грунтовых вод на равнинах вокруг водохранилища начал повышаться. На сегодняшний день было отмечено, что около 2000 гектаров освоенных земель вокруг Шуркуля сильно засолены.Пастбища вокруг Бухарского и Каракульского оазисов в последующие годы также используются для орошаемого земледелия. В районе Кызылтепы и Эчкилисая слой гипса залегает очень близко к поверхности (1-1,5 метра). Несмотря на это, в последние годы здесь развивается орошаемое земледелие. В результате во многих местах наблюдаются явления ложного карста с суффозией. По данным У.Нуровой [1], площадь ложного карста здесь составляет около 3000 гектаров. Если освоение подобных территорий будет продолжаться такими темпами, то ближаюшие время площадь ложных карстовых явлений составит 11 тысяч гектаров.

В настоящее время в Бухарской области разводят много овец и верблюдов. Большинство овец и верблюдов разводят в районе каналов Варахша, Денгизкуль и Аму-Бухара. На этих пастбищах содержится в 2-3 раза больше овец и верблюдов, чем установлено нормой. В результате песчаные пастбища превращаются в барханы, и процесс опустынивания усиливается. Если этот процесс не предотвратить, то через 10-15 лет площадь дюн и сыпучих песков удвоится.

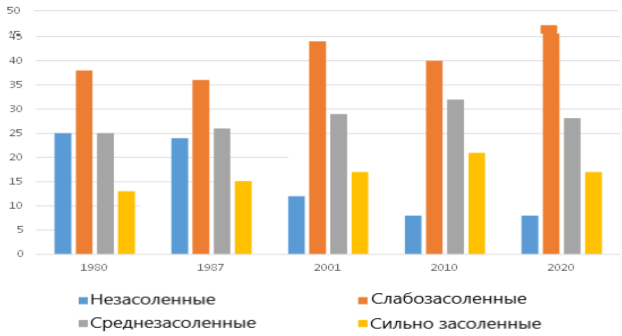
Мы проанализировали динамику заселенности почв в Бухарском и Каракульском оазисах за 1980-2020 годы (рис. 1). Если в 1980 году площади незасоленных почв составлял 25%, слабозасоленные - 37%, среднозасоленные

- 25% и сильно засоленные - 13%, то в 2020 году площади незасоленных почв составлял 8%, слабозасоленные - 47%, среднозасоленные - 28% и сильно засоленные - 17%. Наибольшее число случаев заражения произошло в 2010 году на почвах со средней засоленностью 32% и сильной засоленностью 22%. В результате проводимых в нашей стране реформ, ликвидации единоличного ведения хлопководства и перехода на передовые технологии орошения, к 2020 году площадь земель с средно и сильным засолением в Бухарском и Каракульском оазисах сократилась. Как видно из приведенных данных, 70-80% орошаемых почв Бухарского и Каракульского оазисов имеют разную степень засоления. В некоторых районах оазисов этот показатель достигает 95%.

Сильная дефляция почв наблюдается также в Нижнем Зарафшане. В Бухарском и Каракульском оазисах 60% почв на орошаемых землях в той или иной степени подверглись дефляции. Из них 31,3 тыс. га относятся к слабым, 22,4 тыс. га - к средним и 14,1 тыс. га - к сильно **дефляционным землям**.

Рисунок 1

Динамика засоления почв Бухарского и Каракульского оазисов



Дельта реки Заравшана на протяжении многих веков считалась одним из развитых районов орошаемого земледелия. По данным археологов, первое орошаемое земледелие появилось здесь в IV веке до нашей эры. Жители региона в основном занимались земледелием и животноводством. 80% территории дельты занимают песчаные пустыни, 20% - оазисные ландшафты. 95% населения проживает в оазисах.

До 60-х годов прошлого века влияние хозяйственной деятельности человека на природные компоненты и геосистемы дельты было незаметным. Но рост населения, создание крупных промышленных предприятий, открытие месторождений газа и нефти, нерациональное использование водных ресурсов в орошаемом земледелии, использование многих химических удобрений при выращивании хлопка и избыток поголовья скота усилили влияние антропогенных факторов на природу дельты. В результате были загрязнены воздух, вода и почва. В частности, усилились изменения в составе и структуре почвы, засоление и заболачивание в некоторых местах. Такая ситуация ускорила процесс опустынивания в этом районе.

Увеличение численности населения в Нижнем Зарафшане, превышение нормы содержания скота на пастбищах, использование большого количества кустарниковой и полукустарниковой растительности в шелководстве являются причинами деградации пустынной растительности, а также появления подвижных песчаных дюн. Согласно историческим источникам, до начала XIX века в окрестностях дельты реки Зарафшан были густые саксауловые леса. Они безжалостно использовались населением в качестве топлива, особенно при изготовлении древесного угля, щелочи (калия). Это привело к образованию подвижных песков на месте укрепленных песков вокруг дельты Зарафшана. В результате во второй половине девятнадцатого и первой четверти двадцатого века вокруг дельты образовалось подвижное "море" песка.

Общирные площади сельскохозяйственных угодий, городов, деревень и пустынных пастбищ стали жертвами сыпучих песков. Пустынная территория в дельте реки является одним из основных пастбищ каракульских овец. Поголовье крупного рогатого скота, выращиваемого на пустынных пастбищах, в 1,5-2 раза превышает норму (норма для пустынных условий - 5 овец на голову). Это приводит к деградации растительного мира и, как следствие, расширению площади подвижных песков. Эта ситуация особенно остро проявляется в отношении колодцев, используемых для водопоя скота. Сегодня из-за нехватки топливных ресурсов (газа, угля, дров) для населения, проживающего в регионе, многие саксауловые рощи вырублены и используются в качестве дров. Каждое домохозяйство, проживающее в дельте, не обеспеченные топливными ресурсами, заготавливает в среднем 1000-1500 бушелей саксаула в год и использует его в качестве дров.

Сегодня, несмотря на меры, принятые для уменьшения дефляции песков, подвижные пески в дельте реки Зарафшан наносят большой ущерб сельскому хозяйству.

Химические удобрения и пестициды также оказывают большое влияние на загрязнение почв в Нижнем Зарафшане. В результате эксперимента было установлено, что хлопок поглощает 30-40% азота, 15-20% фосфора, 40-45% пестицидов остается в растениях, а остальные остаются в почве, поднимаются в воздух, а 20-25% вымываются в воду (Самойленко, Якубова, 1987). Во многих хозяйствах для получения высокого урожая хлопка было использовано химических удобрений в несколько раз больше нормы.

Некоторые из этих химических удобрений, накапливающихся в почве и воде, без сомнения, попадают на овощные и фруктовые культуры и через них воздействуют на организм человека. Пестициды относятся к другой группе химических веществ, которые отравили сельскохозяйственные ландшафты региона. В течение нескольких десятилетий на хлопковых и других сельскохозяйственных полях использовались ДДТ, ГХЦГ, бутифос, хлорофос и др., которые считаются чрезвычайно токсичными. На гектар хлопковых полей использовалось до 54 кг пестицидов. Из-за длительного срока хранения в природе и чрезвычайной токсичности для здоровья человека использование ДДТ было запрещено в развитых странах в 1970-х годах. В Узбекистане эта инструкция была введена в действие в 1983 году.

Несмотря на запрет, ДДТ тайно применялся во многих колхозах Бухарского и Каракульского оазиса. В результате на орошаемых почвах оазисов наблюдается в 1,5-2 раза больше нормы несмотря на то, что с тех пор, как применение ДДТ было запрещено, прошло несколько десятилетий.

Выводы. В заключение отметим, что негативное воздействие антропогенного фактора на почвы дельты Зеравшана сохраняется и по сей день. В результате неправильного использования воды в орошаемом земледелии наблюдается засоление почв, чрезмерное применение различных химических удобрений при выращивании хлопка в течение длительного времени и, как следствие, накопление большого количества химических удобрений в почве. Деградация растений наблюдается в результате вырубки саксаула и различных кустарниковых растений на дрова в окрестностях населенных пунктов, а также чрезмерного выпаса скота. В результате вокруг населенных пунктов образуются зыбучие пески. Самое печальное, что негативное воздействие антропогенного фактора вызывает ряд социальных последствий. Среди населения, проживающего в регионе, наблюдаются различные заболевания по сравнению с другими регионами нашей республики.

Использованные источники:

1.Нуров У. Динамика ландшафтов и природные ресурсы дельты реки Зарафшан: Автореф. дис. канд. геог. наук. –Бухара. 1990. –28 с.

2.Назаров И.К. Абиогенные потоки в аридных геосистемах: оптимизация природопользования.-Ташкент., Фан, 1992.-99 с.

3.Рахматуллаев А. Ўзбекистон воҳа ландшафтларининг геоэкологик муаммолари // Ўзбекистон География жамияти ахбороти. –Т.: 2003. –23-жилд. -Б. 18-21.

4.Рахматуллаев А., Самъяев А., Равшанов А. Структурно-динамические особенности и оптимизация ландшафтов долины р. Зарафшан // Структурно - динамические особенности, современное состояние и проблемы оптимизации ландшафтов: Междунар. конф., посвященная 95-летию со дня рождения Ф.Н.Милькова. -Воронеж, 2013, -С. 324-326.

5.Самьяев А.К. Роль антропогенного фактора в эволюции почв Нижнего Зарафшана // Теоретические и прикладные проблемы географии на рубеже столетий. Матер. междун. науч-практ. конф. Часть-1. –Алматы. Аркас. 2004. С. 176-177.

6. Abbasov S.B., Samyayev A.K. Modern Ecolojical Problems Of Zarafshan River Delta // International Scientific Journal ISJ Theoretical & Applied Science Philadelphia, USA issue 01, volume 81 published January 30, 2020. P. 636-638.

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Сахыдова М.
преподаваатель
Туркменский государственный институт финансов
г.Ашгабат

ФИНАНСЫ И ЦИФРОВАЯ ЭКОНОМИКА

Аннотация: *В данной статье рассматривается взаимосвязь финансов и цифровой экономики в условиях глобальной цифровой трансформации, охватывающей все сферы деятельности. Особое внимание уделено влиянию цифровизации на финансовый сектор и адаптации финансовых институтов к изменениям, вызванным внедрением технологий, таких как блокчейн, искусственный интеллект и большие данные. Статья анализирует ключевые преимущества и вызовы цифровой экономики для финансовой отрасли, исследует перспективы ее дальнейшего развития и влияния на обеспечение финансовой стабильности и устойчивого роста. Приведены примеры внедрения цифровых технологий в управлении финансами и рассмотрены возможные пути их оптимизации для повышения эффективности финансовой системы.*

Ключевые слова: *финансы, цифровая экономика, цифровизация, финансовая трансформация, блокчейн, искусственный интеллект, финансовые технологии, кибербезопасность, большие данные, финтех.*

Sahydova M.
Lecturer
Turkmen state institute of finances

FINANCE AND THE DIGITAL ECONOMY

Abstract: *This article explores the relationship between finance and the digital economy in the context of global digital transformation affecting all spheres of activity. Special attention is paid to the impact of digitalization on the financial sector and the adaptation of financial institutions to changes brought about by technologies such as blockchain, artificial intelligence, and big data. The article analyzes the key advantages and challenges of the digital economy for the financial industry, examines the prospects for its further development, and discusses its influence on ensuring financial stability and sustainable growth. Examples of digital technology implementation in financial management are provided, along with potential optimization paths to enhance the efficiency of the financial system.*

Keywords: *finance, digital economy, digitalization, financial transformation, blockchain, artificial intelligence, financial technologies, cybersecurity, big data, fintech.*

Введение

Развитие цифровой экономики в последние десятилетия значительно изменило финансовый сектор, привнеся в него новые технологии и подходы к управлению активами, операциями и клиентскими данными. Цифровизация, включая развитие финтех-стартапов и интеграцию новейших технологий, таких как блокчейн и искусственный интеллект, дает возможность не только усовершенствовать существующие финансовые процессы, но и создать новые бизнес-модели, улучшающие экономическую эффективность и доступность финансовых услуг. Тем не менее, процесс цифровой трансформации требует тщательной адаптации традиционных финансовых систем к новым технологиям, а также укрепления нормативно-правовой базы.

Цифровизация финансов: основные направления

Цифровая трансформация финансового сектора включает несколько ключевых направлений:

1. **Использование искусственного интеллекта (ИИ):** Искусственный интеллект и машинное обучение позволяют автоматизировать процессы финансового анализа и управления активами. ИИ активно применяется для оценки кредитных рисков, создания персонализированных предложений для клиентов, а также для прогнозирования рыночных трендов. Это способствует более эффективному принятию решений, снижению рисков и повышению доходности.
2. **Блокчейн и криптовалюты:** Блокчейн стал одной из самых популярных технологий в финансовом секторе, благодаря его способности обеспечивать прозрачность, неизменность и децентрализацию данных. Блокчейн также способствует развитию рынка криптовалют и токенизации активов, что открывает новые возможности для инвестиций и упрощает трансграничные операции. Эти технологии снижают операционные издержки и повышают доверие клиентов к финансовым услугам.
3. **Финансовые технологии (финтех):**

Финтех-компании активно развивают инновационные продукты и услуги, повышающие удобство и доступность финансовых услуг для клиентов. Такие технологии, как мобильные платежи, онлайн-кредитование и P2P-платформы, позволяют людям легко и быстро осуществлять финансовые операции без участия традиционных банковских учреждений.

4. **Большие данные и аналитика:** Анализ больших данных позволяет финансовым учреждениям лучше понимать поведение клиентов, оптимизировать маркетинговые стратегии и улучшать процессы принятия решений. Использование больших данных помогает создавать модели предсказания поведения потребителей, оптимизировать портфель активов и минимизировать риски.

Преимущества цифровизации для финансового сектора

Цифровая экономика предоставляет значительные преимущества для финансовых институтов, включая:

- **Увеличение доступности и скорости финансовых услуг:** Цифровизация позволяет предоставлять услуги клиентам в любое время и в любой точке мира. Благодаря онлайн-банкингу и мобильным приложениям клиенты могут управлять своими финансами, не посещая отделения банков.
- **Снижение операционных расходов:** Автоматизация процессов и уменьшение необходимости в физических офисах позволяет снизить операционные издержки. Например, чат-боты и алгоритмы ИИ позволяют сократить время обработки запросов и повысить эффективность обслуживания клиентов.
- **Повышение прозрачности и доверия:** Благодаря блокчейн-технологиям и улучшенной системе управления данными финансовые операции становятся более прозрачными и надежными, что способствует укреплению доверия со стороны клиентов.

Вызовы цифровой трансформации в финансах

Несмотря на преимущества, цифровизация финансового сектора связана с рядом вызовов:

1. **Кибербезопасность и защита данных:** В условиях цифровизации становится важным вопрос обеспечения безопасности данных. Уязвимости в системах могут привести к финансовым потерям, нарушению конфиденциальности и утрате доверия к финансовым учреждениям. Необходимость инвестиций в кибербезопасность становится одним из главных приоритетов для компаний.
2. **Правовое регулирование и нормативная база:** Быстрое развитие цифровых технологий требует адаптации законодательства для защиты интересов участников рынка и минимизации рисков, связанных с новыми формами финансовых операций. Особое внимание уделяется разработке нормативов, регулирующих использование криптовалют и блокчейна, а также защиты прав потребителей цифровых финансовых услуг.
3. **Отставание от традиционной инфраструктуры:** Внедрение цифровых технологий часто сталкивается с устаревшими финансовыми системами, что может привести к сложностям при интеграции новых инструментов в традиционные бизнес-процессы.

Перспективы развития цифровых финансов

Цифровая экономика будет продолжать трансформировать финансовый сектор, открывая новые возможности для его участников. Перспективными направлениями развития являются:

- **Углубленная интеграция блокчейн-технологий:** Ожидается, что блокчейн продолжит свое внедрение не только в банковскую сферу, но и в страхование, инвестиции и логистику. Благодаря возможности децентрализованного учета активов и транзакций блокчейн станет основой для создания новых финансовых продуктов и решений.
- **Рост использования искусственного интеллекта и автоматизации процессов:** Спрос на ИИ и робо-советников в финансовом секторе будет увеличиваться,

так как они позволяют автоматизировать задачи, связанные с обработкой данных, анализа рынка и предоставлением рекомендаций клиентам.

- **Увеличение роли финтех-стартапов:** Финтех-стартапы продолжат развитие и предложат новые цифровые услуги, направленные на улучшение клиентского опыта и удовлетворение растущих потребностей рынка.

Заключение

Цифровая трансформация оказывает значительное влияние на финансы, открывая перед финансовыми учреждениями новые возможности для роста и повышения конкурентоспособности. Внедрение технологий, таких как блокчейн, искусственный интеллект и финтех, способствует повышению прозрачности, снижению издержек и улучшению качества финансовых услуг. Тем не менее, для успешного функционирования цифровой экономики важна координация между государственными органами и частными компаниями, направленная на решение вопросов кибербезопасности и создания эффективной нормативно-правовой базы. В результате цифровая экономика становится неотъемлемой частью современной финансовой системы, способствуя её стабильности и устойчивому росту.

Использованные источники:

1. Попов В. В., "Цифровая экономика: концепции, технологии, возможности," Экономические исследования, 2022.
2. Иванов С. Н., "Финансовые технологии и цифровизация: современное состояние и перспективы," Финансовый журнал, 2021.
3. Смит Д., "Влияние цифровой трансформации на финансовый сектор," Международные финансы, 2023.
4. Харрис К., "Блокчейн и финансы: новые горизонты," Журнал цифровых технологий, 2020.
5. Мартинес Р., "Кибербезопасность и цифровая экономика," Журнал экономических инноваций, 2021.
6. Томпсон Э., "Большие данные и их роль в финансах," Журнал аналитических данных, 2023.
7. Ли Дж., "Развитие финтех-сектора: тенденции и вызовы," Финансовая аналитика, 2022.
8. Ким А., "Будущее искусственного интеллекта в финансах," Журнал искусственного интеллекта и инноваций, 2021.

Суропов Б.М.
Доктор философии по педагогическим наукам PhD
Доцент кафедры Компьютерные системы
НОУ Университет экономики и педагогики

РАЗВИТИЕ У СТУДЕНТОВ НАВЫКОВ АНАЛИЗА БОЛЬШИХ ДАННЫХ В ОБРАЗОВАТЕЛЬНОМ ПРОЦЕССЕ

Аннотация: *Анализ больших данных стал неотъемлемой частью современного мира. Он применяется во всех сферах деятельности, от бизнеса до науки. Поэтому развитие у студентов навыков анализа больших данных в образовательном процессе становится все более актуальным.*

Ключевые слова: *анализ больших данных, образование, навыки, студенты, машинное обучение, данные, программирование.*

Suropov B.M.
Doctor of Philosophy in Pedagogical Sciences PhD
Associate Professor of the Department of Computer Systems
NGU University of Economics and Pedagogy

DEVELOPMENT OF STUDENTS' SKILLS IN BIG DATA ANALYSIS IN THE EDUCATIONAL PROCESS

Abstract: *Big data analysis has become an integral part of the modern world. It is used in all areas of activity, from business to science. Therefore, developing students' skills in big data analysis in the educational process is becoming increasingly relevant.*

Keywords: *big data analysis, education, skills, students, machine learning, data, programming.*

Сегодня одним из актуальных направлений при подготовке практически любого специалиста является оперирование большими данными. Это обусловлено как огромным объемом накопленной информации за более чем 20-летний срок информатизации всех сфер деятельности человека, которую необходимо анализировать и систематизировать, так и возможностями технологий Big Data выстраивать иную траекторию в прогнозировании спроса различных услуг на базе аналитики.

В образовании с появлением Big Data произошло расширение возможностей автоматической обработки информации, которое дает возможность «ставить на крыло» новые поколения исследователей — методологов и теоретиков педагогики. Сегодня появляются новые сервисы для анализа данных, разрабатывается программное обеспечение и упрощаются устройства, и именно эта работа по созданию и упрощению оказывается наиболее востребована и высокооплачиваема, поэтому педагогам важно иметь компетенции освоения новых технических решений и программного обеспечения, а также владеть методами организации аналитики в сфере образования.

В системе образования всегда традиционно анализировались данные по успеваемости обучаемых, предпочтениям учителей в использовании педагогических методов и приемов на уроках, результатам поступивших выпускников в вузы и техникумы. С появлением цифровых возможностей все это стало быстро и доступно, что не всегда качественно. «Сами по себе большие данные малоинтересны — работает система и работает. Основной интерес представляют аномальные и пограничные состояния систем. Именно взаимосвязь вводных изменений и реакция на них системы наиболее полезны для работы с большими данными» [1]. Именно таких специалистов сейчас и не хватает в системе образования, которые смогли бы собирать и анализировать данные о работе систем, и прежде всего о человеке—тоже системе, которую можно анализировать, настраивать по параметрам и прогнозировать результат. Эта потребность и должна быть отражена в новых программах профессиональной подготовки педагога как для очного, так и для дистанционного преподавания.

Идея «больших данных» (BigData) появилась уже достаточно давно, но активно развивается последние 2-3 года, основными факторами ее развития являются политические, экономические и социальные тенденции развития общества. BigData позволяют не только анализировать образ потребителя и объем плановых затрат, спрос на те или иные туристические направления, но и моделировать будущее в финансах, бизнесе, образовании и др. Они позволяют узнать состояния исследуемых объектов, например, что любят есть на обед те, кому нравится классическая музыка, или какую машину купит семья с двумя детьми и собакой.

Нахождение новых решений и методов актуально и для системы образования, особенно для повышения эффективности управления образовательными системами и обеспечения качества обучения. Для этого, с одной стороны, требуется использовать огромный объем накопленной информации, которую необходимо анализировать и систематизировать. С другой – Big Data дает возможность по-новому выстроить каждому обучающемуся свою индивидуальную образовательную траекторию, а также оценить качество обучения в образовательной организации и выбрать для себя приемлемый способ обучения. В связи с этим, рассмотрение возможностей использования больших данных для оценки и повышения качества образования является актуальным.

Используя в образовании большие данные, нужно подавать материал так, чтобы было интересно учиться, выявлять закономерности и использовать их. Условно говоря, они могут показать, что школьники, живущие в Казани, готовы решать сложные задачи в солнечную погоду с утра, а дети из Нарьян-Мара такие же задачи лучше решат их в плохую погоду после обеда. Если есть данные о местоположении обучающихся, погоде в регионе и проценте положительных решений, то несложно решить поставленную задачу. Такие неочевидные закономерности, носящие случайный, но объективный характер, могут составить основу новой научно-инженерной дисциплины, которую можно назвать «вычислительная педагогика».

Существенная роль педагога сохранится еще долгое время, если не навсегда, и никакая информационная система не заменит Пифагора. Но для задач массового и корпоративного образования компьютерные системы могут быть очень эффективными, дополнительными средствами обучения. Как минимум они помогут экономить время на поиск информации. Интеллектуальные системы, работающие на уровне лучшего педагога, в будущем будут доступны в любой образовательной организации. Тогда удастся преодолеть понятие образовательного неравенства, сократить барьеры обучения для людей с ограниченными возможностями. И хотя из двоечника нельзя сделать вундеркинда, но подтянуть его до среднего уровня станет возможно. И все это благодаря персонифицированному подходу и умному компьютеру, который знает все о том, как усваивает материал обучающийся [3]. Они же позволят давать информацию о лучших методиках обучения и контроля знаний, умений и компетенций, приобретаемых в различных образовательных организациях или самостоятельно. Методы объективного анализа данных, составляющие основу алгоритмов наших действий, позволяют вычислить закономерности, возникающие в процессе обучения. А это в свою очередь поможет оптимизировать процесс обучения и сделать его более увлекательным и для троечника, и для отличника. Зависимостей, на самом деле, при использовании больших данных очень много, просто они еще не все открыты и используемы. Многое интересное еще впереди.

Big Data помогают обработать опыт тысяч преподавателей и студентов, на основе анализа получить эффективную методику. Если традиционно преподавательская методика создаётся на основе персонального опыта одного или нескольких учителей, то на основе больших данных методика становится продуктом массового опыта [4]. Помимо повышения качества и эффективности создаваемых методик, большие данные помогают персонализировать контент под потребности каждого обучающегося. Кстати, а в чём роль педагога? Он умеет объяснять и получать обратную связь. Компьютер не может отследить реакцию ученика, не обладает той магией, когда педагог по глазам обучающегося видит, прояснилось в их головах полученная информация или нет, понимают они ее или нет. Кроме того, педагог создаёт эмоциональный фон и мотивацию обучения. Компьютер просто пишет «Молодец», а педагог заглядывает в глаза, верит, говорит, что сможешь, а потом радуется: «Ведь можешь же, когда захочешь!».

Большие данные, как и любая технология в образовании, не избавляют педагога от эмпатии и взаимодействия с обучающимся, способность человека сопереживать и мотивировать всегда важна, а компьютерам такая функция недоступна. Их преимущество в том, что они помогают сделать из преподавателя суперпреподавателя. А как это происходит? К примеру, система может проанализировать сотни тысяч текстов в интернете и подобрать тот, который содержит нужное количество новых слов. Это то, на что не способен человек, но способна сделать машина. С помощью больших данных можно делать, условно говоря, три важные вещи: создавать методики, адаптированные под большое количество студентов; персонализировать контент; подбирать режим обучения.

Отметим, что Big Data вскоре изменят технологии высшего образования, позволив сделать обучение студентов более индивидуальным: не только подбирать каждому свою программу курсов, но и давать отдельное домашнее задание, а также обеспечивать проверку усвоения содержания. Другой станет и методика работы в группах: в Гарварде уже сейчас на одном из курсов в пары объединяют студентов с разными ответами на одно и то же задание, чтобы они могли прийти к единому решению, отстаивая свою точку зрения в процессе поиска правильного ответа. Студенты будут получать более подробные рекомендации по различным темам и иметь расширенное информационное пространство. Предсказывать, насколько успешно пройден курс ещё до начала обучения программы умеют уже сейчас. Студенты будут иметь возможность подобрать свою программу курсов, выполнить отдельное домашнее задание, получить более подробные рекомендации. С помощью больших данных в университетских группах станет меньше отстающих, так как технологии позволят заранее выявлять студентов, которые могут оказаться в группе риска, а преподаватели смогут лучше помогать отстающим студентам, так как программа укажет, в каких именно областях знаний есть проблемы. Система также будет помогать подросткам в выборе вуза: предполагается, что роботы будут сами подбирать наилучшие места обучения для будущих студентов, им даже не придётся подавать заявление. Система будет выбирать наилучшие места для будущих студентов, а к окончанию вуза у каждого студента будет цифровое портфолио, которое поможет молодым специалистам ориентироваться на рынке труда, проще ориентироваться при выборе карьеры, а работодателям в подборе специалистов.

В сфере образования для анализа больших данных выделяются пять основных типов: персональные данные; данные о взаимодействии студентов с электронными системами обучения и друг с другом (электронными учебниками, онлайн-курсами, показатели отказов, скорости просмотра страниц, возвраты к страницам, количество связей, расстояние связей, количество просмотров страниц одним пользователем и т.д.); данные об эффективности учебных материалов (какой тип ученика с какой частью контента взаимодействует, результаты взаимодействия, образовательные результаты и т.д.); административные (общесистемные) данные (посещаемость, пропуски по болезни, количество проведенных уроков и т.д.); прогнозные (предполагаемые) данные (какова вероятность участия ученика в той или иной деятельности, какова вероятность выполнения задания и т.д.) (рис.).

Рис. Схема внешних и внутренних потоков данных

Очевидно, что сегодня практически все образовательные организации работают в основном с малыми данными. Это связано с тем, что в образовательных организациях отсутствует специальная электронная среда, которая содержит много онлайн-контента и как следствие – большое число пользователей контентом и взаимодействий между собой относительно него.

Заключение.

В заключение отметим, что возможности обобщать и использовать данные в электронной среде велики. Причинами этого является ряд факторов

Во-первых, анализ данных позволяет работать с индивидуальными программами обучающихся, персонализировать обучение. Данные показывают, какой тип учащегося с какой частью контента взаимодействует, как происходит это взаимодействие, где он проявил интерес, а где ему было скучно, с кем и как он взаимодействовал в процессе обучения, как прохождение того или иного курса повлияло на образовательные результаты, на каком этапе обучения ему нужна помощь. Обучение становится адаптивным и личностноориентированным.

Во-вторых, образовательная аналитика на основе больших данных меняет представление о формате образовательных программ. Тексты, используемые в образовательном процессе, могут быть не только оцифрованы, но и переведены в числовые данные. Пользователи продвигаются по материалу с большей свободой, затем осуществляется анализ, как пользователи взаимодействовали с материалом: что оказалось эффективным, что неэффективным. Результатом такой аналитики является изменение контента. Поэтому образовательная программа превращается из формата утверждаемого текста в формат некоторой совокупности онлайн-контента, которая динамически изменяется через анализ данных, появляющихся в результате взаимодействия с онлайн-контентом обучающихся. Появляются так называемые «умная программа», «умный учебный план». Можно предположить, что программы учебных курсов также претерпят изменения: они могут стать метапредметными.

В-третьих, изменение подходов к мониторингу и оценке, как самого образовательного процесса, так и образовательных результатов. Мониторинг становится постоянным. Заинтересованность студентов в постоянном мониторинге связана с тем, что анализ данных позволяет сделать его учебный план индивидуальным, заинтересованность преподавателей связана с возможностью получения информации о продуктивных группах, обратной связи от учащихся к создаваемому контенту (интересно/не интересно, сложно/легко и т.д.), для преподавателей – эффективное распределение ресурсов. Оценка образовательных результатов может быть самостоятельной и/или коллективной, агрегированной на основе всех данных студента, полученных из всех взаимодействий. Оценка осуществляется для того, чтобы грамотно расширить образовательную программу обучающегося. Динамика образовательных результатов фиксируется постоянно, на основе этих данных формируются паттерны (повторяющиеся шаблоны), по которым можно судить о развитии учащегося.

В-четвертых, составной частью образовательной аналитики станут новые методы: а) прогноз, когда комбинация известных данных позволит прогнозировать искомое неизвестное; б) метод выявления структуры и кластеризация; в) сетевой анализ.

BigData открывает новые горизонты в современном образовании, с развитием этих технологии образование выходит на более высокий уровень, когда применение BigData позволяет выделять студентов, которые оказываются в ситуации отчисления или заслуживают особых заслуг. Это позволяет отслеживать подобные ситуации и помогать им как в успешном продвижении по индивидуальной образовательной траектории, так и для исключения ситуации потери места в университете. Анализ данных о качестве обучения может ориентировать участников выбрать образование и карьеру, наиболее соответствующие личным качествам и их заинтересованности в дальнейшей перспективе.

Использованные источники.

1. Суропов Б.М. (2021). Талабаларни касбий фаолиятга тайёрлашда эконометрика ва ахборот технологиялари фанлараро интеграциясидан фойдаланиш. // “Замонваий таълим” (“Современное образование”) илмий-амалий оммабоп журнали (Узбекистон), № 8 (105), 36-44 б.
2. Maydonovich S.B. (2020). Teaching students automation of financial reports of the company by using spreadsheet system in ms excel. European Journal of Research and Reflection in Educational Sciences Vol, 8(1).
3. Суропов Б.М. (2019). Иқтисодиёт йўналиши талабаларининг ахборот технологияларидан фойдаланиш компетентлигини шакллантириш. // Интернаука, (27-2), 62-63.

4. Суропов Б.М. (2020). Дастурий маҳсулотлардан фойдаланиб инновацион фаолиятни тижоратлаштириш. Современное образование (Узбекистон), // “Замонваий таълим” (“Современное образование”) илмий-амалий оммабоп журнали (Узбекистон), № 2 (87), 3-8 б.
5. Суропов Б.М. (2023). Мобиль иловалар асосида талабаларнинг замонавий билимларни ўзлаштириш механизмлари. // “Замонваий таълим” (“Современное образование”) илмий-амалий оммабоп журнали (Узбекистон), № 5 (126), 10-17 б.
6. Kayumova, N. A., & Suropov, B. M. (2016). THE FORMATION PROFESSIONAL AND PEDAGOGICAL COMPETENCE OF THE TEACHER OF INFORMATICS. *ББК*, *65*(13), 11.
7. Каюмова, Н. А., & Суропов, Б. М. (2015). ТАЪЛИМ ЖАРАЁНИДА ИНТЕГРАЦИЯЛАШГАН МУҲИТ. In *Сборники конференций НИЦ Социосфера* (No. 51, pp. 19-21). Vedecko vydavatelske centrum Sociosfera-CZ sro.
8. Суропов, Б. М. (2020). Олий таълимда ахборот-таълим муҳитини яратиш ва ундан фойдаланишнинг имкониятлари. *Современное образование (Узбекистан)*, (10 (95)), 3-10.
9. Каюмова, Н. А., & Суропов, Б. М. (2019). ПСИХОЛОГО-ПЕДАГОГИЧЕСКИЕ АСПЕКТЫ В ПРОЦЕССЕ ОБУЧЕНИЯ ИНФОРМАЦИОННО-КОММУНИКАЦИОННЫЕ ТЕХНОЛОГИИ. *Интернаука*, (28), 66-67.
10. Суропов, Б. М. (2018). Информатика фанида стандарт функцияларни ўқитишнинг узлуксизлиги. *Современное образование (Узбекистан)*, (4), 62-67.
11. Суропов, Б. М. (2021). Характеристика компьютерных программ в области анализа, прогнозирования и планирования деятельности предприятия. *Вестник науки и образования*, (5-2 (108)), 11-14.
12. Kayumova, N., & Fayziyeva, S. (2022). USING SOFTWARE THAT CREATOR COMPUTER NETWORK MODELS. *CENTRAL ASIAN JOURNAL OF EDUCATION AND COMPUTER SCIENCES (CAJECS)*, *1*(2), 61-65.
13. Suropov, B. M. (2020). Opportunities to create and use the informationeducational environment in higher education. *Modern education.-Tashkent*, *10*(95), 3-10.
14. Суропов, Б. М. (2018). Методика обучения информационно-коммуникационным технологиям: метод. пособие для студентов-экономистов.
15. Суропов, Б. М. (2020). Формирование инновационной деятельности студентов с использованием программных продуктов. *Проблемы современного образования*, (6), 206-212.
16. Suropov, B. (2024). INTEGRATING DIGITAL TECHNOLOGIES AND ECONOMIC KNOWLEDGE IN STUDENT TRAINING: PEDAGOGICAL AND PSYCHOLOGICAL PERSPECTIVES. *Science and innovation*, *3*(B10), 68-74.

17. SY Fayzieva. FORMATION OF INFORMATION COMPETENCE OF STUDENTS USING MODERN ELECTRONIC MEANS. Innovative Development in Educational Activities 2 (24), 326-330

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Тайлакова Д. Б.
ассистент
Каршинский инженерно-экономический институт
Узбекистан

ЭТАПЫ ФОРМИРОВАНИЯ СФЕРЫ УСЛУГ В РАЗВИТИИ ЗЕЛЕНОЙ ЭКОНОМИКИ

Аннотация. *В данной статье показано, как развитие сферы услуг в обеспечении сбалансированности и стабильности аграрной экономики создаст дополнительные рабочие места в стране и повысит благосостояние населения. В нем также представлены выводы, предложения и рекомендации по повышению эффективности ускоренного развития сектора услуг, среди других секторов и отраслей.*

Ключевые слова: *Услуги, информация, финансы, транспорт, консалтинг, сельское хозяйство, мобильная связь, интернет, магазины, развлекательные центры, кейтеринг, салоны красоты зеленой экономики .*

Taylakova D.
Assistant
Karshi Engineering Economics Institute
Uzbekistan

STAGES OF FORMATION OF THE SERVICES SPHERE IN THE DEVELOPMENT OF THE GREEN ECONOMY

Annotation. *This article shows how the development of the service sector in ensuring the balance and stability of the agricultural economy will create additional jobs in the country and increase the well-being of the population. It also presents conclusions, proposals and recommendations for improving the efficiency of accelerated development of the service sector, among other sectors and industries.*

Key words: *Services, information, finance, transport, consulting, agriculture, mobile communications, internet, shops, entertainment centers, catering, beauty salons.*

Роль сектора услуг, который является одним из важнейших секторов экономики в условиях сельского хозяйства, очень велика и значительна. Потому что усложнение производства, наполнение рынка товарами, основанными на повседневном и личном спросе, связано со стремительным ростом научно-технического прогресса, который обновляет жизнь общества. Все это невозможно сделать без информационных, финансовых, транспортных, консалтинговых и других видов услуг.

Президент Республики Узбекистан Ш.М.Мирзиеев отметил, что "значительный прогресс достигнут в областях промышленности, сельского хозяйства, капитального строительства, транспорта и связи, сервиса и обслуги" [1]. Следовательно, необходимо обеспечить дальнейшее развитие сферы услуг во всех различных организациях, а также социально-экономическое развитие в сельском хозяйстве. В результате развития сектора услуг в обеспечении пропорциональности и стабильности сельскохозяйственной экономики в стране создаются дополнительные рабочие места, которые служат повышению уровня жизни населения. Сфера услуг фактически является консолидированной сферой, которая предполагает воспроизводство различных видов услуг, предоставляемых предприятиями, организациями и частными лицами. Сегодня сфера услуг в сельском хозяйстве имеет большое значение. Сельское хозяйство - важная отрасль, необходимая для жизни человека. Потому что сельскохозяйственное производство является источником дохода и основой управления природными ресурсами, что обеспечивает улучшение условий жизни населения, проживающего в сельской местности, и вносит свой достойный вклад в поддержание сельского образа жизни. Именно поэтому сельскохозяйственное производство имеет большое значение для подъема экономики Кашкадарьинской области и повышения уровня жизни населения. На основе цифровой экономики в аграрной экономике важным вопросом является решение ряда проблем в области современных технологий и различных видов бытовых услуг. Услуги можно определить как вид экономической деятельности. Услуги - это действия, работа или делопроизводство, которые считаются производительностью, и они незаметны. В сельской местности универсальные и продовольственные магазины удобны и в одном месте выставляют на продажу много товаров. Службы баз данных размещают информацию в форме, удобной для менеджеров. Вечернее время, проведенное в ресторане или кинотеатре в разгар тяжелой рабочей недели, обеспечивает восстановление душевных сил.

Услуги могут характеризоваться значительной зависимостью от товаров. Таким образом, получается, что понимание сути сервисной деятельности связано с понятиями прибыли, сервиса. В общем, понятия Сервис и обслуга приобретают одно и то же значение. В то же время они также могут образовывать словосочетание Service, которое отражает современную сетку обслуживания. "Сервис" в переводе с английского означает "Обслуживание, Обслуга, эксплуатация". Ученые-экономисты по-разному интерпретировали понятия "услуга", "сервис". Все это невозможно сделать без информационных, финансовых, транспортных, консалтинговых и других видов услуг. Как мы знаем, на данный момент каждый из нас сталкивается с сектором услуг почти каждый день. Так что без стремительного развития сферы услуг трудно представить экономическое развитие нашей республики. Поэтому в стратегии действий по пяти приоритетным направлениям развития Республики Узбекистан на 2017-2021 годы этот вопрос также предусмотрен отдельно. Мероприятия, осуществляемые в рамках программы, направлены на дальнейшее облегчение условий ведения бизнеса в этом секторе. [2]

Высокий рост секторов сельскохозяйственных услуг можно объяснить влиянием ряда факторов, в том числе: появление современных новых видов услуг в нашей стране, то есть, используя сегодняшнюю цифровую экономику, мы пользуемся услугами мобильной связи, Интернета, торговых, развлекательных центров, заведений общественного питания, салонов красоты, консультационных услуг, медицинских и образовательных центров посредством кредитных карт, используя различные виды транспорта, используя электронный (через онлайн-приложение) вид платежной услуги. Все эти виды услуг составляют концепцию сектора услуг. Сфера услуг появилась на ранних стадиях развития человечества и включала в себя такие виды услуг, как предоставление социальных услуг государственными организациями общества. Консалтинг (консультирование) - это очень широкое понятие, причина которого заключается в том, чтобы помочь решить проблемы современного предпринимателя посредством консультационных услуг и решения возникающих проблем, становящихся требованием времени с точки зрения конкуренции и законодательства. Суть консалтинговых услуг заключается в предоставлении своих услуг с целью достижения своих целей путем предоставления информации и рекомендаций клиенту, повышения эффективности его деятельности и создания ее высокой стоимости. Сегодня в отношении консалтинговых услуг у деловых людей нет четкой совершенной концепции и определения, поскольку на сегодняшний день не разработаны четкие стандартные перечни видов консалтинговых услуг. Поэтому различные консалтинговые организации классифицируют и эксплуатируют основные направления консалтинговых услуг по-разному, опираясь на собственный опыт. В настоящее время не существует единой классификации международных ассоциаций консультантов. Мировая практика показывает, что на основе консалтинговых услуг можно извлечь выгоду в офсете, в создании бухгалтерских программ, даже в создании политического имиджа. Путаница часто возникает из-за того, что каждая концепция консалтинга определяется практическим направлением его деятельности. По сути, консалтинговые услуги - это вид интеллектуальной и консультативной деятельности, призванный достичь желаемого результата, улучшить и обеспечить эффективность работы, а также проанализировать и разработать определенные проблемы, касающиеся выхода предприятия из кризисного состояния. Другими словами, консалтинговый продукт - это модель схемы или решения проблемы, приобретенная клиентом в виде специальной информации. Рассматривается важный фактор интенсификации и повышения эффективности сельскохозяйственного производства в сфере предоставления услуг. Своевременная и в умеренных количествах поставка сырья, материалов и готовой продукции, скорость которой определяет размер ресурса, находящегося в деловом обороте. Расположение объектов сервисных предприятий (в основном в районных центрах), используемые технологии, высокие тарифы на услуги, монопольное положение и другие причины являются причинами, по которым фермеры не в полной мере пользуются их услугами. Сегодня рыночная экономика движется на основе спроса, предложения, конкуренции и цены. Точно так же, как и в сельском хозяйстве, создание и размещение предприятий и организаций, обслуживающих фермы и подсобные хозяйства, должно определяться на основе спроса и предложения ферм и подсобных хозяйств. Но во многих районах нашей страны предприятия, которые оказывают услуги фермерам и фермерским хозяйствам, основаны не на их требованиях, а скорее наоборот или расположены не на желаемой территории или находятся далеко, это обстоятельство также негативно влияет на взаимные экономические, организационные и правовые отношения между фермерами и деятельность из сущностей, которые им служат. Если сервисные предприятия в регионах организованы на основе спроса и предложения, между ними формируется конкуренция, и само собой можно добиться снижения их качества и стоимости обслуживания. Это дает возможность регулировать экономические отношения между ловкими и фермерскими хозяйствами.

Таблица 1

Вновь созданные малые предприятия и микропредприятия по районам, в Единстве[5]

	Январь-декабрь 2022	Январь-декабрь 2023	(+;-)
Кашкадарьинская область	**5154**	**5742**	**588**
города:			
Город Карши.	983	1045	62
Районы города Шахрисабз:	324	234	-90
Гузар	241	295	54
Дехканабад	211	241	30
Камаши	334	358	24
Карши	421	353	-68
Касан	313	476	163
Китоб	330	405	75
Миришкор	232	247	15
Муборак	153	170	17

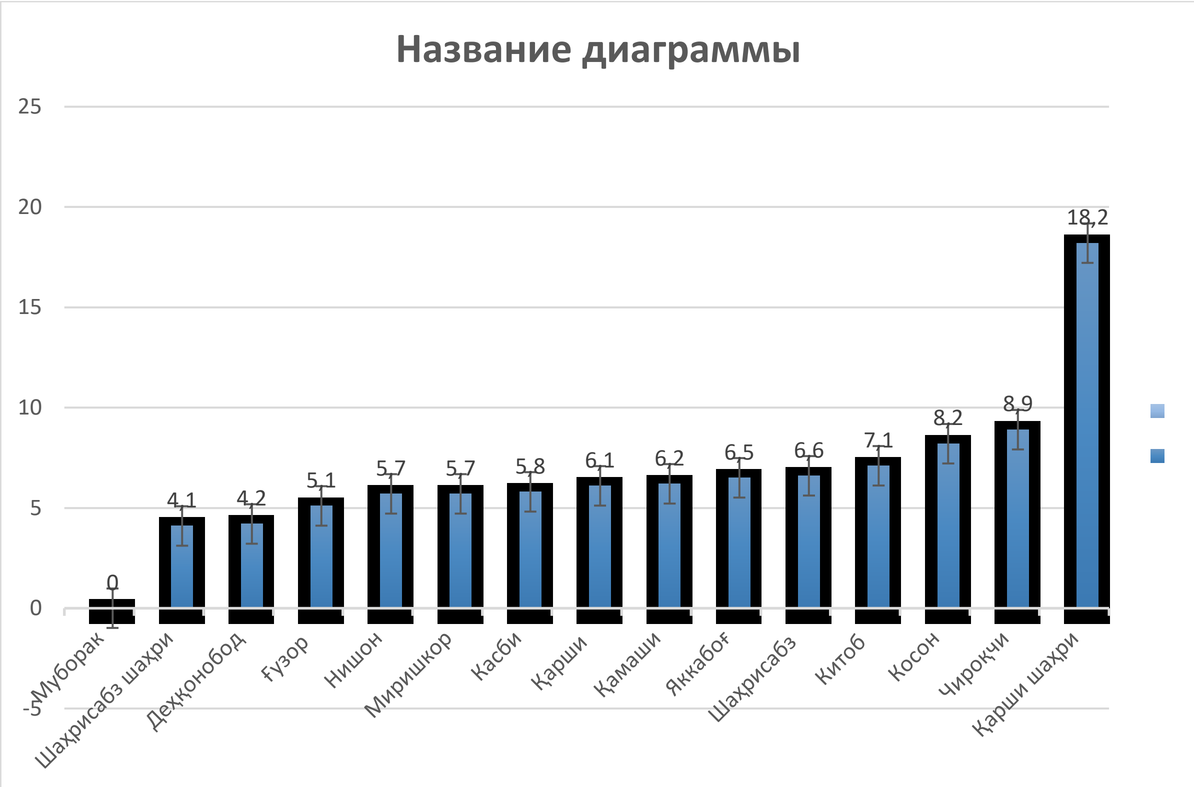
Нишон	215	328	113
Касби	338	332	-6
Чирокчи	418	509	91
Шахрисабз	317	378	61
Яккобог	324	371	47

Данные статистического управления Кашкадарьинской области

Как видно из данных таблицы, вновь созданных малых предприятий и микропредприятий по регионам в январе-декабре 2022 года в городах и районах Кашкадарьинской области 5154 по сравнению с январем-декабрем 2022 года, отличаются на 5742 единицы. Город Карши 62, Город Шахрисабз -90, Гузар 54, Дехканабад 30, Камаши 24, Карши -68, Касан 163, Китоб 75, Миришкор 15, Муборак 17, Нишон 113, Касби -6, Чирокчи 91, Шахрисабз 61, Яккабог 47 сформировали подразделение.

Рассматривается важный фактор интенсификации и повышения эффективности сельскохозяйственного производства в сфере предоставления услуг. Своевременная и в умеренных количествах поставка сырья, материалов и готовой продукции, скорость которой определяет размер ресурса, находящегося в деловом обороте. Расположение объектов сервисных предприятий (в основном в районных центрах), используемые технологии, высокие тарифы на услуги, монопольное положение и другие причины являются причинами, по которым фермеры не в полной мере пользуются их услугами.

Диаграмма



Как видно из диаграммы, в январе-декабре 2023 года наибольшая доля вновь созданных малых предприятий и микропредприятий по регионам по сравнению с общим Город Карши – 18,2 %, Район Чирагчи – 8,9 %, Район Касан – 8,2 %, Район Китаб – 7,1 %, Шахрисабзский район – 6,6 %, Район Яккабог – 6,5 %, Район Камаши - 6,2 %, Каршинский район – 6,1 % это совпало со взносами.

Решение проблем инновационного обеспечения сельских товаропроизводителей позволяет исследователям активно и качественно осуществлять инновационные проекты, а потребителям этих проектов создавать двухсторонние благоприятные условия для их быстрого усвоения. Своевременная разработка инновационных проектов в сфере сельскохозяйственного сервиса повысит экономическую эффективность сельскохозяйственных субъектов и обеспечит их развитие на более высоком уровне.

В условиях модернизации и диверсификации экономики нашей страны, путем совершенствования организационно-экономических механизмов инновационного развития инфраструктуры, обслуживающей сельское хозяйство, требуется обеспечить необходимый уровень обслуживания сельского населения и фермеров сельскохозяйственной продукцией и в полной мере удовлетворить их потребности. Эта проблема объясняется рядом приведенных ниже случаев. Во-первых, можно разработать конкретные организационные и экономические механизмы инновационного развития, которые включают в себя реализацию системных мер по ускорению производства высококачественной продукции и активизации инновационных процессов во всех сферах сельского хозяйства, и успешно проводить инновационную политику только при создании соответствующих условий. Во-вторых, система материально-технического снабжения, научно-технический масштаб и интенсивные технологии являются определяющим фактором повышения экономической эффективности сельскохозяйственного производства, а интенсификация сельского хозяйства обусловливает необходимость их эффективного использования в обмен на совершенствование производственного вооружения, развитие сферы услуг и снижение вклада живого труда. Как известно, развитие инфраструктуры и расширение ее видов напрямую связаны с проникновением научно-технического прогресса в отрасли экономики и ускорением инновационной активности.

В-третьих, в условиях модернизации страны инновационное развитие инфраструктуры, обслуживающей сельское хозяйство, требует комплексного подхода. Необходимо, чтобы методы и механизмы инновационного развития инфраструктуры не только отвечали современным рыночным принципам национальной экономики, но и учитывали особенности каждой территории. В соответствии с вышеуказанными обстоятельствами становится актуальным комплексное изучение инновационной деятельности и процессов в сфере сельскохозяйственной инфраструктуры, критическое рассмотрение ситуации, сложившейся на практике, и эволюционная и объективная необходимость организационных и экономических основ инновационного развития инфраструктуры, обслуживающей сельское хозяйство. В целом инфраструктура напрямую связана с развитием науки и техники, развитие инновационной деятельности в секторах экономики, в том числе в аграрном секторе, повысит не только расширение видов инфраструктуры, но и качество ее обслуживания. В свою очередь, в результате инновационного развития инфраструктуры сельскохозяйственного обслуживания станет возможным выйти на новый этап развития сельского хозяйства и качественно повысить уровень жизни сельского населения.

В заключение следует отметить, что сегодня рыночная экономика движется на основе спроса, предложения, конкуренции и цены. Таким образом, в сельском хозяйстве как создание, так и размещение предприятий и организаций, обслуживающих декскан и фермы, организуются на основе спроса и предложения декскана и ферм. В настоящее время во многих районах нашей страны предприятия, оказывающие услуги фермерам и фермерским хозяйствам, основаны не на их требованиях, а скорее наоборот, либо расположены не на желаемой территории, либо находятся далеко, и это обстоятельство также негативно сказывается на экономических, организационных и правовых отношениях между фермами и деятельность организаций, которые их обслуживают. Если сервисные предприятия в регионах организованы на основе спроса и предложения, между ними формируется конкуренция, и само собой можно добиться снижения их качества и стоимости обслуживания. Это дает возможность регулировать экономические отношения между ловкими и фермерскими хозяйствами.

Использованные источники

1. Ш.М. Мирзиеев "2019 год - год активных инвестиций и социального развития". Обращение к Олий Мажлису от 28 декабря 2018 г. - Т.: Народное слово, 29 декабря 2018 г., № 271-272
2. Указ президента Республики Узбекистан от 7 февраля 2017 года ПФ-4947 "О стратегии действий по дальнейшему развитию Республики Узбекистан".
3. Эргашев Р. Х, Тайлакова Д.Б. економічний механізм державної підтримки малого бізнесу та приватного підприємництва в узбекистані. – 2019.
4. Данные Статистического комитета Республики Узбекистан.
5. Ochilova N. A. Farming Management and their Economic Efficiency //Innovation in the Modern Education System. – 2023. – Т. 3. – №. 28. – С. 177-184.
6. Akramovna O. N. SCIENTIFIC ON INCREASING THE EFFICIENCY OF CROP PRODUCTION ON FARMS AND PEOPLE'S HOMESTEADS RECOMMENDATION ANALYSIS //" ONLINE-CONFERENCES" PLATFORM. – 2022. – С. 300-303.
7. Khamraeva S., Ochilova N. Assessment of innovative potential of farmers and homestead land owners //E3S Web of Conferences. – EDP Sciences, 2024. – Т. 480. – С. 03003.
8. Хожанова Г. О. Особенности использования природных ресурсов //Лучшие интеллектуальные исследования. – 2023. – Т. 9. – №. 2. – С. 105-107.
9. Khojanova G. O. Economic Aspects of Natural Resources Use in Uzbekistan //Information Horizons: American Journal of Library and Information Science Innovation (2993-2777). – 2023. – Т. 1. – №. 7. – С. 22-27.
10. Khojanova G. O. INCREASING THE ECONOMIC EFFICIENCY OF THE REGION'S NATURAL RESOURCES //INNOVATION IN THE MODERN EDUCATION SYSTEM. – 2023. – Т. 3. – №. 28. – С. 171-176.
11. Махмутуллаева С. Х. AGRICULTURAL BRIDGE: BARRIERS AND PROSPECTS FOR GLOBAL AGRILOGISTICS //Intent Research Scientific Journal. – 2024. – Т. 3. – №. 2. – С. 48-53.
12. Makhmutullaeva S. ANALYSIS OF EXISTING LOGISTICS SYSTEMS IN THE EXPORT ACTIVITIES OF UZBEKISTAN: PROBLEMS AND PROSPECTS //Экономика и социум. – 2024. – №. 8 (123). – С. 117-120.

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Турсынов М. Ж.
старший преподаватель
кафедра “Экономическая и социальная география”
Каракалпакский государственный университет
Нукус, Узбекистан
Наурузбаева Г.Т.
старший преподаватель
кафедра “Экономическая и социальная география”
Каракалпакский государственный университет
Нукус, Узбекистан

МИГРАЦИОННАЯ СИТУАЦИЯ И ПЛОТНОСТЬ НАСЕЛЕНИЯ В СЕЛЬСКОЙ МЕСТНОСТИ РЕСПУБЛИКИ КАРАКАЛПАКСТАН

Аннотация: *В данной статье расматривается миграционная ситуация, и проанализирована плотность населения в сельской местности Республики Каракалпакстан. Она формируется под воздействием целого ряда факторов-экономических, природно-климатических, социально-психологических и др. Одной из основных причин появления отрицательной миграционной ситуаций связано с уменьшением водных ресурсов Республики.*

Ключевые слова: *Дельта реки Амударьи, плотность населения, миграция, сельское население, поселки городского типа, миграционное сальдо.*

Tursinov M.J.
Senior Lecturer Department of Economic and Social Geography
Karakalpak State University
Nukus, Uzbekistan
Nauruzbaeva G.T.
Senior Lecturer Department of Economic and Social Geography
Karakalpak State University
Nukus, Uzbekistan

MIGRATION SITUATION AND POPULATION DENSITY IN RURAL AREAS OF THE REPUBLIC OF KARAKALPAKSTAN

Abstract: *This article examines the migration situation and analyzes the population density in rural areas of the Republic of Karakalpakstan. It is formed under the influence of a number of factors - economic, natural and climatic, socio-psychological, etc. One of the main reasons for the emergence of negative migration situations is associated with the reduction of water resources of the Republic.*

Key words: *Amudarya River Delta, population density, migration, rural population, urban-type settlements, migration balance.*

Нижнее течение дельты Амударьи, как и бассейны других крупнейших рек мира, был одним из древнейших густозаселенных регионов. Однако, в силу природно-экологических обстоятельств сильно подвергается опустыниванию. В результате размещение населения на территории Республики Каракалпакстан характеризуется крайне низким в Узбекистане и составляет примерно 12 человек на 1 км². На обширных территориях плато Устюрт и Северо-Западном Кызылкуме занимающие 45% территории республики плотность населения не превышает 0,7-0,3 человек на 1 км². Эти территории характеризуются очаговым расселением (пустынно-пастбищным), которое отставляет незаселенными большие пространства Устюрта и Каракалпакской части Кызылкума, а также Аралкума.

Относительно высокая плотность населения имеет дельта реки Амударьи, т.е. орошаемая территория находящаяся в контуре оросительной сети и в зоне тяготения железнодорожной и автодорожной коммуникации. Здесь на 1 км² территории плотность населения составляет до 36-172 человек, а в отдельных ареалах и сельских районах (Ходжейлийском, Амударьинском и т.д.) она достигает от 155 до 215 человек и более.

Значительно густо заселены Кегейлиский (73,5), Чимбайский (69), Шуманайский (60) и Канлыкульский (56,4) районы. Два района, т.е. Кунградский и Муйнакский, располагают большой территорией равной 70,5% площади Каракалпакстана, имеют плотность населения 0,75-0,2 на 1 км².

Максимальная доля сельского населения Республики Каракалпакстан сосредоточена в Южных районах (54,0%), т.е. в Турткульском, Амударьинском, Берунийском и Элликалинском районах. Характерно, что они имеют большую устойчивость социальной системы и лучшие показатели здоровья населения.

Объединение в категорию городского населения жителей не больших городов, в том числе районных административных центров, поселков городского типа и городов спутников с развитым пригородным посадом носит условный характер. Социально-бытовые условия и образа жизни населения в этих категориях населенных пунктов существенно различаются. Крупные поселки городского типа часто имеют гораздо более городскую среду обитания и условия жизни, чем старинные города (старый Ходжейли, старый Кунград (Алтынкуль) и т.д.). Следует также отметить, что население городов-спутников (Пристань, Каратау, Кызкеткен, Таслақ и т.д.) имеют менее удобств, чем г. Нукус, общий вес их населения не превышает 16% населении столицы Каракалпакстана.

Таким образом, города-спутники, т.е. небольшие города и поселки городского типа формирующихся вокруг крупных городов, скорее всего, играют роль перевалочных баз для населения, стремящегося из села в город. Здесь они получают городские профессии, отсюда ищут связи в центрах. Характерно, что в ряде случаев население перевалочных баз не располагают приусадебными участками и живут в малообеспеченных жилищно-бытовых условиях.

Поэтому планомерный подход к размещению населения, вокруг крупных городов и поселков городского типа осуществляется путем создания промышленных объектов, что положительно сказывается на улучшение материального благосостояния и культурно-бытовых условий населения живущих в черте городской агломерации.

Каракалпакстан был и остается одним из крупнейших районов сельскохозяйственного освоения. Здесь сосредоточены огромные запасы земельных и минерально-сырьевых ресурсов Республики Узбекистан. По этому ускоренное развитие агропромышленного комплекса Республики Каракалпакстан будет обеспечиваться за счет укрепления технической базы производства, а также путем внутрирайонного перераспределения трудовых ресурсов. Так как, значительный рост эффективности сельскохозяйственного производства может быть достигнут лишь на базе более рационального размещения трудовых ресурсов и целенаправленной миграции населения сельской местности. Однако, огромный прирост ново-освоенных земель и резервов труда не везде совпадают. Например, в южных районах республики сосредоточено более 54% сельского населения и только 16% пахотно-пригодных земель, а в северных районах же размещено 44,1% сельского населения и более 71% орошаемых земель. Поэтому для освоения колосальных резервов земель Северного Каракалпакстана необходимо внутрирайонное перераспределение населения. Так как, здесь миграция населения должна служить методом территориального перераспределения населения и трудовых ресурсов и она оказывает влияние на формирование половозрастной структуры населения, а также его социального развития.

Таким образом, сам процесс миграции представляет собой совокупность территориальных перемещении населения. Она формируется под воздействием целого ряда факторов-экономических, природно-климатических, социально- психологических и др. Основной приток населения в низовьях Амударьи, в частности Республики Каракалпакстан, началась со строительством железной дороги Чарджоу-Кунград далее Бейнеу-Макат-Александров-Гай, а также после октябрьских событии в России. Она особенно усилилась после второй мировой войны и носила наступательный характер. Его прирост в отдельные годы в пределы Каракалпакстан доходила до 0,5% к общему населению республики. Большинство мигрантов из Российской Федерации и Казахстана.

До середины 1980-х годов миграционное сальдо населения Каракалпакстана было положительным, а с начала 1990 годов стало формироваться отрицательное сальдо. Этот процесс постепенно нарастал и достиг пика В 1996 году, когда официально зарегистрированное межреспубликанское отрицательное сальдо миграции составило почти 6 тыс. человек.

Одной из основных причин появления отрицательной миграционной ситуаций связано с уменьшением водных ресурсов Республики. Это привело к различным негативным процессам. Особенно следует отметить аридизацию природных условии, ухудшения качества питьевой воды и распространения различных инфекционных болезней среди населения сельской местности. Кроме того, огромная водная артерия Каракалпакстана, Аральское море, утратило свое рыбохозяйственное и транспортное значение, в результате часть населения г. Муйнака и Муйнакского района, связанная с рыболовством, вынуждено было мигрировать.

В последние годы в развитии миграционных процессов в Республике Каракалпакстан в целом, и в частности сельской местности появились тенденции, оказывающие немалое влияния как на величину, так и на структуру миграционных потоков. Основным из них является рост миграционной подвижности коренного населения. Она выражается, с одной стороны, вовлечением в миграционное потоки сельских жителей, с другой сокращением прибытия населения из других соседних стран. В связи с этим в структуре миграции возрастает доля внутренних и сокращается доля внешних перемещении.

Динамику современной миграции в Каракалпакстане определяют, с одной стороны демографическая ситуация сложившееся в связи с Аральским кризисом, а с другой устоявшиеся стереотипы миграционного поведения коренного населения.

В настоящее время растет объем межреспубликанской миграции труда. Среди выбывших за пределы Республики Каракалпакстан произошли заметные изменения, т.е. в нём участвует население и коренной национальности.

Исходя из вышеуказанного ухудшения экологической обстановки в Южном Приаралье существующая тенденция в ближайшие годы может быть сохранена. Поэтому отрицательное сальдо миграции будет сказываться в трудовом балансе народнохозяйственного комплекса Республики, так как большинство мигрантов высококвалифицированные специалисты. В этих условиях проведение мероприятии связанные с переквалификацией сельских работников и расширение сети инфраструктурных объектов в сельской местности должна быть первоочередной задачей сегодняшнего дня.

Использованные источники:

1. Embergenov N.J., Tursinov M.J., Auezov O.T. Population Migration of the Republik of Karakalpakstan and its Territorial Features. Eurasian Journal of History, Geography and Ekonomics. 2023.

2. Умаров Е., Турсынов М. Динамика роста и размещение населения сельской местности Республики Каракалпакстан. «Вестник КК филиала АН РУз». Вып. 1. Нукус, 2014

3. Умаров Е., Ходжаева Г., Турсынов М. Основные направления социально-экономического развития Республики Каракалпакстан. «Узбекистон География жамияти Ахборотномаси». Тошкент, 2013

4. Ходжаева Г.А., Наурузбаева Г.Т.,Дальжанов К. О. Роль трудовой миграции на рынке труда. Материалы V-Республиканской научно-практической

конференции, «Рациональное использование природных ресурсов Южного Приаралья», Нукус 2016. 278-280 бет.
5. Ходжаева Г.А., Наурузбаева Г.Т. Проблемы формирования рынка труда Республики Каракалпакстан. Известия Географического общества Узбекистана.48 том Тошкент 2016.68-71 стр.

Уразбаев А.К.
Чирчикский государственный педагогический университет
город Чирчик, Узбекистан

РОЛЬ СТРУКТУРЫ РЕЛЬЕФА И СТОКОВ В ДИФФЕРЕНЦИИ ЛАНДШАФТОВ МЕЛЬКИХ ДЕЛЬТ НИЗОВЬЕВ АМУДАРЬИ

Аннотация. *В тезисе рассматриваются роль структуры рельефа в дифференциации ландшафтов современной дельты Амударьи. Вместе с этим показано роль структуры рельефа в установлении направлений стоков, которые играют большую роль в химическом составе ландшафтов. При изучении структуры рельефа показана значение карты пластика рельефа.*
Ключевые слова. *Структура рельефа, «древовидные» ландшафтные структуры, мелкие дельты.*

Urazbaev A.K.
Chirchik State Pedagogical University
Chirchik city, Uzbekistan

THE ROLE OF RELIEF STRUCTURE AND RUNOFFS IN THE DIFFERENTIATION OF LANDSCAPES OF SMALL DELTAS OF THE LOWER AMUDARYA

Abstract. *The thesis considers the role of the relief structure in the differentiation of the landscapes of the modern Amudarya delta. At the same time, the role of the relief structure in determining the directions of runoff, which play an important role in the chemical composition of landscapes, is shown. When studying the relief structure, the significance of the relief plastic map is shown.*
Keywords. *Relief structure, "tree-like" landscape structures, small deltas.*

При анализе строения дельтовых геосистем важно знать геологию истории рельефа, т.е., естественная структура современного рельефа дельты Амударьи сформировалась за счет Амударьи и ее протоков: Ульдарьи, Эркиндарьи, Шуртамбая и др. В результате многолетней миграции стоков была образована «разветвленная» почвенно-геологическая система. Образовавшаяся «древовидная» структура рельефа легла в основу при изучении дифференциации ландшафтов. Поэтому «древовидная» структура образующихся мелких дельт является основным фактором рисунков ландшафтов. Одним словом, «древовидная» структура — это признак, главная черта мелких дельт. В общем понятие элемента играет особую роль при анализе структуры каждого объекта. Повышения и понижения, изображенные на карте пластики рельефа, являются элементами рельефа, и их взаимосвязь друг с другом образует структуру мелких дельт. То есть положение повышений и понижений, обособленных на аллювиальных равнинах, принципиально отличается от соотношения повышений и понижений от возвышенностей и песков. Аллювиальные равнины, возвышенности и пески, которые распространены в дельтах различаются по своей структуры. В связи с этим при изучении структуры рельефа аллювиальных равнин дельтовых геосистем в первую очередь необходимо обращать большое внимание на внутреннюю структуру изучаемых объектов. Потому что «древовидные» структуры является «атрибутом» мелких дельт. Следует отметить, что хотя «древовидные» структуры аллювиальных равнин является общей характеристикой всех мелких дельт, размеры их завесят от энергии стоков. В связи с этим при изучении структуры рельефа аллювиальных равнин в дельте в первую очередь необходимо обращать большое внимание на структуру земной поверхности, которые изображены на карте пластик рельефа.

Наши исследования роль структуры рельефа на дифференциации ландшафтов в современной дельте Амударьи показывают, что влияние земной поверхности на рисунку ландшафта на орошаемых и неорошаемых территориях сильно различается. Поэтому, если мы будем анализировать влияние структуры рельефа на дифференциации ландшафта в неорошаемых районах будем рассматривать на примере мелких дельт, а когда будем изучать влияние структуры рельефа на дифференциации орошаемых районов, тогда будем рассматривать на примере бассейнов коллекторов.

Влияние структуры рельефа на неорошаемых территориях на структуры ландшафтов рассмотрим на примере мелких дельт Кызкеткен-Чимбая, Эркиндарьи и Шуртамбая на правобережной части современной дельты Амударьи. В частности, рельеф дельты Кизкеткен-Чимбая имеет «древовидные» структуры, но по своему внутреннему структуры дельта отличается от мелких дельт Эркиндарьи и Шуртамбая. Дельта Кизкеткен-Чимбай занимает первое место среди мелких дельт правобережной части современной дельты Амударьи по своей площади. Эта мелкая дельта является единственной дельтой на правобережье современной дельты Амударьи, начинающейся вокруг города Нукус и продолжающейся до границы Аральского моря в 1961 году. Мелкие дельты Шуртамбая, Эркиндарьи, хотя и начинаются с севера от города Нукуса, но заканчиваются за окраиной Кусканатау, то есть их длина короче дельты Кизкеткен-Чимбая. Длинные или короткие эти дельты определенно показывает влияние структуры рельефа на дифференциации ландшафтов в этих районах. По истории своего возникновения мелкие дельты Кизкеткен-Чимбая, Шуртамбая, Улдарьи имеют возраст 5000 лет. [Лопатин,1957]

Структуру рельефа, образованную стоков в дельтовых условиях, целесообразно назвать структурой «стоков». Направление элементов рельефа: повышений и понижений связано с деятельностью стоков. «Древовидная» структура мелких дельт, образованная в условиях дельты, являются основным фактором в дифференциации ландшафтов дельты, то есть дифференциация видов ландшафта напрямую зависит от форм мелких дельт. Оценка системной организации природно-мелиоративных условий ландшафтов основана с одной стороны на «динамическом» изменении компонентов ландшафта в пределах мелких дельт, а с другой стороны на системном изменении этих компонентов в пределах функционально-целостных систем – бассейнов коллекторов.

В орошаемых территориях роль структуры рельефа в дифференциации ландшафтов резко отличается от неорошаемых территорий. На рис.1 Кунгиратская коллектора-система и его внутерная структура. Видно, что функциональная целостность бассейна состоит из нескольких мелких дельт (Эркиндарьи, Казахдарьи, Шуртамбайской и Кызкеткен-Чимбайской дельты) и возвышенности Кусканатау. Основная часть площади бассейна принадлежит восточной части дельты Эркиндарьи (западная – находится в бассейне Аспантайского коллектора), Шуртамбайской дельте и западной части Кызкеткен-Чимбайской дельты (восточная – находится а бассейне коллектора КС-3). Если анализировать реальные структуры поверхности бассейна коллектора, то Шуртамбайской дельте характерны, в основном, вытянутые формы структур рельефа; Кызкеткен-Чимбайской дельте, наоборот, - расширенные формы структур. Это свидетельствует о том, что в Шуртамбайской дельте системообразующие потоки были боле стремительными и имели большую несущую силу; во второй дельте (Кызкеткен-Чимбайской) их скорости и энергии не хватило на формирование вытянутых структур.

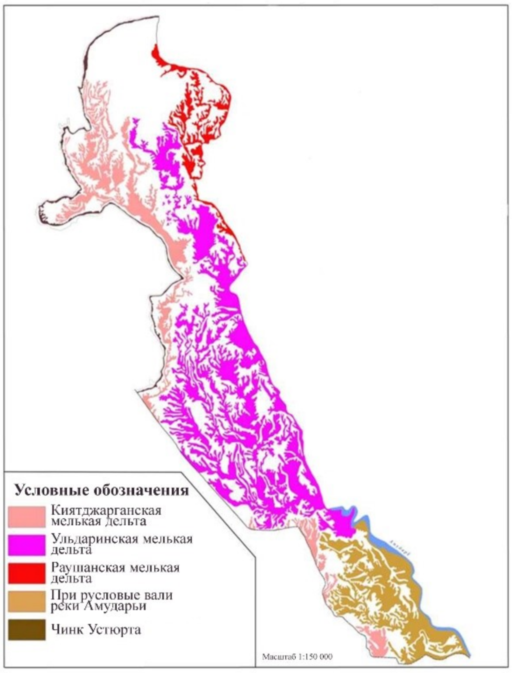

Рис. 1. Кунгиратская коллектора-система и его внутерная структура.

Анализ карты показывает, что в процесс исследования особое внимание следует обратить на изучение самых пониженных участков бассейна коллектора, то есть на межрусловые понижения и контактные зоны между различными дельтами. Они часто слабо дренированы или практически бессточны и являются областями аккумуляции химического, жидкого и твердого стоков. Здесь важно подчеркнуть, что центральные части бассейна коллектора во многих случаях одновременно являются и границами различных разновозрастных мелких дельт.

Внутрибассейновая дифференциация и упорядоченность формы рельефа мелких дельт являются отражением энергетического состояния системообразующих потоков и определяют важнейшие свойства земель. Поэтому их выявлению, идеализации и изучению должно быть отведено важное место при природно-мелиоративных исследованиях, а также при группировке, типизации и классификации систем, подсистем и элементов геосистем по геометрическим показателям или рисункам. [Уразбаев, Иброимов, 2022]

Изучение и оценка системной организации ландшафтов в пределах коллектора предоставляет особый интерес. Бассейн коллектора один из самых распространенных видов функционально-целостных геосистем в пределах орошаемых территорий. Такой мощный интегрирующий фактор, как постоянный (во всяком случае, долговременный), направленный по положительному рельефу поверхностный и подземный водный поток, является одним из самых универсальных строителей дельтовых геосистем географической оболочки. Своеобразие внутреннего строения бассейна коллектора и формирование морфологических структур ландшафтов связаны с процессами водных потоков, поэтому морфологическая структура элементарных ландшафтов и внутреннее строение бассейна коллектора четко отображают направление системообразующих потоков.

С.Д.Муравейский (1948) обратил внимание на значимость анализа процессов стока как географического фактора. Он указывал, что «без транспорта, без перемещения не может быть движения, не может быть взаимных связей, взаимодействий. И эта важнейшая роль транспорта, перемещения вещества по земной поверхности ложится в первую очередь и главным образом на процесс стока». Наиболее отчетливо роль стока, как географического фактора в дельтовых условиях, проявляется в формировании разновозрастных мелких дельт (процессы рельефо- и почвообразования). Он же влияет на водно-солевой режим и литолого-механический состав почв, химизм поверхностных, подземных вод и др.

Следует отметить, что сток имеет большое значение в установлении границ географических комплексов, в данном случае в определении границ бассейна коллектора. Установление границ природных объектов определяется, главным образом, резкими изменениями путей миграции солей (химических элементов), их качественного состава, нарушениями в круговороте веществ, а в этих изменениях и нарушениях сток играет далеко не последнюю роль. Важно также знать значениях потока с позиций функционально-целостного подхода. А.Ю.Ретеюм (1971) отмечает, что основным методическим средством при членении земной поверхности рассматриваемого функционально-целостного подхода служит анализ потоков, что объясняется их ролью в геосистемах. Однако, это не означает абсолютизации их значения: поток не только не стоит над системной, но он сам является ее продуктом, ее порождением.

Суть изучения объекта как целого заключается в выделении внутри геосистемы элементов и установлении связей между ними Ф.А.Слудский еще в прошлом веке писал о задачах научного объяснения так: «Рубить сложное явление на простейшие элементарные, показать, как оно слагается из этих элементарных, вот что значит для натуралиста объяснить явление» (цит. по В.Н.Солнцеву, 1981). Иначе говоря, с позиции прерывности и непрерывности выделение отдельных устойчивых элементов и выявление связи между ними составляет объяснение объекта так, как есть в природе.

А.К.Уразбаевым (2002) на основе крупномасштабной карты пластики рельефа (М 1: 25 000) впервые составлена карта систем земной поверхности современной дельты Амударьи. На карте систем выделены следующие подсистемы: 1- Кыятджарганская подсистема; 2- подсистема Ульдарьинская; 3- подсистема Кызкеткен-Чимбайская; 4- подсистема Шуртамбайская; 5- подсистема Эркиндарьинская; 6- подсистема Раушанская; 7- подсистема Акбашлийская; 8- подсистема Кыпчакдарьинская; 9- подсистема Кунядарья-Казахдарьинская.

Возникает вопрос: что же определяет границы геосистемы? Границы должны быть естественными и обозначаться линиями. Следует заметить, что дельта Амударьи, как система, образовалась под влиянием деятельности реки Амударьи и естественные границы отделяют ее от Кызылкумов, Устюрта и Аральского моря. Происхождение подсистемы связано с протоками Амударьи. Например: массив Эркиндарьи (подсистема Эркиндарьи) тесно связан с руслом Эркиндарьи. Надо отметить, что в контактных зонах, где соединяются два или более различных протока, показ границ требует более конкретных мер. В тех случаях, когда необходимо выявить четкую границу, нужно изучить литологический состав каждой подсистемы и привести этап идеализации (геометризации). Поэтому особенно большое значение имеет изучение контактных зон между разновозрастными мелкими дельтами, так как их литологический состав и водно-солевой режим очень сложный. Но эта сложность становится понятной на карте систем земной поверхности.

К интегрирующим географическим факторам С.Д.Муравейский (1948) отнес климат, сток и рельеф. Как нам известно, в формировании дельтовых поверхностей роль речного стока незаменима Г.В.Лопатин (1957), изучая историю формирования современной дельты Амударьи, делит ее на две части: южную, более древнюю и северную «живую» части. Применение метода пластики рельефа позволило нам расчленить вышеуказанные части дельты. В основе расчленения Г.В.Лопатина лежал генетический принцип или история формирования дельты. Во время расчленения дельты на части мы основывались, с одной стороны, на генетический принцип (древовидные формы мелкие дельты взаимосвязаны со стоком реки) и, с другой стороны, функционально-целостный. В настоящее время установлено, что функционально-целостный подход несет свою положительную сторону в изучении объекта и что генетический, типологический и функциональный подходы не заменяют, а удачно дополняют друг друга. Поэтому применяемые нами два принципа расчленения дельты положительно влияют друг на друга. Функционально-целостная единица – бассейн коллектора состоит из нескольких разновозрастных мелких дельт, т.е. совокупность мелких дельт образует целостность данного бассейна.

При фиксации пространственных структур критерием упорядоченности можно считать существование каждой геосистемы или географического пространства части, т.е. каждая систем (мелких дельты) имеет: точку начала координат, начало, середину, конец. Обратимся к конкретному примеру: точкой начала координат современной дельты Амударьи является г.Тахиаташ, а концом – берег Аральского моря. Иначе говоря: началом подсистемы Эркиндарьи считается около (или северная часть) водохранилища Дауткула, а серединой – район между возвышенностями Кусканатау и Иткыр, после этого начинается конечная часть. В свою очередь, эти части системы по своей структуре отличаются друг от друга. Кроме того, на карте каждого контура элементарного ландшафта также выделяются части, как указано выше. Практически наличие и выделение таких важных частей дает нам возможность упорядочить географические структуры.

Изучение структуры земной поверхности региона показывает, что дельта состоит из нескольких мелких «топологических деревьев», образующих целостную систему. Элементарные ландшафты (системообразующие потоки), сочетаясь между собой, создают взаимосвязанные геосистемы мелких дельт (Ульдарьи, Эркиндарьи и т.д.), которые, в свою очередь, могут рассматриваться как элементы еще более крупных и сложных геосистем («топологические деревья» дельты Амударьи). Если вершины деревьев соединить, то образуется система, состоящая из многоугольников. Такие многоугольники отражают состояние пространственных границ почвенно-геологических тел и ландшафтов и включает две части – левую и правую, т.е. имеют зеркальное отражение: каждая половина зеркально асимметрична. Эта асимметрия широко распространена в дельтовых геосистемах. Совокупность геометрических фигур имеет вид лопастей. Здесь от верхней части дельты (точки разветвления) под определенным углом отходят ветви-потоки. Каждая такая форма есть топологическое дерево (рис.2), а их совокупность – топологический лес.

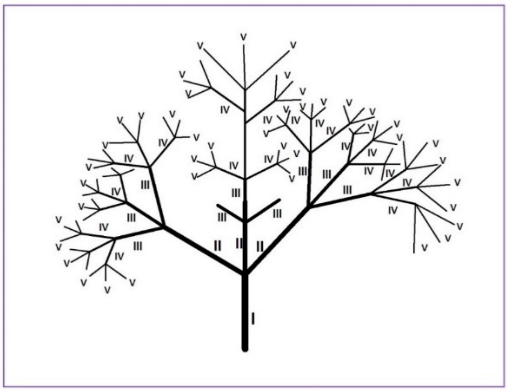

Рис.2. Идеализированная структура «древовидной» формы мелких дельт.

Ветвящиеся ландшафтные система дельты берут начало в верхней части протока, откуда под действием силы тяжести исходный материал «стекает» к концу конусов выноса в виде системообразующих лент-потоков. Чем мощнее силы потока, тем больше их площадь. В начале потока или в точке разветвления идеальные почвенно-геологические тела имеют большую ширину, которая книзу постепенно убывает. Такое поэтапное увеличение площади дельты по точкам разветвления свидетельствует о том, что приращение площадей в дельтовой системе подчиняется закону топологического ветвления.

Выводы

1. Мелкие дельты имеют верхнюю, среднюю и нижнюю части. Совокупность этих частей образуют «древовидную» структуру дельт. Впервые в пределах современной дельты Амударьи выделено девять мелких дельт. Древовидная структура рельефа влияет на дифференциации ландшафтов: гидроморфную, полугидроморфную и автоморфную.

2. «Узловой» объект – бассейн коллектора имеет важное значение при изучении и оценке системной организации природно-мелиоративных условий орошаемых территорий.

3. Внутрибассейновая дифференциация представлена в виде однонаправленных элементов рельефа: повышений и понижений. Бассейн коллектора сброса-1 состоит из следующих мелких дельт: западной части Кызкеткен-Чимбайской дельты, Шуртамбайской, восточной части Эркиндарьинской дельты, нижней части Казахдарьинской дельты и возвышенностей (Кусканатау, Крантау).

4. «Древовидная» структура мелких дельт является основной при определении мелиоративного состояния земель в пределах бассейна коллектора.

Использованные источники:

1. Лопатин Г.В., Строения дельты Амударьи и история ее формиррования. // Тр. лаборатории озероведения. - М. -Л.: Изд-во АН СССР, 1957. -Т.IV. -С. 5-34.

2. Уразбаев А.К., Иброимов Ш.И. Закономерности дифференциации парагенетических ландшафтных комплексов бассейнов коллектора // ДАН РУз, 2022. - №2. – С. 82-85.
3. Муравейский С.Д. Роль географических факторов в формировании географических комплексов // Вопр. геогр. – М.: Мысль, 1948. - Сб. 9. – С. 95-110.
4. Ретеюм А.Ю. О геокомплексах с односторонним системообразующим потоком вещества и энергии // Изв. АН СССР. – Сер. Геогр. – 1971. №5. – С. 122-128.
5. Уразбаев А.К. Системная организация природно-мелиоративных условий современной дельты Амударьи // Автореферат диссерт. на соиск. уч. степени докт. геогр. наук. -Ташкент., 2002. -48 с.
6. Уразбаев А.К. Древовидные ландшафтные комплексы мелких дельт // ДАН РУз, 2021. - №4. – С. 90-91.
7. Уразбаев, А. К., Ражабов, Ф. Т., & Иброимов, Ш. И. (2023). Значение бассейновой концепции в рациональном использовании водно-земельных ресурсов орошаемых земель современной дельты Амударьи. Центральноазиатский журнал географических исследований, 1-2 (1-2), 38-47.
8. Sherzod IBROIMOV. (2024). PARAGENETIC LANDSCAPE COMPLEXES OF RESERVOIR BASINS OF THE MODERN AMU DARYA DELTA AND THEIR NATURAL AND AMELIORATIVE CONDITIONS. News of the NUUz, 3(3.1), 229-233. https://doi.org/10.69617/uzmu.v3i3.1.1780
9. TABIIY GEOGRAFIK FANLAR TIZIMIDAGI HAVZAVIY USUL VA UNING TABIAT KOMPONENTLARINING O‘ZARO ALOQADORLIGINI TADQIQ QILISHDAGI ROLI. (2024). Konferensiyalar | Conferences, 1(11), 63-67. https://www.uzresearchers.com/index.php/Conferences/article/view/3013

Усманова К. А.
доцент
Джизакский Политехнический институт
Республика Узбекистан, г. Джизак
Шингисов А. У.
профессор
Южно-Казахстанский государственный университет имени Мухтара Авезова
Республика Казахстан, г. Шымкент

ИССЛЕДОВАНИЕ ПЕРСПЕКТИВЫ РАЗВИТИЯ И ИННОВАЦИИ В ПРОИЗВОДСТВЕ СУШЕНОЙ СЛИВЫ В СОВРЕМЕННОЕ ВРЕМЯ

Аннотация: *В данной работе рассматривается инновационная методика вакуумной сушки, применяемая для производства чернослива. Анализируются её преимущества в сравнении с традиционными методами сушки, уделяя внимание таким аспектам, как сохранение питательных веществ, улучшение текстуры и вкусовых качеств, экономия времени и энергии. Предоставляются данные исследования, подтверждающие, что вакуумная сушка позволяет сохранить до 85% витамина С и увеличить срок хранения продукта на 30%. Работа подчеркивает значимость данной методики для повышения конкурентоспособности чернослива и улучшения его качественных характеристик.*

Ключевые слова: *вакуум, сушка, чернослив, качество, хранение, энергия, витамины, антиоксиданты, технология, эффективность*

Usmanova K.
Associate Professor
Jizzakh Polytechnic Institute,
Republic of Uzbekistan, Jizzakh
Shingisov A.
Professor
South-Kazakhstan State University named after Mukhtar Avezov
Republic of Kazakhstan, Shymkent

STUDY OF DEVELOPMENT PROSPECTS AND INNOVATIONS IN DRIED PLUM PRODUCTION IN MODERN TIMES

Abstract: *This paper discusses an innovative vacuum drying technique used for the production of prunes. Its advantages in comparison with traditional drying methods are analyzed, focusing on such aspects as preservation of nutrients, improvement of texture and taste, saving time and energy. Research data are provided confirming that vacuum drying allows preserving up to 85% of vitamin C and increasing the shelf life of the product by 30%. The work emphasizes the*

importance of this technique for increasing the competitiveness of prunes and improving their quality characteristics.
Keywords: *vacuum, drying, prunes, quality, storage, energy, vitamins, antioxidants, technology, efficiency*

Введение: Сушеная слива, или чернослив, уже много лет является популярным продуктом благодаря своим полезным свойствам, вкусовым качествам и широкому применению в кулинарии. В современных условиях возросшего спроса на натуральные и здоровые продукты перед производителями чернослива встает задача повышения эффективности производственных процессов и внедрения инноваций, чтобы соответствовать требованиям рынка и привлекать новых потребителей. Существенной проблемой, с которой сталкиваются производители чернослива, является поддержание высокого качества продукта при снижении затрат на производство. Традиционные методы сушки, используемые для переработки сливы, нередко оказываются энергозатратными и могут приводить к потере некоторых питательных веществ, что снижает ценность готового продукта для конечного потребителя. Одним из возможных решений проблемы является внедрение инновационных методов сушки, таких как инфракрасная или вакуумная сушка, которые позволяют значительно сократить время обработки, снизить затраты и сохранить больше питательных веществ в продукте. Эти методы требуют первичных инвестиций, но способны окупиться в долгосрочной перспективе за счёт экономии на энергоресурсах и повышения качества продукта.

Методология: "Методика вакуумной сушки для производства чернослива". Вакуумная сушка является инновационным методом, который позволяет эффективно удалять влагу из сливы при низких температурах и минимальном воздействии кислорода. В отличие от традиционной сушки, вакуумная технология обеспечивает более бережное обращение с продуктом, что способствует сохранению питательных веществ, витаминов и антиоксидантов, которые разрушаются при высоких температурах. Процесс начинается с того, что сливы помещаются в специальную вакуумную камеру, где снижается давление. При пониженном давлении вода начинает испаряться при более низких температурах, благодаря чему происходит более щадящая и быстрая сушка. Такая методика помогает сохранить текстуру и вкус плодов, делая их более привлекательными для потребителей, а также способствует экономии энергии на всех этапах производства. Эффективность вакуумной сушки подтверждается исследованиями, которые показывают, что благодаря снижению температурного воздействия сохраняется до 90% полезных веществ, содержащихся в свежих сливах.

Результат: В результате проведённого исследования вакуумной сушки для производства чернослива были получены следующие данные, которые подтверждают её эффективность в сохранении питательных веществ и улучшении качества продукта.

Сохранение питательных веществ: По сравнению с традиционной сушкой, вакуумная сушка позволила сохранить на 30% больше витаминов, особенно витамина С и антиоксидантов. Исследования показали, что после вакуумной сушки содержание витамина С в черносливе сохраняется на уровне 85% от исходного, в то время как при обычной сушке этот показатель составляет около 55%.

Качество текстуры и вкуса: По результатам органолептической оценки, 92% участников дегустации отметили, что чернослив, высушенный вакуумным методом, имеет более насыщенный вкус и мягкую текстуру по сравнению с традиционным. Чернослив, высушенный вакуумной методикой, также имел яркий, привлекательный цвет, что делает его более конкурентоспособным на рынке.

Экономия времени и затрат: Вакуумная сушка позволила сократить общее время обработки сливы на 25% по сравнению с конвекционными методами, что снизило затраты на энергию на 18%. Эта экономия делает методику не только более эффективной, но и перспективной для долгосрочных вложений.

Увеличение срока хранения: За счёт более равномерного и полного удаления влаги, чернослив, высушенный вакуумным методом, показал устойчивость к развитию плесени и микроорганизмов. Продукт сохраняет свежесть и качество до 30% дольше, чем чернослив, прошедший обычную сушку. Результаты исследования демонстрируют, что внедрение методики вакуумной сушки для производства чернослива позволяет производителям повысить качество и конкурентоспособность продукта, сохранив полезные свойства и снизив затраты на производство.

Заключение: Современное производство сушеной сливы сталкивается с вызовами, связанными с потребностью в высококачественном, экологически чистом продукте при оптимальных затратах. Внедрение инновационных методов сушки, таких как инфракрасная технология, представляет собой перспективный путь развития отрасли, позволяя производителям повысить конкурентоспособность и соответствовать стандартам качества.

Использованные источники.

1. Brodowska, A. The impact of ozone treatment on changes in biologically active substances of cardamom seeds. J. / A. J. Brodowska, K. Smigielski, A. Nowak, K. Brodowska, R. Catthoor, A. Czyzowska // Food Sci. — № 79(9). — С. 1649–1655

2. Yang, P. Aqueous ozone decomposition kinetics in a rotating packed bed / Yang P., Luo S., Liu H., Jiao W., Liu, Y. // Journal of the Taiwan Institute of Chemical Engineers. — 2019. — № 96. — С. 11–17.

3. Усманова К.А., Абдурахмонов И.А., Хасанов Р.Н. Методы сушки яблок и заготовка сушёных яблок в домашних условиях //Science and Education. – 2022. – Т. 3. – №. 2. – С. 55-59.

4. Усманова К.А. и др. Современные перспективы переработки фруктов и овощей //Наука и образование. - 2022. - Т. 3. – нет. 2. - С. 389-392.

5. Bobomurodova S.Y., Usmanova K.A., Fayzullaev N.I. Catalytic aromatization of oil satellite gases //International Journal of Advanced Science and Technology. – 2020. – Т. 29. – №. 5. – С. 3031-3039.
6. Холдоров Б.Б. и др. Роль инноваций в обеспечении продовольственной безопасности в регионах //Наука, образование, инновации: апробация результатов исследований. – 2020. – С. 251-256.
7. Abdujobborovna U.K. Effect of Drying Methods on Plum Fruit Quality Indicators //international journal of biological engineering and agriculture. – 2023. – Т. 2. – №. 1. – С. 43-46.
8. Усманова К.А., Олтиной Қ. Анализ характеристик микроволново-осмотической обработки яблок с последующей воздушной сушкой //Universum: технические науки. – 2023. – №. 10-4 (115). – С. 49-51

Усмонов М.М.
преподователь
Международный институт пищевых технологий и инженерии.

АКТУАЛЬНЫЕ ВОПРОСЫ ДОСТИЖЕНИЯ ТОЧКИ БЕЗУБЫТОЧНОСТИ НА ПРЕДПРИЯТИЯХ

Аннотация: *В данной статье освещаются вопросы касающиеся достижения точки безубыточности на предприятиях. Автор в своём исследовании даёт обзор сущности понятия точки безубыточности. В рамках исследования изучен зарубежный опыт таких стран как южная Корея, США. В заключении автор приводит выводы и даёт рекомендации для достижения точки безубыточности на предприятиях.*

Ключевые слова: *точка безубыточности**,** эффективность, переменные затраты, фиксированные затраты, объём производства, минимальный объем продаж.*

Usmonov M.M.
Lecturer
International Institute of Food Technologies and Engineering

TOPICAL ISSUES OF ACHIEVING THE BREAK-EVEN POINT IN ENTERPRISES

Abstract*: This article covers issues related to achieving the break-even point in enterprises. The author in his study gives an overview of the essence of the concept of break-even point. As part of the study, the foreign experience of such countries as South Korea and the USA was studied. In conclusion, the author provides conclusions and makes recommendations for achieving the break-even point in enterprises.*

Key words*: break-even point, efficiency, variable costs, fixed costs, production volume, minimum sales volume.*

На сегодняшний день особенно актуальными для всех предприятий являются вопросы достижения точки безубыточности. В своём исследовании мы бы хотели обратить внимание именно на эти вопросы.

Точка безубыточности (или точка окупаемости) — это уровень продаж, при котором общие доходы равны общим затратам, и прибыль равна нулю. Рассчитывается эта точка с использованием следующей формулы:Точка безубыточности=Фиксированные затраты=Цена единицы продукции−Переменные затраты за единицу продукцииТочка безубыточности=Цена единицы продукции−Переменные затраты за единицу продукцииФиксированные затраты[1].

Где: Фиксированные затраты — это те затраты, которые не зависят от объема производства и продаж, такие как аренда помещения, зарплаты административного персонала и т.д. Цена единицы продукции — это цена, по которой предприятие продает одну единицу своей продукции.

Переменные же затраты за единицу продукции — это затраты, которые изменяются в зависимости от объема производства, например, сырье, электроэнергия и т.д.

Рассчитав этот показатель, предприятие может определить минимальный объем продаж, необходимый для покрытия всех своих затрат и избежать убытков. Точка безубыточности является важным инструментом для управления финансами предприятия и принятия решений о ценообразовании, объемах производства и стратегии развития.

Как известно вход на рынок всегда сопряжен с определенными рисками. Эти риски могут варьироваться в зависимости от отрасли, страны, размера предприятия и других факторов. Ниже приведём некоторые из основных рисков, с которыми предприятие может столкнуться при входе на новый рынок. Это могут быть финансовые риски, связанные с инвестиционными затратами. Необходимость вложения средств в новую инфраструктуру, маркетинг, исследования и разработки.

Отдельно необходимо обратить внимание на риск, связанный с неопределенностью доходов, зависящих от низкого объема продаж в начале, которые могут привести к временным убыткам.

Методология исследования включила в себя следующие аспекты: формулировка проблемы, литературный обзор, формулировка гипотезы или вопросов исследования, связанных с достижением точки безубыточности на предприятиях. В ходе исследования были выявлены проблемы, связанные с достижением точки безубыточности на предприятиях. В исследовании рассмотрен опыт и практические рекомендации учёных- практиков в области изучения проблем достижения точки безубыточности на предприятиях. Предложения по эффективной реализации принципов рационального использования имеющихся ресурсов предприятия были разработаны с точки зрения следования принципам управления передовыми менеджерами.

В работе приведена методология сравнительного анализа. При написании статьи использовались методы синтеза и обобщения. В работе использованы сравнительный анализ и описательная методология.

В целях эффективного управления с нашей точки зрения возможно использование технологии кайдзен[2].

Культурные различия: различия в бизнес-культуре и языковые барьеры могут затруднить управление. Риски маркетинга: неудачи в маркетинге: Неправильная стратегия маркетинга или недостаточное понимание потребностей рынка.

Специфические отраслевые риски: сезонные колебания: некоторые отрасли подвержены сезонным колебаниям, что может повлиять на доходы и прибыль. Риски валютных колебаний: курсовые риски: Если предприятие входит на международный рынок, изменения валютных курсов могут влиять на финансовые результаты.

Перед тем как входить на новый рынок, предприятие должно провести тщательный анализ и оценку рисков, разработать стратегии и планы для их смягчения. Это может включать в себя исследование рынка, адаптацию бизнес-модели, диверсификацию и эффективное управление ресурсами.

По нашему глубокому убеждению, достижение точки безубыточности требует системного и целенаправленного управления предприятием. Вот несколько ключевых стратегий, которые могут на наш взгляд помочь в этом:

Анализ и снижение затрат: целесообразно проведение детального анализа всех расходов на предприятии, как фиксированных, так и переменных.

Необходимо идентифицировать возможности для сокращения издержек без ущерба для качества продукции или обслуживания клиентов.

Большое значение имеет оптимизация производственных процессов: насущная необходимость автоматизации производственные процессы, где это возможно, для увеличения эффективности и сокращения трудозатрат.

Стоит отметить то, что поиск возможностей для оптимизации запасов и управления цепочкой поставок приводит к положительным результатам. В этой связи эффективными являются маркетинг и продажи, в рамках которых актуально проведение анализа рынка и определение ценообразования, которое позволит покрыть все затраты.

Положительный эффект даёт развитие стратегии продвижения продукции или услуг для привлечения новых клиентов и увеличения объема продаж.

С точки зрения управления оборотным капиталом целесообразно эффективно управлять сроками платежей и получением денег от клиентов, чтобы уменьшить оборотный капитал. Актуально сокращение запасов до оптимального уровня, чтобы избежать избыточных затрат на хранение.

С позиции фокуса на клиентском опыте: поддержка высокого уровня обслуживания клиентов для удержания существующих клиентов и привлечения новых.

Эффективна разработка стратегии удержания клиентов, таких как лояльность и скидки для повторных покупок.

Большая роль в достижении точки безубыточности на предприятиях отводится инновациям и диверсификации. С этой позиции необходимо исследование новых рынков и продуктов для диверсификации доходов. Уместно инвестирование в исследования и разработки для создания инновационных продуктов или улучшения существующих.

Приоритетным в этом направлении является улучшение управленческой эффективности, которая подразумевает поддержку эффективных коммуникаций и сотрудничество внутри команды.

По нашему глубокому убеждению, необходимо использование ключевых показателей эффективности (KPI) для оценки производительности и коррекции стратегии. Финансовое планирование и мониторинг в свою очередь подразумевают регулярное обновление финансовых прогнозов и планов, учитывая изменения в бизнес-среде. Обязательно необходим мониторинг финансовых показателей и оперативных результатов.

В разрезе обучения и развития персонала: инвестируйте в обучение и развитие сотрудников для повышения их квалификации и производительности.

В плане реагирования на изменения: будьте гибкими и готовыми к быстрому реагированию на изменения внешних факторов, таких как рыночные условия или законодательство.

Следует отметить то, что эффективное управление предприятием требует комплексного подхода, включающего в себя стратегическое планирование, оперативное управление и непрерывное улучшение бизнес-процессов.

Исследователи в этой области отмечают то, что эффективность форм управления может зависеть от конкретных условий и характеристик предприятия, отрасли, рыночной конкуренции и других факторов. Однако, некоторые общие подходы к управлению могут помочь в минимизации убытков: Эксперты в этой области отмечают то, что стратегическое управление, анализ рынка подразумевают проведение глубокого анализа рынка и понимание потребностей клиентов для разработки стратегии, соответствующей текущим требованиям рынка.

При достижении безубыточности на предприятии имеют главенствующее значение планирование и прогнозирование, в том числе разработка долгосрочных и краткосрочных планов с учетом финансовых, маркетинговых и операционных аспектов. Эффективное финансовое управление тоже является составляющей достижения стратегических целей предприятия. Бюджетирование тоже имеет воздействие на достижение точки безубыточности. Разработка бюджетов, регулярный мониторинг финансовых показателей и коррекция бюджетов в случае необходимости приводит к ожидаемым результатам.

С точки зрения управления оборотным капиталом: Активное управление денежными средствами, запасами и дебиторской задолженностью в целях минимизации финансовых рисков. Эффективное управление затратами:

Анализ затрат предполагает регулярное изучение всех расходов для выявления возможностей снижения издержек без ущерба для качества и производительности. Процессы оптимизации могут дать ожидаемые результаты с помощью внедрения процессов оптимизации, автоматизации и рационализации для сокращения затрат.

В рамках исследования мы обратили внимание на вопросы гибкой структуры управления, которая предполагает создание гибкой и адаптивной организационной структуры, способной быстро реагировать на изменения внешней среды.

В ходе исследования были проанализированы вопросы маркетинга и продаж:

Адаптивные маркетинговые стратегии предполагают разработку гибких маркетинговых стратегий, способных адаптироваться к изменениям в потребительском спросе и конкурентной среде. Эффективные стратегии продаж подразумевают разработку стратегий продаж, учитывающих ценообразование, продвижение и обслуживание клиентов.

В процессе исследования было обращено внимание на вопросы контроля и мониторинга, которые подразумевают внедрение систем контроля и мониторинга для оперативного выявления проблем и своевременного принятия корректирующих мер.

По нашему глубокому убеждению, использование KPI, то есть ключевых показателей эффективности для измерения производительности и достижения целей имеет первостепенное значение.

Отдельное внимание следует обратить на вопросы развития персонала с точки зрения инвестиций в обучение и развитие персонала для повышения квалификации и эффективности труда. В рамках командной работы уместно создание эффективных команд и стимулирование сотрудников к активному участию в достижении общих целей. Отметим то, что каждое предприятие уникально, и эффективные методы управления могут различаться. Важно адаптировать подход к конкретным условиям предприятия и его окружению.

Применение зарубежного опыта так же может быть полезным при достижении точки безубыточности на предприятии. Зарубежные компании часто успешно применяют различные стратегии и методы управления, которые могут быть адаптированы и использованы в других странах. Вот несколько ключевых аспектов зарубежного опыта, которые могут быть применены:

Можем привести лучшие практики в управлении затратами:

Изучение того, как зарубежные компании эффективно управляют своими расходами и оптимизируют бизнес-процессы для минимизации затрат.

Применение лучших практик в области бюджетирования, контроля затрат и поиска эффективных методов снижения издержек.

Во-первых – это эффективные стратегии маркетинга и продаж, подразумевающие изучение методов международного маркетинга и продаж, включая успешные стратегии продвижения товаров и услуг на мировых рынках. Так же применение инновационных подходов к маркетингу, адаптированных к местным условиям.

Во-вторых- акцент на гибкость и адаптивность, включающий в себя процессы изучение того, как зарубежные компании успешно приспосабливаются к изменяющимся условиям рынка и экономической среды. Внедрение гибких стратегий и методов управления, позволяющих эффективно реагировать на изменения в бизнес-среде.

В-третьих – внедрение инноваций, проведение исследований и разработок, то есть изучение того, как успешные компании зарубежных рынков инвестируют в исследования и разработки для создания инновационных продуктов и услуг[3].

В итоге применение передовых технологий и практик в своей отрасли.

Адаптация методов управления и коммуникации под местные условия и ожидания. Однако, при адаптации зарубежного опыта важно учитывать местные особенности, законы, культурные различия и специфику рынка. Не всегда зарубежные методы могут быть применимы без изменений, и их следует адаптировать к конкретным условиям предприятия и рынка.

Скажем Южная Корея славится своим динамичным и успешным бизнес-сектором, и опыт управления на предприятиях в стране может предложить несколько уроков для достижения точки безубыточности. Ниже представлены некоторые ключевые элементы южнокорейского опыта управления на предприятиях:

В ракурсе долгосрочной стратегии, например корейские компании известны своим долгосрочным подходом к развитию бизнеса. Они обычно разрабатывают стратегии на долгий период, что позволяет им адаптироваться к изменяющимся условиям рынка. В разрезе инноваций, исследований и разработок Южная Корея активно инвестирует в исследования и разработки, поощряя инновации и новаторские решения.

Компании в стране активно стремятся к технологическому лидерству в своих отраслях[3].

Корейские компании обладают способностью быстро адаптироваться к изменениям в бизнес-среде. Это помогает им эффективно реагировать на колебания спроса и другие рыночные изменения. Южнокорейские предприятия часто выделяются высоким уровнем качества продукции и эффективностью производства. Оптимизация производственных процессов позволяет им сокращать затраты и повышать конкурентоспособность.

Корейские компании уделяют большое внимание маркетингу и брендингу. Использование креативных и инновационных маркетинговых стратегий помогает им привлекать внимание потребителей и расширять свою долю на рынке. Многие корейские компании успешно выходят на мировые рынки, что помогает им диверсифицировать риски и расширять свое влияние. Глобальное присутствие также обеспечивает доступ к новым возможностям и рынкам.

Культура предприятий в Южной Корее часто подчеркивает коллективизм, усердие и стремление к общему успеху. Сильная корпоративная культура может способствовать высокой мотивации сотрудников. Корейские компании часто устанавливают тесные партнерские отношения с другими компаниями и поставщиками. Это может способствовать обмену ресурсами и оптимизации поставок. При применении этих элементов в своем бизнесе важно учитывать контекст и особенности собственного рынка. Каждая стратегия должна быть адаптирована под конкретные условия предприятия, его отрасль и рынок.

Что касается американского опыт управления на предприятиях при достижении точки безубыточности также предоставляет много ценных уроков. В США существует разнообразие бизнес-моделей и стратегий, и ниже представлены некоторые ключевые элементы американского опыта управления: В США акцент часто делается на стимулировании инноваций и предпринимательской активности. Компании активно инвестируют в исследования и разработки, создание новых продуктов и услуг.

Американские компании часто известны своей гибкостью и способностью быстро адаптироваться к изменениям в рыночной среде. Это позволяет им эффективно справляться с неопределенностью и конкурентной динамикой.

Американские предприятия часто придают большое значение пониманию и удовлетворению потребностей клиентов. Фокус на клиентском опыте помогает удерживать существующих клиентов и привлекать новых. Оптимизация бизнес-процессов и управление производственными операциями позволяют компаниям в США повышать эффективность и снижать затраты.

Американские компании активно используют финансовые инструменты, аналитику и ключевые показатели эффективности (KPI) для мониторинга и управления финансовым состоянием предприятия. Опыт американских компаний подчеркивает важность эффективного управления рисками. Компании активно оценивают риски и разрабатывают стратегии для их снижения. Американские предприятия стремятся создать культуру, способствующую постоянному обучению и инновациям. Обученные и мотивированные сотрудники могут быть ключевым ресурсом для достижения точки безубыточности.

Управление персоналом в США часто основывается на принципах разнообразия и включения, стимулировании творческого мышления и предоставлении сотрудникам возможности для профессионального роста.

Многие американские компании активно внедряют принципы корпоративной социальной ответственности (CSR), что может улучшить их общественный имидж и привлечь клиентов.

Так же следует отметить то, что при достижении точки безубыточности на предприятиях положительный результат даёт использование математических расчётов[4].

Применение этих аспектов может помочь предприятию достичь точки безубыточности и создать устойчивый бизнес. Однако, важно учитывать специфику отрасли, размер предприятия и контекста местного рынка.

Необходимо отметить роль цифровизации экономики в целом, а также внедрение их на предприятиях для достижения точки безубыточности [8].

В заключении мы хотели бы привести выводы, касающиеся достижения точки безубыточности на предприятиях: для достижения точки безубыточности на предприятии важно учесть ряд ключевых факторов и стратегий:

Во-первых – целесообразно проведение детального анализ всех расходов, включая фиксированные и переменные затраты. Положительный результат даёт идентификация возможностей для снижения издержек без ущерба для качества продукции или услуг.

Во-вторых – уместна оптимизация производственных процессов, предполагающая внедрение системы автоматизации и оптимизации, чтобы повысить эффективность производства и снизить трудозатраты.

В-третьих – положительно влияет эффективное управление оборотным капиталом, означающее управление сроками платежей и получения денег от клиентов для улучшения оборотного капитала.

В-четвёртых, нужно снижать уровень запасов до оптимального для минимизации затрат.

Разработайте ценообразование, которое позволит покрыть все затраты. Инвестируйте в эффективные стратегии маркетинга и продаж для привлечения новых клиентов и увеличения объема продаж. Регулярно обновляйте бюджеты и планы, учитывая изменения в бизнес-среде [6].

Следите за финансовыми показателями и оперативными результатами с использованием ключевых показателей эффективности. Инвестируйте в исследования и разработки для создания инновационных продуктов или услуг.

Ищите возможности для диверсификации и внедрения новых технологий.

Очень важно глобальное понимание рынка, которое включает в себя. Изучайте зарубежный опыт управления и мировые тенденции в вашей отрасли для успешного выхода на глобальный рынок. Адаптировать следует лучшие практики с учетом местных особенностей [6].

Создавайте стратегии, направленные на удовлетворение потребностей клиентов и улучшение клиентского опыта. Развивайте стратегии удержания клиентов, такие как программа лояльности и персонализированный сервис.

Будьте готовыми быстро реагировать на изменения внешней среды и рыночных условий. Максимально используйте гибкость в стратегии и процессах, чтобы адаптироваться к новым требованиям. Каждое предприятие уникально, и успешное достижение точки безубыточности требует гибкости и непрерывного анализа бизнес-процессов.

Использованные источники:

1. Леонтьева, А. В. (2014). Анализ безубыточности и управленческие решения. *Научные записки молодых исследователей*, (1), 29-31.
2. Усманова, З. М. (2022). К актуальным вопросам использования технологии кайдзен в совершенствовании механизма управления персоналом на предприятиях лёгкой промышленности. *Nazariy va amaliy tadqiqotlar xalqaro jurnali*, *2*(1), 108-116.
3. Usmanova, Z. M. (2019). To questions of personnel motivation at industrial enterprises. *Scientific and Technical Journal of Namangan Institute of Engineering and Technology*, *1*(8), 116-121.

4. Хасанов, А., & Жалилов, И. (2022). Gipergeometrik funksiya uchun integral ko ‘rinishlar va bu funksiyani qanoatlantiruvchi gipergeometrik tipdagi differensial tenglamalar sistemasi. *Scientific journal of the Fergana State University*, (4), 38-38.
5. Jalilov, I. (2019). To the problems of innovation into the educational process. *Scientific and Technical Journal of Namangan Institute of Engineering and Technology*, *1*(3), 344-347.
6. Исмоилов, Д., & Михеева, А. (2023). К проблемам реализации цифровизации региональной экономики в узбекистане. *Research and implementation*.

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Файзибоев П. Н.
Гигиена кафедраси мудири, тиббиёт фанлари доктори, доцент
Ибрагимова Ф.С.
Махмараймов Ф. И.
Гигиена кафедраси 2-босқич клиник ординаторлари
Файзибоев Б. П.
Альфраганус университети 2-босқич талабаси

ЖИГАР ҲАСТАЛИГИ БИЛАН ОҒРИГАН БЕМОРЛАР САЛОМАТЛИК ҲОЛАТИНИ ЎРГАНИШ ВА ПРОФИЛАКТИКАСИ

Аннотация*: Хронические заболевания печени у человека часто приводят к развитию цирроза печени. Под воздействием инфекций, алкоголя и других факторов клетки печени погибают, а на их месте образуется соединительная ткань. В результате печень теряет способность выполнять свои функции, что приводит к сбоям в системе кровообращения и развитию печеночной недостаточности.*

Ключевые слова*: Хронические заболевания печени, клетки печени, алкогольные напитки.*

Fayziboev P.N.
Doctor of Medical Sciences, Associate Professor
Head of the Department of Hygiene
Ibragimova F. S.
Makhmaraimov F. I.
2nd-year clinical residents of the Department of Hygiene
Fayziboev B.P.
2nd-year student of Alfraganus University

STUDY OF THE HEALTH STATUS OF PATIENTS WITH LIVER DISEASES AND DEVELOPMENT OF PREVENTIVE MEASURES

Abstract: *Chronic liver diseases in humans often result in the development of cirrhosis. Under the influence of infections, alcohol and other factors, liver cells die, and connective tissue forms in their place. As a result, the liver loses the ability to perform its functions, which leads to failures in the circulatory system and the development of liver failure.*

Keywords: *Chronic liver diseases, liver cells, alcoholic beverages*

Мавзунинг долзарблиги: Сўнгги йилларда жигар касалликларининг ривожланишида узоқ вақт интоксикация, тўғри овқатланмаслик, рационда зарур бўлган минерал моддалар ва витаминларнинг етишмаслиги ҳам катта аҳамиятга эга эканлиги маълум бўлди.

Инсонларнинг сурункали жигар касаллигига чалинишининг якуний босқичи бу жигар циррозга чалиниши билан тугашидир. Бу касалликa чалинган беморларда организимидаги инфекция, спиртли ичимлик ва бошқа сабаблар таъсири остида жигар ҳужайраларининг ўлиши ва унинг ўрнини бириктирувчи тўқималарнинг эгаллаши билан кечади. Қарабсизки бунинг оқибатда жигар ўз вазифасини бажара олмайди натижада, инсон ички аъзоларининг қон айланиш тизими ишдан чиқиб, жигар етишмовчилигининг ривожланишига сабаб бўлади.

Бундан ташқари, алкоголли ичимликлар жигарда содир бўладиган турли метаболик жараёнларга сезиларли таъсир кўрсатиши исботланган. Ҳайвонлар устида ўтказилган тажрибалар шуни кўрсатдики, спиртли ичимликларни узоқ вақт давомида истеъмол қилиш заҳарланишга, тўғри овқатланишнинг пасайишига, айрим ферментатив жараёнларнинг ўзгаришига ва гепатоцитларда дегенератив ўзгаришларнинг ривожланишига олиб келади.

80 % ҳолатларда жигар циррози спиртли ичимликлар сабабли келиб чиққани билан айрим пайтларда уни оғзига олмаган одамларда ҳам моддалар алмашинуви билан туғма жиддий муаммоларнинг борлиги, дорилардан ва кимёвий заҳарланиш, ўт йўли касалликлари, сурункали вирусли гепатит В, С, рационда оқсил ва витаминларнинг сурункали танқислиги ва парҳез овқатланишга риоя қилмаслик оқибатларида худди шундай касалликa чалиниш ҳолатлари кузатилмоқда.

Жаҳонда олиб борилган илмий тадқиқотлар шуни кўрсатадики, мамлакатимизда сурункали жигар касалликлари билан оғриган беморлар ўлим кўрсаткичлари бўйича биринчи ўринда туради. Бу эса ушбу масалага кўпроқ эътибор бериш муҳимлигини талаб қилади.

Мақсад: Парҳез овқатланишнинг анъанавий таомларини киритиш орқали жигар касаллигига чалинган инсонларнинг саломатлик ҳолатини ўрганиш ва профилактик чора-тадбирларни ишлаб чиқиш.

Тадқиқотнинг материаллари: Жигар касаллигига чалинган беморларни текширувдан ўтказиш, метаболик жараёнларни тўғрилаш учун парҳез овқатланиш орқали керакли бўлган қўшимчалардан фойдаланилади.

Республика ва Самарқанд вилояти Санитария-эпидемиологик осойишталик ва жамоат саломатлги хизматининг жигар касалликлари билан касалланиши бўйича охриги икки йиллик расмий ҳисобот натижалари ва сўровномалардан фойдаланилди.

Тадқиқот натижалари: Сурункали жигар касаллиги бўлган одамлар кўпинча ёмон овқатланиш ҳолатига дуч келишади. Жигар фаолиятининг ёмонлашиши билан касалликнинг оғирлиги кучаяди ва касалликнинг тарқалишига ва ўлим даражасига сезиларли даражада таъсир қилади.

Беморнинг аҳволини баҳолаш учун олиб борилган тадқиқотлар анъанавий тарзда касалхонага ётқизилган беморларда ўрганилди. Тажриба давомида барча беморларнинг шикоятларини кўриб чиқилди. Жигар циррози ташхиси қўйилган беморларни тақсимлашда касалликнинг давомийлиги йил давомида ташрифлар частотасига таянган ҳолда ўрганилди. Беморлар билан суҳбатлар давомида 12 беморда 4 йилдан ортиқ вақт давомида жигар шикастланишининг аломатлари борлигини аниқланди, улардан 7 нафари аёл ва 5 нафари эркак кишидан иборат бўлди. 67 нафар (31 нафар аёл, 36 нафар эркак) беморда 2-3 йил давомида симптомлар кузатилиб, бир йил олдин 12 нафар бемор, жумладан, 5 нафар аёл ва 7 нафар эркакда жигар циррози аниқланган. Тиббий муассасага ташрифлар частотаси ўрганиб чиқилганда, 13 нафар иштирокчи касаллик бошланганидан буён 3 мартагача поликлиникага ташриф буюрган, 31 нафари 5 мартадан ортиқ, 44 нафари эса 3-5 марта касалхонага ётқизилгани аниқланди.

Иш жойидаги муҳит ва шарт-шароитлар, шунингдек, сўровда қатнашган шахсларнинг касбий фаолияти ҳар томонлама ўрганилгандан сўнг, респондентларнинг 5,62% ушбу соҳада ишчиларнинг соғлиғига зарарли ва хавфли омиллар таъсир кўрсатадиган ишлаб чиқариш корхоналарида ишлаганлиги аниқланди. 1,12% эса ушбу соҳада маъмурий лавозимларда ишлаган. Бошқарувчи ролларни эгаллашдан олдин респондентларнинг 5,62% бир неча йил давомида уларнинг соғлиғига таъсир қилувчи зарарли омиллар билан боғлиқ бўлган жойларда ишлашганлиги аниқланди.

Хулоса қилиб шу нарсани айтишимиз мумкинки**,** касаллик билан боғлик бўлган ўзига хос оғишларни ҳисобга олган ҳолда стандарт мувозанатли парҳез овқатланишни тўғри йўлга қўйиш. Профилактика мақсадида, атроф-муҳит омиллари ва иш жойининг жойлашувининг жигар шикастланишига таъсирини ҳисобга олган ҳолда беморларнинг касбларини тўғри танлашлари муҳимлиги борасида тушинтириш ишларини олиб бориш.

Фойдаланилган адабиётлар:

1. Braet F., Wisse E. Structural and functional aspects of liver sinusoidal endothelial cell fenestrae: a review //Comparative hepatology. – 2002. – Т. 1. – №. 1. – С. 1-17
2. Calmet F., Martin P., Pearlman M. Nutrition in patients with cirrhosis //Gastroenterology & hepatology. – 2019. – Т. 15. – №. 5. – С. 248.
3. Сабзавот ва полиз маҳсулотларини сақлаш ва ташишда нозик назорат нуқталардаги хавфли омилларни баҳолаш. (2024). INTERNATIONAL JOURNAL OF RECENTLY SCIENTIFIC RESEARCHER’S THEORY, 2(3), 6-12.
4. Файзибоев П. Н. и др. ЭХИНОКОККОЗ КАСАЛЛИГИНИ КЕЛТИРИБ ЧИҚАРУВЧИ АСОСИЙ ОМИЛЛАР ВА УШБУ ОМИЛЛАРНИНГ КАСАЛЛАНИШ КЎРСАТКИЧИГА ТАЪСИРИНИ ЎРГАНИШ //INTERNATIONAL JOURNAL OF RECENTLY SCIENTIFIC RESEARCHER'S THEORY. – 2024. – Т. 2. – №. 5. – С. 266-273.
5. Файзибоев П. Н. и др. САМАРҚАНД ВИЛОЯТИДА ЭХИНОКОККОЗ БИЛАН КАСАЛЛАНИШНИНГ ЭПИДЕМИОЛОГИК ТАҲЛИЛИ //INTERNATIONAL JOURNAL OF RECENTLY SCIENTIFIC RESEARCHER'S THEORY. – 2024. – Т. 2. – №. 5. – С. 274-280.

6. Normamatovich F. P. et al. aO’ZBEKISTONDA BRUTSELLYOZ KASALLIGINING ETIOLOGIYASI VA EPIDEMIOLOGIYASINING TAHLILI //Лучшие интеллектуальные исследования. – 2024. – Т. 19. – №. 3. – С. 75-80.
7. Normamatovich F. P. et al. ESTIMATES OF CONSUMPTION OF CONFECTIONERY PRODUCTS IN THE AVERAGE DAILY DIETS OF THE POPULATION IN THE SUMMERAUTUMN SEASON //INTERNATIONAL JOURNAL OF RECENTLY SCIENTIFIC RESEARCHER'S THEORY. – 2024. – Т. 2. – №. 1. – С. 142-149.
8. ЎЗБЕКИСТОНДА ГЕЛМИНТОЗ КАСАЛЛИКЛАРНИНГ ЭПИДЕМИОЛОГИК ТАҲЛИЛИ ВА ПРОФИЛАКТИКАСИ. (2023). INTERNATIONAL JOURNAL OF RECENTLY SCIENTIFIC RESEARCHER’S THEORY, 1(9), 231-235.
9. ФУНКСИОНАЛ ОЗИҚ-ОВҚАТ МАҲСУЛОТЛАРИНИНГ ОҒИЗ БЎШЛИҒИ КАСАЛЛИКЛАРИДА ТУТГАН ЎРНИ. (2023). INTERNATIONAL JOURNAL OF RECENTLY SCIENTIFIC RESEARCHER’S THEORY, 1(8), 60-64.
10. САБЗАВОТ, ПОЛИЗ МАҲСУЛОТЛАРИНИ ЕТИШТИРИШ ЖАРАЁНЛАРИНИ ГИГИЕНИК БАҲОЛАШ. (2023). INTERNATIONAL JOURNAL OF RECENTLY SCIENTIFIC RESEARCHER’S THEORY, 1(7), 221-225.
11. Файзибоев П. Н. и др. САБЗАВОТ ВА ПОЛИЗ МАҲСУЛОТЛАРИНИНГ ХАВФСИЗЛИК МЕЗОНЛАРИ ВА ОЗУҚАВИЙ ҚИЙМАТЛИЛИГИНИ ГИГИЕНИК БАҲОЛАШ //INTERNATIONAL JOURNAL OF RECENTLY SCIENTIFIC RESEARCHER'S THEORY. – 2024. – Т. 2. – №. 1. – С. 136-141.
12. ЎЗБЕКИСТОН ШАРОИТИДА ЭХИНОКОККОЗ КАСАЛЛИГИ БИЛАН КАСАЛЛАНИШНИНГ ЭПИДЕМИОЛОГИК ТАҲЛИЛИ. (2023). INTERNATIONAL JOURNAL OF RECENTLY SCIENTIFIC RESEARCHER’S THEORY, 1(7), 230-233.
13. Абдимуминова Л. А. и др. HACCP ХАЛҚАРО ТИЗИМИГА АМАЛ ҚИЛГАН ҲОЛДА МАКТАБ ЎҚУВЧИЛАРИ ОРАСИДА ТЕМИР ТАНҚИСЛИК КАСАЛЛИГИНИНГ КЕЛИБ ЧИҚИШ САБАБЛАРИНИ АНИҚЛАШ //INTERNATIONAL JOURNAL OF RECENTLY SCIENTIFIC RESEARCHER'S THEORY. – 2024. – Т. 2. – №. 1. – С. 227-232.
14. Файзибоев П. Н. АҲОЛИНИНГ ЎРТАЧА КУНЛИК РАЦИОНИДА ҚАНДОЛАТ МАҲСУЛОТЛАРИНИНГ ЁЗ-КУЗ МАВСУМИДАГИ ИСТЕЪМОЛИНИ БАҲОЛАШ //Журнал гуманитарных и естественных наук. – 2024. – №. 9. – С. 148-152.
15. ГИГИЕНИЧЕСКАЯ ОЦЕНКА КРИТЕРИЕВ БЕЗОПАСНОСТИ И ПИЩЕВОЙ ЦЕННОСТИ ПЛОДООВОЩНОЙ ПРОДУКЦИИ. (2024). INTERNATIONAL JOURNAL OF RECENTLY SCIENTIFIC RESEARCHER’S THEORY, 2(1), 71-76.
16. HYGIENIC ASSESSMENT OF CRITERIA FOR SAFETY AND NUTRITIONAL VALUE OF FRUITS AND VEGETABLES. (2024). INTERNATIONAL JOURNAL OF RECENTLY SCIENTIFIC RESEARCHER’S THEORY, 2(1), 77-81.

17. Файзибоев П. Н. и др. Ўткир респиратор касалликларининг олдини олишда, соғлом овқатланиш ва иммунитетнинг ўрни //INTERNATIONAL JOURNAL OF RECENTLY SCIENTIFIC RESEARCHER'S THEORY. – 2024. – Т. 2. – №. 3. – С. 13-18.
18. Carvalho J. R., Machado M. V. New insights about albumin and liver disease //Annals of hepatology. – 2018. – Т. 17. – №. 4. – С. 547-560.

Хасанов К.У.
ассистент
Шаробиддинов М.З.
ассистент
кафедры Анестезиологии – реаниматологии
и экстренной медицинской помощи
Андижанский государственный медицинский институт
Каримов А.Ш., магистр
кафедры Анестезиологии – реаниматологии
и экстренной медицинской помощи
Андижанский государственный медицинский институт

ПОСЛЕОПЕРАЦИОННЫЕ КОГНИТИВНЫЕ ИЗМЕНЕНИЯ У БОЛЬНЫХ ПОЖИЛОГО ВОЗРАСТА

Аннотация: *Представлен анализ данных по проблеме послеоперационных когнитивных нарушений у больных пожилого и старческого возраста. Рассмотрены определение понятия послеоперационной когнитивной дисфункции, его этиологии и факторы, способствующие его развитию, клиническая симптоматика, особенности его диагностики, а также факторы профилактики ПОКД и его возможной фармакологической коррекции. В приложении приведены психологические тесты, используемые для диагностики ПОКД.*

Важно отметить, что адекватная диагностика ПОКД невозможна без оценки предоперационного нейропсихологического статуса.

Ключевые слова: *послеоперационная когнитивная дисфункция, патогенез, этиология, факторы развития, диагностика, профилактика*

Khasanov K.U.
Sharobiddinov M.Z.
assistants
Department of Anesthesiology - Reanimatology
and emergency medical care
Andijan State Medical Institute
Karimov A.Sh.
Master
Department of Anesthesiology - Reanimatology
and emergency medical care
Andijan State Medical Institute

POSTOPERATIVE COGNITIVE CHANGES IN ELDERLY PATIENTS

Abstract: *An analysis of data on the problem of postoperative cognitive impairment in elderly and senile patients is presented. The definition of the concept of postoperative cognitive dysfunction, its etiology and factors contributing to its development, clinical symptoms, features of its diagnosis, as well as factors for the prevention of POCD and its possible pharmacological correction.*

It is important to note that adequate diagnosis of POCD is impossible without assessing the preoperative neuropsychological status.

The appendix provides psychological tests used to diagnose POCD.

Key words: *postoperative cognitive dysfunction, pathogenesis, etiology, development factors, diagnosis, prevention*

Актуальность. Проблема развития когнитивной дисфункции у больных пожилого возраста в раннем послеоперационном периоде в отделение реанимации и интенсивной терапии, является частым осложнением с последующим переходом дисфункции в делирий. Частота расстройств послеоперационной когнитивной дисфункции и послеоперационного делирия у этой категории больных, по данным разных авторов, составляет от 10 до 64% [2, 3]. Развитие когнитивная дисфункция в послеоперационном периоде приводит к увеличению риска летальности, удлинению сроков лечения. Профилактика и лечение когнитивной дисфункции не имеет на сегодняшний день четкого алгоритма действий. Несмотря на определенные успехи в консервативном лечении острой когнитивной дисфункции и осложнений, летальность при этом заболевании остается высокой. Количество развития ПКД за последние 10 лет увеличилось с 53% до 75%. Общая летальность в случае перехода ПКД в делирий увеличилось на 15%, а в пожилом возрасте достигает 28-80%. В настоящее время, клиницисты уделяют основное внимание проблемам оценки неврологического статуса и тяжести общего состояния при подготовке больных к оперативному вмешательству [4,5].

Послеоперационная когнитивная дисфункция являются нередким и тяжелым осложнением у пациентов пожилого возраста после оперативных вмешательств. Частота расстройств послеоперационной когнитивной дисфункции и послеоперационного делирия у этой категории больных, по данным разных авторов, составляет от 10 до 64% [2,3]. Очевидно, такой значительный разброс показателей обусловлен недостатком единообразия и четкости в выявлении и документировании симптомов делирия. Интерес к изучению этого послеоперационного осложнения не только не уменьшается, но и постоянно возрастает, свидетельством чему является значительное число зарубежных работ, опубликованных в последние годы. В качестве факторов риска указывают на пожилой возраст, вид анестезии (общая или регионарная), гипернатриемию и гиперосмолярность плазмы, гипонатриемию, наличие вредных привычек (курение и злоупотребление алкоголем), сопутствующие заболевания сердечно-сосудистой и дыхательной систем, сахарный диабет, длительность оперативного вмешательства [1,4,5]. Тем не менее, несмотря на многолетние усилия и значительное количество публикаций, противоречивой остается трактовка многих сторон проблемы, прежде всего - спектра и удельного веса факторов риска, прогноза развития этого осложнения у конкретного пациента и, соответственно, мер его целенаправленной профилактики.

Концепция повреждения мозга под влиянием общей анестезии многие годы дискутируется на междисциплинарном уровне. В настоящее время большинство специалистов различного профиля (неврологи, нейрофизиологи, психологи, анестезиологи, хирурги) поддерживают эту гипотезу [2,5,6]. Однако на современном этапе развития неврологии и нейрофизиологии следует признать, что мы очень мало знаем о механизмах развития послеоперационной когнитивной дисфункции (ПОКД), вследствие чего отсутствуют стратегические направления ее профилактики и терапии. Кроме того, в настоящее время не изучены возможные социальные и/или экономические последствия ПОКД, что представляется весьма важным в связи со сложившейся неблагоприятной демографической ситуацией в нашей стране.

В литературе имеются многочисленные данные о негативном влиянии на ЦНС даже среднетерапевтических доз препаратов для общей анестезии, в том числе: морфина, фентанила, амфетамина, галотана, оксибутирата натрия, гексенала, кетамина, нембутала, пропофола (дипривана) [1; 2; 7]. В последние годы поднимается вопрос о повреждающем влиянии на головной мозг гипотензивной анестезии [3,5].

Вследствие многофакторности ПОКД в последние годы отмечается тенденция к мультидисциплинарному подходу к решению данной проблемы с привлечением специалистов различных специальностей, включая, не только анестезиологов, но и неврологов, клинических нейрофизиологов, патофизиологов, медицинских психологов.

В виду неоднородности проводимых исследований, данные о распространенности ПОКД разноречивы. Частота ранней ПОКД в общехирургической практике варьирует от 10 до 30%, а стойкая ПОКД наблюдается в среднем у 1-10% пациентов [1,7,8,9]. Показано, что у пациентов среднего возраста (40 - 60 лет) субъективные жалобы на стойкие когнитивные нарушения после операций в условиях общей анестезии отмечаются у 29% пациентов, у пожилых людей старше 70 лет) стойкая ПОКД регистрируется в 4-6% случаев [166; 184; 207; 218; 222]. Данные о распространенности ПОКД у пациентов пожилого и среднего возраста были уточнены в результате международных проспективных рандомизированных исследований International Study of Post-Operative Cognitive Dysfunction - ISPOCD1 (1998) и ISPOCD2 (2000), продемонстрировавших сохранение стойкой ПОКД у 14% пожилых пациентов [223], ранней и стойкой ПОКД у 19,2% и 6,2% пациентов среднего возраста соответственно [447]. В течение 1-2 лет ПОКД сохранялась у 10,4% пациентов и у 1-2% по истечении 2 лет. Определен риск развития ПОКД, сохраняющейся в течение 2 лет после операций в условиях общей анестезии, который составил 1:64000 случаев общей анестезии, однако проспективное исследование в течение двухлетнего периода выполнено на небольшой подгруппе пациентов [6,11].

Среди факторов риска ПОКД указывались: общая анестезия [3,4,8], хронические цереброваскулярные заболевания и состояние когнитивных функций в дооперационном периоде, возраст пациентов [7]. На частоту и тяжесть ПОКД влияет доза1 анестетиков и длительность общей анестезии. Увеличение риска поражения ЦНС отмечается при удлинении длительности общей анестезии более 3,5-4 ч, достигая максимальных значений к 5 - 6 ч анестезиологического пособия [Hayashi H. et al., 1996; Limburg M. et al., 1998]. Однако вопрос о вероятности развития, группах риска и распространенности ПОКД у пациентов молодого возраста в настоящее время далек от разрешения.

Под когнитивными функциями понимают наиболее сложные функции головного мозга, с помощью которых осуществляется процесс рационального познания мира [4,5,6]. Снижение когнитивных функций проявляется нарушением памяти, внимания, речи, счета, пространственно-временнóй ориентации, способности к абстрактному мышлению, признаками замедления мышления. Для оценки когнитивных функций используются нейропсихологические методы исследования, представляющие различные тесты и пробы на запоминание и воспроизведение слов и рисунков, узнавание образов, решение интеллектуальных задач, исследование движений. По прежнему мало изученным остается вопрос когнитивных нарушений как последствия анестезии. Выделяют 2 основных варианта: послеоперационный делирий и так называемая послеоперационная когнитивная дисфункция (postoperative cognitive dysfunction — POCD).

Послеоперационная когнитивная дисфункция — это когнитивное расстройство, развивающееся в ранний и возможно сохраняющееся в поздний послеоперационный периоды, клинически проявляющееся в виде нарушений памяти, трудности концентрации и длительного удержания внимания, а также нарушений других высших корковых функций (мышления, речи и т. д.), подтвержденное данными нейропсихологического тестирования (в виде снижения показателей тестирования в послеоперационный период не менее чем на 10% от дооперационного уровня), что влечет за собой проблемы с обучением, снижение умственной работоспособности, настроения (депрессию).

В течение последних 10-15 лет отмечается оживление интереса к изучению функционального состояния ЦНС после операций в условиях общей анестезии [2,7,10], появились работы, свидетельствующие о развитии метаболических изменений на нейро-нальном уровне, нарушении процессов синаптической передачи, изменении БЭА головного мозга, нарушении микроциркуляции и тканевой гипоксии. Найдены публикации, свидетельствующие о повреждении функционального состояния ЦНС (в частности, когнитивных функций) после различных видов общей анестезии. К ним относятся: снижение познавательных способностей, нарушение моторных функций, внимания, ухудшение памяти, возникновение психотических реакций. Показано, что на частоту и тяжесть побочного влияния наркоза на ЦНС влияют доза анестетиков и длительность общей анестезии [3,6,10,11].

Однако неврологами не учитывается неблагоприятное влияние центральных анестетиков на ЦНС у пациентов молодого возраста после длительных оперативных вмешательств в общехирургической и, особенно, в микрохирургической практике (включая пластическую хирургию), так как подобные манипуляции не сопровождаются значительной кровопотерей, угрожающими жизни больного изменениями периферической и центральной гемодинамики, и являются, казалось бы, «неосложненными» оперативными вмешательствами.

Учет рекомендаций невролога позволяет анестезиологу, по возможности, минимизировать риск неврологических осложнений общей анестезии. Кроме того, пациенты с высоким риском неврологических осложнений должны быть осмотрены и обследованы неврологом в динамике в течение, по крайней мере, первых 7-10 дней послеоперационного периода [5,9].

Цель исследования: изучить состояние когнитивных функций у пациентов пожилого возраста с неотягощенным неврологическим и психосоматическим анамнезом до и после микрохирургических операций в условиях общей анестезии и оценить эффективность лечебных мероприятий по предупреждению стойких когнитивных расстройств в отдаленном послеоперационном периоде.

Материал и методы исследования. Объектом исследования явился контингент больных от 65 до 90 лет. Все пациенты получили плановое хирургическое лечение в условиях общей, регионарной и комбинированной анестезии на базе клинике АГМИ, в период с 2015 по 2018 гг. Объем выборки составил 100 пациентов.

Результаты исследования. Исследование проводилось в два этапа: первый этап - выполненный на выборке в количестве 100 пациентов, был посвящен поиску факторов риска развития послеоперационного когнитивного дефицита и послеоперационного делирия с тем, чтобы снизить их риск и управления ими. Второй этап - оценка возможностей профилактики послеоперационного когнитивного дефицита и делирия у рассматриваемой категории пациентов, потребовал анализа дополнительной выборки в количестве 30 больных.

Критериями включения в исследование были: хирургический профиль пациентов, возраст от 65 до 90 лет и необходимость плановой операции.

Критерии исключения: наличие в анамнезе психических заболеваний, состояние деменции, прием психотропных препаратов, черепно-мозговая травма, алкогольное опьянение и кардио- и нейрохирургические операции.

Для исключения деменции всех больных до операции тестировали с помощью опросника MMSE (сокр. Англ. Mini mental state examination), направленного на оценку когнитивных функций. Для наблюдения в динамике за изменениями показателей всем больным, включенным в исследование, тестирование по MMSE проводилось также в первые, четвертые и седьмые сутки после операции. Диагноз делирия в послеоперационном периоде устанавливали на основе опроса исходя из диагностических критериев МКБ-10 и DSM-IV (American Psychiatric Association, 1994) и верифицировали консультацией психиатра.

Всем больным выполнялось комплексное обследование, включавшее клинические, биохимические и инструментальные исследования. В анализах крови больных в 70% случаях отмечена гиперлипидемия, азотемия, гипопротеинемия, коагулопатия в виде повышенного фибриногена и снижение АЧТВ.

Всем больным выполнены оперативные вмешательства под общей комбинированной анестезией с ИВЛ, сбалансированной внутривенной без ИВЛ и регионарной анестезией.

В течение первых двух суток после операции делирий развился у 17 пациентов (9 мужчин и 8 женщин). Средний возраст этих больных составил 77,9±8,1 года, тогда как в остальной группе - 74,7±6,5 года ($p>0,05$).

В группе пациентов, у которых развился делирий, 7 пациентам выполнялись общехирургические операции, а 10 - эндопротезирование тазобедренного и коленного суставов. У 10 больных наблюдали гиперактивную форму делирия с преобладанием ажитации, раздражительности и агрессии, у 3 - гипоактивную форму с преобладанием заторможенности, сонливости и апатии, у 4 пациентов отмечена смешанная форма с примерно равной пропорцией этих расстройств. Клиника имела тенденцию нарастать к вечеру, еще более усиливаясь ночью и уменьшаясь к утру.

Анализ влияния фоновых факторов риска и данных дооперационных анализов крови на развитие послеоперационного делирия показал отсутствие статистически значимых связей

В течение всего срока наблюдения в каждой из трех подгрупп отмечалось постепенное улучшение когнитивного статуса, однако даже на седьмые сутки после операции не было достигнуто исходное состояние; различие оценки с исходной во всех подгруппах оставалось достоверным ($p<0,05$).

Таким образом, в группе пожилых пациентов общехирургического, травматолого-ортопедического и урологического профилей послеоперационный делирий развивается у каждого шестого больного; при этом пропорция между гиперактивной, гипоактивной и смешанной формами делирия составляет 10 : 3 : 4 соответственно. Несмотря на отсутствие делирия, операция и анестезия независимо от выбора метода последней приводят у пожилых больных к значимому ухудшению когнитивных функций. Их постепенное восстановление не позволяет достичь исходного уровня даже к седьмым суткам после вмешательства.

Вывод: Когнитивные нарушения в послеоперационном периоде, особенно у лиц пожилого и старческого возраста, обусловливают необходимость рационального изучения и понимания механизмов их формирования у данной категории больных. Профилактическая нейропротективная терапия вместе с адекватной коррекцией, гемодинамики, гомеостаза и газообмена имеют важнейшее практическое значение для предотвращения повреждения нейронов или коррекции уже возникших нарушений высших психических функций в раннем послеоперационном периоде, когда эти изменения являются потенциально обратимыми.

Использованные источники:

1. Федоровский Н. М., Косаченко В. М., Корсунский С. Б. и др. Мониторирование транскраниального кровотока при регионарной анестезии у лиц пожилого и старческого возраста. Рос. мед. журн. 2003; 3: 23—26.
2. Давыдов В. В., Неймарк М. И. Состояние высших психических функций у больных, перенесших анестезию с применением диприванa и кетамина. Общ. реаниматол. 2005; 1 (2): 48—52.
3. Исаев С. В., Лихванцев В. В., Кичин В. В. Влияние периоперационных факторов и выбора метода анестезии на частоту когнитивных расстройств в послеоперационном периоде. В кн.: Материалы IX Съезда Федерации анестезиологов и реаниматологов. 27—29 сентября 2004 г. Иркутск; 2004. 113—114.
4. Лурия А.Р. Основы нейропсихологии. — М.: Изд-во МГУ; 1973.
5. Яхно Н. Н., Захаров В. В. Легкие когнитивные расстройства в пожилом возрасте. Неврол. журн. 2004; 9 (1): 4—8.
6. Международная статистическая классификация болезней и проблем, связанных со здоровьем. Десятый пересмотр (МКБ-10).М.: Медицина; 2003: 317.
7. Захаров В.В., Дамулин И.В. Диагностика и лечение когнитивных нарушений у пожилых. Метод. рекомендации. Под ред. Н. Н. Яхно. М.: ММА им. И. М. Сеченова; 2000.
8. Шнайдер Н. А., Шпрах В. В., Салина А. Б. Послеоперационная когнитивная дисфункция (диагностика, профилактика, лечение). В кн.: Новые компьютерные технологии. Красноярск; 2005. 95.
9. Сазонова А. Ноотропные препараты — стремление к разуму. Провизор 2005; 16: 4.
10. Попугаев К.А., Савин И.А., Горячев А.С. Делирий в нейрореани мации. В кн.: II Национальный конгресс. "Неотложные состояния в неврологии". Москва, 2011, с.185 — 191.
11. Преображенская И. С., Яхно Н. Н. Сосудистые когнитивные расстройства — клинические проявления, диагностика, лечение. Неврол. журн. 2007; 12: 45—51.

Хасанов К.У.
Шаробиддинов М.З.
ассистенты
кафедра Анестезиологии – реаниматологии
и экстренной медицинской помощи
Андижанский государственный медицинский институт
Хамидова Ф.О., магистр
кафедра Анестезиологии – реаниматологии
и экстренной медицинской помощи
Андижанский государственный медицинский институт

ДИАГНОСТИКА ОТДЕЛЬНЫХ ФОРМ ГНОЙНО-СЕПТИЧЕСКИХ ОСЛОЖНЕНИЙ КАТЕТЕРИЗАЦИИ ПОДКЛЮЧИЧНОЙ ВЕНЫ

Аннотация: *Гнойно-септические осложнения относятся к трудно диагностируемым осложнениям катетеризации подключичной вены. Они возникают, как правило, при длительном использовании катетера у крайне ослабленных больных, у больных с активными очагами высокоинвазивной инфекции, при снижении иммунорезистентности к условно патогенной инфекции, нарушении правил установки катетера и ухода за ним, вливании бактериально загрязненных жидкостей.*

Ключевые слова: *гнойно – септические осложнения, катетеризация подключичной вены, диагностика, кавакатетеризация, инфильтрат, флегмона.*

Khasanov K.U.
Sharobiddinov M.Z.
assistants
Department of Anesthesiology - Reanimatology
and emergency medical care
Andijan State Medical Institute
Khamidova F.O., Master
Department of Anesthesiology - Reanimatology
and emergency medical care
Andijan State Medical Institute

DIAGNOSTICS OF INDIVIDUAL FORMS OF PURULENT-SEPTIC COMPLICATIONS OF CONCLUSIONAL VIN CATHETERIZATION

Abstract: *Purulent-septic complications are difficult to diagnose complications of subclavian vein catheterization. They occur, as a rule, with prolonged use of the catheter in extremely debilitated patients, in patients with active foci of highly invasive infection, with a decrease in immunoresistance to opportunistic infections,*

violation of the rules for installing a catheter and caring for it, infusion of bacterially contaminated fluids.

Key words: *purulent-septic complications, catheterization of the subclavian vein, diagnosis, cavacatheterization, infiltration, phlegmon.*

Сведения о клинических проявлениях, диагностике и лечении гнойно-септических осложнений катетеризации подключичной вены неоднозначны. Одни авторы считают, что для верификации диагноза и лечения больных достаточно использовать обычные средства и методы, применяемые в хирургии, другие полагают, что эти осложнения требуют применения специальных методик, позволяющих быстро и эффективно выявить и устранить развившиеся осложнения кавакатетеризации [1,2,3].

Диагностика гнойно-септических осложнений катетеризации подключичной вены в нашей работе основывалась на оценке жалоб, особенностей клинической картины, данных физикальных методов исследования, лабораторных данных, результатов измерения центрального венозного давления, ультразвукового исследования подключичной и внутренней яремной вен, микробиологического исследования крови, катетера и отделяемого из гнойных очагов. Среди 215 обследованных гнойно-септические осложнения кавакатетеризации выявлены у 53 больных.

Общими признаками для всех форм гнойно-септических осложнений катетеризации подключичной вены были: учащение пульса и частоты дыхания, повышение температуры тела, лейкоцитоз, ухудшение состояния больного вплоть до развития полиорганной недостаточности и др.

К основным местным клиническим признакам гнойно-септических осложнений кавакатетеризации, выявленным при физикальном обследовании мы относили:

- боли, гиперемию кожи, отек мягких тканей в подключичной области;
- инфильтрат в месте пункции подключичной вены;
- боли, гиперемию кожи, отек и инфильтрат в области боковой поверхности шеи и по ходу сосудисто-нервного пучка (в проекции кивательной мышцы);
- расширение подкожных вен в области плеча, верхней половины груди и боковой поверхности шеи на стороне поражения;
- отек и цианоз верхней конечности;

На основании полученных данных нами выделены 6 форм гнойно-септических осложнений катетеризации подключичной вены:

1) инфильтрат мягких тканей подключичной области вокруг катетера;
2) флегмона мягких тканей подключичной области вокруг катетера;
3) флебит подключичной вены и ее притоков без тромбоза;
4) тромбофлебит подключичной вены с неполной окклюзией сосуда;
5) тромбофлебит подключичной вены с полной окклюзией просвета вены;
6) тромбофлебит внутренней яремной вены с развитием флегмоны шеи;

Результаты исследования клинических проявлений отдельных форм гнойно-септических осложнений катетеризации подключичной вены, особенности их диагностики и лечения приведены ниже.

Дифференциально-диагностические признаки инфильтрата и флегмоны подключичной области

Инфильтрат подключичной области в месте установки подключичного катетера развился у 10 больных: 7 женщин и 3 мужчин в возрасте от 22 до 71 года, средний возраст составил 53,2±4,9 года. Всем больным была катетеризирована правая подключичная вена. Срок нахождения катетера в вене составлял от 3 до 14 сут, в среднем - 7,3±1,4 сут.

Флегмона подключичной области осложнила течение основного заболевания у 8 больных: 4 мужчин и 4 женщин в возрасте от 22 до 78 лет, средний возраст составил 45,5±5,8 лет. Правая подключичная вена катетеризирована у 6 больных, левая - у 2 больных. Катетер находился в подключичной вене от 3 до 7 сут, средний срок нахождения катетера в вене составил 7,8±0,6 сут.

Больные имели следующие заболевания, послужившие причиной их госпитализации в (табл. 1).

Таблица 1

Показания к госпитализации больных, у которых развились инфильтрат и флегмона подключичной области

Нозологические формы заболеваний	Число больных с инфильтратом	Число больных с флегмоной	Общее число больных
Хирургического профиля			
Перфоративная язва двенадцатиперстной кишки	1		1
Язва желудка, осложненная кровотечением	1		
Острый панкреатит		1	
Острый аппендицит	1		
Тромбоз мезентериальных сосудов	1		
Острый холецистит	1		
Острая кишечная непроходимость	1		
Перелом бедра		1	
Разрыв мочевого пузыря	1		

Варикозное расширение вен пищевода с кровотечением		1	1
Терапевтического профиля			
Острая пневмония		2	2
Острый инфаркт миокарда	1	1	2
Сахарный диабет	1	1	2
Неспецифический язвенный колит		1	1
Неврологические заболевания	1		1
ВСЕГО	10	8	18

Как и во всей группе больных с гнойно-септическими осложнениями катетеризации подключичной вены, основной причиной госпитализации являлись заболевания хирургического профиля (10 из 18).

У 3 больных имелись очаги хронической инфекции, большинство пациентов (15 чел.) имели сопутствующие заболевания.

Средний койко-день в группе больных с инфильтратом подключичной области составил 19,5±2,2 дня, в группе больных с флегмоной подключичной области 25±3,2 дня.

Клиническая картина развившихся осложнений включала в себя местные и общие клинические признаки.

Местные клинические признаки инфильтрата и флегмоны подключичной области, выявляемые при физикальном обследовании, были обусловлены развитием воспаления в мягких тканях вокруг катетера и включали в себя: инфильтрат в месте пункции подключичной вены, боли, гиперемию кожи, пастозность и отек мягких тканей в подключичной области.

Инфильтрат в подключичной области обычно развивался в первые 3-7 сут после кавакатетеризации (рис. 1).

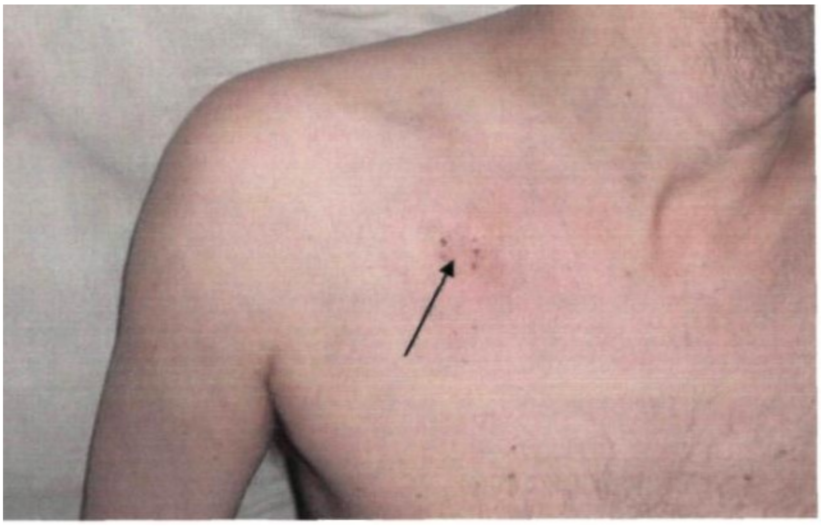

Рис. 1. Б-й Б., 22 лет, и.б. № 2448. Инфильтрат мягких тканей подключичной области справа.

Сначала он проявлялся локальной плотной инфильтрацией в месте стояния подключичного катетера и гиперемией кожи (в среднем — на 4,8±1,8 сут). Затем (на 7±1,2 сут) появлялись боли различной интенсивности в месте установки катетера. Боли носили, в основном, местный характер.

Местные симптомы флегмоны подключичной области развивались на 8-12 сут после катетеризации (рис. 2). Они проявлялись гиперемией кожи (на 8,6±1,3 сут), пастозностью и отеком мягких тканей подключичной области без четкой границы (на 9±1,1 сут), выделением гноя из пункционного отверстия (на 12,2±1,3 сут).

Больные предъявляли жалобы на тянущие, жгучие боли в подключичной области с иррадиацией в шею и верхнюю конечность. Боли появлялись, как правило, на 11±1,6 сут.

Рис. 2. Б-й И., 22 лет, и.б. № 2957. Флегмона мягких тканей подключичной области справа.

При измерении ЦВД оказалось, что оно было повышенным у 1 больного с инфильтратом подключичной области до 125 мм вод. ст. и у 2 больных с флегмоной подключичной области (до 124 и 128 мм вод. ст., соответственно). Это объяснялось наличием сопутствующей патологии: пневмонией - у 2 больных и сердечной недостаточностью - у 1 пациента. У 15 пациентов с нормальным уровнем ЦВД дополнительно проводилась нагрузочная проба с ватно-марлевым шариком, но и она не выявила патологии.

Общие клинические признаки воспаления мягких тканей вокруг кавакатетера нередко проявлялись раньше, чем местные симптомы. Так, на 3-4 сут после катетеризации у 6 пациентов с инфильтратом подключичной области и у 4 - с флегмоной подключичной области отмечалось повышение температуры тела до 37,5°C с ее нормализацией в последующие несколько суток. На 5,9±1,7 сут у 3 больных с инфильтратом и у 7 больных с флегмоной подключичной области на фоне адекватного лечения основного и сопутствующих заболеваний появилось немотивированное ухудшение состояния: нарастающая общая слабость, адинамия, тянущие боли в мышцах и суставах.

Повышение температуры тела выше 38,0°C с ознобом на 5-7 сутки с момента постановки катетера отмечено у 4 больных с инфильтратом подключичной области и у всех больных с флегмоной подключичной области. Другие признаки системной воспалительной реакции (тахикардия ЧСС > 90/мин, лейкоцитоз в анализах крови >12x109/мл, ЧД >20/мин) развились у 3 больных с инфильтратом и у всех больных с флегмоной подключичной области несколько позже - на 6,1±1,1 сут.

На основании проведенных общеклинических анализов крови рассчитан лейкоцитарный индекс интоксикации по Кальф-Калифу (ЛИИ). Отмечалось повышение ЛИИ на 5-7 сут, по сравнению с 3 сут от момента постановки катетера, до 2,0 - 2,5 у больных с инфильтратом подключичной области и выше 3,0 - у больных с флегмоной подключичной области. Кроме лейкоцитоза со сдвигом лейкоцитарной формулы влево наблюдалось ускорение СОЭ (до 40 мм/ч и более).

При использовании шкалы SOFA у больных с инфильтратом и флегмоной подключичной области органной несостоятельности не выявлено.

При оценке тяжести состояния больных по шкале APACHE II на 3 сут от установки подключичного катетера и на 5-7 сут (средний срок развития осложнения) отмечено увеличение тяжести состояния больных, что выражалось в увеличении количества баллов. Так, у больных с инфильтратом подключичной области среднее количество баллов по шкале APACHE II на 3 сутки составило 7,5±1,5 балла, на 5-7 сут — 8,7±1,6, у больных с флегмоной - 8±1 и 12±0,9 балла, соответственно.

При ультразвуковом исследовании (п=18), виден отек и инфильтрация кожи и подкожножировой клетчатки подключичной области, подключичная вена и внутренняя яремная вена полностью проходимы, без патологических включений, стенки вен эластичные, скорость кровотока не изменена.

Всем больным с инфильтратом и флегмоной подключичной области проведены микробиологические исследования, которые включали: посев кончика катетера при его удалении, посев крови из катетера, трехкратные посевы периферической венозной крови, посев отделяемого из ран при вскрытии флегмоны.

Качественный состав микрофлоры, выделенной с кончика катетера, состоял из: Staphylococcus aureus - у 7 больных и St. epidermidis - у 6 больных. Рост микрофлоры получен в 13 из 18 образцов. При исследовании крови из катетера получены следующие данные: St. aureus выявлен у 3 больных, St. epidermidis - у 5 больных. Бакпосев крови из интактной периферической вены оказался положительным у 4 больных с флегмоной подключичной области (возбудитель - золотистый стафилококк). Изучение состава микрофлоры из ран при вскрытии флегмоны подключичной области дало следующие результаты: St. aureus - 4 больных, St. epidermidis - 1 больной, ассоциация St. aureus и St. epidermidis - 3 больных, рост микроорганизмов получен в 80% взятых проб.

Вывод: Таким образом, диагностика инфильтрата и флегмоны подключичной области основывается, главным образом, на местных симптомах воспаления мягких тканей вокруг катетера. При этом необходимо учитывать общие клинические признаки осложнений, которые, нередко, проявляются раньше, чем локальные изменения в месте пункции.

Использованные источники:

1. Костюченко А.Л. Сепсис. Терминология и сущность / А.Л. Костюченко // Вест, хирургии. - 2017. -Т.158, № 3. - С.86-88.
2. Белобородов В.Б. Сепсис - современная проблема клинической медицины / В.Б. Белобородов // Рус. мед. журн. - 2017. - Т.5, № 24. -С.1589-1596.
3. Klein M.D. Central venous catheter sepsis in surgical newborns / M.D. Klein, K. Rood, P. Graham // Pediatr. Surg. Int. - 2013. - Vol.19, N 7. -P.529-532.
4. Беляев А.В. Принципы рациональной антибактериальной терапии // Руководство по интенсивной терапии / А.В. Беляев; Ред. А.И. Трешинский, Ф.С. Глумчер. - Киев: Вища шк., 2014. - Разд. 19. - С.555-562.
5. Белянина Е.О. Основы клинической флебологии / Е.О. Белянина, Е.П. Гаврилов, В.Г. Гудымович и др.; Ред. Ю.Л. Шевченко - М.: Медицина, 2015.- 311 с.
6. Богомолов Б.Н. Справочные материалы // Руководство по анестезиологии и реаниматологии / Б.Н. Богомолов, А.Г. Новиков; Ред. Ю.С. Полушин. - СПб.: ЭЛБИ-СПб, 2014. - С.696-719.
7. Болбас А.С. Возможности ультразвукового метода в определении положения центрального венозного катетера / А.С. Болбас, Г.М. Громыко, Д.В. Новиков, Г.М. Карпелев // Новости лучевой диагностики. -2018. -№ 5. -С. 18-20.
8. Вафин А.З. Осложнения катетеризации подключичных вен и их профилактика / А.З, Вафин, В.С. Марочкин, Л.И. Власов // Вестн. хирургии.-

2017.- Т.117, №9.-С.99-103.
9. Веденский А.Н. Ошибки, опасности и осложнения в хирургии вен: Рук. для врачей / А.Н. Веденский, Ю.Л. Шевченко, М.И. Лыткин и др.; Ред. Ю.Л. Шевченко. - СПб.: Питер, 2017. - 308 с.
10. Войно-Ясенецкий В.Ф. Очерки гнойной хирургии. - 3-е изд. / В.Ф. Войно-Ясенецкий. - Л.: Медгиз, 2017. - 631 с.
11. Гайдаенко В.М. Ошибки и осложнения при катетеризации верхней полой вены и их профилактика / В.М. Гайдаенко, Ю.А. Титовский, В.Б. Оскирко // Анестезиология и реаниматология. - 2018. — № 5. — С.70-71.
12. Гостищев В.К. Оперативная гнойная хирургия: рук. для врачей / В.К. Гостищев. - М.: Медицина, 2018. - 415 с.
13. Гринев М.В. Иммуномодуляция в комплексном лечении хирургического сепсиса / М.В. Гринев, С.Ф. Багненко, М.И. Громов, П.П. Пивоварова // Вест, хирургии. - 2017. - Т. 158, № 6. - С.98-99.
14. Гучев И.А. Оптимизация терапии сепсиса / И.А. Гучев, О.И. Клочков // Воен.-мед. журн. - 2013. - Т. 324, № 9. - С.23-29.
15. Дамир Е.А. Основные этапы общей анестезии. Инфузионно-трансфузионная терапия во время анестезии и операции // Рук. по анестезиологии. - 2-е изд., стереотип. / Е.А. Дамир; Ред. А.А. Бунятян. -М.: Медицина, 2017.-Гл.11.-С. 145-164.

Хасанов Ш. Н.
ассистент
Мамадаев Р. Э.
ассистент
кафедра Анестезиологии-реаниматологии
и экстренной медицинской помощи
Андижанский государственный медицинский институт

РЕАНИМАТОЛОГИЧЕСКИЕ АСПЕКТЫ ЛЕЧЕНИЯ ПАЦИЕНТОВ С РАСПРОСТРАНЕННЫМ ПЕРИТОНИТОМ

Целью нашего исследования: *Вопросам хирургического лечения распространенных форм вторичного перитонита на настоящий момент уделяется большое внимание, что связано с неудовлетворенностью результатами лечения данной группы больных и отсутствием унифицированного подхода к хирургической тактике у пациентов, требующих неоднократных хирургических вмешательств для адекватной санации брюшной полости.*

Результаты исследования: *Применение дифференцированного подхода к проведению плановых релапаротомий у больных с распространенным перитонитом позволило уменьшить общую летальность в 1,7 раза (с 51,3 до 30,2%) (p=0,001) за счет снижения удельного веса абдоминального сепсиса как причины неблагоприятного исхода. Значимого влияния применения указанного алгоритма на частоту и структуру осложнений, а также длительность полиорганной недостаточности выявлено не было.*

Ключевые слова: *abdominal sepsis, disseminated peritonitis, plasmapheresis abdominal compartment syndrome, ischemic reperfusion syndrome, disseminated peritonitis, relaparotomy, laparostomy.*

Xasanov Sh. N.
Mamadayev R.E.
assistant's at the Department of Anesthesiology Reanimatology and emergency medical care Andijan State Medical Institute

RESUSCITATION ASPECTS OF TREATMENT OF PATIENTS WITH WIDESPREAD PERITONITIS

The purpose of our research: *Much attention is currently paid to the issues of surgical treatment of common forms of secondary peritonitis, which is due to dissatisfaction with the results of treatment of this group of patients and the lack of a unified approach to surgical tactics in patients requiring repeated surgical interventions for adequate sanitation of the abdominal cavity.*

Research results: *The use of a differentiated approach to planned relaparotomies in patients with widespread peritonitis made it possible to reduce the overall mortality by 1.7 times (from 51.3 to 30.2%) (p=0.001) due to a decrease in the proportion of abdominal sepsis as a cause of a pleasant outcome. No significant effect of the application of this algorithm on the frequency and structure of complications, as well as the duration of multiple organ failure, was revealed.*
Keywords: *abdominal sepsis, widespread peritonitis, plasmapheresis, abdominal compartment syndrome, ischemic reperfusion syndrome.*

Введение

Несмотря на более чем вековую историю изучения распространенного перитонита, вопросы его лечения остаются одной из наиболее сложных проблем абдоминальной хирургии, а достигнутые результаты далеки от идеальных. Учитывая многокомпонентность этого заболевания, подход к лечению больных с распространенным перитонитом носит мультидисциплинарный характер и включает в себя комплекс мер, направленных на устранение источника внутрибрюшной инфекции и коррекцию нарушений гомеостаза. Принимая во внимание успехи в области анестезиологии и интенсивной терапии, решающая роль принадлежит хирургической санации септического очага, и от эффективности последней во многом зависит исход лечения этой группы больных. Исторически подходы к оперативному лечению больных с осложненными формами внутрибрюшной инфекции разнились от широкого применения методик «открытого живота» в конце XIX в. до признания релапаротомии технической ошибкой в период внедрения антибактериальной терапии в клиническую практику. В 80-е гг. XX в. появляется ряд работ о неэффективности в ряде случаев однократного оперативного вмешательства для эффективной санации брюшной полости как причине прогрессирования перитонита, что послужило поводом для возврата релапаротомий в хирургическую практику [1]. Существующие на настоящий момент тактики плановых санационных и релапаротомий «по требованию» обладают рядом известных преимуществ и недостатков [2–4], ввиду чего сроки и порядок проведения данных вмешательств на настоящий момент не стандартизированы и варьируют в различных лечебных учреждениях. Оценка эффективности различных хирургических стратегий также затруднена по причине некоторой гетерогенности сравниваемых групп больных [5].

Цель исследования: Улучшение ближайших результатов лечения пациентов с распространенным вторичным перитонитом путем определения подходов к выбору оптимальной хирургической тактики.

Материалы и методы: В основу данной работы легли результаты лечения 220 больных, оперированных по поводу распространенных форм вторичного перитонита в хирургических отделениях СПб ГБУЗ «Елизаветинская больница» в период с 2013 по 2019 г. В исследование не вошли больные с первичными и панкреатогенными перитонитами, мезентериальными тромбозами с тотальным некрозом тонкой кишки, а также умершие в первые сутки от момента поступления в стационар. Отобранные для исследования больные были разделены на следующие группы: — основная группа, включавшая 109 больных, в лечении которых использовали разработанный алгоритм плановых санационных релапаротомий в соответствии с принятыми показаниями в период с 2016 по 2019 г.; — группа сравнения в составе 111 пациентов, в ведении которых практиковалась стратегия релапаротомий «по требованию» в период с 2013–2015 гг. Сравниваемые группы больных были сопоставимы по возрастным и гендерным показателям, средний возраст составил 64,9±18,1 года. Тяжесть состояния общесоматического фона оценивали согласно сумме баллов шкалы APACHE II, рассчитываемой при поступлении больных в отделения реанимации для проведения интенсивной предоперационной подготовки. Средние значения APACHE II статистически не различались в пределах групп и составили 11,5±7,1 в группе сравнения и 11,6±6,5 — в основной (рис. 1). Длительность персистенции внутрибрюшной инфекции оценивали от начала болевого синдрома до момента первичного оперативного вмешательства, она составила 37,9±26,9 и 34,2±27,3 часа в основной и группе сравнения соответственно. При поступлении в стационар после выполнения комплекса обследований всем больным проводили стандартную предоперационную подготовку, объем и длительность которой определяли наличием и тяжестью полиорганной недостаточности (ПОН). Проведение интенсивной терапии осуществляли в реанимационных отделениях либо непосредственно на операционном столе в тех случаях, когда ее предполагаемая длительность не превышала 2 часа (рис. 2). Не беря во внимание 3 пациентов основной и 1 больного группы сравнения, отказывавшихся от оперативного вмешательства в сроки до 28 часов от момента поступления, средняя длительность предоперационной подготовки в основной группе составила 6,5±8,5 часа, в группе сравнения — 4,5±4,9 часа. Структура заболеваний, послуживших причиной генерализованной внутрибрюшной инфекции, представлена в табл. 1. Перфоративные язвы различных

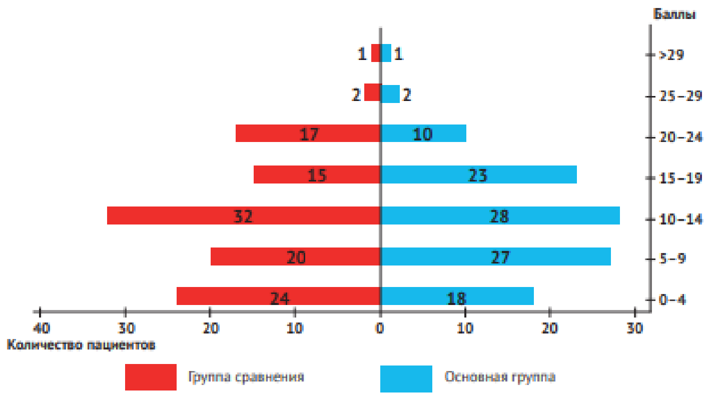

Рис. 1. Распределение больных сравниваемых групп по шкале APACHE II при поступлении в реанимационное отделение

Fig. 1. The distribution of patients compared according to APACHE II upon admission to intensive care department

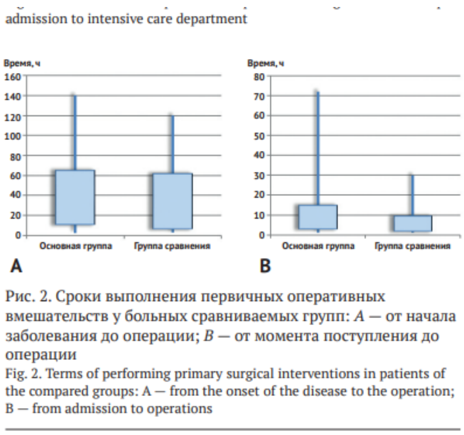

Рис. 2. Сроки выполнения первичных оперативных вмешательств у больных сравниваемых групп: А — от начала заболевания до операции; В — от момента поступления до операции.

Fig. 2. Terms of performing primary surgical interventions in patients of the compared groups: A — from the onset of the disease to the operation; B — from admission to operations

Отделов желудочно-кишечного тракта (ЖКТ) преобладали среди хирургических источников вторичного перитонита — 44 (40,0%) и 55 (49,5%) в основной и группе сравнения соответственно. На втором месте по частоте располагались опухоли различных отделов ЖКТ, преимущественно толстой кишки, осложненные распадом и перфорацией — 28 (25,6%) и 24 (21,6%) соответственно. Достаточно невысокий процент осложненных форм острого аппендицита и холецистита (7,7% и 4,1% соответственно) объясняется спецификой хирургических отделений, среди которых осуществлялся набор больных. Таким образом, структура основных заболеваний, приведших к развитию перитонита среди больных сравниваемых групп, также была сопоставима. Объем и характер первичных оперативных вмешательств избирался в каждом случае индивидуально и определялся интраоперационными находками, тяжестью состояния пациента и степенью анестезиологического риска. Во всех случаях в качестве основного оперативного доступа осуществляли срединную лапаротомию; лапароскопический доступ был применен у 30 больных (27,5%) основной и 21 больного (18,9%) группы сравнения исключительно с диагностической целью — при констатации факта наличия распространенного перитонита осуществляли конверсию доступа. Также у 3 пациентов (2,7%) основной группы лапаротомные доступы дополнялись люмботомическими ввиду массивной контаминации забрюшинного пространства. Объем выполненных оперативных вмешательств в большинстве случаев сводился к устранению источника перитонита с дальнейшей механической санацией и дренированием брюшной полости трубчатыми дренажами. Установка тампонов была осуществлена у 1 больного (0,9%) основной и 2 пациентов (1,8%) группы сравнения в связи с признаками диффузного кровотечения из распадающихся опухолей различных локализаций. Сведения о выполненных операциях представлены в табл. 2. Помимо осуществления непосредственно оперативного вмешательства интраоперационно оценивали глубину морфологических изменений в брюшной полости путем подсчета индекса брюшной полости (ИБП) по В.С. Савельеву и Мангеймского индекса перитонита (МИП) [6, 7]. На рис. 3 и 4 изображены результаты подсчетов указанных показателей, исходя из которых статистически достоверной разницы в распределении больных сравниваемых групп по тяжести

Таблица 1

Характеристика сравниваемых групп в соответствии с источником вторичного перитонита

Table 1

Characteristics of the compared groups according to the source of secondary peritonitis

Первичный очаг внутрибрюшной инфекции	Исследуемые группы				Всего, n=220	
	Основная, n=109		Сравнения, n=111			
	n	%	n	%	n	%
Гангренозный аппендицит	8	7,3	9	8,1	17	7,7
Гангренозный холецистит	6	5,5	3	2,7	9	4,1
Перфорация язвы						
Хронической двенадцатиперстной кишки	26	25,9	34	30,6	60	27,2
Хронической желудка	7	6,4	13	11,7	20	9,1
Острой желудка	1	0,9	0	0	1	0,5
Острой тонкой кишки	9	8,3	5	4,5	14	6,4
Острой ободочной кишки	1	0,9	3	2,7	4	1,8
Перфорация дивертикула						
Ободочной кишки	4	3,7	6	5,4	10	4,5
Тонкой кишки	0	0	1	0,9	1	0,5
Некроз опухоли						
Ободочной кишки	22	20,2	19	17,2	41	18,5
Желудка	4	3,7	5	4,5	9	4,1
Желчного пузыря	1	0,9	0	0	1	0,5
Поджелудочной железы	1	0,9	0	0	1	0,5
Предстательной железы	3	2,8	0	0	3	1,4
Матки	2	1,8	3	2,7	5	2,3
Мочевого пузыря	0	0	1	0,9	1	0,5
Ущемленная грыжа с некрозом тонкой кишки	1	0,9	3	2,7	4	1,8
Мезентериальный тромбоз с некрозом						
Тонкой кишки	3	2,8	1	0,9	4	1,8
Ободочной кишки	0	0	3	2,7	3	1,4
Травматическое повреждение Тонкой кишки	1	0,9	0	0	1	0,5
Ободочной кишки	0	0	2	1,8	2	0,9
Заворот с некрозом Тонкой кишки	1	0,9	0	0	1	0,5
Ободочной кишки	1	0,9	0	0	1	0,5
Абсцесс почки	1	0,9	0	0	1	0,5
Абсцессы брюшной полости и забрюшинного пространства неуточненной этиологии с прорывом в брюшную полость	4	3,7	0	0	4	1,8
Пиосальпинкс	2	1,8	0	0	2	0,9

Таблица 2

Характеристика первичных оперативных вмешательств у пациентов сравниваемых групп

Table 2

Characteristics of primary surgical interventions in patients of the compared groups

Первичное оперативное вмешательство	Исследуемые группы				Всего, n=220	
	Основная, n=109		Сравнения, n=111			
	n	%	n	%	n	%
Аппендэктомия	7	6,4	9	8,1	16	7,3
Холецистэктомия	4	3,6	2	1,8	6	2,7
Холецистэктомия с дренированием желчевыводящих путей	2	1,8	1	0,9	3	1,4
Ушивание перфоративной язвы						
Хронической двенадцатиперстной кишки	19	17,5	30	27,1	49	22,2
Хронической желудка	5	4,6	11	9,9	16	7,2
Острой желудка	1	0,9	0	0	1	0,5
Острой тонкой кишки	5	4,6	2	1,8	7	3,2
Пилоропластика	4	3,7	3	2,7	7	3,2
Резекция желудка	7	6,4	2	1,8	9	4,1
Коло-/энтеростомия	5	4,6	7	6,3	12	5,5
Резекция						
Сигмовидной кишки	11	10,1	12	10,8	23	10,4
Тонкой кишки	10	9,2	6	5,4	16	7,2
Гемиколэктомия	12	11,0	11	9,9	23	10,5
Ушивание опухоли желудка по Оппелю–Поликарпову	2	1,8	4	3,6	6	2,7
Вскрытие, дренирование абсцесса брюшной полости	4	3,7	0	0	4	1,8
Адренэктомия	1	0,9	0	0	1	0,5
Другие симультанные вмешательства	10	9,2	11	9,9	21	9,6

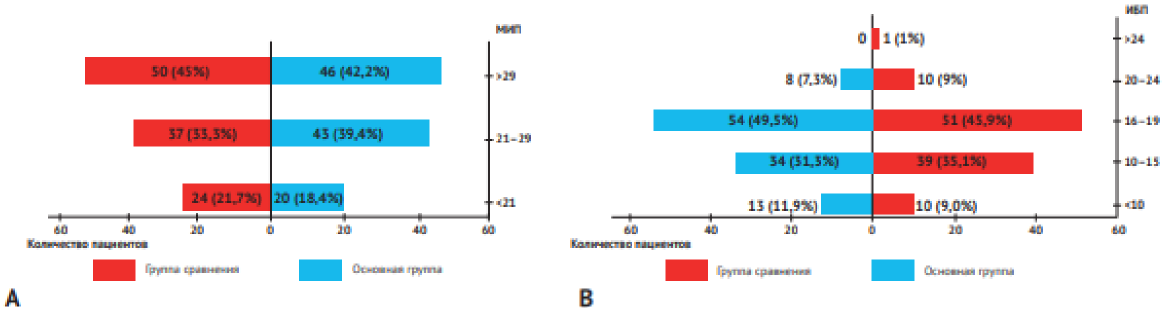

Рис. 3. Распределение больных сравниваемых групп во время первой операции согласно значениям: *А* — Мангеймского индекса перитонита (МИП); *B* — индекса брюшной полости (ИБП)
Fig. 3. The distribution of patients in compared groups according to Mannheim Peritonitis Index (A) and the index of the abdominal cavity (B)

Перитонита выявлено не было: ИБП составил 14,4±4,2 и 14,2±4,1 в группах сравнения и основной соответственно, МИП — 27,4±9,9 и 26,7±10,8. Таким образом, группы пациентов были сравнимы по возрастным, половым критериям, общесоматическому фону, объему и характеру выполненных оперативных вмешательств, а также тяжести патоморфологических изменений в брюшной полости. После проведения срочных и экстренных оперативных вмешательств все больные были госпитализированы в реанимационные отделения для проведения интенсивной и антибактериальной терапии по стандартным схемам, одинаковым в обеих сравниваемых группах. Дальнейшая хирургическая тактика была различной: в группе сравнения определялась клинической картиной и динамикой воспалительного процесса: признаки третичного перитонита служили показанием к проведению релапаротомий наряду с обоснованными подозрениями на развитие внутрибрюшного осложнения. В основной группе релапаротомии носили запланированный характер согласно разработанному алгоритму, представленному на рис. 4. Обработку результатов исследования проводили статистическими методами, включавшими расчет относительных величин частоты и распределения по исследуемым группам с определением статистически значимых различий между ними путем расчета t-критерия для независимых выборок и критерия согласия хи-квадрат для непараметрических критериев. Оценку нормальности распределения в первом случае предварительно рассчитывали путем подсчета критерия Колмогорова-Смирнова. Различия данных считались достоверными в случаях, если p-критерий не превышал 0,05.

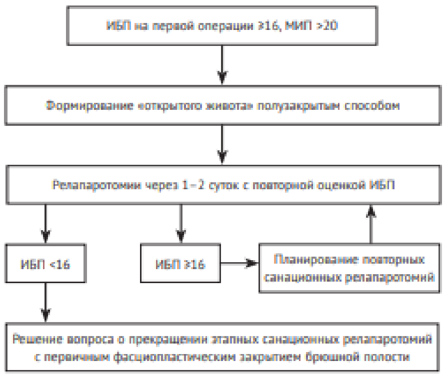

Рис. 4. Хирургическая тактика, применявшаяся в основной группе
Примечания: ИБП — индекс брюшной полости (по В.С. Савельеву); МИП — значения Мангеймского индекса перитонита
Fig. 4. The surgical tactic for the main group
Notes: ИБП – abdominal cavity index (according to V.S. Savelyev); МИП – Mannheim Peritonitis Index

Результаты и обсуждении

Всего в группе сравнения повторным вмешательствам подверглись 23 пациента (20,7%), которым суммарно было проведено 35 релапаротомий (в среднем 1,5±0,7). Из них в 24 случаях показаниями к операции послужили косвенные признаки третичного перитонита, иными словами релапаротомии были выполнены «по требованию». При решении вопроса о необходимости санационного вмешательства ключевую роль играли такие показатели, как сохранение мутного отделяемого по дренажам, длительный парез кишечника, не разрешимый консервативными мероприятиями, и нарастание септических явлений, оцениваемых по данным лабораторных показателей (уровни лейкоцитоза, С-реактивного белка — СРБ) и уровню полиорганной недостаточности. На рис. 5 представлены сведения о динамике указанных показателей среди больных группы сравнения. Исходя из полученных данных, сколь либо значимой закономерности в уровнях лейкоцитоза и СРБ выявлено не было, в то время как показатели SOFA продемонстрировали отчетливый пик на 4–6-е сутки послеоперационного периода. В соответствии с указанной тенденцией и клиническими данными сроки проведения повторных вмешательств составили 3,9±1,9 суток. Следует отметить, что из 24 релапаротомий, проведенных ввиду наличия признаков персистенции воспалительного процесса в брюшной полости, в 11 случаях (45,8%) были выявлены осложнения, не демонстрировавшие специфических проявлений на дооперационном этапе — перфоративные острые язвы (4 больных), мезентериальный тромбоз (4), несостоятельность швов полых органов (2), ранняя спаечная кишечная непроходимость (1). В основной группе релапаротомиям подверглись 40 больных, которым суммарно было выполнено 70 повторных вмешательств (1,75±1,5 в среднем). Согласно разработанному алгоритму плановые релапаротомии были осуществлены в 46 случаях (65,7%), у оставшихся 24 больных (34,3%) были диагностированы те или иные формы внутрибрюшных осложнений. Как правило, плановые релапаротомии проводили пациентам с распространенными формами калового или гнойного перитонита, с длительными сроками заболевания и выраженными признаками ПОН — объективизацию указанных критериев осуществляли путем подсчета МИП и ИБП. При проведении ретроспективного анализа в группе сравнения выявлена положительная корреляционная связь между значениями этих индексов во время первичного оперативного вмешательства и вероятностью проведения релапаротомий в последующем (табл. 3). Исходя из полученных данных при превышении ИБП значения в 16 баллов, частота релапаротомий существенно возрастала (с 7,7 до 27,5%) с сохранением указанной тенденции для более высоких значений ИБП. Для МИП аналогичная величина составила 21 балл, ввиду чего указанные значения были приняты как «пороговые» при разработке лечебного алгоритма, применявшегося в основной группе. Принятие решения о необходимости плановых санационных релапаротомий диктовало необходимость формирования лапаростомы с целью облегчения дальнейшего доступа к санационным вмешательствам и профилактики абдоминального компартмент-синдрома. В 34 случаях (85%) из 40 лапаростома была сформирована полузакрытым способом (укрытие внутренних органов кожными покровами), у 6 больных (15%) — полуоткрытым (подразумевающим полное отсутствие контакта между тканями передней брюшной стенки, изоляцию внутренних органов осуществляли мазевыми тампонами и полиэтиленовыми пленками). Выбор конкретной методики формирования лапаростомы определяли выраженностью висцерального отека и расширения кишечных петель. При проведении релапаротомий значения ИБП подсчитывали повторно с целью оценки эффективности санационных мероприятий, и в основной группе — решения вопроса о необходимости последующих вмешательств (рис. 6). При снижении ИБП до 15 и ниже решался вопрос о прекращении санационных релапаротомий и первичном фасциопластическом закрытии брюшной полости. Благоприятные условия для осуществления последнего мероприятия были достигнуты у 26 больных (23,8%) основной группы уже после одной релапаротомии — брюшная полость была закрыта послойным ушиванием краев операционной раны в 20 случаях (76,9%). Еще 14 больным для адекватной санации брюшной полости понадобилось более одного вмешательства — от 2 до 8. Среди этих больных частота первичного закрытия лапаростомы была значительно ниже и составила 28,5% (4 больных), что объясняется латерализацией брюшной стенки на фоне длительного отсутствия контакта между апоневротическими краями. Исходя из полученных данных, ИБП во время проведения релапаротомий в основной группе был статистически ниже (p=0,009), чем в группе сравнения (11,5±5,0 против 14,6±5,5). Данный факт, а также отрицательная динамика показателя SOFA в группе сравнения, зафиксированная только на 4–6-е сутки послеоперационного периода, могут свидетельствовать о несколько несвоевременном проведении релапаротомий «по требованию», так как изменения лабораторных показателей вероятно «запаздывают» по сравнению с прогрессированием патоморфологических изменений в брюшной полости. Эта тенденция послужила аргументом в пользу смещения сроков плановых санационных вмешательств в более ранние временные промежутки, составившие в основной группе 1,9±0,8 суток (3,9±1,9 — в группе сравнения). Результаты лечения оценивали по частоте и структуре послеоперационных осложнений, длительности ПОН, пребывания в реанимационных отделениях, койко-дню и послеоперационной летальности. Согласно классификации хирургических осложнений Clavien–Dindo, неосложненный послеоперационный период имел место у 18 больных (17%) основной и у 14 пациентов (12,6%) группы сравнения. В остальных случаях зафиксированы различные осложнения, интра-, экстраабдоминальные и сочетанные.

Структура послеоперационных осложнений
Table 4
The structure of postoperative complications

Тяжесть послеоперационных осложнений по *Clavien–Dindo*	Исследуемые группы (*n*=220)			
	Сравнения, *n*=111		Основная, *n*=109	
	n	%	*n*	%
Неосложненное течение послеоперационного периода	14	12,6	18	17,0
I	10	9,0	12	11,0
II	8	7,2	10	9,1
IIIa	3	2,7	11	10,0
IIIb	8	7,2	14	12,7
IVa	2	1,9	1	0,9
IVb	9	8,1	10	9,1
V	57	51,3	33	30,2

Структура послеоперационной летальности
Table 5
Postoperative mortality structure

Причины смертельных исходов	Исследуемые группы		Всего
	Основная, *n*=109	Сравнения, *n*=111	
Тромбоэмболия легочной артерии	4	3	7
Прогрессирующая полиорганная недостаточность на фоне абдоминального сепсиса	15	42	57
Мезентериальный тромбоз с тотальным некрозом тонкой кишки	2	1	3
Двухсторонняя пневмония	9	8	17
Острый инфаркт миокарда	1	2	3
Кровотечение из острых язв желудка	2	1	3
Общая летальность	33 (30,2%)	57 (51,3%)	90

Table 3
Distribution of ACI and MPI indicators among patients of the compared groups

Группы больных		МИП во время первой операции, *n* (%)			ИБП во время первой операции, *n* (%)				
		<21	21–29	>29	<10	10–15	16–19	20–24	>24
Основная группа	Количество больных (*n*=109)	20 (18,3)	43 (39,4)	46 (42,3)	13 (11,9)	34 (31,3)	54 (49,5)	8 (7,3)	0
	Повторно оперированных (*n*=40)	1 (5)	12 (27,9)	27 (58,7)	1 (7,7)	2 (5,8)	31 (57,4)	6 (75,0)	0
Группа сравнения	Количество больных (*n*=111)	24 (21,6)	37 (33,3)	50 (45,1)	10 (9,0)	39 (35,1)	51 (45,9)	10 (9,0)	1 (1,0)
	Повторно оперированных (*n*=23)	2 (8,3)	8 (21,6)	13 (26,0)	1 (10,0)	3 (7,7)	14 (27,5)	4 (40)	1 (100)

Примечания: ИБП – индекс брюшной полости (по В.С. Савельеву); МИП – значения Мангеймского индекса перитонита
Notes: ИБП – abdominal cavity index (according to V.S. Savelyev); МИП – Mannheim Peritonitis Index

Частота и структура последних существенным образом не отличалась в пределах сравниваемых группах и ожидаемо была выше в подгруппах пациентов, перенесших одну или несколько релапаротомий (табл. 4). Данные о временных показателях суммированы в диаграмме на рис. 7. Длительность полиорганной недостаточности, как одного из ключевых звеньев септического процесса, оценивали в соответствии с динамикой шкалы SOFA — при снижении ее показателей ниже 2 баллов явления сепсиса считались купированными. Таким образом, продолжительность сепсиса составила 5,9±4,5 суток в основной и 5,9±4,5 суток в группе сравнения — статистической разницы не выявлено. В то же время средняя длительность пребывания больных в реанимационных отделениях в основной группе были выше: 6,2±8,3 и 17,3±12,2 суток против 11,3±4,7 и 3,0±2,4 суток аналогичных показателей в группе сравнения. Такая разница связана, вероятнее всего, с большей выживаемостью в основной группе повторно оперированных больных, чьи сроки госпитализации значительно превышали таковые для больных, перенесших одну лапаротомию. Общая летальность в основной группе была статистически ниже (p=0,001) и составила 30,2% (33 пациента) против 51,3% (57 больных) в группе сравнения (табл. 5). Снижение относительного риска летального исхода составило 41%. В структуре послеоперационной летальности также имели место различия в виде меньшего удельного веса абдоминального сепсиса как причины неблагоприятного исхода среди больных.

Рис. 6. Значения индекса брюшной полости (ИБП) во время проведения релапаротомий у больных сравниваемых групп
Fig. 6. The values of the index of the abdominal cavity during the time relaparotomies in patients of compared groups

основной группы (45,5% против 73,7% в группе сравнения).

Заключение

Введение в хирургическую практику плановых санационных релапаротомий и отказ от повторных операций «по требованию» способствовали некоторому росту общего количества произведенных хирургических санаций в основной группе, без существенного влияния на средний койко-день, длительность пребывания пациентов в реанимационных отделениях, частоту и структуру послеоперационных осложнений, а также продолжительность сепсиса. Впрочем, в основной группе было достигнуто статистически значимое снижение летальности, преимущественно за счет уменьшения роли абдоминального сепсиса в структуре неблагоприятных исходов. Данные результаты связаны вероятнее всего с некоторой несвоевременностью релапаротомий, осуществляемых «по требованию», так как клинически значимые показания к подобным вмешательствам регистрировались достаточно поздно по сравнению с прогрессией патоморфологических изменений в брюшной полости. В связи с этим более агрессивная хирургическая тактика ранних плановых санационных релапаротомий, построенная на изначальном отборе больных с высокими значениями индекса брюшной полости и Мангеймского индекса перитонита, оказалась более эффективна.

Рис. 7. Длительность полиорганной недостаточности *(A)*, пребывания в отделениях интенсивной терапии *(B)* и средний койко-день среди выживших больных *(C)* сравниваемых групп

Fig. 7. Duration of multiple organ failure (A), stay in the intensive care units (B), and the average bed-day among the surviving patients (C) of the compared groups

Вывод

Разработанный лечебный алгоритм, подразумевающий построение хирургической тактики плановых санационных релапаротомий на основе объективной оценки патоморфологических изменений в брюшной полости у больных с распространенными формами перитонита, продемонстрировал свою эффективность, позволив снизить общую послеоперационную летальность в 1,7 раза (p=0,001), что позволяет рекомендовать его к применению в клинической практике.

Использованные источники:

1. Баранов А.И., Лещишин Я.М., Атаманов К.В., Мартынов А.А., Потехин К.В. Лапаростомия: история развития и технические аспекты выполнения. Сибирское медицинское обозрение. 2018;3(111):34–42. https://doi.org/10.20333/2500136-2018-3-34-42 2. Щеголев А.А., Товмасян Р.С., Чевокин А.Ю., Мурадян Т.Г., Плотников В.В. Третичный перитонит: состояние проблемы и возможные перспективы. Лечебное дело. 2018;(4):32–35. https://doi. org/10.24411/2071-5315-2018-12063

3. Салахов Е.К., Власов А.П., Шейранов Н.С., Глухова И.В., Худайберенова Г.Д. Функциональное состояние сердечной и дыхательной систем при различных способах санации брюшной полости. Хирургическая практика. 2019;(1):18–22. https://doi.org/10.15507/0236- 2910.026.201603.402-410
4. Atema JJ, Ram K, Schultz MJ, Boermeester MA. External Validation of a Decision Tool to Guide Post-Operative Management of Patients. with Secondary Peritonitis. Surg. Infect. (Larchmt). 2017;2(18):189–195. PMID: 27991844 https://doi.org/10.1089/sur.2016.017
5. Здзитовецкий Д.Э., Борисов Р.Н. Анализ частоты распространенного перитонита и результатов его лечения в многопрофильном стационаре [Электронный ресурс]. Современные проблемы науки и образования: электронный научный журнал. 2012;2. URL: https:// www.science-education.ru/ru/article/view?id=5771 [Дата обращения 02 марта 2020 г.]
6. Савельев В.С., Гельфанд Б.Р., Филимонов М.И., Подачин П.В., Сергеева Н.А. Критерии выбора эффективной тактики хирургического лечения распространенного перитонита. Анналы хирургии. 2013;(2):48–54.
7. Linder MM, Wacha H, Feldmann U, Wesch G, Streifensand RA, Gundlach E. The Mannheim peritonitis index. An instrument for the intraoperative prognosis of peritonitis. Chirurg. 1987;2(58):84–92. PMID: 3568820.

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Худайберганова А.А.
Соискатель кандидатской
степени психологических наук

ОСНОВНЫЕ ПОЛОЖЕНИЯ ИССЛЕДОВАНИЯ САМОЭФФЕКТИВНОСТИ СОВРЕМЕННОЙ ЛИЧНОСТИ

Аннотация:*В данной статье рассматриваются ключевые аспекты самоэффективности современной личности, включая влияние когнитивных процессов, мотивации и специфических психологических факторов на формирование и развитие самоэффективности. Особое внимание уделяется ее роли в академической и профессиональной сферах, а также в процессах преодоления трудностей. Представлены исследования, подтверждающие влияние самоэффективности на успешность деятельности, а также риск дисфункциональных проявлений при избыточной уверенности. Обозначены направления применения результатов исследования самоэффективности в педагогике, психологии управления, бизнесе и других областях.*

Ключевые слова: *самоэффективность, когнитивные процессы, мотивация, академическая успеваемость, профессиональная деятельность, стратегии преодоления трудностей, психология управления, дисфункциональная самоэффективность*

Khudayberganova A. A.
PhD candidate in Psychology

KEY POINTS OF THE STUDY ON SELF-EFFICIENCY OF THE MODERN INDIVIDUAL

This article examines the key aspects of self-efficiency in modern individuals, including the impact of cognitive processes, motivation, and specific psychological factors on the formation and development of self-efficiency. Particular attention is given to its role in academic and professional spheres, as well as in coping processes. Studies are presented that confirm the impact of self-efficacy on performance success, as well as the risk of dysfunctional manifestations with excessive confidence. Directions for the application of research results on self-efficacy in pedagogy, management psychology, business, and other fields are outlined.

Проведенный анализ научной литературы по изучаемой проблеме показывает, что исследования самоэффективности личности в основном основаны на исследованиях когнитивных процессов и мотивации.[97] Один из ключевых вопросов при исследовании когнитивных процессов и мотивации - это вопрос о том, оказывает тот или иной когнитивный механизм решающее влияние на поведение, или лишь второстепенный. Когнитивный процесс может быть связан с другими факторами (третьими переменными), которые являются истинными причинами успеха. В случае самоэффективности, воспринимаемой субъектом, очевидной третьей переменной является навык. Люди с большим количеством знаний и навыков более уверены в своих способностях. Объективные различия в мастерстве могут, в принципе, объяснять корреляции между субъективными представлениями об эффективности и успешности осуществления соответствующей деятельности. Этой проблеме посвящено немало исследований, в которых подтверждается связь между суждениями о самоэффективности и поведением.[98] Особенно убедительны данные, полученные при экспериментальном манипулировании суждениями об эффективности с сохранением остальных факторов постоянными. Это возможно благодаря едва заметным контекстуальным стимулам, которые искаженно влияют на формирование суждений о самоэффективности. На суждениях об эффективности также отражается краткий анализ положительных или отрицательных факторов, связанных с действиями. Оценка своих сильных и слабых сторон перед выполнением задачи делает когнитивно доступной различную информацию.[99]

В данном аспекте ряд исследователей обнаружили, что связь академической и социальной самоэффективности с успеваемостью в обучении и общении со сверстниками опосредованно специфическими стратегиями преодоления трудностей. При этом, авторы отмечают, что в исследовании не было выявлено статистически значимых связей между академической самоэффективностью и успеваемостью у мужской части выборки, в то время как в зарубежных (американских) исследованиях были получены данные о том, что академическая самоэффективность является предиктором академической успеваемости и у девочек, и у мальчиков.

Самоэффективность активно исследуется также в профессиональной сфере. Например наличие и развитие самоэффективности при введении в

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[97] Чаплин А.В., Шацкая С.С. Факторы, влияющие на самоэффективность личности. // Международный журнал экспериментального образования. - 2015. - №11-6. - С. 991-993.; Кравцова Я.В., Дубовицкая Т.Д., Абдуллин А.Г. Психологическое время и самоэффективность личности. // Психология. Психофизиология. - 2020. - Т.13. - №3. - С. 17-23.

[98] Кучинская Д.В. Самоэффективность личности и ее развитие. // Научный лидер. - 2021. - №12. - С. 14.; Булынко Н.А., Коломейцев Ю.А. К проблеме самоэффективности личности в психологии. // Веснік Мазырскага дзяржаўнага педагагічнага ўніверсітэта імя ІП Шамякіна. - 2009. - №3 (24). - С. 38-44.; Хачатурова М.Р. Самоэффективность личности и ее связь с выбором копинг-стратегий поведения в межличностном конфликте. // Альманах современной науки и образования. - 2011. - № 9. - С. 92-96.

[99] Лебединская С.В. К вопросу изучения самоэффективности личности как ресурсного качества у студентов гуманитарного профиля. // Ученые записки Забайкальского государственного университета. Серия: Педагогические науки. - 2017. - Т.12. - №2. - С. 60-65.; Авагимян А.А. Самоэффективность личности как психологический феномен. // Современные векторы развития образования: актуальные проблемы и перспективные решения. - 2019. - С. 4-7.

работу после окончания вуза, на новую должность, профессиональное повышение и др. В данном аспекте самоэффективность понимается как способность сочетать собственные ожидания относительно результата труда и объективные возможности.[100]

Многочисленные эмпирические исследования, посвященные изучению влияния самоэффективности на успешность деятельности, как правило, показывают, что высокая самоэффективность связана с высокой результативностью деятельности, однако в некоторых случаях слишком сильно выраженная самоэффективность может оказаться дисфункциональной. Так, ряд исследований показал, что высокий уровень самоэффективности приводит к излишней самоуверенности и падению эффективности деятельности.[101]

Группа авторов из Университета Квинсленда провела масштабное лонгитюдное исследование адаптации сотрудников к организационным изменениям. Авторы утверждают о том, что в процессе трудовой деятельности высоко самоэффективные сотрудники в большей степени склонны проявлять инициативу и предлагать новые идеи по улучшению рабочего процесса. У работников с низким уровнем самоэффективности, напротив, подобная работа связана с переживанием стресса.[102]

Самоэффективность может влиять на протекание различных необходимых процессов в эффективной реализации повторных когнитивных актов. Вызывает интерес исследование, направленное на изучение роли самоэффективности в саморегуляции у молодых людей. Задача формирования вербальных концептов была представлена семью задачами, в каждом из которых находилось по 6 независимых фраз (в 6 фразах одной проблемы содержалось одно и то же слово). Испытуемым нужно было найти уникальное слово, подходящее ко всем фразам. По результатам исследования оказалось, что испытуемые, которые давали положительную обратную связь, имели высокую самоэффективность. Значимые статистические связи с высокой самоэффективностью имели место в случае планирования рабочего времени, субъективной оценки качества ответа, настойчивости и постановки оптимистических гипотез. Что касается влияния самоэффективности на метакогнитивный опыт, то последний положительный наблюдался у тех, кто имел конструктивные установки, самостоятельно объяснял преодоление

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[100] Шиленкова Л.Н. Самоэффективность в образовательном процессе (обзор зарубежных исследований). // Современная зарубежная психология. - 2020. - Т.9. - №3. - С. 69-78.; Райхельгауз Л.Б. Формирование академической самоэффективности и личной ответственности в процессе изучения математики. // Проблемы современного педагогического образования. - 2020. - №66-1. - С. 174-177.

[101] Суворова О.В., Пожарская О.И. Особенности личности с разным уровнем самоэффективности в период средней взрослости. // Проблемы современного педагогического образования. - 2022. - №74-1. – С. 372-375.

[102] Jimmieson N.L. A Longitudinal Study of Employee Adaptation to Organizational Change: The Role of Change-Related Information and Change-Related Self-Efficacy. // Journal of Occupational Health Psychology. - Vol.9. - 2004. - № 1. - P. 401-409.

трудностей и был активен в поиске вариантов решения задачи, в отличие от тех, у кого метакогнитивный опыт был отрицательным.[103]

Группой учёных были проведены исследования о роли самоэффективности в регуляции профессиональных ошибок. В качестве исследуемых выступили преподаватели (недавно занявших свою должность). В результате исследования, ученые пришли к выводу, что чувство общей самоэффективности уменьшает влияние профессиональных недостатков на профессиональную удовлетворенность и психологическое благополучие при условии, что субъект установит между сферами жизнедеятельности средний уровень переносов (ни слишком низкий, ни слишком высокий). Исследование было направлено, с одной стороны, на изучение влияния разницы между ожиданиями и реальными проявлениями профессиональных качеств на психическое здоровье субъектов в процессе перехода на новую должность, овладения новыми функциями, с другой стороны – изучалась роль и условия общей самоэффективности в процессе организационной социализации, и, в частности, в регуляции результатов такой разницы. Исследователи обращают внимание на передачу ресурсов из одной области активности в другую или от глобального уровня к более специфическому. В данном случае, самоэффективность представляет собой интраиндивидуальный ресурс. Самоэффективность тесно связана со стратегиями активации-ингибирования переносов между сферами жизни субъекта. Самоэффективность положительно коррелирует с положительной разницей между ожидаемым и реально воспринимаемым («ожидал, что будет труднее, а оказалось легче»).[104]

Показатели самоэффективности, как правило, позволяют сделать более точный прогноз, чем глобальные показатели выраженности тех или иных черт, а также часто статистически опосредуют связь между глобальными диспозиционными переменными и поведением. Например, при исследовании академических достижений, принятия сверстников и наличии проблемного поведения было обнаружено, что показатели самоэффективности характеризуются прогностической ценностью. В работах, посвященных проблеме стресса и копинг-поведения, было обнаружено, что представление человека о собственной самоэффективности статистически опосредует связь между глобальными диспозиционными переменными (например, оптимизм, самоуважение) и адаптацией к стрессовым событиям.[105]

Таким образом, исходя из вышеизложенного полагается целесообразным выделить следующие основные положения изучение самоэффективности современной личности:

[103] Гончар С.Н., Клименко И.В. Самоэффективность как значимое качество личности педагога-инициатора непрерывного образовательного движения. // Вестник Саратовского областного института развития образования. - 2015. - №4. - С. 123-129.

[104] Шишлова Е.Э. Самоэффективность преподавателя высшей школы в условиях социокультурной модернизации образования. // Мир науки, культуры, образования. - 2024. - №2 (105). - С. 106-109.

[105] Едигарева В.Д. Мотивация и самоэффективность личности в контексте интернет-пространства. // Психотехнологии в бизнесе и образовании. - 2022. - С. 10-10.

результаты исследований самоэффективности личности имеют практическую ценность в областях педагогической, медицинской психологии, психологии здоровья, психологии управления и имиджа, предпринимательства и карьеры;

подавляющее большинство исследований самоэффективности личности посвящена непосредственно специфике самоэффективности в отношении различных видов деятельности и базируется на исследованиях когнитивных процессов и мотивации;

результаты исследований самоэффективности свидетельствуют о том, что оценка человеком своих возможностей осуществляет причинное влияние на уровень мотивации, то есть на успешность выполнения какой-либо деятельности. При этом, слишком сильно выраженная самоэффективность может оказаться дисфункциональной;

в процессе анализа работ, было выявлено, что связь самоэффективности с успешностью в обучении, профессиональной деятельности, общении опосредованно различными психологическими переменными, такими как специфические стратегии преодоления трудностей, личностные диспозиции, мастерство и др.

Использованные источники:

1. Авагимян А.А. Самоэффективность личности как психологический феномен. // Современные векторы развития образования: актуальные проблемы и перспективные решения. - 2019. - С. 4-7.

2. Булынко Н.А., Коломейцев Ю.А. К проблеме самоэффективности личности в психологии. // Веснік Мазырскага дзяржаўнага педагагічнага ўніверсітэта імя ІП Шамякіна. - 2009. - №3 (24). - С. 38-44.

3. Гончар С.Н., Клименко И.В. Самоэффективность как значимое качество личности педагога-инициатора непрерывного образовательного движения. // Вестник Саратовского областного института развития образования. - 2015. - №4. - С. 123-129.

4. Едигарева В.Д. Мотивация и самоэффективность личности в контексте интернет-пространства. // Психотехнологии в бизнесе и образовании. - 2022. - С. 10-10.

5. Кравцова Я.В., Дубовицкая Т.Д., Абдуллин А.Г. Психологическое время и самоэффективность личности. // Психология. Психофизиология. - 2020. - Т.13. - №3. - С. 17-23.

6. Кучинская Д.В. Самоэффективность личности и ее развитие. // Научный лидер. - 2021. - №12. - С. 14.

7. Лебединская С.В. К вопросу изучения самоэффективности личности как ресурсного качества у студентов гуманитарного профиля. // Ученые записки Забайкальского государственного университета. Серия: Педагогические науки. - 2017. - Т.12. - №2. - С. 60-65.

8. Райхельгауз Л.Б. Формирование академической самоэффективности и личной ответственности в процессе изучения математики. // Проблемы современного педагогического образования. - 2020. - №66-1. - С. 174-177.

9. Суворова О.В., Пожарская О.И. Особенности личности с разным уровнем самоэффективности в период средней взрослости. // Проблемы современного педагогического образования. - 2022. - №74-1. – С. 372-375.

10. Хачатурова М.Р. Самоэффективность личности и ее связь с выбором копинг-стратегий поведения в межличностном конфликте. // Альманах современной науки и образования. - 2011. - № 9. - С. 92-96.

11. Чаплин А.В., Шацкая С.С. Факторы, влияющие на самоэффективность личности. // Международный журнал экспериментального образования. - 2015. - №11-6. - С. 991-993.

12. Шиленкова Л.Н. Самоэффективность в образовательном процессе (обзор зарубежных исследований). // Современная зарубежная психология. - 2020. - Т.9. - №3. - С. 69-78.

13. Шишлова Е.Э. Самоэффективность преподавателя высшей школы в условиях социокультурной модернизации образования. // Мир науки, культуры, образования. - 2024. - №2 (105). - С. 106-109.

14. Jimmieson N.L. A Longitudinal Study of Employee Adaptation to Organizational Change: The Role of Change-Related Information and Change-Related Self-Efficacy. // Journal of Occupational Health Psychology. - Vol.9. - 2004. - № 1. - P. 401-409.

Худайбергенов Н.С.
ассистент преподаватель
кафедра - физической географии и гидрометеорологии
Каракалпакский государственный университет имени Бердаха
Узбекистан, Нукус

АНАЛИЗ ФОРМИРОВАНИЯ ГОРОДСКОГО ЛАНДШАФТА И ФАКТОРОВ, ВЛИЯЮЩИХ НА НЕГО

Аннотация: *В данной статье анализируются основные факторы, влияющие на формирование и развитие городского ландшафта. Городской ландшафт постоянно меняется под влиянием природных и человеческих факторов. В статье рассматриваются историческое развитие городов, промышленная революция и современные процессы урбанизации, особое внимание уделяется тому, как города влияют на экономические, экологические, географические, социальные и политические факторы. Также подчеркивается, что технологические инновации изменяют городские ландшафты и важность устойчивости и инклюзивности в городском планировании. В статье освещается необходимость комплексного и интегрированного подхода для эффективного и устойчивого развития городов в будущем.*

ключевые слова: *городской ландшафт, географические и экологические факторы, экономические факторы, джентрификация, технологии умного города, участие в планировании*

Khudaybergenov N.S.
assistant teacher
Department- Physical Geography and Hydrometeorology
Berdakh Karakalpak State University named after Berdakh
Uzbekistan, Nukus

ANALYSIS OF THE FORMATION OF THE URBAN LANDSCAPE AND THE FACTORS INFLUENCING IT

Abstract: *This article analyzes the main factors influencing the formation and development of urban landscapes. The urban landscape is constantly changing under the influence of natural and human factors. The article examines the historical development of cities, the industrial revolution, and modern urbanization processes, with particular attention given to how cities affect economic, environmental, geographical, social, and political factors. It is also emphasized that technological innovations are changing urban landscapes and underscoring the importance of sustainability and inclusiveness in urban planning. The article* *highlights the need for a comprehensive and integrated approach to ensure effective and sustainable development of cities in the future.*

Keywords: *urban landscape, geographic and environmental factors, economic factors, gentrification, smart city technologies, planning participation*

Введение

Городской ландшафт - это динамичный интерфейс между природной и человеческой средой. Она отражает культурные, социальные и экономические условия эпохи и постоянно эволюционирует. Понимание формирования городской среды требует комплексного анализа многих факторов, влияющих на ее развитие. В этой статье рассматриваются историческая эволюция, современная динамика и важные факторы, формирующие городские ландшафты, создается основа для понимания их сложностей и факторов планирования будущего города.

Исторический контекст формирования городского ландшафта

первые городские поселения

Происхождение городского ландшафта можно проследить в древних цивилизациях. Ранние городские поселения возникли в районах с высокой плодородностью, благоприятными сельскохозяйственными условиями, где наличие воды и пригодные для сельского хозяйства земли способствовали росту. Такие древние города, как Урук и Вавилон, переходят от кочевого образа жизни к оседлому. Дизайн этих ранних городов часто зависел от религиозных и политических структур, в структуре которых преобладали храмы и дворцы.

Влияние промышленной революции

Промышленная революция в XVIII и XIX веках стала важным поворотным моментом в формировании городской среды. Быстрая индустриализация привела к беспрецедентному росту городов, поскольку люди уезжали из сельской местности в поисках работы на фабриках. Этот поток населения привел к перенаселенным городам, где условия жизни были плохими, загрязнение и недостаточная инфраструктура. С расширением городов градостроители стали осознавать необходимость организованного роста. Внедрение законов зонирования и принципов городского планирования стремилось улучшить условия жизни, хотя они часто ставили экономическое развитие выше социальной справедливости. Распространенная сеть в таких городах, как Нью-Йорк, стимулировала транспортировку и коммерцию, но часто игнорировала потребности маргинальных сообществ.

Период после Второй мировой войны начался с новой волны урбанизации, вызванной экономическим ростом и ростом автомобилестроения. Субурбанизация стала основной тенденцией, приведшей к расширению границ городов и появлению провинциальных городов. Этот сдвиг изменил городскую среду, укрепил культуру, ориентированную на автомобиль, и усилил такие проблемы, как рост городов, экологический кризис и социальная изоляция.

Факторы, влияющие на формирование городского ландшафта

Географические и экологические факторы

❖ География играет ключевую роль в формировании городского ландшафта. Физические особенности расположения влияют на модели жилья, архитектурные стили и землепользование.

❖ Топография: Холмы, долины и водные пути влияют на развитие городов. Например, города, расположенные на берегах рек, часто становятся торговыми центрами, а горные районы могут привести к своеобразным архитектурным адаптациям.

❖ Климат: Климат региона определяет строительные материалы и дизайн. Жаркие климатические условия могут требовать толстых стен и тенисто-прохладных открытых мест, а холодные районы требуют изоляции и систем отопления.

2. Экономические факторы

Экономические условия оказывают глубокое влияние на городской ландшафт, формируя спрос на жилье, коммерческие здания и инфраструктуру.

❖ Инвестиции и развитие: Наличие капитала и инвестиционных возможностей определяет рост городов. Города, которые привлекают бизнес через льготы, часто видят быстрый рост в определенных областях, таких как технологии или финансы.

❖ Джентрификация: Экономические изменения могут привести к джентрификации, когда более состоятельные люди переселяются в районы с низким уровнем дохода, что приводит к росту цен на жилье и длительному вытеснению населения. Этот процесс меняет социальную структуру и характер районов.

3. Социальные и культурные факторы

Ландшафт города также формируется социальной динамикой и культурными особенностями его населения.

❖ Демография: Изменения в демографической структуре населения, включая возрастное, этническое и культурное разнообразие, влияют на виды услуг и удобств, необходимых в городских районах. Разнообразие населения может привести к появлению ярких культурных территорий, а одни и те же сообщества могут лишиться разнообразия.

❖ Культурное наследие: города часто отражают свой историко-культурный контекст через архитектуру, общественные места и культурные события. Сохранение исторических памятников может усилить самобытность города, привлечь туризм и повысить гордость местного сообщества.

4. Политические и юридические факторы

Роль управления в формировании городского ландшафта должна быть достаточно оценена. Политические решения и правовые рамки определяют, как будут развиваться города. Зонирование: Законы зонирования влияют на типы строительства, которые могут произойти на определенных территориях, определяя плотность землепользования и строительства. Эти законы могут способствовать смешанному строительству или разделять жилые и коммерческие зоны. Городская политика: государственные инициативы, такие как инвестиции в доступное жилье и общественный транспорт, могут оказать существенное влияние на городские ландшафты. Эффективная политика может улучшить доступность и способствовать социальной справедливости.

5. Технологические достижения

Технологические инновации изменили городские ландшафты и продолжают формировать их будущее.

❖ Транспорт: Развитие транспортных технологий, таких как рост личных автомобилей и систем общественного транспорта, влияет на дизайн города. Города с развитой сетью общественного транспорта, как правило, имеют высокую плотность и меньшую зависимость от автомобилей.

❖ Технологии умного города: Интеграция технологий в управлении городом, включая аналитические данные и IoT (интернет вещей), революционизирует то, как работают города. Интеллектуальные технологии могут улучшить энергоэффективность, управление трафиком и общественную безопасность.

Факторы градостроительного планирования

Понимание факторов, влияющих на формирование городского ландшафта, имеет решающее значение для эффективного городского планирования. В условиях глобальных рисков, таких как изменение климата, рост населения и социальное неравенство, планировщики должны применять интегрированные подходы с учетом сложности городской среды.

1. Устойчивое развитие

Планирование устойчивого города придает приоритет балансу между экономическим ростом и охраной окружающей среды.

❖ Зеленая инфраструктура: Внедрение зеленых зон, городских лесов и устойчивых дренажных систем может смягчить последствия городского тепла и наводнений и улучшить качество жизни населения.

❖ Энергоэффективность: Для снижения углеродного следа городских территорий необходимо продвигать энергоэффективные здания и возобновляемые источники энергии.

2. Участие общества

Для создания инклюзивных городских ландшафтов очень важно вовлекать местные сообщества в процесс планирования.

❖ Участие в планировании: вовлечение населения в принятие решений помогает почувствовать принадлежность и гарантирует, что разработки отражают потребности и стремления сообщества.

❖ Социальная справедливость: Градостроительство должно учитывать исторические несправедливости и стремиться к справедливому распределению ресурсов, обеспечивая, чтобы маргинальные сообщества получали выгоду от развития города.

3. Сохранение культурного наследия

Для сохранения самобытности города решающее значение имеет баланс между модернизацией и сохранением культурного наследия.

➢ Адаптивное повторное использование: Приспособление старых зданий для новых целей может сохранить их историческую ценность и одновременно удовлетворить современные потребности.

➢ Культурные программы: Поддержка культурных мероприятий и общественных инициатив в области искусства может обогатить городские ландшафты и укрепить связи в сообществе.

Заключение

Формирование городского ландшафта представляет собой сложный процесс, на который влияют от географических и экономических факторов до социальных, политических и технологических. Поскольку эволюция городов продолжается, понимание этих воздействий необходимо для создания устойчивой, равноправной и устойчивой городской среды. Применяя комплексный подход к городскому планированию, мы можем создавать ландшафты, которые удовлетворяют разнообразные потребности нынешнего и будущего населения, при этом уважая богатую историческую и культурную самобытность, определяющую наши городские пространства. Проблема заключается в обеспечении пропорциональности развития с устойчивостью и инклюзивностью, обеспечении развития городских ландшафтов в соответствии с динамическим характером общества.

Использованные источники:

1.Алланазаров К. Ж., Ходжаев С. С., Кошкинбаева М. Т. ЛАНДШАФТНО-ЭКОЛОГИЧЕСКИЕ ОСНОВЫ ОБВОДНЕНИЯ ТУГАЙНЫХ КОМПЛЕКСОВ НИЗОВЬЕВ ДЕЛЬТЫ АМУДАРЬИ //Экономика и социум. – 2024. – №. 6-2 (121). – С. 852-857.

2. Allanazarov K., Khodjaeva G., Shields K. IMPLICATIONS OF THE LINKS BETWEEN DEMOGRAPHY AND ECOLOGY FOR THE ECONOMY OF THE REPUBLIC OF KARAKALPAKSTAN //Karakalpak Scientific Journal. – 2021. – Т. 4. – №. 2. – С. 30-40.

3. Салаев С. К. и др. Пути развития экологического туризма на охраняемых природных территориях //Бюллетень науки и практики. – 2018. – Т. 4. – №. 12. – С. 228-234.

4. Kerimbergenovich A. A. et al. Ecotourism development in the Republic of Karakalpakstan: historical places and protected areas //Journal of Critical Reviews. – 2020. – Т. 7. – №. 12. – С. 1258-1262.

5. Qaldibaevich I. A. et al. Assessment of hazardous hydrometeorological phenomena affecting agricultural crops //British Journal of Global Ecology and Sustainable Development. – 2022. – Т. 10. – С. 125-131.

6. Imanmurzaev Adilbek Qaldibaevich, Abdullaev Tozabek Jumabay O’g’li, Ganiev Nurman Janabergenovich, Khudaybergenov Nurlan Saparbay O’g’li, & Amangeldieva Umida Joldasbayevna. (2022). ASSESSMENT OF HAZARDOUS HYDROMETEOROLOGICAL PHENOMENA AFFECTING AGRICULTURAL CROPS. British Journal of Global Ecology and Sustainable Development, 10, 125–131. Retrieved from https://journalzone.org/index.php/bjgesd/article/view/149

7. Qaldibaevich, I. A. ., O’g’li, A. T. J. ., Janabergenovich, G. N. ., & O’g’li, K. N. S. . (2023). Assessment of Dangerous Hydrometeorological Events Affecting Agricultural Crops with a Modern Program . International Journal of Biological Engineering and Agriculture, 2(2), 12–17. https://doi.org/10.51699/ijbea.v2i2.1076
8. Imanmurzaev Adilbek Qaldibaevich, Bazarbaev Nursultan Azatbay Ogli, Omonboyev Shohzod Davronbek O‘g‘li, & Berdimuratova Aysara. (2023). Dangerous Hydrometeorological Phenomena Observed in Lower Amudarya Region. Texas Journal of Agriculture and Biological Sciences, 23, 49–53. Retrieved from https://zienjournals.com/index.php/tjabs/article/view/4854
10. Xudaybergenov N. S., Ganiev N. J., Esenova I. M. EKOTURIZMNING VUJUDGA KELISHI VA RIVOJLANISHI BOSQICHLARI //Hamkor konferensiyalar. – 2024. – T. 1. – №. 3. – C. 298-302.
11. 3.Imanmurzaev A. Q. et al. TÓMENGI ÁMIWDÁRYA SUW OBYEKTLERINIŃ GIDROGRAFIYALIQ TÁRIYPI //Hamkor konferensiyalar. – 2024. – T. 1. – №. 3. – C. 23-27.
12.Sultashova O. G. et al. QUYI AMUDARYO HUDUDIDA IQLIM O’ZGARISHI NATIYJASIDA GIDROMETEOROLOGIK HODISALARNING O’ZGARISHINI BAHOLASH //Hamkor konferensiyalar. – 2024. – T. 1. – №. 3. – C. 74-78.
13. Xudaybergenov N. S., Ganiev N. J., Esenova I. M. EKOTURIZMNING VUJUDGA KELISHI VA RIVOJLANISHI BOSQICHLARI //Hamkor konferensiyalar. – 2024. – T. 1. – №. 3. – C. 298-302.
14. Xudaybergenov N. S. AWIL XOJALIǴINA TÁSIR ETIWSHI QÁWIPLI GIDROMETEOROLOGIYALIQ HÁDIYSELERDI BAHALAW //Hamkor konferensiyalar. – 2024. – T. 1. – №. 3. – C. 159-164.
15. Imanmurzaev A. Q. et al. JANUBIY OROL BOYI IQLIM SHAROITI //INTERNATIONAL CONFERENCES. – 2022. – T. 1. – №. 21. – C. 73-77.

Шамиев Д.Б.
доцент
Жиззах политехника институти
Жиззах ш

ПИЛТАЛИ ТЎҚИМАЛАРНИ ИШЛАБ ЧИҚАРИШ ВА ТАДҚИҚОТ ҚИЛИШ

Annotatsiya: *Мақолада хавфсизлик камарларига мўлжалланган пилтали тўқималарни ишлаб чиқариш, хусусиятлари ва қўлланиши бўйича тадқиқотлар натижалари келтирилган.*
Калит сўзлар: *автомобилсозлик, тўқимачилик, тўқима, ўрилиш, пилтали тўқима, хомашё, дастгоҳ,лентали тўқима, хавфсизлик.*

Shamiev D. B.
Associate Professor
Jizzakh Polytechnic Institute
Jizzakh city

DEVELOPMENT AND RESEARCH OF VELVET FABRICS

Annotation: *The article presents the results of research on the production, properties and application of velvet fabrics for seat belts.*
Keywords: *automotive industry, textile, fabric, weaving, velvet fabric, raw materials, device, tape fabric, safety.*
Аннотация; *В данной работе показаны результаты исследований по созданию, изучению свойств и применению специального ленточного ткани для ремней безопасности.*

Annatation: *In this paper possibility of creation of the special of safety belt and results of researches on manufacturing, studying of properties and to application is shown.*

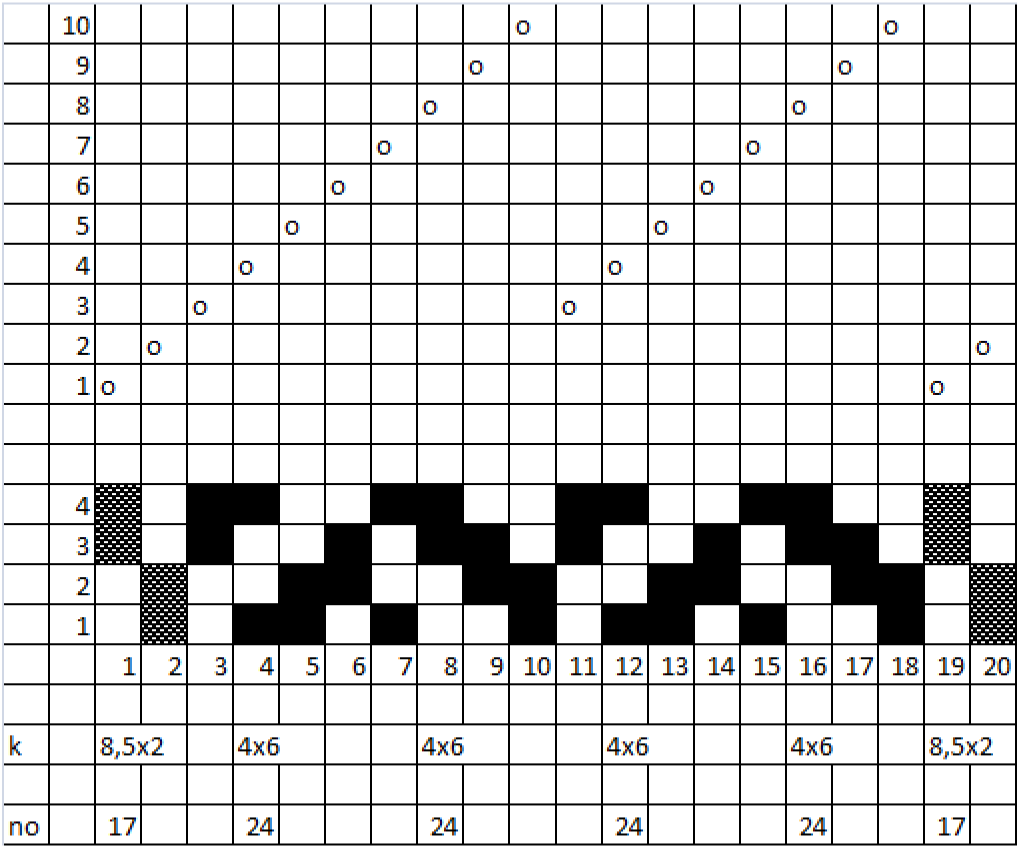
Автомобил саноати бугунги кунда муҳим аҳамиятга эга. Шу боис, бу сохада улкан ўсиш ва ривожланиш юз бермоқда. Автомобилларда ишлатиладиган тўқимачилик материалининг улуши автомобилнинг умумий оғирлигининг 2,2 фоизини ташкил килади [1]. Ички матолар, гиламлар, ва хоказо тўқимачилик махсулотларидан фойдаланишдан ташқари, шиналар, ёнилғи фильтрлари, ҳаво ёстиғи ва хавфсизлик камарларидан фойдаланилади. Жаҳон соғлиқни сақлаш ташкилоти маълумотларига кўра, йўл-транспорт ходисалари бутун дунё бўйлаб катта муаммодир ва хозирда бутун дунёда йўл-транспорт халокатларидан 1,2 миллион одам нобуд бўлмокда. Ўлим ва жарохатланишнинг олдини олишда юқори даражада самарали бўлган хавфсизлик камарлари ва хаво ёстиғи энг яхши ечимдир. Хавфсизлик камарлари жиддий шикастланишларнинг умумий хавфини 60-70% га ва ўлим хавфини тахминан 45% га қисқартириши аниқланган [2]. Шунинг учун хавфсизлик камарларини яратиш ва ишлаб чиқариш муҳим вазифалардан бири хисобланади.

Республикамизда автомобилсозлик ривожлана бориб, GM Uzbekistan заводи очилиб, турли хил русумдаги енгил автомобиллар ишлаб чиқарила бошлади. Автомобилларни бутловчи қисмларни ишлаб чиқаришни маҳаллийлаштириш борасида хукумат томонидан бир қанча қарорлар қабул қилинди [3]. Автомобилларни хавфсизлик камарларини ҳам ишлаб чиқариш ечими кутилаётган масалалардан биридир.

Мазкур илмий тадқиқот ишида автомобилларни хавфсизлик камарларини лойиҳалаш, тўқув дастгохига тахтлаш, ишлаб чиқариш технолик омилларини яратиш масалаларига бағишланган.

Дастлабки кунларда хавфсизлик камарларининг ишлаб чиқаришида, иккита материал, яъни тўқималарни ишлаб чиқариш учун нейлон, кўндаланг хилма-хилликни яратиш учун фақат полистер иплари ишлатилган.

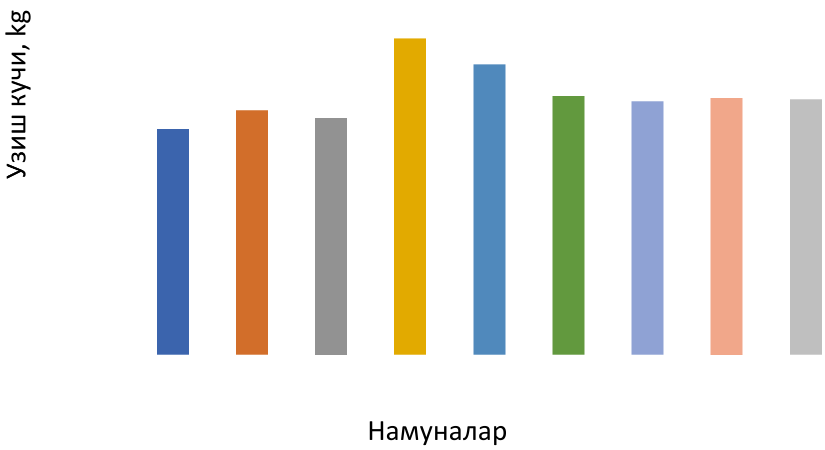
Биз тадқиқот сифатида ишлаб чиққан хавфсизлик камарининг кенглиги B_{tt}=46+1 см бўлиб, у саржа 2/2, рогожка ва полотно ўрилишларида ишлаб чиқарилди. Бунда танда ипининг чизиқий зичлиги $T_т$=110 текс ва арқоқ ипининг чизиқий зичлиги T_A=50 тексдан иборат. Умумий иплар сони 130 та, тўқиманинг танда бўйича зичлиги $P_т$=30 ип/см ва арқоқ бўйича зичлиги P_A=17 ип/см ни ташкил этади, тиғ номери $H_{тиғ}$=26. Ушбу хавфсизлик тасмасини ишлаб чиқаришда Хитойнинг Yitai Weaving Machine Making Co.Ltd фирмасида ишлаб чиқарилган YTB 4/110 русумли рапирали пилта тўқув дастгохидан фойдаланилди. Ушбу дастгохнинг ишчи эни 110 см бўлиб 1200-1400 айл/мин тезликда ишлайди. Ўрилишнинг тўлиқ тахтлаш дастури 1-расмда келтирилган.



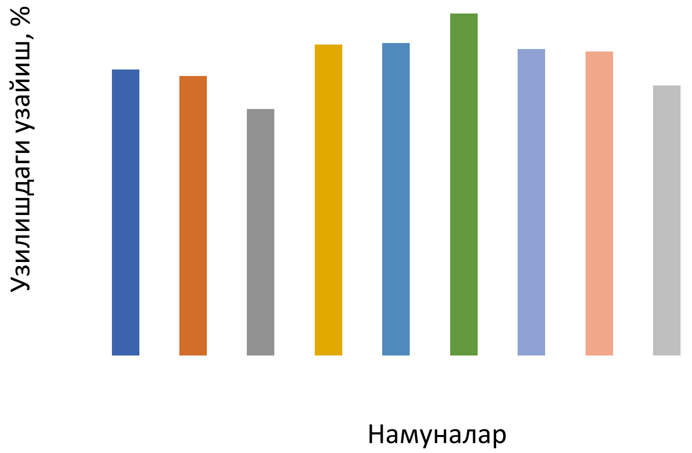
1-расм. Тўқимани тўлиқ тахтлаш дастури

Тўқима намунасининг физик-механик хоссалари GM Uzbekistan заводи лабораториясида синовдан ўтказиб аниқланди.

Тажриба натижаларига кўра тўқимани максимал узилиш кучи бўйича 515,02 кг; узилишдаги узайиши–10,4 % га тенг эканлиги аниқланди (2,3-расмлар).



2- расм Тўқиманинг танда бўйича узилиш кучи гистограммаси



3-расм Тўқиманинг танда бўйича узилишдаги узайиши гистограммаси

Пилтали тўқималар ассортименти классификацияси, тўқима тузилиши ва сифатига таъсир этувчи ўрилиш турлари ва технологик тахтлаш омилларининг таъсири тахлил этилди. Пилтали тўқима ишлаб чиқариш технологияси бўйича қисқа технологияга эга, тўқимани ишлаб чиқариш учун хом ашё ва ўрилиш турлари танлаб олинди ва хусусиятлари тадқиқ этилди.

Фойдаланалиган адабиётлар.

1. “Автомобиль транспортини бошқариш тизимини янада такомиллаштириш чора-тадбирлари тўғрисида”ги ПҚ-3589. 06.03.2018 й.
2. Шамиев Д. Пилтали тўқимани ишлаб чиқаришдан кутиладиган иқтисодий самарадорлик // Образование наука и инновационные идеи в мире. – 2023. – Т. 18. – №. 7. – С. 187-190.

Шарапова Г. Р.
старший преподаватель
кафедра «Корпоративное управление»
Ташкентский государственный транспортный университет

ОБЗОР МАРКЕТИНГОВОГО РЫНКА УЗБЕКИСТАНА: ТРЕНДЫ, ОСОБЕННОСТИ И ПЕРСПЕКТИВЫ

Аннотация: *Маркетинговый рынок Узбекистана переживает период бурного роста и трансформации. С одной стороны, это обусловлено стремительным развитием цифровой экономики и проникновением интернета в жизнь населения. С другой стороны, на рынок оказывают влияние уникальные культурные особенности страны и государственная политика, направленная на поддержку отечественного бизнеса.*

Ключевые слова: *маркетинг в Узбекистане, digital-маркетинг, социальные сети, e-commerce, культурные особенности, тренды, перспективы*

Sharapova G. R.
Senior Lecturer
Department of Corporate Management
Tashkent State Transport University

REVIEW OF THE MARKETING MARKET OF UZBEKISTAN: TRENDS, FEATURES AND PROSPECTS

Abstract: *The marketing market of Uzbekistan is experiencing a period of rapid growth and transformation. On the one hand, this is due to the rapid development of the digital economy and the penetration of the Internet into the lives of the population. On the other hand, the market is influenced by the unique cultural characteristics of the country and government policy aimed at supporting domestic business.*

Keywords: *marketing in Uzbekistan, digital marketing, social networks, e-commerce, cultural characteristics, trends, prospects.*

Digital-маркетинг в Узбекистане переживает стремительное развитие, однако имеет свои уникальные особенности, обусловленные культурными, социальными и экономическими факторами.

Основные особенности:

- **Высокая мобильность:** Большинство пользователей интернета в Узбекистане выходят в сеть преимущественно с мобильных устройств, что делает мобильный маркетинг одним из ключевых направлений.

- **Популярность социальных сетей:** Instagram, Facebook, Telegram и другие платформы являются основными каналами коммуникации и продвижения брендов.
- **Рост e-commerce:** Рынок электронной коммерции демонстрирует высокие темпы роста, что стимулирует развитие соответствующих маркетинговых инструментов.
- **Влияние культурных особенностей:** Узбекская культура оказывает значительное влияние на потребительское поведение, поэтому маркетинговые коммуникации должны быть адаптированы под местные ценности и традиции.
- **Значимость семейных ценностей:** При принятии решений о покупке узбекистанцы часто учитывают мнение семьи, поэтому маркетинговые сообщения должны апеллировать к семейным ценностям.
- **Гостеприимство:** Узбекистан славится своим гостеприимством, что можно использовать для создания эмоциональной связи с потребителями.
- **Религиозные особенности:** Необходимо учитывать религиозные аспекты при разработке маркетинговых кампаний.
- **Развитие региональных рынков:** В Узбекистане существуют значительные региональные различия, поэтому маркетинговые стратегии должны быть адаптированы под особенности каждого региона.

Для успешной работы на узбекском рынке маркетологам необходимо:

- Изучать особенности местного рынка и потребительского поведения.
- Использовать комплексный подход к продвижению.
- Постоянно адаптироваться к меняющимся условиям.
- Сочетать традиционные и цифровые маркетинговые инструменты.
- Учитывать культурные особенности и ценности.

Изучение местного рынка и потребительского поведения в Узбекистане: глубокий погружение

Изучение местного рынка и потребительского поведения – один из ключевых этапов успешной маркетинговой кампании в Узбекистане. Учитывая уникальные культурные, социальные и экономические особенности страны, этот этап требует тщательной подготовки и глубокого анализа.

Почему это важно?

- **Адаптация продукта/услуги:** Понимание потребностей и предпочтений местного потребителя позволяет адаптировать продукт или услугу под специфику рынка.
- **Разработка эффективной маркетинговой стратегии:** Знание целевой аудитории помогает выбрать оптимальные каналы коммуникации, создать релевантные сообщения и разработать эффективные рекламные кампании.

- **Снижение рисков:** Изучение рынка позволяет избежать ошибок и минимизировать риски, связанные с запуском новых продуктов или услуг.
- **Построение долгосрочных отношений с клиентами:** Глубокое понимание потребительского поведения помогает выстроить долгосрочные отношения с клиентами, основанные на доверии и взаимопонимании.

Изучение местного рынка и потребительского поведения – это непрерывный процесс. Регулярный анализ полученных данных позволит своевременно выявлять новые тренды и адаптировать маркетинговую стратегию под меняющиеся условия.

Маркетинг – это универсальный язык бизнеса, но его диалекты сильно разнятся от страны к стране. Узбекистан, как и другие развивающиеся рынки, имеет свои уникальные особенности, которые необходимо учитывать при разработке маркетинговых стратегий. Давайте сравним их с более развитыми рынками.

Мобильный маркетинг в Узбекистане стремительно развивается, отражая глобальные тренды и учитывая местные особенности. Высокая проникаемость мобильных устройств, рост интернет-трафика и активное использование социальных сетей делают этот инструмент одним из самых эффективных для продвижения товаров и услуг.

Почему мобильный маркетинг так важен в Узбекистане?

- **Высокая мобильная проникаемость:** Большинство населения Узбекистана пользуется смартфонами, что делает мобильный маркетинг доступным для широкой аудитории.
- **Активное использование социальных сетей:** Социальные сети, такие как Instagram, Facebook и Telegram, являются основными каналами коммуникации, и мобильные приложения для этих сетей используются повсеместно.
- **Развитие e-commerce:** Рост онлайн-покупок требует эффективных инструментов для привлечения и удержания клиентов, и мобильный маркетинг является одним из ключевых.
- **Культурные особенности:** Мобильные устройства стали неотъемлемой частью повседневной жизни узбекистанцев, и маркетинговые сообщения, адаптированные под мобильные устройства, лучше воспринимаются аудиторией.

Основные инструменты мобильного маркетинга в Узбекистане

- **SMS-рассылки:** Несмотря на появление новых технологий, SMS-рассылки остаются эффективным инструментом для информирования клиентов о новых продуктах, акциях и специальных предложениях.
- **Мобильные приложения:** Разработка собственного мобильного приложения позволяет создать прямую связь с клиентами, предоставлять персонализированные предложения и повышать лояльность.
- **Мобильная реклама:** Реклама в мобильных приложениях и на мобильных сайтах позволяет достичь широкой аудитории и таргетировать рекламные сообщения на конкретные сегменты.

- **Push-уведомления:** Позволяют отправлять персонализированные сообщения прямо на устройства пользователей, повышая вероятность того, что они будут замечены.
- **QR-коды:** Используются для перенаправления пользователей на мобильные сайты, страницы в социальных сетях или для скачивания мобильных приложений.
- **Геотаргетинг:** Позволяет показывать рекламу пользователям, находящимся в определенном месте.

Заключение

Мобильный маркетинг в Узбекистане обладает огромным потенциалом. Для успешной реализации мобильных маркетинговых кампаний необходимо учитывать местные особенности, использовать современные технологии и постоянно адаптироваться к меняющимся потребностям потребителей.

Использованные источники:

1. Abdusoliyev, A. I., Kushakova, M. N. (2021). Temir yo'l transportini rivojlantirishning moliyaviy siyosatining tahlili va tamoyillari. Экономика и социум, *9*(88), 893-896.
2. Abdusoliyev, A. I., Kushakova, M. N. (2021). Moliyaviy menejment tizimini rivojlantirish tamoyllari. Oriental renaissance Innovative, educational, natural and social sciences, *1*(9), 972-977.
3. Razzoqova, J. R., Qaxorov, M. X., Kushakova, M. N. (2021). Temir yo'l transportining moliyaviy boshqaruv tizimini takomillashtirish. Oriental renaissance Innovative, educational, natural and social sciences, *1*(9), 978-986.
4. Kushakova, M. N. (2020). Main directions of credit policy during the COVID-19 PANDEMY. European Journal of Molecular & Clinical Medicine, *7*(2), 1836-1839.

Эргашев Г.У.
ассистент
Каршинский инженерно-экономический институт
Узбекистан

ЦИФРОВАЯ ЭКОНОМИКА КАК СТРАТЕГИЧЕСКИЙ ВЕКТОР БУДУЩЕГО РАЗВИТИЯ УЗБЕКИСТАНА

Аннотация. *В данной статье описывается понятие цифровой экономики, перспективы развития цифровой экономики в Узбекистане.*

Ключевые слова: *цифровая экономика, информационное общество, цифровые технологии, электронное правительство.*

Ergashev G.
Assistant
Karshi Engineering Economics Institute
Uzbekistan

DIGITAL ECONOMY AS A STRATEGIC VECTOR FOR UZBEKISTAN'S FUTURE DEVELOPMENT

Annotation. *This article describes the concept of the digital economy, the prospects for the development of the digital economy in Uzbekistan.*

Keywords: *digital economy, information society, digital technologies, e-government.*

Введение. Экономика, предполагающая широкое внедрение электронных и информационно-коммуникационных технологий в процессы производства, распределения и потребления общественных благ, является цифровой экономикой. Инновационная идея цифровой экономики была озвучена Всемирным банком в докладе «Доклад о мировом развитии за 2016 год – 2016: Digital Dividends». Процесс управления в цифровой экономике представляет собой компьютеризированную систему управления взаимодействием, которая осуществляет масштабную работу по активному использованию электронной информации для удовлетворения растущих потребностей человечества. Признаками цифровой экономики являются высокая степень автоматизации, электронный документооборот, электронная интеграция систем учета и управления, электронные базы данных, наличие CPM (системы взаимодействия с клиентами), корпоративных сетей. В цифровой экономике снижаются затраты на платежи (например, экономится стоимость проезда в банк и другие ресурсы), получается все больше и быстрее информации о товарах и услугах, в цифровом мире открываются большие возможности для выхода товаров и услуг на мировой рынок, товары и услуги быстро совершенствуются за счет быстрой обратной связи (мнения потребителей).

Первоначально, в 90-е годы XXI века, термин «Цифровая экономика» ввел в практику американский программист Николас Негропонте. Сегодня этот термин используют политики, экономисты, журналисты, бизнесмены – практически все – во всем мире. В связи с этим впервые в 2016 году Всемирный банк опубликовал доклад о состоянии цифровой экономики в мире. Цифровая экономика существенно повышает уровень жизни людей, что является ее основным преимуществом.

Термин цифровая экономика был определен академиком С.С. Гуломовым, одним из наших узбекских экономистов, как «Цифровой бизнес – это появление новых бизнес-моделей, объединяющих физический и цифровой миры».[5]

Развитие цифровой экономики в Узбекистане в условиях, когда экономика стремительно развивается в мире, возможности ее использования в отраслях экономики будут определяться путем изучения региональных особенностей цифровой экономики в нашей республике средствами экономического анализа. методы сравнения и группировки. Сравнение достигнутых результатов в отраслях экономики с зарубежным опытом позволит выбрать пути расширения возможностей развития цифровой экономики в будущем.

Хотя цифровые данные являются ценным экономическим ресурсом, они полезны только тогда, когда преобразуются в цифровое мышление. С появлением цифровой экономики возникает проблема создания цифровых платформ и монетизации быстро растущих цифровых данных. Важно определить пути создания стоимости и средства устранения препятствий в этих процессах. Он обеспечивает понимание потенциала создания и распределения стоимости, обновления стоимости, управления стоимостью и получения прибыли. В перспективе современного развития технологии работы с большими данными (Big Data), искусственный интеллект, нейротехнологии, квантовые технологии, Интернет вещей, робототехника и сенсоры, цифровые электронные платформы, решающее значение приобретают цифровые технологии, такие как облачные и мобильные технологии, технологии виртуальной и дополненной реальности, краудсорсинг, технологии блокчейна, криптовалюты, 3D-технологии.

Согласно статистическим данным, предоставленным Президентом Ш.М.Мирзиёевым на мероприятии, посвященном развитию информационных технологий 13 февраля 2020 года, доля цифровой экономики в валовом внутреннем продукте в США составляет 10,9 процента, в Китае – 10,9 процента. составляет 10 процентов, а в Индии — 5,5 процента. В Узбекистане этот показатель не превышает 2 процентов [2].

В условиях столь стремительных изменений и усиления конкуренции в мировом сообществе фактом является то, что мы не сможем устойчиво развивать экономику нашей страны и обеспечивать ее конкурентоспособность в ближайшем и отдаленном будущем без широкого внедрения инноваций и цифровых технологий. , что, в свою очередь, требует усиления научных и практических усилий. В этой связи в рамках комплексных реформ по коренной модернизации нашей национальной экономики за последние годы принят ряд мер по внедрению цифровых технологий в социально-экономическую жизнь и систему государственного управления нашей страны. В частности, важным шагом в развитии цифровой экономики стало принятие Постановления Президента Республики Узбекистан от 3 июля 2018 года № PQ-3832 «О мерах по развитию цифровой экономики в Республике Узбекистан». и определены важнейшие задачи дальнейшего развития цифровой экономики в нашей стране. Также внедрение системы «Электронное правительство» в нашей стране является неотъемлемой составляющей развития цифровой экономики, и ее основная цель – упростить переход от административных процедур и процедур, повысить качество жизни населения. и улучшить инвестиционную и деловую среду.

В нашей стране принимаются последовательные меры по модернизации и развитию электронного правительства, в том числе системы предоставления государственных услуг, направленные на упрощение перехода от административных процедур, повышение качества жизни населения, улучшение инвестиционной и деловой среды. 21 ноября 2018 года принято Постановление Президента Республики Узбекистан № Указ-4022 «О мерах по дальнейшей модернизации цифровой инфраструктуры в целях развития цифровой экономики». В решении были определены основные задачи по созданию условий для ускоренного развития цифровой экономики, дальнейшему совершенствованию системы государственного управления, расширению возможностей ее использования, использованию современной инфраструктуры.[4]

18 мая 2019 года объявлено Постановление Президента Республики Узбекистан № Указ-4321 «О мерах по дальнейшему совершенствованию инфраструктуры цифровой экономики и системы «электронное правительство»»». В решении определены важные задачи последовательной реализации основных направлений реформ в сфере совершенствования цифровой экономики и системы «Электронное правительство». [3]

Реализация данного пункта обеспечена Указом Президента Республики Узбекистан «Об утверждении Стратегии «Цифровой Узбекистан – 2030» и мер по ее эффективной реализации» № ПФ-6079, принятого 5 октября 2020 года. В основном были утверждены стратегия «Цифровой Узбекистан – 2030» и «дорожная карта» по ее реализации, а также программы цифровой трансформации регионов и сетей на 2020-2022 годы.

В 2020-2022 годах в рамках цифровой трансформации регионов и сетей уровень подключения к Интернету населенных пунктов нашей страны, включая порты широкополосного подключения, будет увеличен до 2,5 млн, а за счет строительства 20 тыс. км. объем волоконно-оптических линий связи и развитие сетей мобильной связи планируется довести с 78 до 95 процентов.

Внедрено более 400 информационных систем, электронных сервисов и других программных продуктов в различных сферах социально-экономического развития регионов. В частности, одной из широких возможностей для молодежи является организация обучения программированию с охватом 587 тысяч человек, в том числе 500 тысяч молодых людей в рамках проекта «Один миллион программистов». На данном этапе повышению эффективности послужит внедрение более 280 информационных систем и программных продуктов для автоматизации управленческих, производственных и логистических процессов на предприятиях реального сектора экономики.

В связи с реальностью мы видим, что в странах с развитой цифровой экономикой высоки как объем ВВП, так и доля ВВП на душу населения. С этой точки зрения внимание к этому вопросу в нашей стране имеет единую цель, которая заключается в улучшении условий жизни населения, увеличении реальных доходов населения, а также развитии предпринимательства и экономики нашей страны. Цифровые технологии не только повышают качество продуктов и услуг, но и сокращают лишние затраты. В то же время это также эффективный инструмент искоренения худшего зла коррупции. Цифровизация важна не только потому, что обеспечивает экономию и эффективность в секторах экономики, но и как эффективный инструмент борьбы с коррупцией.

В заключение отметим, что развитие цифровой экономики уникально тем, что это один из основных инструментов, служащих построению экономически, социально, политически сильного, демократического государства, в котором в полной мере применимы законы рыночной экономики, а также Важно улучшить деловую среду в стране, создать широкий спектр удобств для предпринимательства и упростить его управление, а также реализовать новые инновационные идеи.

В современном периоде развития человечества и в ближайшем будущем качественное развитие отраслей экономики, социальной сферы, системы государственного управления напрямую связано с широким внедрением цифровых технологий. Перспектива развития нашей страны также зависит от развития цифровой экономики и уровня охвата цифровыми технологиями. Для достижения этой цели целесообразно реализовать основные условия и приоритеты развития цифровой экономики, такие как создание институциональной среды и цифровой инфраструктуры, широкое внедрение цифровых технологий.

Использованные источники:

1. Указ Президента Республики Узбекистан от 5 октября 2020 года № ПФ-6079 «Об утверждении стратегии «Цифровой Узбекистан – 2030» и мер по ее эффективной реализации» // www.lex.uz

2. Президент Республики Узбекистан Ш.Мирзиёев. Выступление Мирзиёева на мероприятии, посвященном развитию информационных технологий 13 февраля 2020 года // www.lex.uz

3. Постановление Президента Республики Узбекистан № pq-4321 от 18 мая 2019 года «о мерах по дальнейшему совершенствованию инфраструктуры цифровой экономики и системы «электронное правительство» // www.lex.uz
4. Постановление Президента Республики Узбекистан от 21 ноября 2018 года «О мерах по дальнейшей модернизации цифровой инфраструктуры в целях развития цифровой экономики» // www.lex.uz
5. Гулямов С.С. и другие. Блокчейн-технологии в цифровой экономике. - Т.: «Экономика-Финансы», 2019.
6. Shodmonovna F. S., Negmatovich Y. N. THE ROLE OF LIVESTOCK REFORM IN THE DEVELOPMENT OF THE COUNTRY'S ECONOMY. ACADEMICIA: An International Multidisciplinary Research Journal [Электронный ресурс].
7. Эргашев Р. Х., Курбонов А. Б., Файзиева Ш. Ш. Совершенствование государственной поддержки малого бизнеса и частного предпринимательства в Узбекистане //Феномен рыночного хозяйства: от истоков до наших дней. Бизнес, инновации, информационные технологии, моделирование. – 2019. – С. 544-554.
8. Fayziyeva S., Samiyiva G., Yuldosheve S. Ensuring food safety in Uzbekistan and its forecasting //BIO Web of Conferences. – EDP Sciences, 2023. – Т. 71. – С. 01072.
9. zx SHODMONOVNA F. S. Impact of affordable housing construction and housing and communal services on the welfare of the population by typical projects //The journal of contemporary issues in business and government. – 2021. – Т. 27. – №. 2. – С. 4069-4073.
10. Юлдошева Ш. А. ЗНАЧЕНИЕ ЦИФРОВОЙ ЭКОНОМИКИ В СИСТЕМЕ ЖИЛИЩНО-КОММУНАЛЬНОГО ХОЗЯЙСТВА //Экономика и социум. – 2022. – №. 10-1 (101). – С. 794-800.
11. Юлдошева Ш. А. САНОАТ КОРХОНАЛАРИ САМАРАЛИЛИГИНИ ОШИРИШ БЎЙИЧА ИШЛАБ ЧИҚАРИШ ЙЎНАЛИШЛАРИ //Экономика и социум. – 2023. – №. 11 (114)-1. – С. 1168-1172.
12. Юлдошева Ш. А. ЭКОНОМИЧЕСКИЙ АНАЛИЗ ФАКТОРОВ, ВЛИЯЮЩИХ НА ОБСЛУЖИВАНИЕ В ЖИЛИЩНО-КОММУНАЛЬНЫХ ПРЕДПРИЯТИЯХ //Экономика и социум. – 2022. – №. 12-1 (103). – С. 1158-1165
13. Дустова М. К., Шомуротова С. Роль иностранных инвестиций в развитии экономики //Научный прогресс. – 2022. – Т. 3. – №. 2. – С. 1021-1025.
14. Dustova M. X., Shomurotova S. O. TIJORAT BANKLARIDA KREDIT RISKLARINI SAMARALI BOSHQARISH //Conferencea. – 2022. – С. 119-121.
15. Khudayberdievna D. M. Improving the Mechanism of Financial Lending to Agricultural Enterprises. – 2023.

Эргашев Х.М.
старший преподаватель
кафедры Анестезиологии – реаниматологии и ЭМП
АГМИ
Адихамжонов Ш.Б.
ассистент
кафедры Анестезиологии – реаниматологии и ЭМП
АГМИ
Аминжонов А.О., магистр
кафедры Анестезиологии – реаниматологии
и ЭМП, АГМИ

ДИАГНОСТИКА И ЛЕЧЕНИЕ ГНОЙНО-СЕПТИЧЕСКИХ ОСЛОЖНЕНИЙ КАТЕТЕРИЗАЦИИ ПОДКЛЮЧИЧНОЙ ВЕНЫ (ОБЗОР ЛИТЕРАТУРЫ)

Аннотация: *Проблема диагностики и лечения гнойно-септических осложнений катетеризации подключичной вены давно привлекает внимание хирургов, анестезиологов-реаниматологов и специалистов по хирургическим инфекциям. Частота развития этих осложнений, по данным различных авторов, очень вариабельна и колеблется от 0,07% до 17,5%. По данным Национальной системы контроля нозокомиальных инфекций (National Nosocomial Infection Surveillance), в США ежегодно регистрируется около 200 тысяч случаев инфекции, связанной с применением подключичных катетеров (NNIS System Report, 1998). В России и, в частности, в Санкт-Петербурге, бактериемия выявляется у 9,3% больных с подключичными катетерами.*
Ключевые слова: *гнойно-септические осложнения, диагностика, катетеризация подключичной вены.*

Ergashev Kh.M.
senior lecturer
Department of Anesthesiology – Reanimatology and EMC, ASMI
Adihamjonov Sh.B.
assistant
Department of Anesthesiology – Reanimatology and EMC, ASMI
Aminjonov A.O., Master
Department of Anesthesiology – Reanimatology and EMC, ASMI

DIAGNOSTICS AND TREATMENT OF PURULOUS-SEPTIC COMPLICATIONS OF SUBCLUSIVE VIN CATHETERIZATION (literature review)

Abstract: *The problem of diagnosis and treatment of purulent-septic complications of subclavian vein catheterization has long attracted the attention of surgeons, anesthesiologists-resuscitators and specialists in surgical infections. The incidence of these complications, according to various authors, is very variable and ranges from 0.07% to 17.5%. According to the National Nosocomial Infection Surveillance, there are about 200,000 subclavian catheter infections reported annually in the United States (NNIS System Report, 1998). In Russia and, in particular, in St. Petersburg, bacteremia is detected in 9.3% of patients with subclavian catheters.*

Key words: *purulent-septic complications, diagnostics, catheterization of the subclavian vein.*

Клиническая картина, диагностика и профилактика гнойно-септических осложнений, развившихся после введения подключичного катетера.

Микроорганизмы, вызывающие катетер-ассоциированные инфекции, чаще всего проникают в кровеносное русло с кожных покровов на месте введения катетера. Они мигрируют с поверхности кожи места введения катетера вдоль наружной его поверхности, колонизируя дистальный конец и тромбы, находящиеся в просвете сосуда. Таким образом, образуется септический очаг. Локализация его непосредственно в кровеносном русле и определяет патогенетическую сущность, клиническую картину и прогноз заболевания.

Первым признаком местного проявления воспалительного процесса в катетеризированной вене, приводящего в дальнейшем к генерализации инфекции, является появление боли по ходу вены при инфузии. Затем возникают жалобы на боли в области шеи на стороне катетеризации, отечность и цианоз верхней конечности, расширение подкожных вен этой зоны. Развивается отек верхней конечности и шеи на стороне катетеризации [2]. Возможно возникновение воспалительного отека в зоне стояния катетера, появление гиперемии и гноевидного отделяемого через катетерную ранку при надавливании на область введения кавакатетера [2].

При развитии тромбоза внутренней яремной вены кроме отека и болей в области шеи больные отмечают боли при глотании. Яремная вена прощупывается в виде плотного болезненного тяжа, нередко видна на глаз [4].

В тоже время колонизация катетера (особенно представителями кожной микрофлоры) может нередко протекать без клинически выраженной симптоматики, что связано с низкой вирулентностью таких возбудителей [5].

При развитии первичного очага во внутренней яремной вене вследствие миграции туда подключичного катетера, вместе с клиникой тромбоза подключичной вены развивается картина инфильтрата, а затем и глубокой флегмоны шеи, которая описана В.Ф. Войно-Ясенецким в 1956 г. как, так называемая, «деревянистая» флегмона.

Общие клинические симптомы складываются из признаков системной воспалительной реакции (SIRS): тахикардия (>90/мин.), гипервентиляция (ЧД >20/мин.), лейкоцитоз крови (>12x10^9/л), лихорадка (t >38°C) с дальнейшими признаками сепсиса при прогрессировании осложнения [6].

Клинически ангиогенный сепсис (катетер-ассоциированный сепсис) проявляется симптомами сепсиса любого другого генеза, но в то же время имеет некоторые особенности. Характерным является совпадение по времени периодов подъема температуры с внутривенными введениями лекарственных препаратов [5].

М.И. Лыткин, Н.Н. Шихвердиев (2017) на основании собственных наблюдений (142 случая) выделяют следующие критерии для обоснованного установления диагноза ангиогенного сепсиса:

1. локализация источника инфекции в сосудистом русле
2. наличие клинических и лабораторных признаков сепсиса: лихорадка с ознобом и усиленным потоотделением, особенно после внутривенных и внутриартериальных вливаний, признаки интоксикации, наличие метастатических гнойных очагов, прогрессирующее ухудшение состояния, лейкоцитоз со сдвигом формулы влево, лимфопения, анемия, гипопротеинемия, проявление недостаточности тех или иных органов или систем; несоответствие местных признаков инфекции общей реакции организма, исчезновение клинических проявлений и нормализация лабораторных показателей после удаления катетера;
3. Наличие бактериемии.

При отрицательных данных гемокультуры следует иметь в виду, что бактериемия не может быть постоянной в силу бактерицидных свойств крови и частично сохранившейся способности организма к отграничению очага инфекции. Прорыв инфекта в кровоток обычно сопровождается гипертермией, и взятие крови на посев необходимо делать именно на высоте лихорадки (Лыткин М.И., Шпхвердиев Н.Н., 2017; Schwartz H.C, Nguyen D.C., 2009). В.А. Гологорский и соавторы (2018) обязательным условием диагностики ангиогенного сепсиса считают идентичность микрофлоры высеянной с катетера и крови при наличии клинических признаков генерализованного инфекционного процесса.

В настоящее время принята балльная оценка тяжести нарушения тех или иных органов и систем при сепсисе. Среди наиболее простых и распространенных - шкала SOFA (Sepsis Oriented Failure Assessment) и шкала MODS (Multiple Organs Disfunction Score). Шкала SOFA разработана J.L.Vincent в 2006 году, принята Европейским обществом по интенсивной терапии (ESIM). Шкала очень проста в использовании и доступна практически для любого стационара, имеющего биохимическую лабораторию (Костюченко А.Л. и соавт., 2016). Она используются для оценки тяжести органных нарушений, что позволяет объективно выделить группу больных с тяжелым сепсисом и описать развивающиеся нарушения. Для оценки тяжести состояния в конкретный момент времени чаще других используется шкала APACHE II (Acute Physiological and Chronic Health Estimation II) (Костюченко А.Л. и соавт., 2016; Белобородов В.Б., 2012; Гельфанд Б.Р. и соавт., 2013).

Методы диагностики гнойно-септических осложнений катетеризации подключичной вены, в первую очередь, заключаются в оценке клинических проявлений, тщательном осмотре места катетеризации, верхней конечности и шеи на стороне катетеризации. Большое диагностическое значение для диагностики тромбоза вены имеет измерение центрального венозного давления (Портной М.В., 2018; Стойко Ю.М. и соавт., 2012; Sanders R.J., Haug C, 2018; Ena J. et al., 2018).

Современным методом диагностики обструкций подключичной вены, является УЗИ. Преимуществом ультразвуковой диагностики является простота в использовании, неинвазивность, возможность многократного применения для оценки динамики процесса [7,8,9].

Ведущим методом диагностики тромбозов вен сегодня можно считать дуплексное ангиосканирование [10,11], которое позволяет комбинировать возможность просмотра (информация о морфологии) с определением допплеровского анализа (гемодинамическая информация). В исследованиях G.M. Baxter et al. (2015) ультразвуковая цветная допплерография в диагностике тромбоза подключично-подмышечной вены имела чувствительность и специфичность 100% в сравнении с результатами флебографии. Другие авторы отмечают, что ультразвуковые методы исследования нередко могут давать ложные результаты при диагностике обструкции подключичной вены [12,6]. М.В. Гринев и соавт. (2010) указывают большую диагностическую ценность ультразвуковых методов исследования в диагностике инфильтратов, абсцессов и флегмон в зоне нахождения подключичного катетера.

При проведении ультразвукового исследования катетеризированных вен с развившимся тромбозом для острой стадии процесса характерна гомогенная, гипо- или анэхогенная структура тромба, для подострой стадии и стадии посттромботической болезни - гетерогенная с наличием в структуре участков как низкой, так и высокой эхогенности [7,13].

Контрастная флебография, по данным Ю.М. Стойко и соавт. (2012), является «золотым стандартом» диагностики патологии вен. Флебография позволяет определить локализацию и протяженность тромбоза, степень развития коллатеральных путей оттока крови, степень реканализации тромба, а также выраженность посттромботических изменений вен. Однако по данным Р.З. Лосева (2010), точность ультразвукового метода составляет 95%, по сравнению с флебографическими данными, а его быстрота, неинвазивность, отсутствие осложнений и противопоказаний к выполнению, возможность мониторингового контроля делают ультразвуковое исследование одним из ведущих методов диагностики венозного тромбоза.

Для успешной диагностики гнойно-септических осложнений катетеризации подключичной вены могут использоваться сцинтиграфия, реовазография, ядерно-магнитный резонанс [6,9,14,15,16].

Микробиологическое исследование удаленного катетера и крови имеет чрезвычайно важное значение для установления этиологии развившихся осложнений и их адекватного лечения.

При соблюдении строгих требований к правильному забору материала и использовании современных микробиологических методик положительная гемокультура при сепсисе наблюдается в 80-90% случаев [17]. Описанный D.G. Maki et al., в 2017 году метод посева кончика катетера (прокатывание его по плотной питательной среде) используется многими авторами для определения обсемененности наружной поверхности катетера [17]. Частота высевания флоры с кончика катетера составляет от 26% до 43%. Х. Лоде (2018), G. Ferretti et al. (2013) предлагают проведение количественных микробиологических исследований - количество колоний, выделенных из образца крови, взятого через катетер должно в пять раз превышать таковое, выделенное из одновременно взятого образца периферической крови. Для более полноценного посева внутреннего содержимого катетера предлагается использование специальных щеточек, с последующим центрифугированием и окраской лейкоцитарного осадка акридиновым оранжевым. По данным Х. Лоде (2018), у пациентов, получающих полное парэнтеральное питание, этот метод имел чувствительность - 95% и специфичность - 84%.

Бактериологическая диагностика катетерной септицемии требует многократных посевов периферической крови, причем как венозной, так и артериальной. При подозрении на катетерную инфекцию необходимо провести посев крови из катетера и интактной периферической вены. Положительным результатом считают выделение идентичных возбудителей [17,18,19,20].

Яковлев СВ. (2010) предлагает следующие правила для проведения адекватной микробиологической диагностики катетерной инфекции и сепсиса:

1. Кровь для исследования необходимо забирать до назначения антибиотиков. Если больной уже получает антибактериальную терапию, то, по возможности, антибиотики следует отменить как минимум на 24 ч, после чего осуществить забор крови. В тех случаях, когда невозможно отменить антибиотики, кровь следует забирать непосредственно перед очередным введением препарата.

2. Необходимым минимумом забора являются две пробы, взятые из разных рук с интервалом 30 мин. Оптимальным является забор трех проб крови, что существенно повышает выявление возбудителя. В исследованиях было показано, что большее количество проб не имеет преимуществ перед трехкратным забором в плане частоты выявления возбудителей.

3. Кровь для исследования необходимо забирать из периферической вены. Не показано преимуществ забора крови из артерии.

При подозрении на катетер-ассоциированный сепсис следует провести количественное бактериологическое исследование крови, полученной из интактной периферической вены и через подозрительный катетер. Если из обоих образцов выделяется один и тот же микроорганизм, а количественное соотношение обсемененности образцов из катетера и вены равно или более 5, то катетер, по всей видимости, является источником сепсиса. Чувствительность данного метода диагностики составляет более 80%, а специфичность достигает 100%.

4. Более оптимальным является использование стандартных специальных флаконов с готовыми питательными средами, а не флаконов с питательными средами, закрытых ватно-марлевыми пробками, приготовленными в лаборатории. Во-первых, среды лабораторного приготовления недостаточно стандартизованы и частота выделения микроорганизмов из крови при их использовании существенно ниже. Во-вторых, при открывании флакона и внесении образца крови из шприца существует опасность контаминации питательной среды микрофлорой воздуха.

Кроме того, в коммерческих флаконах создается отрицательное давление, что обеспечивает поступление строго определенного количества крови без контакта с окружающей средой при использовании переходной системы с иглами на противоположных концах катетера.

5. Забор крови из периферической вены следует проводить с тщательным соблюдением асептики. Кожу в месте венепункции обрабатывают раствором йода или повидон-йода концентрическими движениями от центра к периферии в течение минимум 1 мин. Непосредственно перед забором кожу обрабатывают 70% спиртом. При проведении венепункции используют стерильные перчатки. Крышку флакона со средой обрабатывают спиртом. Для каждой пробы забирают 10 мл крови.

Тщательная обработка кожи, крышки флакона и использование специальных систем для забора крови с переходником позволяет снизить степень контаминации образцов до 3% и менее [21,22].

Важным этапом развития мер по профилактике катетер-ассоциированных инфекций было обобщение мирового опыта методов профилактики в виде Рекомендаций, вышедших в 2016 году в США [23]. В 2017 году вышли исправленные и дополненные Рекомендации по профилактике инфекций, связанных с катетеризацией сосудов [1]. Рекомендации содержат новые и систематизируют уже известные данные методов профилактики. Их можно разделить на следующие группы:

1. Обработка рук и асептическая техника.

Эффективная обработка рук достигается применением безводных средств на основе спиртов или антибактериального мыла и последующим смыванием мыла водой. Необходимо использование максимального объема асептики: шапочка, маска, стерильный халат, стерильные перчатки и широкая обработка операционного поля.

2. Обработка кожи.

Повидон - йод является наиболее распространенным антисептиком для обработки кожи в области катетеризации центральных вен.

3. Повязки на область катетеризации.

Прозрачные полупроницаемые повязки становятся популярными для прикрытия области катетеризации. Они безопасны для катетеров и позволяют визуально контролировать область катетеризации. Колонизация катетеров при применении прозрачных повязок (5,7%) сравнима с марлевыми повязками (4,6%), не выявило клинически значимых различий для развития тромбофлебита.

4. Фиксация катетера.

Бесшовная катетеризация имеет свои преимущества перед подшиванием катетера в плане профилактики катетерной инфекции.

5. Бактериальные фильтры.

Бактериальные фильтры оказались эффективными для снижения частоты флебитов при катетеризации периферических вен, однако нет данных о повышении эффективности профилактики катетерной инфекции. Поэтому применение их не рекомендуется.

6. Катетеры и манжеты, импрегнированные антибиотиками и антисептиками.

Все исследования, посвященные импрегнированным катетерам, были проведены на трехпросветных катетерах без манжет у взрослых с продолжительностью катетеризации менее 30 дней. При импрегнации миноциклин/рифампицином наружной и внутренней поверхности катетера обнаружено снижение количества катетер ассоциированной инфекции по сравнению с катетерами, покрытыми с наружной стороны хлоргексидином/сульфадиазином серебра. Преимущества наблюдались после 6-го дня катетеризации, однако после 30 суток они отсутствовали. Описано применение катетеров с манжетами, покрытыми ионами платины/серебра. Тем не менее, применение катетеров, импрегнированных антибиотиками и антисептиками должно сопровождаться всеми профилактическими мерами.

7. Профилактическое применение антибиотиков.

До настоящего времени нет исследований, доказывающих снижение частоты катетер ассоциированной инфекции при приеме внутрь или парэнтеральном применении антибиотиков.

8. Мази, содержащие антибиотики и антисептики.

Применение мазей содержащих антибиотики и антисептики на область катетеризации для снижения частоты возникновения катетер ассоциированной инфекции имеет самые противоречивые данные. Четкого снижения колонизации катетера не получено. S. Danchaivijitr, R. Theeralharathom (2012) провели исследование направленное на изучение колонизации катетеров при применении хлоргексидиновой мази, мази содержащей йодофор, и спиртовых повязок у 150 пациентов с центральными катетерами. Исследование показало, что частота колонизации катетера у больных, которым применялись спиртовые повязки на 22,7% меньше, чем у больных, которым применялись мази с хлоргексидином и йодофором.

9. Профилактическое заполнение катетера раствором антибиотика.

Для профилактики катетер ассоциированной инфекции в периоды

времени, когда катетер не использовали, его просвет заполняли растворами антибиотиков и антикоагулянтов, однако эффективность их не доказана.

10. Антикоагулянты.

Растворы антикоагулянтов широко применяются для профилактики тромбоза катетеров. При применении гепарина (3 ЕД/мл в растворе, 5000 ЕД каждые 6 или 12 часов или 2500 ЕД низкомолекулярного гепаринов подкожно) у пациентов с кратковременной катетеризацией центральных вен риск тромбоза катетеров снижался, однако не выявлено достоверных различий в частоте возникновения катетер ассоциированной инфекции.

11. Перестановка катетеров.

Замена катетеров по графику (через 3-7 суток) с целью снижения частоты катетер ассоциированной инфекции оказалась неэффективной.

12. Замена систем для трансфузии.

Оптимальный интервал для замены систем внутривенных трансфузий составляет 96 часов. В случае инфузий жидкостей с повышенной вероятностью контаминации микроорганизмами (жировые эмульсии, кровь) показана более частая замена систем. Дополнительные порты с кранами (для введения лекарств, забора крови) представляют собой потенциальную опасность внедрения микроорганизмов в катетер, сосуды, инфузионные жидкости (контаминация кранов составляет 45-50% случаев). Однако является ли такая контаминация источником катетер ассоциированной инфекции, пока не доказано.

F. Parras et al. (2014) приводят данные исследования проведенного среди 500 больных, которым устанавливался подключичный катетер, и подвергнутым воздействию «обязательной программы», включающей методы тщательной профилактики катетерной инфекции. Частота возникновения флебитов снизилось на 1% (с 15 до 14 %), колонизация внутренней и наружной поверхности катетера на 1% с 12 до 11% и с 2 до 1%). По данным A.F. Widmer (2014) применение обязательного протокола профилактики позволяет снизить частоту катетерной инфекции на 40% - 50%. A.M. Cazalla Foncueva et al. (2013) также описывают снижение количества катетерной инфекции при строгом соблюдении протокола профилактики.

По данным Центра контроля за заболеваемостью США, благодаря специальным мерам профилактики в течение 4-х лет, в больницах штата Пенсильвания количество катетерной инфекции удалось снизить на 67% [24].

Имеются и другие исследования, посвященные профилактике гнойно-септических осложнений кавакатетеризации [25,26,27,28,29].

Современные принципы лечения больных с гнойно-септическими осложнениями кавакатетеризации.

Лечение гнойно-септических осложнений катетеризации подключичной вены не является однозначным. В зависимости от формы осложнения и тяжести состояния больного оно может быть как консервативным, так и оперативным.

По мнению большинства исследователей, принципиальная схема лечения больных с гнойно-септическими осложнениями катетеризации подключичной вены должна включать в себя следующий комплекс лечебных мероприятий: 1) санация септического очага; 2) антибактериальная терапия; 3) улучшение реологических свойств крови; 4) коррекция нарушений иммунного ответа; 5) нормализация функционирования основных систем жизнеобеспечения организма [1,14,30].

Необходимость устранения первичного септического очага признается всеми авторами. Поскольку очагом инфекции является подключичный катетер, то его удаляют и при необходимости, выполняют катетеризацию вены другой локализации [1]. При флегмоне подключичной области производиться вскрытие и дренирование гнойника.

Единой тактики лечения больных при тромбофлебите центральных вен в литературе не существует. Одни авторы считают, что тромбы из вены необходимо удалять [9,22]; другие полагают, что при этом осложнении достаточно перевязать вену, третьи рекомендуют проводить консервативную терапию и лишь при неэффективности лечения прибегать к операции, B.A. Pruitt et al., (2016) считают, что при ухудшении состояния больного и наличии септицемии в течение 24 час после удаления катетера и начала консервативной терапии необходимо производить оперативное удаление пораженной периферической вены, при этом вопрос об операциях на центральных венах не рассматривается. Е.С. Баймышев и соавт. (2018) описывают единственный случай оперативного вмешательства на подключичной вене с благоприятным исходом. При этом после взятия вены на турникет она была вскрыта и тромб удален с помощью катетера и частично вымыванием новокаином ретроградно. R.N. Garrison et al. (2012) приводят опыт хирургического лечения 35 пациентов в течении 6 лет с гнойным тромбофлебитом, явившимся причиной сепсиса, как следствие катетеризации периферических вен. Вены были иссечены, что привело к быстрому регрессированию симптомов сепсиса. R.E. Winn et al. (2018), демонстрируют случай оперативного лечения гнойного тромбофлебита подключичной вены - выполнена ее перевязка с иссечением участка заполненного тромбами.

Впервые тромбэктомию из внутренней яремной вены при отогенном синустромбозе и тромбозе внутренней яремной вены выполнили M. Chiray и G. Semelaigne в 1922 г. После вскрытия просвета вены для удаления тромбов авторы использовали шприц с толстой иглой. В России методика операции с удалением тромботических масс при тромбозе внутренней яремной вены описана и применена А.Н. Бакулевым с соавт. в 2018 г. Доступ к вене осуществлялся из продольного разреза по переднему краю грудино-ключично-сосцевидной мышцы. Начиная с 70-х годов XX столетия при развитии тромбоза или тромбофлебита внутренней яремной вены с флегмоной сосудистого пучка шеи многие авторы рекомендуют широко вскрывать флегмону и перевязывать вену без вскрытия ее просвета и удаления тромбов.

Важнейшим компонентом комплексной терапии гнойно-септических осложнений катетеризации подключичной вены являются антимикробные средства. При этом проводится целенаправленная и адекватная по объему антибактериальная терапия антибиотиками широкого спектра действия, обладающими бактерицидным эффектом в отношении максимального числа потенциальных возбудителей [1,30].

Раннее применение антибактериальной терапии снижает риск летального исхода. В случае неадекватной антибиотикотерапии значительно повышается летальность. Так, по данным Н.В. Завада и соавт. (2013), выживаемость при септическом шоке у больных, получавших неадекватную антибактериальную терапию, не превышала 20%.

M. Antonelli et al. (2010) предлагают использование деэскалационного режима терапии. Принцип метода заключается в применении препаратов или комбинаций, характеризующихся сверхшироким спектром действия, устойчивость к которым у вероятных возбудителей минимальна. Деэскалационная терапия подразумевает активный поиск возбудителя инфекции. После его выделения и оценки чувствительности осуществляется переход на целенаправленную терапию.

Согласно Калужской конференции РАСХИ (2014), при выделении оксациллиночувствительных штаммов золотистого и эпидермального стафилококков у больных сепсисом на фоне катетерассоциированной инфекции рекомендуется применять в качестве антибиотиков первого ряда оксациллин и цефазолин. Если указанные возбудители не чувствительны к оксациллину, то следует применять ванкомицин с линезолидом.

По мнению W.F. Ehni et al. (2012); А.Л. Костюченко и соавт. (2016); В.А., Руднова (2012); С.В. Яковлева (2015) в случаях клинически отчетливого или визуализированного с помощью УЗИ флеботромбоза обязательным компонентом лечения должен быть антистафилококковый препарат (защищенный амоксициллин, рифампицин, гликопептидный антибиотик).

Длительность антимикробной терапии должна быть значительной - 17-20 дней, т.к. короткий курс создает опасность развития ангиогенной генерализованной инфекции, например, в форме эндокардита. При отсутствии признаков тромбофлебита проводится эрадикация возбудителя с помощью антипсевдомонадных антибиотиков (цефтазидим, цефопиразон, цефтриаксон).

Основой медикаментозной терапии острых флеботромбозов в настоящее время является применение антикоагулянтов (в их числе низкомолекулярных фракционированных гепаринов), ингибиторов синтеза витамин К-зависимых факторов свертывания (кумаринов), ингибиторов функции тромбоцитов (аспирина, плавикса, реополиглюкина), а также активаторов тромболиза. Основным компонентом такой терапии являются гепарины, прекращающие рост тромбоцитов и стимулирующие естественную реканализацию вен [15].

У большинства больных при развитии тромбоза и тромбофлебита катетеризированной вены и ее притоков применяется нефракционный гепарин [10]. После однократного внутривенного введения 5 тыс. ЕД, больному подкожно вводят гепарин через 6-12 часов в средней суточной дозе 500 ЕД/кг массы тела, но не более 20-30 тыс. ЕД гепарина в сут в течение 5-7 сут. В последующем больные переводятся на непрямые антикоагулянты (варфарин).

Стандартная схема лечения гепарином имеет ряд недостатков, поскольку этот препарат трудно дозируется, требует частых введений или длительных инфузий, постоянного лабораторного контроля и обладает побочными эффектами (приводит к развитию гематом, гепариновой тромбоцитопении, остеопорозу и др.). В последние годы обычный гепарин постепенно вытесняется низкомолекулярными гепаринами (фраксипарин, клексан и др.), которые лишены перечисленных недостатков. Их дозировка рассчитывается индивидуально.

Некоторые авторы, касаясь лечения тромбозов подключичной вены, говорят о необходимости более «агрессивной» терапии, то есть использовании фибринолитических препаратов [9]. Однако большое количество осложнений тромболитиков и, как следствие этого, широкий круг противопоказаний к их использованию (недавняя операция или травма - менее 1 мес, геморрагические состояния, беременность, болезни мозга, срок более 7 сут от начала тромбоза и др.) значительно ограничивают их применение. Пропорция польза/риск при применении тромболитиков не имеет преимуществ над гепаринотерапией.

Задачами иммунокоррегирующей терапии при катетерассоциированной инфекции являются: 1) нейтрализация возбудителей инфекции и их токсинов; 2) модуляция активности макрофагов, гранулоцитов, лимфоцитов и тромбоцитов; 3) модуляция синтеза и экскреции про- и противовоспалительных цитокинов; 4) коррекция проявлений системной воспалительной реакции для предотвращения развития полиорганной недостаточности.

Исследования, проведенные при лечении больных сепсисом, показывают, что применение пентоксифиллина, иммуноглобулинов G и M способствует снижению летальности; а использовании малых доз кортикостероидов приводит к стабилизации гемодинамики.

Одним из обязательных элементов лечения больных с гнойно-септическими осложнениями кавакатетеризации является нормализация функционирования основных систем жизнеобеспечения на фоне хорошо наложенного энтерального и парентерального питания. Сюда относится комплексная инфузионно-трансфузионная терапия, борьба с гипоксией, нормализация всех видов обмена, тканевого метаболизма, функции паренхиматозных органов и др. [6,10,22,29].

Результаты лечения больных зависят от многих обстоятельств: основного и сопутствующего заболеваний, характера гнойно-септических осложнений кавакатетеризации, вида перенесенной операции и др. Имеются немногочисленные данные об успешном лечении больных. Однако большинство авторов считают результаты лечения этих пациентов неудовлетворительными. Летальность при развитии гнойно-септических осложнений кавакатетеризации, в частности, при тяжелом сепсисе, достигает высоких цифр - 50-80% [17]. В Америке инфекции кровотока вошли в десятку заболеваний, лидирующих как причина смерти (NNIS System Report, 2014).

Заключение. Анализ данных литературы показывает, что несмотря на большие успехи хирургии и анестезиологии, гнойно-септические осложнения относятся к трудно диагностируемым осложнениям катетеризации подключичной вены. Сведения о результатах лечения этих осложнений неоднозначны и противоречивы. Существующие общепринятые способы профилактики и методы хирургического лечения недостаточно эффективны. Изучение особенностей диагностики, профилактики и лечения гнойно-септических осложнений катетеризации подключичной вены представляет актуальную научную проблему.

Использованные источники:

15. Белобородов В.Б. Сепсис - современная проблема клинической медицины / В.Б. Белобородов // Рус. мед. журн. - 2017. - Т.5, № 24. -С.1589-1596.

16. Гайдаенко В.М. Ошибки и осложнения при катетеризации верхней полой вены и их профилактика / В.М. Гайдаенко, Ю.А. Титовский, В.Б. Оскирко // Анестезиология и реаниматология. - 2018. — № 5. — С.70-71.

17. Дамир Е.А. Основные этапы общей анестезии. Инфузионно-трансфузионная терапия во время анестезии и операции // Рук. по анестезиологии. - 2-е изд., стереотип. / Е.А. Дамир; Ред. А.А. Бунятян. -М.: Медицина, 2017.-Гл.11.-С. 145-164.

18. Дякин В.М. Опасности и осложнения пункции и катетеризации подключичной вены / В.М. Дякин, Т.Д. Науменко, Н.Н. Шевердин, Д.Н.

Личман, В.Ф. Герцог // Хирургия. - 2018, № 5. - С.96-101.
19. Гринев М.В. Иммуномодуляция в комплексном лечении хирургического сепсиса / М.В. Гринев, С.Ф. Багненко, М.И. Громов, П.П. Пивоварова // Вест, хирургии. - 2017. - Т. 158, № 6. - С.98-99.
20. Зубарев А.Р. Диагностический ультразвук. - 1-е издание / А.Р. Зубарев. -М.: Реал, время, 2017. - 176 с.
21. Перминов Е.Н. Ультразвуковая диагностика осложнений катетеризации подключичной и пупочной вен / Е.Н. Перминов, М.И. Пыков // Ультразвуковая диагностика. - 2017. -№ 4. - С.75-78.
22. Стойко Ю.М. О санации магистральных вен шеи при катетерном сепсисе / Ю.М. Стойко, М.И. Долгоруков, В.И. Кулагин, Е.Ю. Калинин // 9-й Всерос. съезд хирургов: Материалы съезда. - Волгоград, 2012. -С.267.
23. Белянина Е.О. Основы клинической флебологии / Е.О. Белянина, Е.П. Гаврилов, В.Г. Гудымович и др.; Ред. Ю.Л. Шевченко - М.: Медицина, 2015.-311 с.
24. Енькина Т.Н. Значение ультразвуковой неинвазивной диагностики заболеваний сосудов в условиях многопрофильной клиники / Т.Н. Енькина, А.В. Извекова, М.О. Папп, Е.А. Федотенкова, Н.Л. Руднева, Я.Л. Накатис // Современные диагностические и лечебные технологии в многопрофильной клинике: Материалы конф., посвящ. 145-летию ФГУ «Сев.-Зап. окр. мед. центра Федерал. агентства по здравоохранению и социал. развитию». - СПб., 2006. - С.75-76.
25. Priollet P. Trombose de la veine souse-claviere: traitement medical / P.Priollet // J. Mai. Vase. - 2018. - Vol. 19, suppl A. - P.44-47. 191.Pruitt B.A. Diagnosis and treatment of Cannularelated Intravenous sepsis
in bourn patients / B.A. Pruitt, W.F. McManus, S.H. Kim, R.C. Tread //Ann. Surg. - 1980. - Vol.191, N 5. - P.546-554.
26. Лелюк В.Г. Ультразвуковая ангиология. - 2-е изд., доп. и перераб. / В.Г. Лелюк, С.Э. Лелюк. - М.: Реал. время, 2013. - 322 с.

Эргашев У.А.
преподаватель
кафедры «Кафедра общественных наук и спорта»
Ферганский политехнический институт
г. Фергана, Республика Узбекистан

ФИЛОСОФСКОЕ МИРОВОЗЗРЕНИЕ ДЖАДИДИЗМА

Аннотация: *В статье рассматривается философское осмысление джадидизма как общественно-политического и культурного движения, возникшего в Туркестане в конце XIX – начале XX века.*

Ключевые слова: *Джадидизм, Туркестан, философия, Исмаил Гаспринский, Махмудходжа Бехбуди, Мунаввар коры Абдурашидханов, Абдулла Авлони, Абдурауф Фитрат, образование, культура, общественная жизнь.*

Ergashev U.A.
Lecturer
of the Department of "Social Sciences and Sports"
the Fergana Polytechnic Institute
Fergana, Republic of Uzbekistan

PHILOSOPHICAL WORLDVIEW OF JADIDISM

Abstract: The article examines the philosophical understanding of Jadidism as a socio-political and cultural movement that arose in Turkestan in the late *XIX* th – early *XX* th centuries.

Key words: *Jadidism, Turkestan, philosophy, Ismail Gasprinsky, Mahmudkhoja Behbudi, Munavvar kory Abdurashidkhanov, Abdullah Avloni, Abdurauf Fitrat, education, culture, social life.*

В этом плане в современный период развития Узбекистана отношение к наследию наших предков поднимается на новый уровень и не может быть мыслимо вне процесса обновления, происходящего в нашей духовной жизни.

Современный период обновления, как и времена минувшие, требует обновления мышления людей как социальной необходимости, превращения граждан в полноценных реформаторов. Новейшая история свидетельствует о том, что идея и философия джадидов, представителей широких слоев нашего народа лишь 100 лет назад обрели новое мышление, и что их дух сохранился и в нынешнем поколении. По законам социальной социологии можно возродить эту преемственность, придать ей новый, современный дух и силу.

Идея и философия джадида, движение и практика джадидизма являются не только одним из главных источников поддержки таких смелых интеллектуалов, но и важным и необходимым руководством для процесса обновления современного мышления, потребности каждого из быть для нас примером и фактором укрепления чувства моральной ответственности.

С этой точки зрения концептуальные идеи джадидов служат духовным руководством нынешней практики перемен, генетической основой сегодняшней стратегии и комплексных реформ.

Чтобы дать объективную оценку и правильное описание причин возникновения и развития движения джадидизма в нашей стране, важно проанализировать, в какой степени оказали влияние исторические условия и социально-политические факторы. С этой точки зрения в социально-философском, религиозно-этическом и культурном развитии нашего народа период последнего и начала следующего столетия XIX века отличается разнообразием идейно-теоретических и идеологических форм.

Джадидизм — это общественно-политическое и культурное движение, возникшее в Туркестане в конце XIX – начале XX века. В основе идеи Джадидизма было не революционизировать, а добиться прогресса, следуя по пути революции и реформ, путем максимально широкого распространения знаний и просвещения. Причиной этого было то, что Туркестан сильно отставал даже от своего прежнего развития, не мог справиться с возникающей и наступающей конкуренцией между развитыми странами в социально-экономической сфере и превращался в колонию. Националисты и прогрессивные модернисты глубоко понимали эту ситуацию и считали, что единственный путь вывести Туркестан в ряды развитых стран мировой цивилизационной системы — это обновление сознания народа, развитие науки и образования.

Туркестанские современники поняли, что спасти страну от нищеты, разобщенности и неграмотности можно только через просвещение.

Философский анализ движения Джадидизма позволяет нам увидеть его важность и роль в истории Узбекистана. Основными философскими принципами Джадидизма были учебный подход к религии, более открытый подход к образованию и модернизация общественной жизни.

В философии Джадида отражены отшлифованные веками восточные ценности, духовный образ, мышление и образ жизни нашего народа, менталитет, обычаи, традиции, принципы толерантности, стремление к стабильности и творчеству. в философских принципах, понятиях и категориях.

Не случайно в выступлении Президента особое значение было уделено необходимости проведения обширных исследований по философским вопросам наследия джадидов и джадидского движения, а также систематического развертывания специальных научных исследований.

Однако, по мнению исследователей, проводящих исследования в этой области, ведущие мировые научные центры и высшие учебные заведения тщательно изучают современную философию, литературу и систему образования, уделяя особое внимание исследованию наследия наших предков.

Социально-философское исследование джадидизма заключается в следующих положениях:

- доказано, что сущность джадидизма заключается в совокупности социокультурных отношений, обусловленных поисками светской идентичности;

- установлены различия между джадидизмом, мусульманским либерализмом, демократическим просветительством и религиозным реформаторством;

-раскрыта специфика джадидизма, которая проявляется в признании просвещения и образования в качестве критерия прогресса; практической полезности духовных ценностей; приоритете научного познания; культуре толерантности; этике благотворительного поведения; единстве этического и эстетического;

-выявлено, что джадидизм отражает антагонизмы между социальными группами и классами;

- обосновано, что типологическая идентичность джадидизма и выражается в признаках: эволюционного пути социального развития; экономической детерминированности; приоритета научного познания; культуры толерантности; фактора гражданского мира и стабилизации социально-политической обстановки.

Итак, философия движения джадидизма заключается в том, что независимость от свободы и зависимости достигается не войнами, а грамотностью населения и повышением его грамотности, во-вторых, развитием национального самосознания, реализацией национальной идентичности, созданием единства, ведением к политическим фактор.

Использованные источники:

1. Пулатов К.А. Международный научный журнал «Научный импульс» № 17 (100), часть 1 Января, 2024.

2. Агзамходжаев С.С. Реформаторское движение в Туркестане http://www.sociosphera.com/publication/ conference/2014/241/reformatorskoe_dvizhenie_v_turkestane/ (дата обращения: 10.04.2016).

3. Ўзбекистон Миллий энциклопедияси. 1-жилд. – Тошкент: ФзМЭ, 2000.

4. А.А.Мадаминов. “Морально-нравственное формирование человека в трактатах учёных Фараби и Бируни”. Достижения науки и образования, 2018. №13. 48стр. https://scholar.google.com/citations?view_op=view_citation&hl=ru&user=_3waDc4AAAAJ&citation_for_view=_3waDc4AAAAJ:UeHWp8X0CEIC

5. А.А.Мадаминов. Влияние СМИ на политическую культуру молодёжи. Вопросы науки и образования. 2018. 7 (19). https://scholar.google.com/citations?view_op=view_citation&hl=ru&user=_3waDc4AAAAJ&citation_for_view=_3waDc4AAAAJ:HoB7MX3m0LUC

6. А.А.Мадаминов. ACTUAL PROBLEMS OF YOUTH SOCIALIZATION IN THE CONTEXT OF GLOBALIZATION. Экономика и социум. 2019. №4(59). 62-64стр.

https://www.iupr.ru/_files/ugd/b06fdc_0d8e3a360c514eab84f18bb092e3a7fb.pdf?index=true
7. Эргашев У. А. Гармонично развитое поколение-решающая сила развития Нового Узбекистана //Экономика и социум. – 2021. – №. 11-2 (90). – С. 730-732.

Эргашев У.А.
преподаватель
кафедры «Кафедра общественных наук и спорта»
Ферганский политехнический институт
г. Фергана, Республика Узбекистан

НАУЧНО-ФИЛОСОФСКОЕ НАСЛЕДИЕ ИБН СИНЫ

***Аннотация**: В данной статье анализируются наследия Ибн Сины в области философии, логики, естествознания, медицины, психологии, астрономии.*

***Ключевые слова**: Ибн Сина, философия Ибн Сины, научное наследие, философское наследие, духовные, научные, теоретические ценности.*

Ergashev U.A.
Lecturer
of the Department of “Social Sciences and Sports”
the Fergana Polytechnic Institute
Fergana, Republic of Uzbekistan

SCIENTIFIC AND PHILOSOPHICAL HERITAGE OF IBN SINA

***Abstract:** This article analyzes the legacy of Ibn Sina in the fields of philosophy, logic, natural science, medicine, psychology, and astronomy.*

***Key words:** Ibn Sina, philosophy of Ibn Sina, scientific heritage, philosophical heritage, spiritual, scientific, theoretical values.*

Великие люди, добродетельные учёные, философы, учёные просвещения жившие на территории Туран внесли огромный вклад в цивилизацию человечества.

Духовные, научные, теоретические ценности занимают важное место в психике, менталитете, образе жизни и традициях нашего народа.

Такие учёные как, Ахмад Фергани, Мухаммад Хорезми, Фароби, Аль-Бухари, Ат-Термези, Ахмад Яссави, Бахауддин Накишбанди, Абу Райхан Беруни, Аз-Замахшари, Махмуд Кашгари, Юсуф Хос Хаджиб, Алишер Навои, Мирза Улугбек, Бабур вклали неоценимый вклад в развитие общечеловеческой культуры. Мы гордимся Мирзой, Ходжи Ахрором Вали, Боборахимом Машрабом, Суфи Оллояром, Мухаммадом Ферузом, Махмудходжей Бехбуди, Мунавваром Кори, Чолпоном, Фитратом, Абдуллой Кадири, Абдуллой Авлони, Алиханом Тора Согуни и другими. Они наша гордость и честь.

После обретения Узбекистаном независимости появилась возможность более глубоко изучить наследие наших предков, приступив к восстановлению его духовных способностей и умственного потенциала.

Среди таких великих деятелей-Ибн Сина (980 –1037 гг.), гениальный средневековый ученый, врач, философ поэт, музыкант. в Европе зовут его Авиценна.

Абу Али ибн Сина, настоящее имя которого Хусейн, имя отца Абдулла, - известный ученый-энциклопедист, внесший большой вклад в науки медицины, теологии, логики, философ, натуралист, астроном, математик, физик, юрист, литературный критик, лингвист, музыковед. Он родился в селе Афшона недалеко от Бухары.

Обладая необыкновенным природным, врожденным талантом, Ибн Сина с юных лет начал познавать тайны науки. Эпоха, в которую он жил и творил, была чрезвычайно сложной и противоречивой. Его жизнь совпала со временами Саманидов, Караханидов и Газневидов. Молодой Ибн Сина вскоре получил доступ к богатейшей библиотеке Восточного Возрождения в Бухаре, поскольку лечил Нуха Ибн Мансура, владельца Саманинского царства.

После прихода к власти Караханидов в 999 году он был вынужден отправиться в Ургенч. В начале XI века научная среда в Хорезме была намного лучше, и наука была развита.

В Академии Хорезмшаха Маъмуна он познакомился с Абу Райханом Беруни с Абул Хайром Хаммаром, Масахи, Абу Мансуром ас-Саолиби. В «Бейт-уль-Хикма» работали более 500 соотечественников.

Ибн Сина был соратником, товарищем Абу Райхан Беруни. Беруни поднялся до статуса учёного и государственного деятеля при дворе Абу Аббаса Мамуна ибн Мамуна (998–1017).

Во время правления султана Махмуда Газневи (998-1030), в 1011 году, Ибн Сина тайно прибыл в присутствие Гургонского эмирата на юго-востоке Каспийского моря и встретился с Жузжони. Он стал верным учеником Ибн Сины.

Научные дискуссии Беруни и Ибн Сины касаются области науки, особенно физики. Их произведения повлияли друг на друга.

Ибн Сина прославился в области медицины, когда ему было 17-18 лет. В то время оно не было широко известно в области физики. Мы можем узнать это из дискуссий Беруни и Ибн Сины о физических явлениях. Беруни был первым учителем Ибн Сины в области физики. Ибн Сина высказал по этому поводу следующие мысли: «Я читал книгу Аристотеля «Метофизика». Я не мог понять, что там было написано; Цель человека, написавшего эту книгу, мне была неясна. Я прочитал это сорок один раз. Но даже в этом случае я не мог понять его и его цели. Я отказался от этой идеи и пришел к выводу, что это непонятная книга.

Однажды я зашёл в книжный магазин. Он позвал меня и показал книгу. Я отверг это знание, думая, что знать его бесполезно. Он мне сказал, возьми эту книгу, я продам ее по дешевке в три дирхама, хозяину нужны деньги.

Я купил это. Я вижу, что это философский комментарий Абу Насра Фараби к содержанию книги Аристотеля «Метофизика». Я вернулся домой, чтобы прочитать это. Поскольку «Метофизика» заучивалась мною, мне тогда открылись цели этой книги, и я был этому очень рад».

Комментарии Ибн Сины к «Метофизике» Аристотеля были также прокомментированы журналом «Сино» в теме «Этические добродетели Ибн Сины».

В персидском переводе «Джафар» Ибн Сина утверждает, что «на следующий день я от радости отдал деньги нуждающимся».

В философских и медицинских трудах Ибн Сины можно найти комментарии к научной и творческой деятельности Сократа (469-399 годы), Платона (427-347 годы), Аристотеля (384-322 годы), Гиппократа (459-355 годы), Галена (129-200 годы) других мыслителей.

Будучи энциклопедистом, Ибн Сина занимался всеми областями науки. Из его более чем 450 работ до нас дошли 242. Из них 80 связаны с философией, теологией и мистицизмом, 43 - с медициной, 19 - с логикой, 26 - с психологией, 23 - с естествознанием, 7 - с естественными науками, 1 - с естествознанием, 1 связано с музыкой, 2 связано с химией, 9 связано с этикой, 4 посвящено литературе и 8 — переписке с другими учёными. Его главный и важный труд по философии, дошедший до нас, называется «Книга исцеления» («Китаб аш-шифа»). Книга, поднявшаяся до уровня энциклопедии, состоит из 4 частей.

1. Логика
2. Естественные науки
3. Математика
4. Теология

Некоторые его разделы изданы на западных и восточных языках.

Вторая книга по философии — «Книга спасения» («Китаб ан-наджот»), в которой разъясняется содержание «Китаб аш-шифа».

Последним крупным философским трудом является «Намеки и выговоры» («Аль-ишарат ва-т-танбихот»), в котором описаны основные вопросы философии. «Книга знаний» («Донишнома») издавалась на персидском и русском языках.

Кроме того, «Книга справедливости» («Китаб ул-инсаф») (20 томов); «Китаб лисан уль-араб» (на арабском языке (книга в 10 томах); «Рисала ат-Тайр» («Язык птицы»); «Саломон и Ибсол»; "Хаййи ибн Йакзан" (Живой, сын Бодрствующего), «Китаб аль-Ишарат»; «История Юсуфа»; «Поэма о медицине» («Урджуса фит-тиб») - медицинский эпос и др.

В заключение следует сказать, что независимость создала более широкую возможность изучения научного и философского наследия Ибн Сины. Его историческая заслуга в том, что он соединил опыт с наукой. Он изучил наследие великих ученых древности и заложил основы новых направлений науки. Хотя Ибн Сина твердо верил в теологию, он оставался одним из основателей конкретной светской науки.

Изучение наследия Ибн Сины остается важным этапом в понимании национальной идентичности.

В своих научно-философских трудах Ибн Сина уделял внимание также общественно-политическим, духовно-просветительским, просветительским вопросам.

Использованные источники:

1. Ф. Зикриллаев. «Мысли Беруни и Ибн Сины о некоторых физических явлениях». Сборник посвящен 1000-летию со дня рождения Беруни. Т., «Наука», 1973, 171 – с.
2. «Этические качества Ибн Сины» Журнал «Сино», 2003, выпуск 10, стр. 49.
3. Абу Али ибн Сина «Законы медицины». Трехтомная подборка. 1 том. Т., Издательство «Народное наследие». 1993, стр. 5.
4. А.А.Мадаминов. “Морально-нравственное формирование человека в трактатах учёных Фараби и Біруни”. Достижения науки и образования, 2018. №13. 48стр. https://scholar.google.com/citations?view_op=view_citation&hl=ru&user=_3waDc4AAAAJ&citation_for_view=_3waDc4AAAAJ:UeHWp8X0CEIC
5. Эргашев У. А. Гармонично развитое поколение-решающая сила развития Нового Узбекистана //Экономика и социум. – 2021. – №. 11-2 (90). – С. 730-732.

Эргашев У.А.
преподаватель
кафедры «Кафедра общественных наук и спорта»
Ферганский политехнический институт
г. Фергана, Республика Узбекистан

ИСПОЛЬЗОВАНИЕ ОБМЕНА ИНФОРМАЦИЕЙ В УСЛОВИЯХ ГЛОБАЛИЗАЦИИ

Аннотация: *В статье рассматривается процесс обмена информацией в эпохе глобализации, негативные и отрицательные стороны интернета.*
Ключевые слова: *глобализация, эпоха, информация, интернет, обмен информаций, «Всемирная паутина».*

Ergashev U.A.
Lecturer
of the Department of "Social Sciences and Sports"
the Fergana Polytechnic Institute, Fergana
Republic of Uzbekistan

USING INFORMATION EXCHANGE IN THE CONTEXT OF GLOBALIZATION

Abstract: *The article examines the process of information exchange in the era of globalization, the negative and negative sides of the Internet.*
Key words*: globalization, era, information, Internet, information exchange, World Wide Web.*

Сегодня в эпохе глобализации процесс обмена информацией стремительно проникает во все сферы общественной жизни. В результате, например, в 50-х годах 20 века на отправку почтой 30 страниц текста на 5.000 км. требовалось не менее 10 дней и 30 долларов, но с появлением факса в 80-х годах 20 века на пересылку этой информации уходило 1 час и 50 долларов. На сегодняшний день отправка этой информации занимает 3 секунды и около 2 центов!

Интернет, позже известный как «Всемирная паутина», т. е. World, WWide, WWWeb, в 1993 году насчитывал более 50 страниц, а к 2003 году их число превысило 50 миллионов. Сегодня более 200 стран подключены к Интернету. По оценкам, в середине 21 века к Интернету будут подключены более 900 миллионов компьютеров, что равно количеству телефонов в мире.

Однако в последнее время становятся очевидными негативные стороны Интернета. Прежде всего, это бесконтрольное распространение информации в Интернете. Во-вторых, замечено, что вся распространяемая информация не соответствует правилам этикета и нашему менталитету. В последние годы отчетливо виден рост отравляющей сознание человека информации - порнографической, агрессивной, воинственной, убийственной и клеветнической.

Глобализация — это возрастающая взаимозависимость развития всех наций и обществ.

Развитие информационных технологий не обходится без обязательного влияния на формирование личности, человеческого фактора. Если раньше человек всю жизнь жил в пределах определенной территории и использовал только ее возможности, то сегодня создание мобильных телефонов и появление Интернета привели к стремительному развитию мировой интеграции. В результате усилилась тенденция к объединению и созданию единой территории в информационном поле, часто используются такие выражения, как «мир без границ» и «гражданин мира». Процесс интеграции имеет положительное значение, поэтому необходимо уметь видеть и его отрицательную сторону. Дело в том, что процесс интеграции может вызвать у некоторых личностей чувство неуважения к стране, народу, языку и национальным традициям. Необходимо учитывать эту тенденцию в подготовке молодежи, в процессе образования. В условиях сегодняшнего информационного «взрыва», глобализации важно повысить эффективность духовно-просветительской работы.

Быстрое проникновение информационных и коммуникационных технологий в нашу жизнь готовит почву для развития нанотехнологий.

- «Можно ли использовать атомы как машины?» Концепция нанотехнологий, введенная в науку в 1974 году японским ученым Нарио Танигучи, поставившим этот вопрос, сегодня представляет интерес как для большинства развитых, так и для развивающихся стран. Поскольку научно-технический прогресс прогрессирует с каждым днем, главная цель этого – облегчить бремя человечества и повысить благосостояние людей.

Эффект от нанотехнологий, постепенно входящих в жизнь человечества в XXI веке, можно увидеть в том, что вновь открытая технология будет содержать не миллиард атомов, а десять, сто или тысячу атомов.

До сих пор создание гипотетического квантового компьютера лишило ученых покоя. В результате исследований на этом пути достигаются определенные достижения, в результате сегодня нам удается записать один бит информации в простой компьютер примерно сотней миллиардов атомов. В квантовом компьютере в этом процессе используется один атом. Кроме того, если в обычном компьютере комбинации записи информации ограничены, то комбинаций, которые можно записать в квантовом компьютере, несравнимо больше.

По некоторым оценкам, через 15-20 лет, а по некоторым предположениям, через 25-30 лет, квантовый компьютер станет популярным. Также ожидается, что нанокапсулы будут очень эффективны в медицине.

Различная информация, которая используется в глобальном масштабе, не затрагивает интересы государства. Естественно, что любая информация так или иначе проявит свое действие по своему содержанию, сути, уровню воздействия, полезна она или вредна для общества, побуждает ли она человека делать зло или добро.

Известно, что во многих случаях молодые люди интересуются некоторыми фильмами, видеороликами, рекламой, различными играми, противоречащими национальной морали, и у них имеется высокая склонность к поиску информации, связанной с вышеперечисленным. Под влиянием такой информации мы можем наблюдать случаи отклонения от цели, поставленной в сознании молодых людей.

Вредные игры могут привести к возникновению у молодых людей склонности к злу, насилию, угрозе жизни человека.

Длительное работа за компьютером больше нормы у молодых людей приводит к появлению у них болезни «компьютерная зависимость».

Необходимо целенаправленное и рациональное использование информационных технологий. С помощью образования, соседства, родителей и общественности контролируются нормы получения информации молодыми людьми, а современные СМИ служат дополнению и укреплению знаний, которые молодые люди получают в образовательных учреждениях. В противном случае информация становится оружием, негативно влияющим на психику, мировоззрение и знания молодежи.

Использованные источники:

1. Засурский Я.Н. Информационное общество и СМИ // Медиаскоп. 20.09.2006 г

2. Калужский *М. Л.* Система социальной глобализации // ЭКО: Всероссийский экономический журнал : журнал. - 2003. - № 4.

3. Глобализация // Экономический словарь / А. И. Архипов и др.; отв. ред. А. И. Архипов. - 2-е изд., перераб. и доп. - М.: Проспект, 2010.

4. А.А.Мадаминов. "Морально-нравственное формирование человека в трактатах учёных Фараби и Беруни". Достижения науки и образования, 2018. №13. 48стр. https://scholar.google.com/citations?view_op=view_citation&hl=ru&user=_3waDc4AAAAJ&citation_for_view=_3waDc4AAAAJ:UeHWp8X0CEIC

5. А.А.Мадаминов. Влияние СМИ на политическую культуру молодёжи. Вопросы науки и образования. 2018. 7 (19). https://scholar.google.com/citations?view_op=view_citation&hl=ru&user=_3waDc4AAAAJ&citation_for_view=_3waDc4AAAAJ:HoB7MX3m0LUC

6. А.А.Мадаминов. ACTUAL PROBLEMS OF YOUTH SOCIALIZATION IN THE CONTEXT OF GLOBALIZATION. Экономика и социум. 2019. №4(59). 62-64стр. https://www.iupr.ru/_files/ugd/b06fdc_0d8e3a360c514eab84f18bb092e3a7fb.pdf?index=true

7. Эргашев У. А. Гармонично развитое поколение-решающая сила развития Нового Узбекистана //Экономика и социум. – 2021. – №. 11-2 (90). – С. 730-732.

Эргашев Х.М.
старщий преподаватель
кафедра анестезиологии-реаниматологии
и скорой медицинский помощи
Андижанский государственный медицинский институт
Муминов Б.Э.
старший преподаватель
кафедра анестезиологии-реаниматологии
и скорой медицинский помощи
Андижанский государственный медицинский институт
Мухаммаджонов Н.Х., магистр
кафедра анестезиологии-реаниматологии
и скорой медицинский помощи
Андижанский государственный медицинский институт

МЕТОДЫ АНЕСТЕЗИИ ПОВТОРНОРОДЯЩИХ АНЕМИЧНЫХ ПЛОДОВ

Аннотация:_Анемия во время беременности, определяемая как уровень гемоглобина (Hb) < 10 г/дл, является качественным или количественный дефицит гемоглобина или эритроцитов в кровообращении, приводящий к снижению содержания кислорода (O2) – пропускная способность крови. Компенсаторные механизмы в виде увеличения сердечной выход (CO), PaO2, уровни 2,3-дифосфоглицерата, сдвиг вправо при диссоциации кислорода кривой (ODC), снижается вязкость крови и высвобождение почечного эритропоэтина, активируются различной степени для поддержания оксигенации тканей и компенсации снижения содержания O2 в артериях. Основными соображениями при анестезии являются минимизация факторов, мешающих доставке O2, предотвращение любое увеличение потребления кислорода и оптимизацию парциального давления O2 в артериальной крови. Разумно использовать как общую анестезию, так и регионарную анестезию. Мониторинг следует сосредоточить внимание главным образом на адекватности перфузии и оксигенации жизненно важных органов. Гипоксия, Гипервентиляция, гипотермия, ацидоз и другие состояния, смещающие ODC влево, должны быть избегал. Любое снижение уровня CO следует предотвращать и активно лечить._

Ключевые слова: _анемия, аспекты анестезии, компенсаторные механизмы, беременность._

Ergashev Kh.M.
senior lecturer
at the Department of Anesthesiology-Reanimatology
and Emergency Medical Care
Andijan State Medical Institute
Muminov B.E.
senior lecturer
at the Department of Anesthesiology-Reanimatology and Emergency Medical Care
Andijan State Medical Institute
Muhammadzhonov N.Kh.
Master
of the Department of Anesthesiology-Reanimatology
and Emergency Medical Care
Andijan State Medical Institute

METHODS OF ANESTHESIA FOR MULTIPARUS ANEMIC FETUS

Abstract:*Anemia during pregnancy, defined as a hemoglobin (Hb) level < 10 g/dL, is a qualitative or quantitative deficiency of hemoglobin or red blood cells in the circulation, resulting in a decrease in oxygen (O2) - the carrying capacity of the blood. Compensatory mechanisms such as increased cardiac output (CO), PaO2, 2,3-diphosphoglycerate levels, rightward shift in oxygen dissociation curve (ODC), blood viscosity decreases and renal erythropoietin release is activated to varying degrees to maintain tissue oxygenation and compensate for decreased arterial O2 content. The main considerations in anesthesia are to minimize factors interfering with O2 delivery, prevent any increase in oxygen consumption, and optimize the partial pressure of O2 in arterial blood. It is reasonable to use as a general anesthesia, and regional anesthesia. Monitoring should focus primarily on the adequacy of perfusion and oxygenation of vital organs. Hypoxia, hyperventilation, hypothermia, acidosis and other conditions that shift the ODC to the left should be avoided. Any decrease in CO levels should be prevented and treated aggressively.*

Key words: *anemia, aspects of anesthesia, compensatory mechanisms, pregnancy.*

ВВЕДЕНИЕ

По оценкам ВОЗ, распространенность заболевания составляет 65-75%. анемия у беременных женщин в Индии.[1,2] Почти половина глобальной материнской смертности из-за анемии происходит в странах Южной Азии, причем 80% из них составляют вклад Индии.

ОПРЕДЕЛЕНИЕ АНЕМИИ

Анемия – качественный или количественный дефицит Hb или эритроциты (RBC) в кровообращении, что приводит к снижение способности крови переносить кислород (O2) органы и ткани.[4] Анемия при беременности определяется при концентрации гемоглобина < 11 г/дл или гематокрите <0,33 в первом и третьем триместрах, а во втором триместре снижение на 0,5 г/дл корректируется с учетом увеличения в объеме плазмы и используется значение 10,5 г/дл.[5,6] Однако в Индии и большинстве других развивающихся стран В странах часто принимается нижний предел 10 г/дл.

КЛАССИФИКАЦИЯ АНЕМИИ

Анемию во время беременности можно классифицировать по этиология как

А. Физиологическая анемия беременности

Б. Приобретено:

а. Питание: дефицит железа, дефицит фолиевой кислоты, Дефицит В-12 и т. д.

б. Инфекции – малярия, нематоды и т. д.

в. Геморрагический – острая или хроническая кровопотеря.

д. Подавление функции костного мозга – апластическая анемия, наркотики и т. д.

е. Заболевания почек

С. Генетические – гемоглобинопатии – серповидноклеточная анемия, талассемия и т. д.

Анемию беременных также можно классифицировать как легкую. умеренная или тяжелая, ВОЗ классифицирует легкую анемию уровень гемоглобина 10,0-10,9 г/дл, умеренная анемия в виде 7–9,9 г/дл и < 7 г/дл при тяжелой анемии.

ФИЗИОЛОГИЧЕСКИЕ ГЕМАТОЛОГИЧЕСКИЕ ИЗМЕНЕНИЯ В БЕРЕМЕННОСТЬ, СВЯЗАННАЯ С АНЕМИЕЙ

Объем материнской крови начинает увеличиваться рано. 6-я неделя и продолжает расти на 45-50% до 34. недель беременности, возвращаясь к норме к 10-14 дней после родов.[9-13] Это адаптивное физиологическое гиперволемия помогает поддерживать кровяное давление в наличие снижения сосудистого тонуса[9,14,15], способствует обмен дыхательных газов у матери и плода, питательные вещества и метаболиты и защищает мать от гипотонии, уменьшая риски, связанные с кровотечением при родах.

Следовательно, увеличение объема плазмы превышает увеличение объема эритроцитов, что приводит к гемодилюции и последующая физиологическая анемия беременности, [9-14] со средним уровнем гемоглобина и гематокрита 11,6 г/дл и 35,5% соответственно. [21] Это означает снижение на 15%. от уровня до беременности. [9] Уменьшение количества крови вязкость из-за более низкого гематокрита снижает резистентность к кровотоку, как компенсаторный механизм. [10] Однако если концентрация гемоглобина падает < 10 г/дл, следует учитывать другие причины анемии.

ПАТОФИЗИОЛОГИЯ АНЕМИИ

Анестезиологические последствия анемии при беременности обусловлены неблагоприятными последствиями уменьшения количества тканей O2 доставки. Давайте кратко рассмотрим нормальные и компенсаторные механизмы доставки O2 при анемии.

Кислород переносится кровью в двух формах:

а. Физический раствор в плазме (растворенная форма)

б. Обратимое химическое соединение с гемоглобином (Оксигемоглобин)

Артериальная кровь содержит всего 0,3 мл O2 на каждые 100 мл крови на ПО2 из 100 мм рт.ст. и температура 37°C.[22] Это небольшое количество отражает напряжение O2 в кровь и действует как путь доставки O2 в Hb и для переноса O2 в ячейки.

Большая часть кислорода, переносимого кровью, находится в комбинации с Хб. Когда кровь покидает легкие, Hb обратимо связывается четырем молекулам O2, что соответствует 1,37-1,39 мл/г. Хб.

Следовательно, O2 содержание крови – это количество O2, содержащиеся в красной ячейке, добавлены к количеству растворенного в плазме, определяется как объем O2 в миллилитров содержится в 1 дл крови. Он рассчитывается из уравнение:

$$CaO2 = Hb \times 1.37 \times SaO2 + 0.0034 \times PaO2 \text{ mm Hg}$$

[а-артериальный образец; CaO2- содержание O2 в артериальной крови в мл/ дл крови, Hb-концентрация Hb в г/дл; 1,37 это объем О 2 в миллилитрах переносятся 1 г полностью насыщенный Hb; CaO 2-фракционное насыщение Hb, определяемое как отношение oxyHb к общему Hb, следовательно, SaO2 =HbO2 / (HbO2 + восстановленный Hb + methHb + COHb); 0,0034 являются коэффициенты растворимости O2 в плазме (мл O2/дл плазма в мм рт. ст.); Измерено давление PaO2-артериального O2 в мм рт.ст.]

Следовательно, O2 содержание крови, где PO2 равно 100 мм рт.ст., SaO2

Предоперационная оценка

Клиническая оценка должна быть сосредоточена на оценке причина, тип и тяжесть анемии, а также адекватность компенсаторные механизмы.[7,28]

а. Анамнез, указывающий на плохую тканевую перфузию, может проявляется утомляемостью, легкой утомляемостью в легкой форме. от анемии до одышки/одышки, сердцебиения, стенокардия при умеренной и тяжелой анемии.[7,28]

б. Признаки высокого уровня CO, такие как тахикардия, широкий пульс. необходимы шумы давления и систолического изгнания. для планирования режима анестезиологического обеспечения.

в. Расследование должно включать полное гемограмма, количество ретикулоцитов, мазки периферической крови и группа крови. Другие расследования включают в себя анализ кала и мочи, СОЭ, азот мочевины крови уровни, С. креатинин, уровни билирубина, С. Белки S. Железо, общая железосвязывающая способность, B12 и фолат. уровни гемоглобина, электрофорез и ЭКГ для выявления каких-либо доказательств ишемии миокарда и др.

Минимально приемлемый уровень гемоглобина и потребность в предоперационное переливание

«Минимально приемлемый уровень гемоглобина» не существуют.[29] Здоровый миокард компенсирует низкие уровни Hb или Hct (7-8 г/дл Hb или 21-24% Hct) для оптимизации доставки O2. У пациентов с явным или немые эпизоды ишемии миокарда (диабетическая роженице), уровень < 10 г/дл несет в себе риск декомпенсация.

Во многих руководствах рабочей группы рекомендуется, чтобы РБК переливание крови не должно быть продиктовано наличием одного уровня гемоглобина. "курок"; вместо этого оно должно основываться на состоянии пациента. потребности и риски развития осложнений неадекватная оксигенация.[31-34] Решение о проведении Переливание эритроцитов должно проводиться как в клинических, так и в клинических условиях. и гематологические основания. Переливание проводится редко. показан стабильным пациентам при уровне гемоглобина > 10 г/дл. и почти всегда показан при уровне < 6 г/дл.[32,33] Если уровень гемоглобина <7-8 г/дл во время родов или в послеродовом периоде. периоде решение о переливании должно быть принято на на информированной основе в соответствии с симптомами, сосуществующими заболевания, продолжающаяся кровопотеря или угроза кровотечения. Существует мало доказательств пользы переливание крови бессимптомным роженицам.

Выгоды от восполнения емкости O2 путем переливания всегда должно быть сбалансировано с риски, связанные с переливанием крови, такие как отек легких, подавление иммунитета и т. д.[35,36] В большом рандомизированном исследовании контролируемое исследование (РКИ), Эбер установил, что разницы в смертности между Ограничительные и либеральные стратегии переливания крови у несердечных пациентов в критическом состоянии, которые были в состоянии переносят более низкие уровни гемоглобина.[36,37] Рейлс и Линден[38] в исследовании указано, что поддержание более высокого Концентрация гемоглобина при переливании эритроцитов при попытке для увеличения тканевого O2 доставка не связана с клиническая польза, поскольку увеличение количества крови, связанное с переливанием крови вязкость может привести к уменьшению кровотока и начинающаяся сердечная недостаточность. А также процесс хранения влияет на способность эритроцитов транспортировать и доставлять O2 в ткани из-за снижения эритроцитов концентрации 2,3-ДПГ до 1 мкмоль/г Hb или менее при 21 день хранения.[27,39] Однако этот пункт остается в силе. спорный.

Если переливание необходимо в тяжелых случаях хронического анемии, лейкоредуцированные эритроциты назначают осторожно под строгий мониторинг имеет благотворный эффект.[38] Дальше необходимо провести исследование для оценки симптоматики стратегии переливания крови на стратегию, основанную на гемоглобине исход у рожениц из группы высокого риска.

Выбор анестезии

Выбор анестезии будет зависеть от тяжести и тип анемии, степень физиологической компенсации, сопутствующие заболевания, тип и характер

процедуры и ожидаемой кровопотери. Главный Вопросы анестезии при хронической анемии минимизировать факторы, мешающие доставке O2, предотвратить любое увеличение потребления O2 и оптимизировать парциальное давление O2 в артериальной крови. необходимо неукоснительно соблюдать следующие меры: периоперационный период, одновременно давая либо общий

Анестезия или регионарная анестезия:

А. Предотвращение гипоксии

а. Преоксигенация обязательна со 100% O2.

б. Кислородную добавку следует давать в пери- и послеоперационный период.

в. Поддержание проходимости дыхательных путей важно для предотвращения падение в FiO2 из-за обструкции дыхательных путей, тяжело интубация и т. д. Отсюда меры и опыт для обеспечения окончательного обеспечения проходимости дыхательных путей должны быть доступны немедленно.

д. Подходит метод спонтанной вентиляции легких. только для коротких процедур. Высокий FiO2 (40-50%) вводится для преодоления последствий гиповентиляция. Высокая концентрация летучих агенты угнетают как миокард, так и а также вентиляция, приводящая к нежелательному уменьшение O2 флюс.

е. Агрессивно лечите и избегайте состояний, которые увеличить O2 требования, такие как лихорадка, дрожь, острая массивная кровопотеря, приводящая к острой падение гемоглобина ниже 7 г/дл.

ф. Закись азота следует применять с осторожностью. пациентам с дефицитом фолиевой кислоты и витамина B-12.

Б. Свести к минимуму снижение уровня CO, вызванное приемом лекарств.

а. Внутривенная индукция анестезии должна быть медленно титруется, чтобы предотвратить резкое падение CO.

б. Тщательное позиционирование пациента для минимизации Сдвиги объема, связанные с положением.

в. Могут наблюдаться легкая тахикардия и широкий пульс. быть физиологичным и не следует путать с легкой анестезией

С. Факторы, ведущие к сдвигу ODC влево, должны быть выявлены. избегал а. Избегайте гипервентиляции, чтобы минимизировать респираторную алкалоз. Гипокапния также снижает уровень СО. Поддерживать нормокапнию.

б. Следует избегать переохлаждения:

I. Примите все меры для обеспечения нормального функционирования ядра температура тела

II. Внутривенные жидкости и продукты крови, если таковые имеются, должны быть согретый

D. Мониторинг должен быть направлен на оценку адекватность перфузии и оксигенации жизненно важных органы.[34] Он должен включать в себя рутинные мониторы, такие как ЭКГ, НИАД, EtCO2, контроль температуры, пульс оксиметрия, диурез и может включать ЦВД, инвазивный мониторинг артериального давления, ГК анализ и измерение смешанного венозного PvO2 при тяжелой анемии, сопровождающейся значительной кровопотерей. ожидаемо, как при предлежании или приращении плаценты и т. д. Серийные значения Hb и гематокрита могут помочь нам определить контролировать продолжающиеся кровопотери.

E. Регионарная анестезия предпочтительна при периферических операции на конечностях, поскольку они связаны со снижением потеря крови.

Ж. Центральные нейроаксиальные блокады могут быть разумно используется с использованием либо низкой дозы спинальной анестезии одновременно с адъювантами или прерывистым дозированием, постоянная эпидуральная анестезия. Это выгодно в обеспечении хорошей анальгезии, способности обеспечить дополнительный кислород и снижение кровопотери с стабильная гемодинамика. Однако центральный нейроаксиальный блоки таят в себе непосредственную опасность гипотония, гемодилюция и последующее сердцебиение недостаточность или отек легких при возвращении сосудистый тонус. Целесообразно применение сосудосуживающих средств. для поддержания артериального давления.[7,28] Регионарная анестезия. также может быть причастно к ухудшению Симптомы подострой дегенерации спинного мозга и, следовательно, его следует избегать у рожениц с явный витамин B 12 нарушений неврологического характера симптомы.

ЗАКЛЮЧЕНИЕ

Анестезиологические последствия анемии при беременности основаны на понимании нормального и компенсаторные механизмы, оптимизирующие ткани оксигенация. Основная цель – сохранить штраф. баланс между компенсаторными механизмами и адекватная оксигенация тканей у этих рожениц. Можно использовать как регионарную, так и общую анестезию. рассудительно. Мониторинг должен быть направлен на оценку

адекватность перфузии и оксигенации, а также масштаб текущих потерь. Пагубное воздействие хроническая тканевая гипоксемия с угрозой серьезного Кровопотери в периоперационном периоде должны быть предвидеть и лечить адекватно.

ИСПОЛЬЗОВАННЫЕ ИСТОЧНИКИ:

1. К. Калаивани. Распространенность и последствия анемии в беременность. Indian J Med Res 2009;130:627-33.
2. ДеМайер Э., Адиелс-Тегман М. Распространенность анемии в Мир. World Health Stat Q 1998;38:302-16.
3. Эззати М., Лопус А.Д., Догерс А., Вандер Х.С., Мюррей К. Избрано. основные факторы риска и глобальное и региональное бремя болезней. Ланцет 2002;360:1347-60.
4. Анемия [последний доступ: 20 июля 2010 г.].
5. Пищевые анемии. Отчет научной группы ВОЗ. ВОЗ Технический представитель Сер 1968; 405: 5-37
6. Центры по контролю заболеваний (CDC). Критерии CDC для анемии у дети и женщины детородного возраста. MMWR Морб Смертный Wkly Rep 1989;38:400-4.
7. Басу С.М. Анемия и беременность. В: Гупта С, редактор. Акушерский Анестезия. 1-е изд. Дели: Публикации Арья; 2004. с. 433-56.
8. Идову О.А., Мафиана К.Ф., Сотилойе Д. Анемия при беременности: А. опрос беременных женщин в Абеокуте, Нигерия. Наука о здоровье Африки 2005;5:295-9.
9. Гайзер Р. Физиологические изменения во время беременности. В: Каштан DH, Полли Л.С., Цен Л.К., Вонг К.А., редакторы. Акушерство Честната Анестезия. Принципы и практика. 4-е изд. США: Мосби Эльзевир; 2009. с. 21-3.
10. Бирнбах Д.Д., Браун ИМ. Анестезия в акушерстве. Вышел: Миллер Р.Д., Эрикссон Л.И., Флейшер Л.А., Винер-Крониш Дж.П., Янг В.Л.
11. Бернштейн И.М., Циглер В., Бэджер Г.Дж. Расширение объема плазмы на ранних сроках беременности. Акушер-гинекол 2001;97:669-72.
12. Лунд С.Дж., Донован Дж.К. Объем крови при беременности: Значение объемов плазмы и эритроцитов. Am J Обстет Гинекол 1967;98:394-403.

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Юлчиева С.Т.
ассистент
кафедра медицинской химии
Андижанский государственный медицинский институт

СОРБЦИОННО-ФОТОМЕТРИЧЕСКОЕ ОПРЕДЕЛЕНИЕ МЕДИ С ПОМОЩЬЮ 1-(5-МЕТИЛ-2-ПИРИДИЛАЗО)-5-ДИЭТИЛАМИНОФЕНОЛА

Аннотация. *Возможность избирательного извлечения элементов, хорошие кинетические характеристики сорбентов дают возможность применять комплексообразующие иммобилизованные реагенты на носителях для концентрирования элементов из растворов сложного состава, для извлечения из больших объемов.*

Ключевые слова: *аналитический реагент, 1-(5-метил-2-пиридилазо)-5-диэтиламинофенола, иммобилизация, сорбционная спектроскопия, сорбция, ионы меди (II).*

Yulchieva S.T.
Assistant
of the Department of Medical Chemistry
Andijan State Medical Institute

SORPTION-PHOTOMETRIC DETERMINATION OF COPPER USING 1-(5-METHYL-2-PYRIDYLAZO)-5-DIETHYLAMINOPHENOL

Abstract. *The possibility of selective extraction of elements, good kinetic characteristics of sorbents make it possible to use complexing immobilized reagents on carriers for concentrating elements from solutions of complex composition, for extraction from large volumes.*

Keywords: *analytical reagent, 1-(5-methyl-2-pyridylazo)-5-diethylaminophenol, immobilization, sorption spectroscopy, sorption, copper (II) ions.*

Введение. На рубеже XX и XXI веков человечество столкнулось с рядом глобальных экологических проблем, среди которых антропогенные изменения биосферы, истощение природных ресурсов, демографический взрыв, загрязнение окружающей среды. Один из распространенных видов загрязнения - поступление в различные среды тяжелых металлов (ТМ) - большой группы химических элементов с атомным весом более 50 (Hg, Pb, W, Sn, Cd, Mo, Cu, Co, Mn, Cr и др.). Тяжелые металлы, загрязняющие почву, могут поглощаться растениями и по пищевой цепи попадать в организмы животных и человека. Основные источники выбросов ТМ сконцентрированы в крупных промышленных городах. [1].

Современная ситуация характеризуется, с одной стороны, переходом на неэтилированные бензины, сокращением объемов выбросов имеющихся промышленных предприятий, с другой стороны, увеличением парка автомобилей, появлением новых производств (в том числе и по переработке бытовых и промышленных отходов). Все это не снимает с повестки дня проблем эмиссии тяжелых металлов [2].

Поэтому необходимость представления влияния тяжелых металлов как факторе экологической опасности, оценить воздействие этого фактора на экосистемы является важным. Список металлов, относящихся к классу особо токсичных, включает в себя As, Cd, Hg, Pb, Se, Sn, Zn. Известно, что в результате различных превращений данные химические элементы могут распределяться в атмосфере, гидросфере, литосфере Земли. Почва является одним из основных концентраторов ТМ в биосфере [3]. В настоящее время на первое место выходит сознательное управление биосферными функциями почвенного покрова. Почвенный покров - незаменимый компонент биосферы - совместно с растениями определяет ее устойчивое функционирование. Прогнозированию поведения тяжелых металлов в биосфере уделяется пристальное внимание. Установлены основные закономерности распределения металлов по поверхности, роль гумуса почвы как фиксатора ртути, свинца и других элементов. [4]

Попадая через органы дыхания и пищеварения в организм человека, тяжелые металлы (ТМ) аккумулируются в различных тканях с последующим токсическим воздействием на организм. Эти токсиканты в малых дозах оказывают неспецифическое воздействие, которое клинически идентифицировать сложно и не всегда представляется возможным. Информативным диагностическим показателем, при этом, является исследование и определение содержания ионов ТМ в биологических средах. Для проведения такого анализа необходим метод с высокой чувствительностью, селективностью и экспрессностью определений различных веществ в широком диапазоне их содержаний. Этим требованиям отвечает инверсионная вольтамперометрия (ИВ), в первую очередь в силу своей чувствительности, нижней границы определяемых концентраций ($С_н$) ($n \cdot 10^{-5}$ мг/дм^3), что значительно ниже уровня предельно допустимой концентрации (ПДК) для косметических средств и биологических объектов [5].

Свинец, кадмий, медь, никель, кобальт и цинк – микроэлементы, которые из-за высокой токсичности являются приоритетными ингредиентами. Их общетоксическое действие на организм заключается в конкуренции с ионами кальция, приводящей к нарушению кальциевого обмена и в последствии к повреждению и гибели клетки. Высокая биохимическая активность ТМ по отношению к сульфгидрильным, тиоловым, карбоксильным и другим активным группам белков и аминокислот, приводящая к образованию комплексов металл-белок может индуцировать аллергическую реакцию.

Помимо общего влияния на организм, каждый металл оказывает на него и специфическое воздействие (таб. 1).

Таблица 1

Результаты токсического действия ТМ на здоровье человека

Cd	Поражение центральной нервной системы, печени, почек, сердца, нарушение P-Ca обмена
Pb	Поражение центральной и периферийной нервной системы, сердечно-сосудистые заболевания
Cu	Витилиго, поражение слизистых оболочек
Zn	Возрастание количества при злокачественном перерождении
Co	Изменение функций щитовидной железы
Ni	Заболевание глаз, нарушение метаболизма клеток, поражение легочной ткани

Определение малых содержаний тяжёлых металлов (ТМ) в водах в ряде случаев затруднено из-за взаимного влияния металлов, присутствия органических лигандов и низких значений ПДК для определяемых элементов. Поэтому при их определении в водах часто требуется предварительное выделение и концентрирование.

Природные воды богаты гуминовыми (ГК) и фульвокислотами (ФК), которые образуют с металлами электронеактивные комплексные соединения, что приводит к увеличению систематической и случайной составляющих погрешности анализа. В связи с этим необходимо предварительное выделение металлов из комплексов, что осуществимо с помощью электрохимичекой пробоподготовки [6].

Для определения максимального значения СОЕ по меди проводили опыты при постепенном увеличении содержания меди. растворе путем повышения его обьема. В таблице 2 предтавлены значения СОЕ по меди при различных объемах раствора меди (П).

Из таблицы 2 и рисунка 1 видно, что значение СОЕ по меди увеличивается с увеличением объема стандартного раствора меди (II) и насыщается начиная с количества 50 мл стандартного раствора меди (II). Максимальное значение СОЕ по меди составляет 43,10.

Таблица 2

Зависимость сорбции меди (II) при раздичных объёмах исходного раствора (pH=5,20; T=100 мкг/см^3)

№	Навеска полимера, г	Общий объем, см^3	V, см^3	$A_{сред}$	C_{Cu}, мкг	C, мкг в растворе	СОЕ
1	0,1002	10	5	0,084	2,9	0,957	9,57
2	0,1002	10	5	0,040	1,4		
3	0,1002	20	5	0,0765	2,5	1,942	19,42

4	0,1002	20	5	0,0965	3,3		
5	0,1000	50	2	0,404	13,8	4,310	43,10
6	0,1001	50	2	0,400	13,7		
7	0,1000	100	2	0,402	13,6	4,310	43,10
8	0,1000	100	2	0,406	13,9		

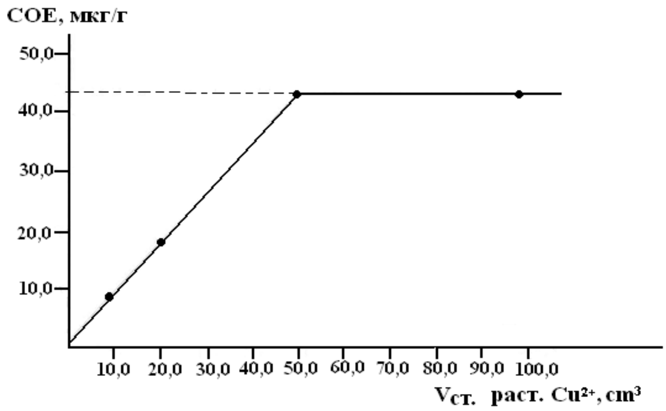

Рис.1. График зависимости сорбции меди от исходного раствора на 0,1001 г сорбента

Изучение десорбции меди (П) с полимера в статических условиях.

Одним из наиболее важных моментов при изучении сорбционных процессов является правильный выбор элюентов. В качестве элюентов для исследования десорбции меди были испытаны растворы азотной кислоты, гидроксиды натрия и аммиака различной концентрации. Время десорбции 24 часа.

Для проведения опытов использовали 0,05 М; 0,1 М; 0,5 М и I М растворы HNO_3; 0,5 М; I М; 2 М; 5 М; 10 М растворы NH_40H; 0,05 М; 0,1 М; 0,5 М; I М; 5 М; I 0 М растворы NaOH. Обьем приливаемых эллюентов был постоянен - 5 см^3.Концентрапию меди (II) в элюате определяли с помощью Pb(ДДТК)$_2$ в $CHCI_3$ во всем обьеме раствора, который предварительно переносили в колбу на 100 см^3 и доводили до метки водой.

Расхождение в результатах сорбции ионов меди (П) зависят от того, что поступила новая партия волокна, у которого значение СОЕ значительно ниже и равно в среднем 72 %.

Заключение. На основании полученных данных и, учитывая присутствие различных функциональных групп в сорбенте, можно предположить механизм сорбции ионов меди (П) на хелатном сорбенте. Ионы меди (II) координируются лигандными группами сорбента $-NH_2$, -COOH с молекулами растворителя (H_2O) из сферы иона комплексообразователя и сольватной оболочки лигагдной группы полимера. В сильнокислых и сильноосновных растворах, когда полимер имеет линейную структуру взаимодействие ионов меди с лигандами маловероятно. В слабо - кислой среде вследствие увеличения гибкости полимера идет образование хелатных комплексов ионов Cu (II) C-NH_2, -COOH групами.

Использованные источники:

1. Yulchieva S.T., Smanova Z.A. Sorption-spectroscopic possibilities of copper (II) ions using immobilized organic reagents// Композицион материаллар. 2021, №4 – 11 б. (02.00.02; №4)
2. Эрматова О.А., Йўлчиева С.Т., Гафурова Д.А., Сманова З.А. Разработка сорбционно-спектроскопического метода определения ионов свинца иммобилизованным сульфарсазеном // O'zbekiston kimyo jurnali. 2021- №4 - 79-б. (02.00.02; №6)
3. Йўлчиева С.Т., Эрматова О.А., Сманова З.А. Сорбционно- фотометрическое определение меди с помощью 1-(5-метил-2-пиридилазо)-5-диэтиламинофенола // O'zbekiston kimyo jurnali. 2021- №6- 67-б. (02.00.02; №6)
4. Юлчиева С.Т., Сманова З.А. Сорбционно-фотометрическое определение ионов меди (II) в объектах окружающей среды с новым иммобилированным реагентом // Фан ва технологиялар тараққиёти. Илмий - техникавий журнал №5/2021- 108-112 б. (02.00.02; №14)
5. Юлчиева С.Т., Сманова З.А. Иммобилизованные органические люминесцентные реагенты для определения некоторых тяжелых металлов// Развитие науки и технологий. Научно-технический журнал. 2021, №6. 46-50 б. (02.00.02; №14)
6. Юлчиева С.Т, Исакулов Ф.Б, Янгиева С.Б, Сманова З.А. Разработка сорбционно-спектрофотометрической методики определения ионов железа (III) // Universum: химия и биология: электрон. научн. журн. 2021. №11-Т.89. URL: https://7universum.com/ru/nature/archive/item/12488 55-бет (02.00.02; №2)

Юсупов А. А., доценти в.в.б., т.ф.б.ф.д, PhD
Ижтимоий фанлар ва спорт кафедраси
ФарПИ

ШАРҚ ВА ЖАДИД МУТАФАККИРЛАРИ МЕҲНАТ ТАРБИЯСИ ҲАҚИДА

Аннотация: *мақола шарқ мутафаккирларининг жамиятда меҳнат тарбиясига оид қарашларига ва бу қарашларнинг бугунги кун учун алоҳида аҳамияти масалаларига қаратилган*

Калит сўзлар*: Шарқ, жадид, мутафаккир, меҳнат тарбияси, Кайковус, Абу Наср Ал Фаробий, Абу Райҳон Беруний, Маҳмуд Қошғарий, Юсуф Хос Ҳожиб, Алишер Навоий, Абдурахмон Жомий*

Yusupov A. A. , Ph.D.,
associate professor
of the Department of Social Sciences and Sports
FarPI

EASTERN AND DJADID THINKERS ON LABOR EDUCATION

Annotation: *the article is focused on the views of eastern thinkers on labor education in society and the special importance of these views for today*

Key words*: East, contemporary, thinker, labor training, Kaikovus, Abu Nasr Al Farabi, Abu Rayhan Beruni, Mahmud Kashgari, Yusuf Khos Hajib, Alisher Navoi, Abdurakhman Jami*

Инсоният ҳаётида ўз ўрнига эга бўлган таълим-тарбия тарихига эътибор қилинса, дастлабки халқ оғзаки ижоди намуналаридан тортиб, буюк мутафаккирлар ижодигача ёшларни меҳнатсевар бўлиб етишиши, касб-ҳунар ўрганиши, меҳнат аҳлини ҳурмат қилиши ҳамда меҳнат инсонни улуғлаши масалаларига алоҳида эътибор берилганлигига гувоҳ бўламиз.

Маълумки, қадимдан шарқ халқлари дунёқарашларида фарзанд тарбиясига алоҳида эътибор қаратилиб, жамиятда яхши тарбия кўрган инсон ҳар тарафлама улуғланган, ўзи яшаган муҳитда унинг ҳаёт йўли бошқалар учун намуна сифатида эътироф этилиб, у шахсий ҳаёти давомида ўз меҳнатига яраша мартабага эришган. Ёшлик даврларидан бошлаб бундай тарбияни шахсан бошларидан кечирган кўплаб шарқ алломалари ўз даврида болага меҳнат тарбияси бериш ва касб-ҳунарга ўргатиш бўйича фикрларини баён этганлар.

Мақола шарқ мутафаккирларидан Кайковус, Абу Наср Ал Фаробий, Абу Райҳон Беруний, Маҳмуд Қошғарий, Юсуф Хос Ҳожиб, Алишер Навоий ва Абдурахмон Жомийларнинг асарларида фарзандларга меҳнат тарбияси бериш ва ҳунарли қилишга ўргатиш бўйича қарашларининг талқинига қаратилган.

Буни биз турли даврларда яратилган маърифий-ахлоқий асарлар ва халқ оғзаки ижоди намуналари – топишмоқ, қўшиқ, масал, мақол, эртак ва достонларни ўзлаштирганимизда меҳнат ва касб-ҳунар одоби ва қоидаларини ўзлаштириш муҳим ҳаётий зарурият эканлигига гувоҳ бўламиз.

Илк ёзма манба ҳисобланган «Авесто», Кайковуснинг «Қобуснома», Абу Наср Форобийнинг «Фозил одамлар шаҳри», Абу Райҳон Берунийнинг «Геодезия», «Минерология», Маҳмуд Қошғарийнинг «Девону луғатит турк», Юсуф Хос Ҳожибнинг «Қутадғу билиг» каби асарлари, Алишер Навоий ижодининг кўплаб жиҳатлари ва шу каби маърифий-мероснинг бошқа намуналарида меҳнатсеварлик, касб-ҳунарнинг аҳамияти ҳақида муҳим фикрлар баён этилган.

Форобийнинг ўз даври учун катта хизматларидан бири шундаки, у кишиларни илм-маърифатли бўлишга, ҳалол меҳнат қилишга ва касб-ҳунар эгаллашга чақириб, ислом мафкурасининг мутлоқ ҳукмронлиги шароитида инсон шахсининг ижодий ва бунёдкорлик кучини ва унинг камолатини, қадр-қимматини ғоят улуғлайди. Инсоннинг пайдо бўлиши ва унинг мавжудлиги, камолатига, илм-маърифатга ва касб-ҳунарга эришуви ҳеч қандай илоҳий куч томонидан белгиланмайди, балки инсон ўз тақдирини ақл ва меҳнати, яъни ижодкорлик қобилияти орқали ўзи яратади.

Форобий ўз ижтимоий вазифасини бажариши учун унга, биринчидан, кундалик ҳаётида одамлар билан мулоқатда бўлиш зарурлигини, иккинчидан, эса у меҳнат ва касб-ҳунар кўникмаларини ва ахлоқий фазилатларни эгаллаши лозимлигини таъкидлайди[106]. Форобий касб-ҳунар аҳлининг ахлоқий фазилатлари тўғрисида фикр юритар экан, касб-ҳунарни эгаллаш ва камолатга эришишга ўз ихтиёрича ҳавас билан интилган кишилар ҳақиқий фазилат эгалари ва ҳақиқий санъат эгаларидир, улар амалий иш билан шуғулланувчи, касб-ҳунарга берилган кишилардир дейди. Мутафаккир инсон фақат ўзининг эҳтиёжи бўлган ва ҳар бир киши ўзи ёқтирган касбни эгаллагандан сўнг ўзига топширилган ишга нисбатан юксак масъулиятни ҳис этиши ва ўз касб-ҳунарини мукаммал билмоғи, яхши тарбия олмоғи ва яхши хулқ-атвор, фазилатларга эга бўлмоғи керак деб таъкидлайди.

Юсуф Хос Ҳожибнинг «Қутадғу билиғ» асарида шаҳар ва қишлоқ халқини ижтимоий табақаларга ажратиб, деҳқонлар, ҳунармандлар, чорвадорлар, олимлар, табиблар ва бошқалар ҳақида сўзлаб, уларнинг жамият ҳаётидаги ўрнига алоҳида тўхталиб ўтади. Турли касблар, айниқса, деҳқончилик, ҳунармандчилик ва чорвачиликка оид фикрлар баён этилади. У деҳқон, ҳунарманд ва чорвадорларни жамиятнинг моддий бойликларини яратувчи кишилар сифатида таърифлайди. Масалан, аллома деҳқонлар ҳақида: ...Қалуғ тебранурка булардан асўғ, Тузук тэгир йэ ичимдан татўғ... (Ҳамма қимирлаган жонга булардан манфаат (бўлади), Ҳаммасига ейим (ва) ичимдан ҳаловат етади)[107], - деб, деҳқонлар меҳнатини улуғлаш билан бирга,

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[106] Ҳикматлар гулдастаси. Тошкент. Ғофур Ғулом номидаги Адабиёт санъат нашриёти, 1952 й. Б. – 53
[107] Юсуф Хос Ҳожиб. Қутадғу билиғ (Саодатга элтувчи билим) – Т., Фан, 1971. Б. – 659.

ҳунарманлар ҳақида ҳам «жуда зарур кишилардир ...темирчи, тикувчи, этикдўз, сувчи, эгарчи, тошчи, ўқчи, камончиларнинг фойдаси катта. Уларни санай бериб сўзим узайиб кетди. ...Бу дунёга улар яхшилик келтирадилар, Улар жуда кўп ажойиб нарсаларни ишлайдилар», - деб, ўзининг хайрихоҳлигини баён этади ва ҳукмрон доираларга меҳнаткашлар билан муносабатда бўлиш шартлари хусусида ўз тавсияларини баён қилади. Юсуф Хос Ҳожибнинг меҳнат аҳли ҳақидаги бу фикрлари, ҳақиқатан ҳам, уларга нисбатан ҳурмат ва эҳтиромни англатади. Юсуф Хос Ҳожибнинг меҳнат тарбиясига оид прогрессив қарашлари тарбиявий жиҳатдан диққатга сазовордир.

Ўрта асрларнинг йирик мутафаккири Алишер Навоийнинг меҳнаткаш инсонни улуғловчи, меҳнат тарбияси ҳақидаги фикрлари «Ҳайратул аброр», «Фарҳод ва Ширин», «Маҳбуб-ул қулуб» асарларида ҳам мавжуд. Алишер Навоий ҳақиқий инсон учун энг яхши фазилатлардан бири меҳнатсеварлик, деб кўрсатади. У «Ҳайратул аброр»нинг бешинчи мақолотида кишиларнинг саҳоватига кўз тикишдан кўра, ўз қўли билан ҳаёт кечириш улуғроқ ва олийжаноброқ эканлигини «Ҳотам Тойи»[108] ҳикоятида келтиради. Ҳотам Тойи бир куни қўй-қўзилар сўйдириб, халққа катта зиёфат беради. Сўнг бироз дам олиш учун далага чиқади. Унга елкасида ўтин кўтариб келаётган бир чол учрайди. Ҳотам Тойи унга «Даштда юриб бехабар қолгандирсан, ташла бу оғир юкни, Ҳотам уйига бориб зиёфатида иззат кўргил», - дейди. Шунда чол кулиб: «Эй, оёғига ҳирс банд солган, ғайрат водийсига қадам урмаган киши, сен ҳам бу тикан меҳнатини чеккин ва Ҳотамнинг миннатидан қутулгин», - деб жавоб қилади. Ҳотам Тойи чолнинг бу сўзларига тан беради ва ҳалол меҳнат билан кун кечириши унинг ҳимматидан баланд эканлигини англайди.

Алишер Навоий меҳнат инсонни гўзаллаштиришини, меҳнат туфайлигина инсон камол топиши мумкинлигини таъкидлайди. Шу мақсадда ўз асраларида кўплаб меҳнатсевар бадиий образларни яратади. Масалан, «Фарҳод ва Ширин» достонининг асосий қаҳрамони Фарҳод ана шундай қаҳрамонлар жумласидандир. Фарҳод Арманистон ўлкасига қадам қўйганда, ўз юртида ўрганган тош йўниш ҳунарини ишлатиб, оғир меҳнатдан эзилган халққа ёрдам беради. Ўз ҳунари, меҳнати туфайли бир томондан халқнинг оғир меҳнатини енгиллаштирган бўлса, иккинчи томондан севгилиси Шириннинг ҳурматига сазовор бўлади. Фарҳоднинг меҳнатсевар ва ижодкорлигидан илҳомланган Алишер Навоий ўз достонининг иккинчи номини «Меҳмоннома» деб атайди. Меҳнатга муҳаббат, ижодкорлик достоннинг марказий масалаларидан бири бўлиб ҳисобланади.

А. Навоий «Маҳбуб-ул қулуб» асарида эса турли ижтимоий гуруҳларнинг ҳаётдаги ўрнини белгилайди, фазилат ва нуқсонларини кўрсатади. Деҳқонлар тўғрисида фикр юритар экан, «Деҳқонки дона сочар, ерни ёрмоқ била ризқ йўлин очар. ...Олам маъмурлиғи алардин ва олам аҳли масрурлиғи алардин. Ҳар қаёнки, қилсалар ҳаракот, элга ҳам қут еткурур, ҳам

[108] Алишер Навоий. Хамса. –Тошкент, Ғ. Ғулом номидаги нашриёт, Б. – 70-71.

баракот»[109], - деб деҳқонларни, яъни, меҳнаткаш инсонни улуғлайди. Шу билан бирга шоир бу асарида текинхўрларни, ножўя иш тутувчи кишиларни, очкўз ва таъмагирларни, меҳнат қилмай ҳаёт кечирувчи шахсларни танқид қилади.

Буюк мутафаккир ва олим Абдурахмон Жомий ўз асарларида касб-ҳунар ва илм ўрганишга ёшликдан киришиб, ёшлик куч-ғайратини ана шунга сарф этиш кераклигини таъкидлайди.

Жомий билим ва касб-ҳунарни эгалламай, ўзининг насли насаби билан мақтаниб юрган ёшларни қаттиқ танқид қилади. Унинг фикрича, бундай ёшлар бирор ижобий фазилатга эга эмас, ҳосил бермайдиган мевасиз дарахтга ўхшайдилар, бундай одамларнинг жамиятга нафи тегмаслигини қуйидаги мисраларда келтиради: Қайси фарзанд фазлу ҳунарсиз бўлиб, Отадан лоф урса, одамдан йироқ. Мевали дарахтнинг мевасиз шохи, Ўтиндан бошқага ярамас мутлоқ[110]. Жомий касб-ҳунар эгаллашни ва у билан шуғулланишни ҳар қандай бойликдан афзал кўради, ёшларни касб-ҳунар эгаллашга даъват қилади ҳамда уни қуйидаги мисраларда ифодалайди: Одамнинг қиймати эмас симу зар, Одамнинг қиймати билѣм ва ҳунар. Шу ўринда касб-ҳунар ўрганишнинг инсон ҳаётида нақадар муҳим эканлиги тўғрисидаги фикрларни қуйидаги тўртлик орқали якунлашни мақсадга мувофиқ деб билдик: Ҳунар ўрган, чунки ҳунарда кўп сир, Ҳунарсиз кишининг аҳволи дилгир, Ҳунар эса сенга доимий ҳамроҳ, Ёпиқ эшикларни очар бирма-бир. Хулоса қилиб айтганда, шарқ мутафаккирларининг биз кўриб чиққан вакилларининг шеъриятида ҳам меҳнатга, илму-ҳунарга муҳаббат ва ижодкорлик ғоялари юксак маҳорат билан ифодаланади ҳамда инсонни ёшлик чоғиданоқ меҳнатга ва бирон-бир касб-ҳунарга ўргатишга катта эътибор қаратилади.

Юқорида шарқ мутафаккирларининг фарзанд тарбиясида мехнатнинг аҳамияти ҳақида юқорида қисқача билганларимизни баён этилди. Бугунги кунда ёшларни оилада маънан етук, жисмонан баркамол бўлиши учун, аввало, ўзимиз меҳнатсевар бўлишимиз, оиладаги катта ёшдаги инсонлар уларга ўрнак бўлмоғимиз лозим. Аввало ўзимиз маълум бир касб ёки хунар эгаси бўлишимиз зарур. Зеро, бирон бир хунарнинг эгаси булиш хам даромад келтиради, фарзандларнинг бўш вақтини тўғри ташкил этишда муҳим ахамиятга эга бўлади.

Шунингдек, уларнинг асраларида инсоннинг касбу-кори билан унинг ахлоқий хислатлари ўртасида чамбарчас алоқадорлик борлиги, ахлоқий онгнинг шаклланиши учун табиий соҳа бўлмиш меҳнат фаолиятининг роли ҳақидаги масалалар ҳам ғоят муҳим бир тарзда ва янгича ифодаланган.

Бу эса бугунги кун ёшларини, айниқса ўқувчи-талаба ёшларни меҳнатга тўғри муносабатда бўлиш ва бирор-бир касбни пухта эгаллашида муҳим аҳамият касб этади.

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[109] Алишер Навоий. Хамса. – Тошкент, Ғ.Ғулом номидаги нашриёт, 1977, Б. – 29-30.

[110] Абдураҳмон Жомий. Танланган асарлари, Ғофур Ғулом номидаги Адабиёт ва санъат нашриёти, Тошкент, 1971 й.

Фойдаланилган адабиётлар.

1. Алишер Навоий. Хамса. – Тошкент, Ғ. Ғулом номидаги нашриёт, 1977
2. Юсуф Хос Ҳожиб. Қутадғу билиғ (Саодатга элтувчи билим) – Тошкент, Фан, 1971.
3. Ҳикматлар гулдастаси. Тошкент. Ғофур Ғулом номидаги Адабиёт санъат нашриёти, 1952 й.
4. Абдураҳмон Жомий. Танланган асарлари, Ғофур Ғулом номидаги Адабиёт ва санъат нашриёти, Тошкент, 1971 й.
5. Шомуҳамедов Ш. Хазиналар жилоси, Тошкент, Ғофур Ғулом номидаги Адабиёт санъат нашриёти, 1981 й.
6. Ҳасанов С. Мутафаккирлар меҳнат тарбияси ҳақида Тошкент, Ўқитувчи, 1993й.,144 б.

Юсупов А.А., и.о. доцент, PhD
кафедра “Общественные науки и спорт”
ФерПИ

ИНФОРМАЦИОННЫЕ УГРОЗЫ В XXI ВЕКЕ И ВОПРОСЫ БОРЬБЫ С НИМИ

Аннотация: *Статья посвящена информационным угрозам современности. В течение последующих десятилетий стремительное проникновение современных информационных технологий в различные сферы нашей общественной жизни создало для всех нас ряд возможностей в плане расширения возможностей обмена информацией. Растущее использование компьютерной техники во всех сферах и использование Интернет-услуг входит в привычку, такие инструменты, как интернет-пространство, электронная почта, социальные сети и мобильные телефоны, занимают большое место в повседневной жизни людей, играют важную роль в улучшении повышение уровня жизни населения и решение проблем социально-экономического развития.*

Ключевые слова: *информационная угроза, информационные технологии, компьютерная техника, Интернет-услуги, Интернет-пространство, электронная почта, социальная сеть, мобильная связь, молодое поколение*

Yusupov A. A. , Ph.D.,
associate professor
of the Department of Social Sciences and Sports
FarPI

INFORMATION THREATS IN THE XXI CENTURY AND ISSUES OF FIGHTING THEM

Annotashion: *The article is devoted to information threats of our time. Over the following decades, the rapid penetration of modern information technologies into various areas of our public life has created a number of opportunities for all of us in terms of expanding the possibilities of sharing information. The growing use of computer technology in all areas and the use of Internet services is becoming a habit, tools such as the Internet, e-mail, social networks and mobile phones occupy a large place in people's daily lives, playing an important role in improving the standard of living of the population and solving problems of socio-economic development.*

Key words: *information threat, information technology, computer technology, Internet services, Internet space, e-mail, social network, mobile communications, young generation*

1. **Актуальность:** Современную жизнь сложно представить себе без глобальной сети Интернет. Именно Интернет стал местом встреч с друзьями и родственниками, возможностью пообщаться с близкими, находящимися далеко. Именно из сети мы узнаем последние новости, находим необходимую информацию, смотрим новинки киноиндустрии и даже прогноз погоды на неделю вперед узнаем, кликнув по одной единственной ссылке. С мобилизацией Интернета, он вошел и укрепился в нашей жизни еще больше; телефоны, планшетники и ноутбуки давно перестали быть роскошью, превратившись в необходимость.

2. **Методы исследования:** при освещении темы использован комплекс исторических методов, таких как объективность, историчность, историческая последовательность, основанный на систематическом анализе материалов.

3. **Результаты исследования:** Интернет – это уникальный сборник всего опыта и знаний человеческой цивилизации. Но не все так безоблачно. К сожалению, изначально задумавшийся как источник информации, общения, развлечения Интернет, перестал выполнять только эти функцию. Вместе с ростом глобализации информации растет и риск информационной угрозы. Каждый новый открытый сайт или загруженная страничка могут нести в себе негативную информацию, направленную на насилие и жестокость, античеловеческие идеи и пропагандирующие терроризм. Важно донести до современной молодежи, чего именно стоит опасаться, какие угрозы поджидают их на просторах глобальной сети и к каким последствиям это может привести.

Среди учащихся и студентов, а также их родителей необходимо проводить разъяснительные беседы, в которых особое внимание необходимо уделять тому, что именно информационная угроза является одной из главных угроз современного мира. Поговорка «Меньше знаешь, крепче спишь» ни в коем случае не должна мешать родителям в этом вопросе. Спросите любого первокласника, и он с легкостью ответит Вам, что такое социальная сеть и как в нее зайти. Родители в ряде случаев и вовсе не интересуются, какие интернет-сайты посещает их ребенок. А ведь социальные сети придумывали для совершеннолетних пользователей, ну или на крайний случай для пользователей, достигших подросткового возраста. Каждый хотя бы раз сталкивался с тем, что, переходя по ссылке, которая на первый взгляд выглядела как переход на развлекательный сайт, попадал на сайт с откровенным содержанием. А ведь такое может произойти и с ребенком в возрасте семи-десяти-пятнадцати лет! Какое представление о взрослой жизни тогда сформируется в сознание маленького человечка?

А компьютерные игры? Большинство браузерных игр – это «стрелялки», «войнушки» и «зомбигонялки», где игроки с легкостью отнимают жизни, ведут бои и совершают преступления. Неужели такие игры могут сформировать здоровую личность, а не агрессивного человека с неустойчивой психикой?

Но и это лишь капли в море. Главное – это распространившиеся по сети различные секты и субкультуры античеловеческого и вообще антижизненного характера. Браузеры закрывают их сотнями, а они снова появляются тысячами. Здесь важно отметить тот факт, что благодаря анонимности невозможно выявить истинный источник происхождения этих сайтов и форумов. Именно об этом задумалась общественность всего Мира. В связи с участившимися случаями антисемитических высказываний, а также высказываний, носящих античеловеческий характер, небезызвестную социальную сеть Twitter (французский филиал) обязали решением суда раскрыть имена анонимных пользователей, наложив на компанию денежный штраф. Будем следить за развитием ситуации. Но это лишь первый шаг, к сокращению информационных угроз. Впереди еще множество преград и не одно судебное решение.

Правительства многих стран разрабатывают законопроекты, которые вынудят пользователей при регистрации указывать свои реальные имена и фамилии, в целях сокращения информационного терроризма. Но приведут ли эти меры к желаемому?

На наш взгляд важно проводить среди молодежи беседы по формированию информационного иммунитета, о мерах защиты от информационных угроз и предупреждению распространения информационного терроризма.

Угрозы необязательно будут явными, чаще всего их искусно вуалируют под различные сообщества, после вступления в которые, с членами проводят разъяснительными беседы, направленные на подавление в них самостоятельной личности, внедрения своих идей и ценностей. Чтобы не допустить распространения информационных угроз следует обратить внимание и обязательно принимать следующие меры:

1. При поступлении на личные странички в социальных сетях различных сообщений, предлагающих вступить в ту или иную секту, поддержать движения, носящие террористический характер или прочего негативного содержания, в срочном порядке сообщить об этом на специально-созданные сайты.
2. Ни в коем случае не попадать под влияние других личностей, не распространять негативную информацию. Разрабатывают и распространяют такую информацию личности хорошо подготовленные, натренированные в вопросах психологии и человеческого сознания.
3. Не указывать на сомнительных сайтах свои личные данные (паспортные данные, адрес, домашний телефон, ПИН-коды банковских карт и пр.). Злоумышленники могут использовать их в преступных целях, и незаметно для себя Вы можете превратиться в должника или обзавестись ненужным имуществом, которое до Вас вряд ли дойдет, а накопления с банковского счета спишутся.

4. Проводить беседы с младшим поколением. Тщательно следите за тем какие сайты посещают Ваши братья-сестры, а также друзья. Если Вы заметили, что кто-либо из Ваших друзей-знакомых попал под чье-либо отрицательное влияние, постарайтесь поговорить с ним, или же сообщите компетентному в этом вопросе взрослому.

5. Не переходить по ссылкам, не вызывающим доверия (особенно относится к подросткам), не покупать товары в сомнительных интернет-магазинах и следить за тем, чтобы в случае выявления мошенничества их деятельность была прекращена.

6. Воспринимать информационную угрозу как настоящее, как то, что может коснуться каждого, не думать, что это никогда не коснётся Вас или Ваших близких. Сегодня стоит быть готовым и к таким угрозам и знать, как от них уберечься и какие меры предпринять.

Чтобы не допустить распространения информационных угроз, нужно:

1. Создание инициативных групп, отслеживающих информационные угрозы на уровне государственного органа.

2. Увеличение количества полезных, информационно чистых сайтов, направленных на развитие человека как личности.

3. Пресечение любых попыток создания групп и сообществ античеловеческого и террористического характера. Ограничение доступа на сайты с откровенным содержанием лицам, не достигшим совершеннолетия. Причем возраст должен быть проверяемым, а не условным.

4. Заключение. Важно понимать, что владелец информации имеет право на ее защиту, и знать, что для этого доступны все средства — технические, психологические и организационные. И важно противопоставить комплексную систему защиты информации тем сотрудникам, которые, прикрываясь разговорами о нарушении конституционного права на невмешательство в личную жизнь, пытаются использовать данные им во исполнение служебных обязанностей ресурсы в собственных неблаговидных целях. Перефразируя классика новейшей истории, в заключение резюмируем: «Только тот бизнес чего-либо стоит, который умеет защищаться».

Использованные источники:

1. Ўзбекистон Республикаси Президенти Шавкат Мирзиёевнинг Олий Мажлисга Мурожаатномаси. // Халқ сўзи. 2020 йил 30 декабрь.
2. Конституция Республики Узбекистан. Т., 2023 г.
3. Юсупов А. А. Приоритетные направления развития малого предпринимательства в Узбекистане на современном этапе //Достижения науки и образования. – 2018. – №. 18 (40). – С. 23-24.
4. Баркамол авлод орзуси. - Тошкент: Шарқ, 1998.
5. Солижанова Г.Ф. Туркистонда ўқитиш-маърифатчилик ўчоқлари уларнинг ижтимоий аҳамияти (XX аср охири - XX аср бошлари). Тарих фанлари номзоди... дисс. - Тошкент, 1998.
6. Долимов У. Эски мактаб//Тафаккур.-Тошкент, 2010.--№1.

7. Yusupov, A. (2022). Social-Economic and Administrative-Territorial Changes in the City of Kokand (Late 19th - Early 20th Century). Central Asian Journal of Social Sciences and History, 3(10), 60-68.
8. Yusupov, A. The role of the Fergana region in trade and economic relations of the Turkestan General-Governorate with Eastern Turkestan in the second half of XIX – early XX centuries. Journal of Positive School Psychology. 2022, Vol. 6, No. 5, 2934-2938 http://journalppw.com
9. Yusupov, A. Socio-economic changes in the city of Kokand (late 19th century and early 20th century). The American Journal of Management and Economics Innovations 3 (09), 14-20
10. Yusupov, A. (2021). Kokand's Silk Industry History in the Late 19th and Early 20th Centuries. Glance into the Past, SI-2.
11. Юсупов А. Социально-экономические и административно-территориальные изменения в городе Коканде (конец XIX-начало XX веков). Central Asian Journal of social sciences and history 2022, 3 (10), 60-68. https://cajssh.centralasianstudies.org/index.php/cajssh/article/view/459
12. Yusupov, A. A. (2023). Trade and Economic Relations of the Turkestan Governorate with Kashgar (Late 19th - Early 20th Centuries). Scientific Tatarstan, 4, 5-11.
13. Yusupov, A. (2023). Protection of the Young Generation from Information Threats and the Formation of Ideological Immunity. Periodica Journal of Modern Philosophy, Social Sciences and Humanities, 24, 39–41. Retrieved from https://www.periodica.org/index.php/journal/article/view/668
14. Yusupov, A. A., Saidmuradov, N. (2023). Trade and Economic Relations of Turkestan with Eastern Turkestan. International Scientific and Technical Conference Materials on the Topic "Role of Modern Information Technologies in the Development of Science and Technology." Fergana, 110-114.
15. Юсупов А. Торгово-экономические связи Туркестанского края с Китаем во второй половине XIX–начале XX вв (на примере Ферганской области). Scientific journal of the Fergana state university, №5/2021, 106-110

Юсупов А. А., доценти в.в.б., т.ф.б.ф.д, PhD
Ижтимоий фанлар ва спорт кафедраси
ФарПИ

ФАРҒОНА ВОДИЙСИ ТОЖИКЛАРИГА ОИД МУЛОҲАЗАЛАР

Аннотация: *Мақолада бугунги Ўзбекистон аҳолисининг катта қисмини ташкил этувчи халқ – тожиклар тўғрисида маълумотлар берилган. Бу халқ вакилларининг Фарғона водийсига келиб жойлашиши, хусусан уларнинг маҳаллий туркийзабон элат ва халқлар билан асрлар давомида қўшилиб, ассимиляциялашуви ва улар жойлашган аҳоли пунктлари тўғрисида мулоҳаза юритилган.*
Калит сўзлар: *Ўзбекистон, аҳоли, халқ, тожиклар, Фарғона водийси, маҳаллий, туркийзабон элат, ассимиляция, аҳоли пункти.*

Yusupov A. A. , Ph.D.,
associate professor
of the Department of Social Sciences and Sports
FarPI

DISCUSSIONS ABOUT TAJIKS IN FERGHANA VALLEY

Annotation: *The article provides information about the Tajik people, who make up the majority of the population of Uzbekistan today. The settlement of the representatives of this people in the Fergana valley, in particular, their integration and assimilation with the local Turkic-speaking peoples and peoples over the centuries, and the settlements where they are located, are discussed.*
Keywords: *Uzbekistan, population, people, Tajiks, Fergana Valley, local, Turkic-speaking population, assimilation, settlement.*

Фарғона водийси тожиклар асрлар давомида яшаб келаётган ҳудуд ҳисобланади. Тожик ҳалқининг этнологияси ва этник тарихи билан шуғулланган тадқиқотчилар, хусусан, XIX аср охири ва XX асрнинг бошларига оид илмий тадқиқотларда ҳамда этнографик-этнологик кузатувларида тожикларни, шу жумладан Фарғона водийси тожикларини иккита асосий гуруҳга – воҳа тожиклари ва тоғлик тожикларга бўлиб ўрганган [1, – С.397]. Бундай илмий ёндашув ҳозирги замон этнологиясида ҳам сақланиб қолганлиги билан аҳамиятли бўлиб, тожикларни шу тариқа туркумлаштириш сақланиб қолган [2, – С.59].

Фарғона водийсининг воҳа тожиклари деганда бу ерда қадимдан яшаб келаётган, туркий халқлар билан ассимилияция бўлмаган, миллий ўзлигини ва тилини сақлаб қолган тожик аҳолиси назарда тутилади. Турли даврларда Самарқанд, Буҳоро, Тошкент, Ўратепа томонлардан Фарғонага кўчиб келиб, шу ерда ўрнашиб қолган тожиклар ҳам воҳа тожиклари ҳисобланган. Воҳа тожикларининг кундалик турмушларида бу даврда асосан деҳқончилик, хунармандчилик ва савдо билан машғул бўлиш устун бўлиб, улар ўз қўшнилари бўлмиш туркий халқлар, биринчи галда ўзбеклар билан яқин этномаданий алоқада бўлганлиги ҳам диққатга моликдир. Натижада Фарғонада воҳа тожиклари ва ўзбекларнинг турмуш тарзи, моддий ва маънавий маданиятлари тобора яқинлашиб, бир бири томонидан эришилган маиший ва ижтимоий ҳаётдаги ютуқларини ўзаро ўзлаштириш кенг тус олган.

Тоғли тожиклар деб аталган гуруҳга ҳозирги Тожикистон Республикасининг тоғли худудларидан (Қоратегин, Мастчоҳ, Дарвоз, Кўлоб, Помир ва бошқалар) Фарғонага келиб, бу ерда муҳим тарзда яшаб қолган ёки мавсумий ишлаш учун келган тожиклар кирган [3, – С.8]. Тоғлик тожиклар асрлар давомида ўз тарихий ватанларидаги тоғли водий ва дараларда бошқа этнослардан ажралган ҳолатда яшаганлиги сабабли туркий элатлар билан озроқ алоқада бўлганлар, шунинг учун ҳам моддий ва маънавий маданият соҳасида ўзларига хос бўлган миллий ҳусусиятларни кўпроқ сақлаб қолган эдилар.

Фарғона водийсида тожикларнинг бу икки гуруҳи ўртасида уларни ўзаро яқинлаштирувчи қатор умумий белгилар билан бирга, уларни бир биридан фарқлантирувчи маълум тафовутлар хам мавжуд бўлиб, бу хусусиятлар жумладан, уларнинг антропологик кўринишларида, шевалари, турмуш тарзи ва маданий-маиший ҳаётида талай фарқлари билан характерланади.

XIX асрнинг охири ва XX асрнинг бошларида тожиклар Туркистон генерал-губернаторлиги таркибига кирган Фарғона вилоятининг деярли барча шаҳар ва уездларида истиқомат қилар эди. Улар айрим ҳудудларда аҳолининг аксарият кўпчилигини ташкил этса, бошқа жойларда ўзбеклар ва қирғизлар билан деярли тенг микдорда, яна бошқа аҳоли пунктларида этник камчилик бўлиб яшар эдилар. Бу ҳол ўша даврда яшаб ўтган тадқиқотларда хамда статистик маълумотларда ўз аксини топган. Жумладан, А. Шишов 1910 йилда чоп этилган “Таджики: этнографическое и антропологическое исследование” номли асарида қуйидагиларни ёзади: “...Фарғона вилояти Наманган уездининг тоғли қисмида сарт қишлоқлари ва кўчманчи қирғизларнинг масканлари орасида тожик қишлоқлари мавжуд. Наманган уездидаги тожик қишлоқлари орасида ўзининг қадимийлиги билан ажралиб турувчи Ахси ва Косон қишлоқлари эътиборни тортади. Фарғонанинг ўзида тожиклар барча шаҳарларда ёйилган бўлиб, бу ерда улар сартлар ва бошқа халқлар билан бирга истиқомат қиладилар. Уларнинг энг кўпчилиги ва нисбатан соф сақланган типи Фарғона водийсининг жанубида, Қўқон ва Марғилон уездларининг тоғли воҳаларида яшамоқдалар”.

Ўрганилаётган даврда воҳа тожиклари кўпроқ Фарғона водийсининг ғарбий (Хўжанд, Конибодом), жанубий (Риштон, Сўх, Учқўрғон) марказий (Чуст Косонсой) ва шимоли ғарбий (Ашт, Чодак) қисмида истиқомат қилганлар. Тадқиқотларда қайд этилишича, ўша даврда Хўжанд шаҳри ва унинг атрофларида аҳолини 85 %ни Бободарҳон волостида 76,5, Ашт волостида 61,5 Исфара волостида 81,6, Конибодомда 63 фоизни тожиклар ташкил этган [4, – С. 37, 43-46].

Шунингдек Риштон, Чодак, Косон, Чуст, Сўх, Учқўрғон сингари йирик аҳоли пунктлари аҳолисининг аксарияти воҳа тожикларидан иборат эди. Тоғлик тожиклар эса кўпроқ водийнинг шарқий қисмида жойлашган эдилар. 1923 йилги маълумотларда ўша даврда Фарғона вилоятининг 120 дан ортиқ аҳоли пунктида тожиклар аксарият кўпчиликни ташкил этилганлиги қайд этилган [5, – С. 5-96].

Статистик манбаларда воҳа тожиклари ва тоғлик тожиклар алоҳида алоҳида ҳисобга олинмаганлиги сабабли, бу икки гуруҳнинг этноҳудудий жойлашуви тўғрисида расмий маълумотлар йўқ. Лекин ўша даврдаги империя шарқшунос тадқиқотчилари бу масалага маълум даражада эътибор берганлар. Уларнинг келтирган маълумотлари ҳамда дала тадқиқотлари давомида қўлга киритган материалларимиз асосида биз имкон қадар шу масалага ойдинлик киритишга ҳаракат қилдик. Ушбу манбалар асосида тузилган қуйидаги жадвалдан XIX асрнинг охири - XX асрнинг бошларида Фарғона водийсида воҳа тожикларининг этноҳудудий жойланиши ҳақида маълумотлар олиш мумкин.

Фарғона водийсида воҳа тожиклари аҳолининг аксариятини ташкил этган яшаш пунктлари*

№	Уезд		Волость	Ахоли пунктлари номлари
1.	Фарғона*		Учқўрғон	Юқори Учқўрғон
			Чимён	Бўрболиқ
2.	Қўқон		Исфара	Ворух, Кулкент, Навгилем, Шўртан,Зумрашо, Найман, Су Чорқишлоқ, Баланд, Зархон, Пирд Мачай, Чорку, Карбон, Лакон, Чи Қалачамозоршар, Машрафа, Исс
			Конибодом	Конибодом
			Кенагас	Мамачол (Тожиквақф)
			Қудаш	Давлатботир, Ражабгарди, Худоё
			Махрам	Махрам,Қароқчиқум, Мирходи водокачкаси
			Риштон	Қалайнав, Юқори Риштон, Пат Риштон, Қашқариён, Хуррамоб
			Сўх***	Малбут, Катта Мигна, Равон Сариканда, Янгиариқ, Ғазнов, Қа Тул, Чунғара, Лембур, Демурс Пидиргон, Мулгони Боло, Мулг Поён, Тошмозор, Обикор, Чумо
			Яйпан	Вокух, Рапқон, Янгиқўрғон
3.	Наманга		Ашт	Оқжар, Ашти боло, Ашти Поё Жарбулоқ, Гудас, Пнук
			Бободархо	Бештол, Жўға, Ертўла, Қамишқў Кўққурук, Ровот, Урмонтол, Др

				Қорамозор, Қулихожа, Мулломи Понғози Боло, Бободархон
			Варзик	Варзик, Варзикон, Қорасув, Оқс Ровот, Қуйи Косон, Юқори Кос Исфайрин, Шаванд, Хитойсо
			Капа	Шамсикўл
			Тергаучи**	Тошжар, Қуқумбой
			Чуст*****	Садача, Чуст
			Чодак	Қуйи Чодак, Юқори Чодак

Бу аҳоли пунктларида яшаган тожиклар туб жойли аҳоли бўлиб, ота-боболари хам асрлар давомида шу ерларда умргузаронлик қилганлар. Биз дала тадқиқотлари давомида бунга яна бир карра амин бўлдик. Жадвалда кўрсатиб ўтилган аҳоли пунктларида воҳа тожиклари вакиллари билан қилган суҳбатларимиз чоғида кўпчиликка битта савол билан мурожаат қилдик: “Сизларнинг ота-боболаринг бу қишлоққа қаердан келиб қолганлар?” Айрим респондентлар (улар жуда озчилик бўлиб, тахминан 6 фоизни ташкил этади) аждодлари Самарқанд, Тошкент, Хўжанд томонларда ёки узоқ-яқиндаги қишлоқлардан келганлигини қайд этдилар. Бундан келиб чиқиб, хақиқатдан хам Фарғона водийсидаги воҳа тожикларининг аксарияти шу ернинг туб жойли аҳолисидир, деган ҳулоса чиқариш мумкин.

XIX асрнинг охири ва XX асрнинг бошларида Самарқанд, Бухоро, Тошкент, Фориш, Ўратепа томонлардан Фарғонага келиб, шу ерда муҳим яшаб қолган тожикларнинг авлодлари билан суҳбат қилганимизда, улар одатда ота-боболари қаердан келганлигини билишларига гувоҳ бўлинди ҳамда авлоддан авлодга ўтиб аҳолининг катта ёшдагилари хотирасида яхши сақланган деб хулоса қилиш мумкин.

Уларнинг айримлари ҳозир ҳам тарихий ватанларидаги қариндошлари билан яқин алоқа қилиб туришларини маълум қилдилар. Бундай тожикларнинг кўпчилиги шаҳарларда истиқомат қиладилар. Биз Фарғона шахрида олиб борган тадқиқотларимиз давомида Самарқанд, Бухоро, Хўжанд, Ашт, Конибодом, ва бошқа жойлардан келиб қолган тожикларнинг авлодлари билан мулоқотда бўлдик. Эътиборга лойиқ факт шундан иборат бўлдики, кўчиб келганларнинг биринчи-иккинчи авлодлари ўзларини “самарқандий” (“самарқандлик”) “бухорий” (“бухоролик”), “хўчандй, (“хўжандлик”) ва ҳоказо деб аталган бўлсалар, уларнинг авлодлари ҳозирги кунда ўзини бундай ном билан атамайди ёки бунга уларда хеч кандай эхтиёж сезилмайда. Бундан келиб чиқиб, воха тожикларининг бу гуруҳи Фарғона водийси муҳитига мослашиб, бу ернинг ахолиси билан интеграциялашиб кетганлар, деб айтиш мумкин.

Воха тожиклари ўзлари яшаб юрган ёки келиб чиққан жойларига қараб, локал гуруҳларга бўлинганлар. Бу гуруҳлар одатда улар яшаган шаҳар ёки йирикроқ қишлоқнинг номи билан аталган. Шу тарица, воҳа тожиклари риштоний (риштонлик), сўхий (сўхлик), чустий (чустлик), косоний (косонлик), конибодомий (конибодомлик), исфарагий (исфаралик), учқўрғоний (учқўрғонлик), варзикий (варзиклик), аштий (аштлик), чодакий (чодаклик) ва бошқа гуруҳларга бўлинган. Хар бир локал гуруҳ ўз шеваси ва айрим урф-одатлари билан бир-биридан маълум даражада фарқланиб турган.

Юқорида кўрсатиб ўтилган локал гуруҳлар ўз навбатида яна кичикроқ гуруҳчаларга бўлинади. Масалан, бошқа жойларга борганда барча Сўх водийси тожиклари ўзларини сўхий (сўхлик) деган умумий ном билан атаганлар. Аммо Сўхнинг ўзида эса яшаб турган қишлоқларига қараб ўзларини "ровоний", "пидиргоний", "ленбурй", қалъагй" ва ҳ.к.о. деб атаганлар ва ҳозир ҳам шундай деб атайдилар.

Хулоса ўрнида таъкидлаш лозимки, XIX асрнинг охири ва XX асрнинг бошларида Фарғона водийсида яшаган воҳа тожиклари ва тоғлик тожиклар ўртасида консолидация жараёнлари рўй берди. Уларнинг ҳўжалик ҳаёти, турмуш тарзи ва урф-одатлари тобора яқинлашиб борди.

Айни вақтда тоғликлар ва улар билан қўшни бўлиб яшаган ўзбеклар, қирғизлар ва қипчоқлар ўртасида ҳар томонлама этномаданий алоқалар ривожланди. Натижада водий ҳалқларининг моддий ва маънавий маданиятида тобора кўпроқ умумийлик ва ўхшашлик кўзга ташлана бошлади.

ФОЙДАЛАНИЛГАН МАНБА ВА АДАБИЁТЛАР РЎЙХАТИ

1. Шишов А. Таджики: Этнографическое и антропологическое исследование. Часть I. Этнография. Ташкент, 1910 С. 43; Миддендороф А.Ф. Очерки Ферганской долины. Спб, 1872.С. 397.
2. Губаева С.С. Население Ферганской долины в конце XIX – начале XX в. Этнокультурные процессы. Т., 1991. С. 59.
3. Шишов А. Указ соч. С.8.
4. Турсунов Н.О Сложение и пути развития Таджикистана и сельского населения Северного Таджикистана XIX-начала X X в Душанбе, 1976. С. 37, 43-46.
5. Список населенных мест Ферганской области. М., 1923. С. 5-96
6. Зияева Д. Туркистон миллий озодлик ҳаракатида зиёлиларнинг ўрни // Марказий Осиё XX аср бошида:ислоҳотлар, янгиланиш, тараққиёт ва мустақиллик учун кураш (Жадидчилик, мухториятчилик, истиқлолчилик). Халқаро конференция материаллари. – Тошкент:Маънавият, 2001.
7. Эрназаров Т.Э., Акбаров А.И. История печати Туркестана (1870-1925). – Т.Ўқитувчи, 1976.
8. Миллий матбуотимизнинг икки дурдонаси. "Садои Туркистон" ва "Садои Фарғона" газеталарининг ўзбек халқини эрк ва ҳуррият, миллий бирлик ва тарққиёт ғоялари руҳида тарбиялашдаги ўрни ва аҳамияти" мавзуидаги Республика илмий-амалий анжумани материаллари. 2015 йил, 27 май. Т., 2015.
9. Yusupov A. Socio-Economic Changes In The City Of Kokand (Late 19th Century And Early 20th Century) //The American Journal of Management and Economics Innovations. – 2021. – Т. 3. – №. 09. – С. 14-20.

10. Юсупов А. А. Туркистон иқтисодий ҳаётида маҳаллий сармоядорлаР //Academic research in educational sciences. – 2021. – Т. 2. – №. 1. – С. 32-43.
11. Юсупов А. А. Приоритетные направления развития малого предпринимательства в Узбекистане на современном этапе //Достижения науки и образования. – 2018. – №. 18 (40). – С. 23-24.

Юсупова М.У.
старший преподаватель
кафедра «Узбекский язык и социальные дисциплины» Ургенчского филиала Тошкентский университет информационных технологий

ОСНОВНЫЕ ФАКТОРЫ ВЛИЯЮЩИЕ НА ДИНАМИКУ РАЗВИТИЯ ТУРИСТИЧЕСКИХ УСЛУГ В УЗБЕКИСТАНЕ

Аннотация: *в данной статье изучается развитие туристической инфраструктуры в Узбекистане. А также, идёт речь о создании специальных экономических зон для туризма, предоставление налоговых льгот и упрощение процедур для инвесторов способствуют притоку капитала в отрасль. Это приводит к появлению новых отелей, ресторанов, развлекательных комплексов и других объектов, необходимых для комфортного пребывания туристов.*
Ключевые слова: *туризм, маркетинговые стратегии, инфраструктура, государственная политика, туристические ресурсы, ключевые факторы, иностранные гости.*

Yusupova M.U.
Senior lecturer
at the department of “Uzbek language and social disciplines” of the Urgench branch of the Toshkent University of Information Technologies

THE MAIN FACTORS INFLUENCING THE DYNAMICS OF DEVELOPMENT OF TOURISM SERVICES IN UZBEKISTAN

Abstract: *This article studies the development of tourism infrastructure in Uzbekistan. And also, we are talking about creating special economic zones for tourism, providing tax incentives and simplifying procedures for investors will contribute to the influx of capital into the industry. This leads to the emergence of new hotels, restaurants, entertainment complexes and other facilities necessary for a comfortable stay for tourists.*
Keywords: *tourism, marketing strategies, infrastructure, public policy, tourism resources, key factors, foreign guests.*

Узбекистан, страна с богатым культурным наследием и уникальными природными ресурсами, активно развивает свою туристическую отрасль. Динамика этого развития зависит от ряда ключевых факторов, включая государственную политику, инфраструктуру, культурное наследие, экономическую ситуацию, маркетинговые стратегии, международные отношения, сезонность, человеческие ресурсы и инновации в сфере туризма.

Каждый из этих факторов играет важную роль в формировании туристического потенциала страны и определяет темпы роста отрасли.

Государственная политика Узбекистана в сфере туризма играет ключевую роль в развитии отрасли. За последние годы правительство страны предприняло ряд важных шагов для стимулирования роста туристического сектора. Одним из наиболее значимых изменений стало введение безвизового режима для граждан многих стран, что существенно упростило процесс посещения Узбекистана [1].

Кроме того, были приняты законы, направленные на защиту прав туристов и регулирование деятельности туристических компаний. Эти законодательные инициативы создали более благоприятную среду для развития туризма, повысив уровень доверия иностранных гостей и инвесторов.

Развитие туристической инфраструктуры. Рисунок-1.

1. ***Безвизовый режим*** Введение безвизового режима для граждан более 80 стран значительно увеличило поток туристов.	*2.* ***Защита прав туристов*** Новые законы обеспечивают лучшую защиту прав и интересов туристов во время их пребывания в стране.
3. ***Регулирование туристического бизнеса*** Законодательство устанавливает четкие правила для туристических компаний, повышая качество предоставляемых услуг.	*4.* ***Налоговые льготы*** Введены налоговые льготы для инвесторов в туристическую инфраструктуру, стимулирующие развитие отрасли.

Инфраструктура является одним из ключевых факторов, влияющих на развитие туризма в Узбекистане. В последние годы страна активно инвестирует в модернизацию и расширение транспортной сети, строительство новых отелей и реконструкцию существующих объектов размещения. Особое внимание уделяется развитию аэропортов и железнодорожного сообщения, что значительно улучшает доступность туристических достопримечательностей [2].

Важным аспектом развития инфраструктуры является также создание современных туристических информационных центров, установка указателей на иностранных языках и развитие сети общественного питания, ориентированной на туристов. Все эти меры направлены на повышение комфорта и удобства путешествий по Узбекистану.

Культурное наследие и его сохранение - Узбекистан обладает богатейшим культурным наследием, которое является одним из главных факторов привлечения туристов. Древние города Самарканд, Бухара и Хива, входящие в список Всемирного наследия ЮНЕСКО, привлекают миллионы посетителей ежегодно. Сохранение и реставрация исторических памятников является приоритетной задачей для развития туризма в стране [2].

Программы по развитию туризма. Рисунок-2.

Программы по развитию туризма			
Объекты ЮНЕСКО	Реставрационные работы	Нематериальное наследие	Экономическая ситуация и инвестиции
Самарканд, Бухара, Хива и другие исторические города привлекают туристов со всего мира своей уникальной архитектурой и атмосферой древности.	Активно ведутся работы по восстановлению и сохранению исторических памятников, что повышает их привлекательность для туристов.	Традиционные ремесла, музыка и кухня Узбекистана являются важными факторами привлечения туристов, интересующихся аутентичной культурой.	Экономическая ситуация в Узбекистане оказывает значительное влияние на развитие туристической отрасли.

Правительство Узбекистана реализует масштабные программы по реставрации архитектурных памятников, музеев и других объектов культурного наследия. Особое внимание уделяется сохранению нематериального культурного наследия, такого как традиционные ремесла, музыка и кухня, которые также представляют большой интерес для туристов.

В последние годы страна демонстрирует стабильный экономический рост, что позволяет увеличивать инвестиции в туристический сектор.

Правительство активно привлекает как внутренние, так и иностранные инвестиции для развития туристической инфраструктуры и сервисов.

Создание специальных экономических зон для туризма, предоставление налоговых льгот и упрощение процедур для инвесторов способствуют притоку капитала в отрасль. Это приводит к появлению новых отелей, ресторанов, развлекательных комплексов и других объектов, необходимых для комфортного пребывания туристов.

2016 год - Начало реализации программы по либерализации экономики, включая туристический сектор.

2018 год - Создание первой специальной туристической зоны "Чарвак" для привлечения инвестиций в развитие горного туризма.

2020 год - Запуск программы субсидирования процентных ставок по кредитам для инвесторов в туристическую инфраструктуру.

2023 год - Увеличение государственных инвестиций в развитие транспортной инфраструктуры для улучшения доступности туристических объектов.

Маркетинг и продвижение туристического потенциала - Эффективный маркетинг играет ключевую роль в развитии туризма в Узбекистане. В последние годы страна значительно усилила свои маркетинговые стратегии, направленные на продвижение туристического потенциала на международном рынке. Государственный комитет по развитию туризма активно участвует в международных туристических выставках, организует рекламные кампании в зарубежных СМИ и социальных сетях.

Особое внимание уделяется цифровому маркетингу. Создан официальный туристический портал Узбекистана, предоставляющий подробную информацию для путешественников на нескольких языках. Активно развиваются партнерства с международными туроператорами и онлайн-платформами для бронирования, что позволяет расширить присутствие Узбекистана на глобальном туристическом рынке [4].

Международные отношения и геополитическая ситуация - Международные отношения и геополитическая ситуация оказывают существенное влияние на развитие туризма в Узбекистане. Улучшение дипломатических отношений со странами-соседями и ведущими мировыми державами способствует увеличению туристического потока. В последние годы Узбекистан значительно расширил сотрудничество в сфере туризма с Россией, Китаем, странами Европейского Союза и Ближнего Востока [5].

Важным фактором является также стабильность в регионе Центральной Азии. Улучшение отношений с соседними странами, такими как Таджикистан и Кыргызстан, открыло новые возможности для развития трансграничного туризма. Кроме того, Узбекистан активно участвует в международных инициативах по развитию туризма, таких как проект "Великий шелковый путь", что способствует повышению его привлекательности для иностранных туристов.

Факторы влияющие на динамику развития туризма. Рисунок-3 [6]**.**

Сезонность и климатические условия играют важную роль в динамике развития туристических услуг в Узбекистане. Страна характеризуется континентальным климатом с жарким летом и прохладной зимой, что влияет на туристические потоки в течение года. Традиционно пик туристического сезона приходится на весну (апрель-май) и осень (сентябрь-ноябрь), когда погодные условия наиболее благоприятны для экскурсий и путешествий.

Для преодоления сезонности туристическая отрасль Узбекистана развивает различные виды туризма, актуальные в разные сезоны. Например, летом популярностью пользуется экотуризм в горных районах, где прохладнее. Зимой развивается горнолыжный туризм. Кроме того, проводится работа по адаптации туристической инфраструктуры к различным погодным условиям, что позволяет сделать отдых комфортным в любое время года.

Сезонность и климатические условия. Рисунок – 4.

Сезон	Особенности	Популярные виды туризма
Весна	Мягкая погода, цветение	Культурно-познавательный, экскурсионный
Лето	Жаркая погода	Экотуризм, горный туризм
Осень	Приятная прохлада, сбор урожая	Культурно-познавательный, гастрономический

Зима	Прохладная погода, снег в горах	Горнолыжный туризм, фестивальный туризм

Инновации и цифровизация становятся все более важными факторами в развитии туристической отрасли Узбекистана. Внедрение современных технологий позволяет повысить качество обслуживания туристов, улучшить доступность информации и упростить процесс планирования путешествий. В последние годы в стране активно развиваются онлайн-платформы для бронирования отелей и экскурсий, создаются мобильные приложения с аудиогидами и виртуальными турами по достопримечательностям [3].

Особое внимание уделяется развитию "умных" туристических городов, где внедряются технологии для улучшения навигации, обеспечения безопасности и предоставления информации туристам. Использование больших данных и искусственного интеллекта помогает анализировать предпочтения туристов и персонализировать предложения. Все эти инновации способствуют повышению конкурентоспособности Узбекистана на международном туристическом рынке.

Использованные источники:

1. Постановление Президента Республики Узбекистан от 30.04.2022 № PQ-232 «О дополнительных мерах, связанных с диверсификацией услуг внутреннего туризма». https://lex.uz/docs/5991928

2. Abowd GD, Atkeson CG, Hong J, Long S, Kooper R, Pinkerton M (1997) Cyberguide: a mobile context-aware tour guide. Wireless Networks 3, 5, pp 421–433

3. Хуррамов О.К. Цифровой туризм. Учебник. Бухара: «Садриддин Салим Бухари» Дурдона, 2021. С. 16.

4. Каюмович К. О. и др. Направления совершенствования цифрового туризма и туристической информационной структуры в Узбекистане //Журнал критических обзоров. - 2020. - Т. 7. – нет. 5. - С. 366-369.

5. Хуррамов О.К. Перспективы развития цифрового туризма в Узбекистане. Научно-практический журнал "Сервис". Выпуск 2 за 2020 год. Б. 34-39

O'rmonov A.A.
ассистент
Андижон Давлат Тиббиёт институти

ZANJABILNING SHIFOBAXSH XUSUSIYATLARI

Annotatsiya: *Ushbu maqolada zanjabilning shifobaxsh hususiyatlari va bazi qasalliklarni zanjabil yordamida davolash bo'yicha tavsiyalar keltirilgan.*
Kalit so'zlar *: zanjabil, ekstrakt, makro va mikroelement, yalliglanish, olein, linolen, kofein* .

Urmanov A.A.
Assistant
Andijan state medical institute

MEDICINAL PROPERTIES OF GINGER

Annotation: *This article presents the medicinal properties of ginger and recommendations for treating certain diseases with ginger.*
Keywords: *ginger, extract, macro- and microelements, anti-inflammatory properties, olein, linolenic acid, caffeine.*

Zanjabil ko'pgina davlatlar qatori O'zbekistonda ham o'sib hasil beradigan asosiysi juda ko'p kasalliklarga shifo bo'luvchi dorivor o'simlikdir. Bu o'simlik insoniyatga qadimdan ma'lum bo'lgan va insonlar to'gridan-to'gti oziq-ovqatga solib istemol qilishgan. Chunki ovqatga solinganda ham ishtaxani ochuvchi ziravordur. Zanjabilnini asosan ildizidan foydalaniladi. Zanjabil ildizidan tayyorlangan ekstrakt davolameydigan qasallik kam uchreydi.Ayniqsa shamollash va yalliglanish qasalliklarida juda samaralidir. Zanjabilning davolovchi hususiyatlari albatta uning tarkibida uchreydigan hilma-hil vitaminlar va mineral moddalarga bog'liq. Uning tarkibida A, E , PP, C vitaminlari, B guruh vitaminlari , organik kislotalardan olein, linolen, kofein va boshqalar, o`rni bosilmaydigan muhim aminokislotalar leytsin, fenilalanin, treoninlar uchreydi.Undan tashqari zanjabil tarkibida makro va mikroelementlar natriy, kaliy, magniy, ruh, kremniy, temir, kalsiy, marganets, fosfor kabi elementlar uchreydi. Zanjabil ekstrakti asal bilan qo'llanilsa butun kun mobaynidagi energiya, kuchli immunitet va yaxshi xotiraga ega bo'lishga yordam beradi. Hazm qilish organlari faoliyatini me`yorlashtirishda, oshqozon va ichak bezovtaligi hamda ovqat hazm qilish buzilishlarida tavsiya etiladi.Oshqozon va ichak yo'llari kasallikarida zanjabil bilan qilingan parhez samaralidir.

Ishchan xolatga keltiruvchi moxitto. Stakanga bir qoshiq asal,ozroq limon,yangi uzulgan yalpiz barglari va tabga ko'ra zanjabil ekstraktidan solinadi.

Erkaklik quvvatin oshiruvchi malxam. 200 – 300 gram maydalangan zanjabil ildizi, bir dona katta limon va 150 gram toza asal olinib avval zanjabil bilan limon (po'sti bilan) blendirda aralashtiriladi keyin asal qo'shiladi.Olingan malxamni shisha idishga solib muzlatgichda saqlanadi.Bir kunda ikki maxal bir choy qoshiqdan istemol qilinsa bo'ladi. Sababi malxamda konsentrasiya yuqori.

Xotirani yaxshilaydigan aralashma. Yangi olinga zanjabil ildizpoyasini 1:1 nisbatta asal bilan istemol qilishingiz mumkin.Bu xotirani kuchaytirishda smarali foyda beradi.

ADABIYOTLAR

1. Асқаров И.Р. "Табобат қомуси" //Тошкент. –2019. – "Мумтоз сўз".
2. Асқаров И.Р. "Сирли табобат" Тошкент "Фан ва технологиялар нашриёт-матба уйи" 2021й.

УДК 616.69-008.6

Pardayeva M.N.
Assistent
Tashkent Medical Academy
Berdimurodov B.P.
Assistant
Tashkent Medical Academy

EFFECTS OF LIRAGLUTIDE ON MALE REPRODUCTIVE TISSUE: A REVIEW OF CURRENT EVIDENCE

Abstract: *Liraglutide, a GLP-1 receptor agonist, is widely prescribed for the management of type 2 diabetes and obesity. However, its effects on male reproductive health, particularly on reproductive tissues, are not well understood. This review explores the current research on liraglutide's impact on male reproductive organs, including the testes, prostate, and sperm function. We examine potential mechanisms of action, such as hormonal regulation, oxidative stress modulation, and metabolic improvements. Evidence suggests liraglutide may influence male reproductive function through multiple pathways, yet further research is needed to elucidate its clinical implications for male fertility and reproductive health.*

Keywords: *Liraglutide, GLP-1 receptor agonist, male reproductive health, testosterone, sperm quality, metabolic syndrome, obesity, diabetes, oxidative stress*

Introduction: Liraglutide, a GLP-1 receptor agonist, has become a cornerstone in the management of type 2 diabetes and obesity. It improves insulin sensitivity, reduces blood glucose, and promotes weight loss, leading to better metabolic control in patients with diabetes. While liraglutide's effects on glucose metabolism and weight loss are well-documented, its influence on male reproductive health has received limited attention. Given the growing prevalence of diabetes and obesity among men of reproductive age, understanding the impact of liraglutide on male fertility and reproductive tissues is critical.

The male reproductive system is sensitive to hormonal imbalances, oxidative stress, and metabolic dysfunction. As liraglutide affects these processes, there is a need to explore how it may alter reproductive tissue function. This article reviews the mechanisms through which liraglutide may influence male reproductive organs, focusing on the testes, epididymis, prostate, and sperm quality. By synthesizing current data from animal models and human studies, we aim to provide a comprehensive understanding of liraglutide's effects on male reproductive health.

Mechanisms of Action

*GLP-1 Receptor Signaling in Reproductive Tissues*** GLP-1 receptors are not only present in pancreatic tissues but also in other organs, including the brain, heart, kidneys, and reproductive tissues. In the testes, for example, GLP-1 receptor expression has been confirmed, suggesting a potential role for GLP-1 signaling in male reproductive function. Activation of the GLP-1 receptor may influence various signaling pathways, including those involved in hormone secretion, inflammation, and cellular metabolism, all of which are critical for maintaining healthy sperm production and male reproductive tissue function.

GLP-1 receptor activation has been shown to enhance insulin secretion and insulin sensitivity, which could indirectly affect reproductive hormone levels. Insulin resistance, often present in obesity and type 2 diabetes, has been linked to decreased testosterone levels, altered sperm production, and poor semen quality. By improving insulin sensitivity, liraglutide could help restore normal hormonal balance and improve reproductive health.

Impact on the Hypothalamic-Pituitary-Gonadal (HPG) Axis. The hypothalamic-pituitary-gonadal axis plays a critical role in regulating male reproductive function. LH (luteinizing hormone) stimulates testosterone production in the testes, while FSH (follicle-stimulating hormone) promotes spermatogenesis. Both hormones are regulated by gonadotropin-releasing hormone (GnRH) from the hypothalamus. Studies suggest that liraglutide may influence the release of GnRH and, subsequently, LH and FSH. This effect could either enhance or suppress testosterone production and spermatogenesis, depending on the metabolic context (e.g., diabetic or obese states).

Oxidative Stress and Inflammation. Oxidative stress plays a major role in male infertility, as excessive free radicals can damage sperm DNA, reduce motility, and impair overall sperm quality. Liraglutide’s antioxidant properties have been well-documented in the context of its anti-inflammatory effects. In animal models, liraglutide administration has been shown to reduce markers of oxidative stress in various tissues, including the liver and kidneys. A reduction in oxidative stress could similarly benefit male reproductive tissues by protecting sperm from damage and improving overall sperm function.

Metabolic Improvements and Lipid Regulation. Obesity and metabolic syndrome are closely associated with impaired fertility in men. Excess visceral fat, insulin resistance, and elevated leptin levels have all been linked to lower testosterone levels and poorer sperm quality. Liraglutide’s ability to promote weight loss and improve metabolic health could lead to improved reproductive outcomes. By reducing adiposity, enhancing lipid metabolism, and increasing insulin sensitivity, liraglutide may reverse some of the metabolic disturbances that negatively affect sperm production and male fertility.

Effects on Male Reproductive Organs

Testicular Function and Spermatogenesis. The testes are central to male reproductive health, as they are responsible for both hormone production (primarily testosterone) and spermatogenesis. Several animal studies have investigated the impact of liraglutide on testicular function. One study demonstrated that liraglutide treatment in diabetic rats improved testicular testosterone levels and sperm motility, suggesting that liraglutide might have a protective effect on spermatogenesis.

Sperm Quality. Sperm quality is a key indicator of male fertility. Parameters such as sperm count, motility, and morphology are commonly assessed in fertility evaluations. While animal studies have shown potential improvements in sperm motility following liraglutide treatment, human data are still limited. Preliminary studies in humans suggest that liraglutide may improve sperm motility, likely due to its ability to reduce oxidative stress and improve metabolic function. However, comprehensive clinical trials are required to fully assess the impact of liraglutide on sperm quality in diabetic and obese men.

Prostate Health. The prostate gland plays a crucial role in male fertility by producing seminal fluid. Liraglutide's effects on prostate health are not well-studied, though it is possible that the drug may influence prostate size, function, or the composition of seminal fluid. As liraglutide impacts insulin and lipid metabolism, it could modulate factors such as insulin-like growth factors (IGFs) and sex hormone binding globulin (SHBG), which in turn affect prostate health. Future studies should investigate whether liraglutide has any significant impact on prostate size or secretory activity.

Clinical Implications: given liraglutide's growing use in the treatment of obesity and diabetes, understanding its effects on male reproductive health is crucial. Men of reproductive age who are using liraglutide may benefit from regular monitoring of hormonal levels, including testosterone, LH, and FSH, to ensure that the drug is not interfering with reproductive function. For men with infertility concerns, a detailed analysis of sperm parameters could help assess the impact of liraglutide on fertility.

Future Directions: although preliminary evidence suggests potential positive effects of liraglutide on male reproductive tissues, further research is required. Longitudinal studies in human populations are needed to assess the long-term effects of liraglutide on sperm quality, testicular function, and reproductive hormone levels. Additionally, randomized controlled trials (RCTs) should evaluate the impact of liraglutide specifically in male patients with obesity, metabolic syndrome, or type 2 diabetes, conditions in which reproductive health is often compromised.

Conclusion: liraglutide represents a promising therapeutic option for managing obesity and type 2 diabetes, both of which are known to adversely affect male reproductive health. While early data suggest that liraglutide may improve metabolic function, reduce oxidative stress, and restore hormonal balance, more research is needed to fully understand its impact on male fertility. Given its widespread use, it is important to continue investigating liraglutide's effects on male reproductive tissues, with the aim of optimizing therapeutic strategies and minimizing any potential risks to reproductive health.

References:

1. Baggio, L. L., & Drucker, D. J. (2007). "Mechanisms of action of glucagon-like peptide 1 in diabetes." *Diabetes Care*, 30(5), 1237-1247.
2. Klingenspor, M., & Walter, M. (2013). "Effects of GLP-1 receptor activation on metabolism and obesity." *Molecular Metabolism*, 2(4), 175-184.

3. Zhang, L., & Zhang, X. (2020). "Liraglutide protects against metabolic disorders and improves fertility in diet-induced obese mice." *Journal of Endocrinology*, 244(1), 47-58.
4. Rahmouni, K., & Clegg, D. J. (2015). "GLP-1 receptor activation in the brain and its implications for diabetes and obesity." *Nature Reviews Endocrinology*, 11(4), 180-191.
5. Cai, H., & Liu, X. (2018). "Liraglutide improves sperm quality and reproductive health in obese diabetic male rats." *Biological Reproduction*, 98(6), 789-799.
6. Song, J. M., & Zhai, Y. J. (2020). "Liraglutide administration attenuates oxidative stress and improves sperm quality in diabetic male rats." *Molecular Reproduction and Development*, 87(4), 403-411.
7. Bucher, H. C., & Hengartner, M. (2017). "Effect of GLP-1 receptor agonists on male sexual function and fertility: A systematic review." *Andrology*, 5(6), 1077-1085.

Voxidova Z.T., candidate of medical sciences
Stajor-assistant
Department of Operative Surgery and Topographic Anatomy
Samarkand State Medical University

COMPLEXITY OF ALZHEIMER'S DISEASE: INTRODUCTION AND ITS PATHOPHYSIOLOGY

Abstract: *Alzheimer's disease (AD), which is typified by gradual cognitive loss and neurodegeneration, continues to be a major global health concern. In the pathophysiology of AD, tau neurofibrillary tangles and amyloid-beta (Aβ) plaques gradually build up in the brain as a result of the complex interaction of hereditary, environmental, and lifestyle variables. Furthermore, lifestyle therapies have demonstrated promise in lowering the risk of dementia and cognitive decline. These include dietary changes, cognitive stimulation, and physical exercise. To enable early intervention and improve patient care, an accurate and prompt diagnosis of AD is crucial. Recent developments in biomarker research, such as neuroimaging methods and cerebrospinal fluid (CSF) markers, allow for more accurate illness progression tracking and diagnostic classification. highlights the complex nature of AD and new developments in the field.*

Keywords:*Alzheimer's disease, Amyloid-βplaques, diagnostic techniques, neurofibrillary tau tangles****,*** *therapeutic modalities.*

Introduction

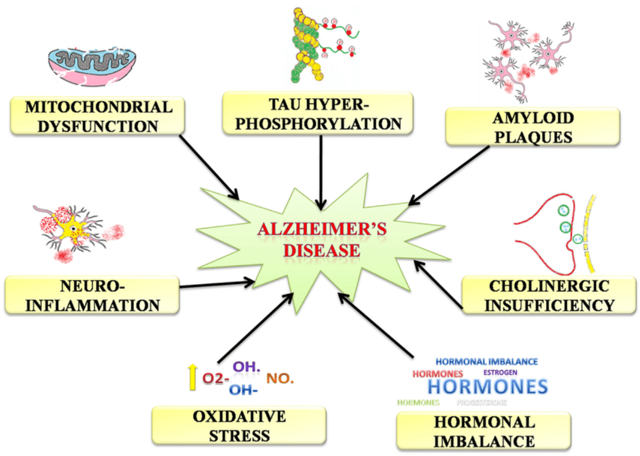
A neurological disorder that deteriorates over time, Alzheimer's disease (AD) is characterized by cognitive decline, memory loss, and functional impairment [1]. In elderly people, it is the most common cause of dementia, accounting for 60–70% of cases worldwide. Since Dr. Alois Alzheimer initially brought up Alzheimer's disease (AD) in 1906, it has grown to be a significant global health issue that impacts millions of individuals and their families [2]. Approximately 35.6 million cases of dementia were reported worldwide in 2010; according to a 2013 World Health Organization (WHO) assessment, this number is expected to quadruple by 2050 [3]. As people age, the prevalence of dementia increases to 25% to 50%, and the incidence affects between 5% to 8% of people over 65. The aggregation of specific proteins in the brain is responsible for the development of structures called "plaques" and "tangles." The defining markers of AD are these microscopic characteristics, which include neurotic plaques that contain amyloid beta peptide (Aβ42) and neurofibrillary tangles (NFTs) made of hyperphosphorylated tau [7]. These proteins help break down the connections between nerve cells, which eventually results in the death of neurons and the loss of brain tissue [8]. The highest estimated prevalence rate of neurodegenerative diseases worldwide in 2019 was 62% for Alzheimer's disease, followed by 17% for Parkinson's disease, 10% for mixed dementia, 4% for Lewy body dementia, 2% for frontotemporal dementia, 2% for vascular dementia, and 3% for other neurodegenerative diseases.

Although the precise mechanisms behind AD are still unclear, a number of important processes have been linked to the disease's etiology [10]. Neuronal dysfunction, synapse degradation, and ultimately neurodegeneration are the results of these processes, which include a complex interaction of genetic, molecular, and cellular abnormalities [11].

Genetic predispositions like mutations in the APP gene or genes controlling Aβ metabolism (e.g., presenilin mutations) are among the many causes that lead to Aβ accumulation in the brain [16]. Furthermore, because Aβ clearance mechanisms become less effective with age, allowing Aβ to accumulate, becoming older is a major risk factor. Furthermore, Aβ accumulation is made worse by the brain's inability to remove Aβ, which is mediated via the lymphatic system and other clearance mechanisms [17]. Aβ accumulation can be increased by impairing these processes through disruptions in the blood-brain barrier or malfunctions in microglial cells, the immune cells in the brain that are in charge of clearing Aβ.

Aβ can also cause tau protein hyperphosphorylation, which is another characteristic of AD pathogenesis and results in the development of neurofibrillary tangles inside neurons. In AD, tau pathology and Aβ interact to promote neurodegeneration and cognitive decline in a synergistic manner (Table 1.1) [28].

Aspects of the pathogenesis of Alzheimer's disease, including hereditary variables, diagnostic biomarkers, treatment approaches, and future directions.



Materials and method of research

Scientists are investigating new approaches to treat AD, such as using green nanoparticles as drug delivery vehicles. These are some cutting-edge methods that are being research

A possible method of delivering medicinal substances to the brain is through green nanoparticles, which are made from natural sources such as plant extracts or biopolymers. In order to address AD pathology, these nanoparticles can contain medications like neuroprotective or anti-amyloid medicines and deliver them across the blood-brain barrier (BBB). The efficacy and safety of AD therapy may be improved by green nanoparticles through increased drug stability, extended circulation time, and precise targeting.

Results

Some substances that come from plants, such resveratrol from grapes and curcumin from turmeric, have neuroprotective properties that may lessen AD-related neuronal damage and cognitive loss. These chemicals' bioavailability and brain penetration can be improved by encapsulating them in green nanoparticles, which increases their potential as AD treatments. Green nanoparticles can also be designed to release medications in response to particular stimuli, which would maximize drug delivery to the areas of the brain that are impacted.

Their biocompatibility, biodegradability, and environmental friendliness make green nanoparticles superior to their synthetic counterparts. These qualities lower the possibility of negative consequences and environmental damage, making them desirable for drug administration. A greener approach to AD treatment is provided by green nanoparticles, which use natural ingredients and sustainable production techniques.

By engineering green nanoparticles to transport several therapeutic drugs at once, combination therapy techniques for AD are made possible. The ability of these nanoparticles to encapsulate medications with complimentary modes of action, such as antioxidants and anti-amyloid compounds, allows them to work in concert to target several pathogenic pathways linked to the progression of AD. This strategy could improve therapy effectiveness and address AD's complex character.

In conclusion

The main risk factor that contributes to the beginning of AD is age. The accumulation of Aβ plaques and neurofibrillary tangles, which result from the aggregation of hyperphosphorylated beta-protein, is the main cause of AD development. Cognitive dysfunction and impairment are directly linked to these pathological characteristics. As our understanding of AD develops, it becomes more and more evident that a thorough approach is essential to understanding its intricacies and developing effective treatment strategies. Researchers can find new avenues for prevention and intervention by looking at how lifestyle, environmental, and genetic factors combine to cause AD onset. This chapter also highlights the urgent need for interdisciplinary collaboration and creative research approaches to address the challenges posed by AD.

References

1.R.A. Katariya, S.S. Sammeta, M.B. Kale, N.R. Kotagale, M.J. Umekar, B.G. Taksande.Agmatine as a novel intervention for Alzheimer's disease: pathological insights and cognitive benefits. Ageing Res. Rev. (2024), p. 102269

2. Rampalli, V.N. Pavlik, M.M. Yu, J. Bishop, C.Y.R. Lin

Cognitive function remains associated with functional impairment in profound dementia: alzheimer disease and dementia with Lewy bodies

Neurology: Clin. Pract., 14 (2) (2024)

e200262

Google Scholar
[3]
3.F.J. Rodríguez-Alcázar, R. Juárez-Vela, J.L. Sánchez-González, J. Martín-Vallejo
Interventions effective in decreasing burden in caregivers of persons with dementia: a meta-analysis
Nursing Reports, 14 (2) (2024), pp. 931-945
Crossref
View in ScopusGoogle Scholar[4]
4.S.T. Huang, C.H. Loh, C.H. Lin, F.Y. Hsiao, L.K. Chen
Trends in dementia incidence and mortality, and dynamic changes in comorbidity and healthcare utilization from 2004 to 2017: a Taiwan national cohort study
Arch. Gerontol. Geriatr., 121 (2024), p. 105330
View PDFView articleView in ScopusGoogle Scholar[5]
5.Y. Cui, W. Yang, J. Shuai, Y. Ma, Y. Yan
Lifestyle and socioeconomic transition and health consequences of Alzheimer's disease and other dementias in global, from 1990 to 2019
The Journal of Prevention of Alzheimer's Disease, 11 (1) (2024), pp. 88-96
View in Scopus
Google Scholar[6]
6.Duthey. https://www.who.int/medicines/areas/priority_medicines/BP6_11Alzheimer.pdf. (Accessed October 18, 2019).
Google Scholar

7.A.A. Stepanchuk, P.K. Stys
Spectral fluorescence pathology of protein misfolding disorders
ACS Chem. Neurosci., 153 (2024)
Google Scholar

8.B.E. Ekundayo, T.O. Obafemi, O.B. Adewale, B.A. Obafemi, B.E. Oyinloye, S.K. Ekundayo
Oxidative stress, endoplasmic reticulum stress and apoptosis in the pathology of Alzheimer's disease
Cell Biochem. Biophys. (2024), pp. 1-21
Google Scholar
9.D. Mastroeni, A. Grover, E. Delvaux, C. Whiteside, P.D. Coleman, J. Rogers
Epigenetic mechanisms in Alzheimer's disease
Neurobiol. Aging, 32 (7) (2011), pp. 1161-1180
View PDFView articleView in ScopusGoogle Scholar[11]
10.R.G. Roy, P.K. Mandal, J.C. Maroon

Oxidative stress occurs prior to amyloid Aβ plaque formation and tau phosphorylation in Alzheimer's disease: role of glutathione and metal ions
ACS Chem. Neurosci., 14 (17) (2023), pp. 2944-2954
View articleCrossref
11. ДА Вохидова, ДД Усманова, ДН Ходжиметов.Роль HIF-1α в развитие патогенеза ишемического повреждения головного мозга. Проблемы биологии и медицины, 2020
12. A Muratova, AA Khozhimetov, AM Khaidarov
Analysis of the peculiarities of the dental status and hemostasis indicators in patients with chronic cerebral ischemia.Problems of Biology and Medicine 118

Voxidova Z.T., candidate of medical sciences
Stajor-assistant
Department of Operative Surgery and Topographic Anatomy
Samarkand State Medical University

THE ROLE SNAIL, SLUG AND TGB FACTOR IN OSTEOSARCOMA

Resume:*Osteosarcoma is the most prevalent primary malignant bone tumor in children and teenagers. Patients who have recurring or metastatic tumors have a 5-year survival rate of only 20%, whereas the 5-year survival rate for regional tumors is normally between 60 and 70%. Despite the most advanced neoadjuvant treatment, the prognosis remains poor. It can be lethal when osteosarcoma spreads to the lung. In this case, the epithelial-mesenchymal transition and the direct and indirect spread of cancer cells to vital organs depend on the Slug regulatory network. In instance, slug and snail signaling pathways contribute to cancer invasion and metastasis. This work aims to understand the role of Slug and Snail transcriptional factors in controlling EMT in osteosarcoma metastases.*

Keywords:*EMT- epithelial mesenchymal transition, MET mesenchymal–epithelial transition, SNAIL1- Snail family zinc finger 1*

Introduction

Osteosarcoma

Osteosarcoma is an aggressive malignant disease that usually spreads to the patient's lungs after first affecting the arms and knee bones. It generates osteoid matrix, malignant fusiform cells, and aberrant bone growth. Abarrategiet al. (2016) state that patients who have disorders that impact their "DNA" development are more likely to develop "osteosarcoma." With the emergence of bone cancers, which are often brought on by DNA cell mutations that degrade the tissues, the incidence of "osteosarcoma" rises. A number of cancer types, including "osteosarcoma" bone cancer, usually cause lung damage, according to Lu et al. (2018).

From cancer cells that have already been impacted, the body's genetic differentiation can be seen.

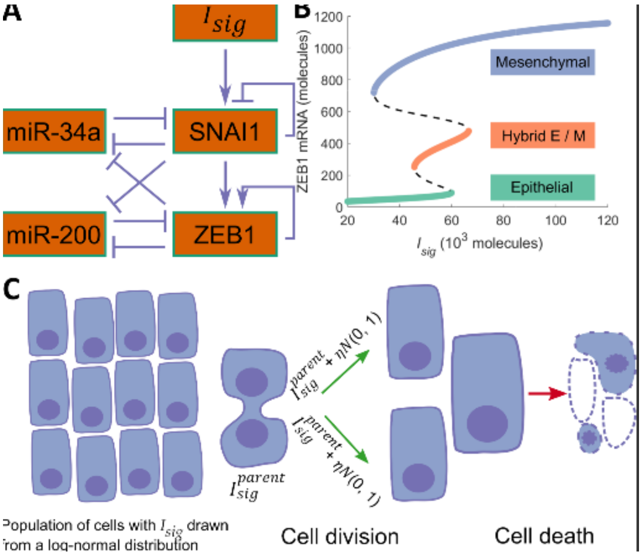
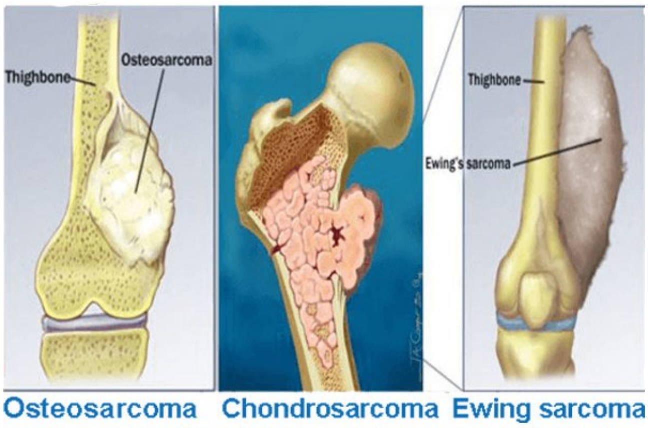


Figure 1.2: Cell Division

(Source: Azevedo *et al.* 2020)

The diagram above illustrates the many cell divisions, cell death, and the way cells change from one place of the body to another. Additionally, the cell division shows the likelihood that the "Cancerian" cells may change from one area to another. As a result, "osteosarcoma" or bone cells eventually develop into cancer cells, and the bunch cells frequently investigate the possibility of acquiring other body parts. Over time, the cells improve the cell division in the patients' lungs, increasing the likelihood that they will develop "lung cancer." The "epithelial" cells have trouble receiving the right treatment because of the genetic alterations that increase the likelihood of receiving a bad diagnosis. The presence of the disease can be explained by the fact that "osteosarcoma" in the human body denotes a swelling in the outer muscles of the joints. The presence of "osteosarcoma" is frequently indicated by pain in the joints and muscles.



Histopathology

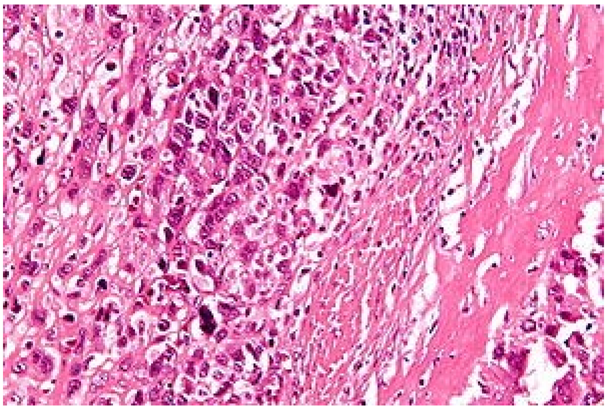


Figure 1.5: Skeletal osteosarcoma

(Source: Wadhwa, 2014)

A tumor composed of malignant cells that produce osteoid is called skeletal osteosarcoma. A chondroid and fibromatoid ground material is common in many tumors. However, all are highly malignant, and over 80% of them die as a result of metastasis. A roentgenogram offers vital proof for an accurate diagnosis for each of them (Wadhwa, 2014).

Zinc-finger E-box-binding, SNAIL, and basic helix–loop–helix transcription factors are among the transcription factor proteins that are implicated in this shift in cell differentiation and behavior, according to Lamouille et al. (2014). Their functions are precisely regulated at the post-translational, translational, and transcriptional levels.

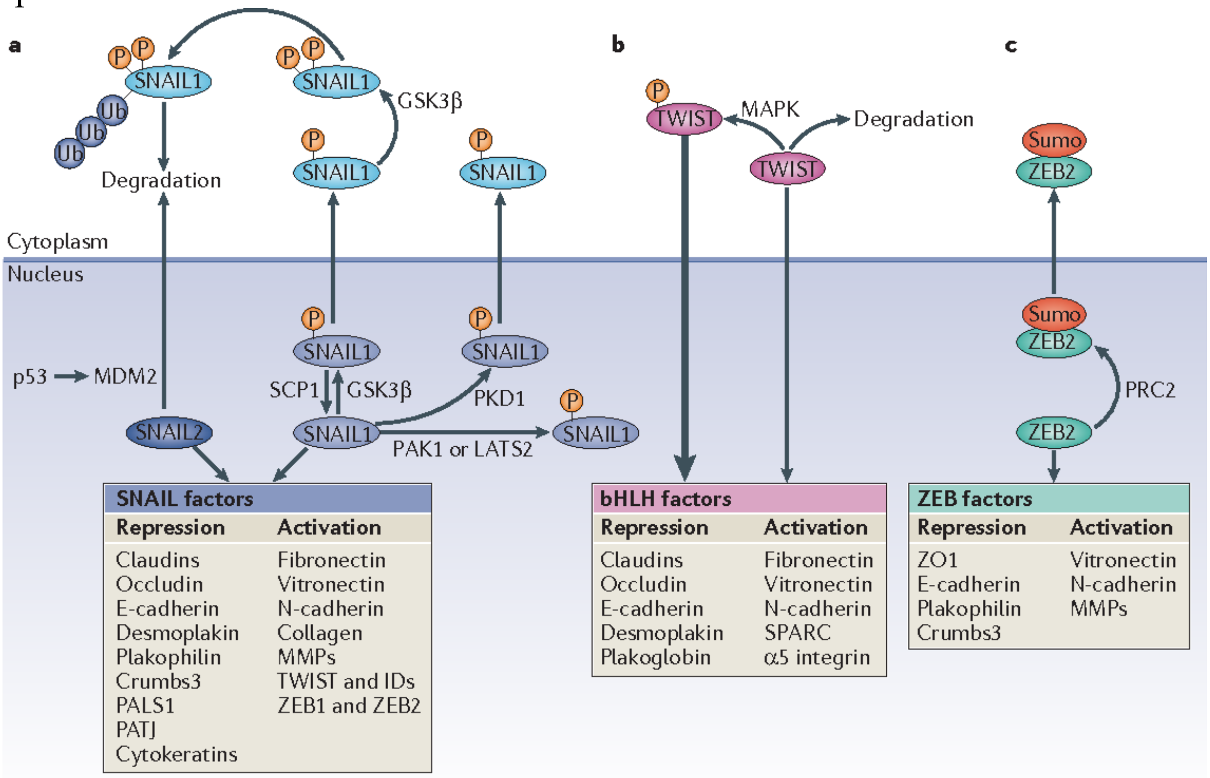


Figure 2 | **Roles and regulation of major EMT transcription factors.** Epithelial–mesenchymal transition (EMT) is driven by

Materials and Methods

The involvement of the snail, slug, and (twist1, twist2, zeb1, zeb2, E-cadherin, TGF-B3, vimentin) in the epithelial-mesenchyme transition in lung metastasis in osteosarcoma has been analyzed in this work by secondary research. According to Johnston (2017), secondary research makes the study more economical and efficient by assisting in the collection of pertinent data on the established fact. Using keywords like "epigenetic control," "cadherin expression," "EMT metastasis matrix," and "embryonic development in osteosarcoma," articles pertaining to "EMT metastasis" are simultaneously searched on the "Pubmed.com website" to gather information about the "underlying epigenetic controls," "E-cadherin expression," "N-cadherin expression," and "anoikis resistance" within the "EMT metastasis."

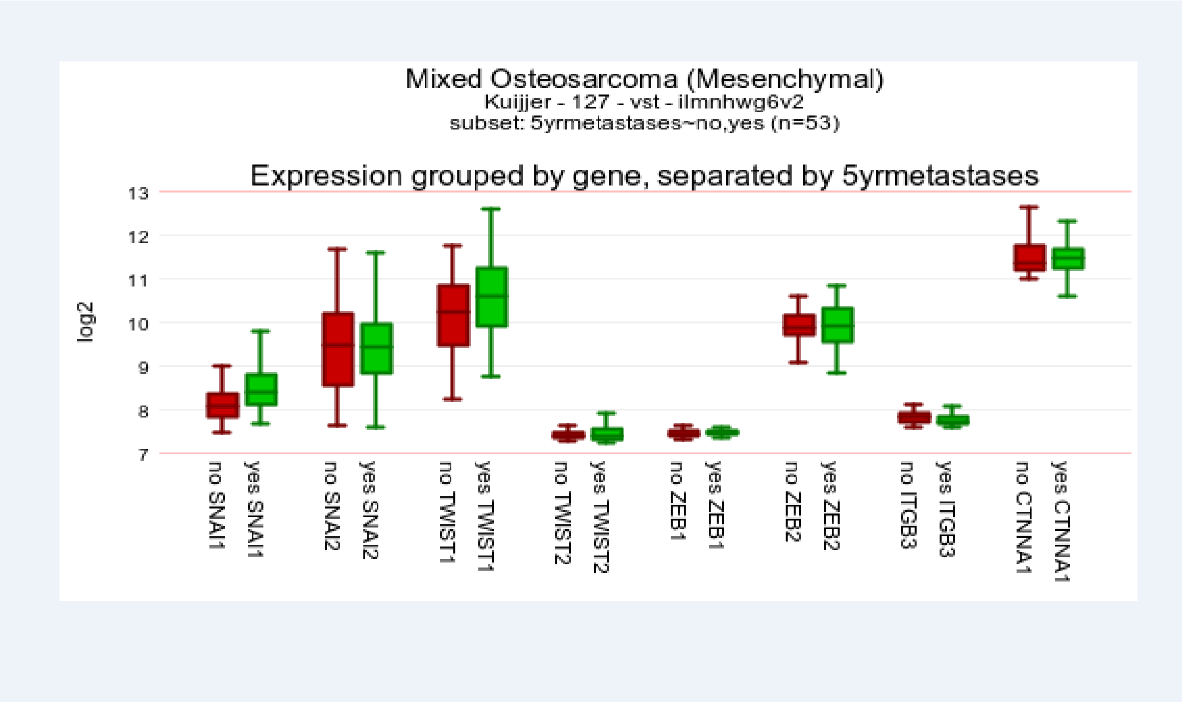


Figure 3: "Mixed Osteosarcoma (Genetic grouping)"

(Source: Self Developed)

From this above diagram, it can be illustrated that metastases are significantly low in ZEB1 and that low metastases indicate that there is a high effect on genes and a critical condition can be highlighted.

Result and discussion

SNAI 1 & 2

To induce EMT, Slug or Snail and TGF-beta signaling are utilized. It is also possible to achieve Snail and Slug expression using TGF-beta. Conversely, Slug and Snail are employed to induce the TGF-beta pathway in genes. TGF-beta and snail or slug impact dissections are thought to act mechanistically to induce EMT, according to Dhasarathy et al. (2011). In addition, MCF-7 cells are controlled following treatment with Snail or Slug adenovirus, DMSO, small molecule inhibitors SB431542, specific inhibitor of TGFBR2, and LY364947 in addition to TGFBR1 to generate TGFBR2 to a lesser degree. Dhasarathy et al. (2011) stated that the TGF beta pathway's impact on cell migration for enabling Slug and Snail induction is assessed by treating the cells with inhibitors, viruses, and DMSO.

In the event of advancement, malignant tumors originating from EMT and ZEB 1 continue to be related to the tumor pathogenesis. However, E-Cadherin is one of the key components where ZEB 1 can be utilized for either direct or indirect inhibition of E-cadherin production, according to Xu et al. (2017). E-Cadherin, which is next to molecules, can form protein dimers that help with "normal alignment of cells."

Conclusion

Consequently, it should be noted that an increase in osteosarcoma cells raises the risk of lung cancer through metastases. Therefore, maintenance must be used to lower hazards because survival rates also drop when osteosarcoma cell growth increases. Numerous cells are susceptible to contracting this illness.

In conclusion, it can be said that different kinds of cancer cells seen in a human body have E-cadherin cells.

Reference List

Abarrategi, A., Tornin, J., Martinez-Cruzado, L., Hamilton, A., Martinez-Campos, E., Rodrigo, J.P., González, M., Baldini, N., Garcia-Castro, J. and Rodriguez, R., (2016). Osteosarcoma: cells-of-origin, cancer stem cells, and targeted therapies. *Stem cells international*, *2016*.

Aiello, N.M. and Kang, Y., (2019). Context-dependent EMT programs in cancer metastasis. *Journal of Experimental Medicine*, *216*(5), pp.1016-1026.

Antoniali, G., Malfatti, M.C. and Tell, G., (2017). Unveiling the non-repair face of the Base Excision Repair pathway in RNA processing: A missing link between DNA repair and gene expression?. *DNA repair*, *56*, pp.65-74.

Aswani, R., Kar, A.K., Ilavarasan, P.V. and Dwivedi, Y.K., (2018). Search engine marketing is not all gold: Insights from Twitter and SEOClerks. *International Journal of Information Management*, *38*(1), pp.107-116.

Balmant, N.V., Reis, R.D.S., Santos, M.D.O., Maschietto, M. and Camargo, B.D., (2019). Incidence and mortality of bone cancer among children, adolescents and young adults of Brazil. *Clinics*, *74*.

Bozorgi, A. and Sabouri, L., (2021). Osteosarcoma, personalized medicine, and tissue engineering; an overview of overlapping fields of research. *Cancer treatment and research communications*, p.100324.

Buddingh, E.P., Schilham, M.W., Ruslan, S.E.N., Berghuis, D., Szuhai, K., Suurmond, J., Taminiau, A.H., Gelderblom, H., Egeler, R.M., Serra, M. and Hogendoorn, P.C., (2011). Chemotherapy-resistant osteosarcoma is highly susceptible to IL-15-activated allogeneic and autologous NK cells. *Cancer immunology, immunotherapy*, *60*(4), pp.575-586.

journal of recently scientific researcher's theory. – 2024. т. 2.№. 4. – с. 161-165.

Bobur Toshbekov [1] Abdumalik R. Mamataliyev [2] Bayramdurdi Sapaev [3] Abdijabbor S. Amanov [4] Nazora Xudoyberdiyeva [5] G'olib T. Kurbanov [6] Dadakhon M. Abdullaev [7] Ikrom Nasimov [8] Matluba K. Rasulova [9] Iroda K. Turakulova. Behavioral Adaptations of Arctic Foxes (Vulpes

lagopus) in Response to Climate Change.*Caspian Journal of Environmental Sciences* . **ISSN: 1735-3033**
Z. T. Voxidova Research Status of Systemic Adjuvant Therapy for Early Breast Cancer.JEconom Sociium. (2024)
Z.T.Voxidova, High-fat and carbohydrate diet caused chronic kidney damage by disrupting kidney function, caspase-3, oxidative stress and inflammation.J. Econom Socium(2024)

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Илёсхонова Ш.Ф.
студентка
лечебный факультет
Ташкентская Медицинская Академия
научный руководитель: Шигакова Л.А.
ассистент
кафедра гистологии и медицинской биологии
Ташкентская Медицинская Академия
Ташкент, Узбекистан

ВЛИЯНИЕ КЕСАРЕВА СЕЧЕНИЯ НА ЗДОРОВЬЕ ЖЕНЩИНЫ: ПОЛОЖИТЕЛЬНЫЕ И ОТРИЦАТЕЛЬНЫЕ СТОРОНЫ С УЧЕТОМ СТАТИСТИКИ

Аннотация: *статье рассматривается влияние кесарева сечения на здоровье женщины с учетом статистических данных. Проведен анализ положительных и отрицательных сторон кесарева сечения, включая такие аспекты, как снижение рисков для матери и ребенка при осложненных родах, планируемость даты родоразрешения, а также уменьшение нагрузки на организм у женщин с хроническими заболеваниями. Также обсуждаются возможные осложнения, такие как инфекционные процессы, длительный период восстановления и повышенные риски при последующих беременностях. Статья подчеркивает важность соблюдения медицинских показаний для выполнения кесарева сечения и необходимость осведомления женщин о возможных последствиях данного вмешательства.*

Ключевые слова: *кесарево сечение, родоразрешение, осложнения, хронические заболевания, здоровье матери, восстановление после родов, риски для последующих беременностей, психологическое состояние*

Ileskhonova Sh.F.
Student
of the general medicine
Tashkent Medical Academy
scientific supervisor :Shigakova L.A.
department assistant
histology and medical biology
Tashkent Medical Academy
Tashkent, Uzbekistan

IMPACT OF CESAREAN SECTION ON WOMEN'S HEALTH: POSITIVE AND NEGATIVE SIDES BASED ON STATISTICS

Abstract: *the article discusses the impact of cesarean section on women's health, taking into account statistical data. An analysis of the positive and negative aspects of cesarean section is conducted, including such aspects as reducing risks for the mother and child in complicated births, planning the date of delivery, and reducing the burden on the body in women with chronic diseases. Possible complications, such as infectious processes, a long recovery period, and increased risks in subsequent pregnancies are also discussed. The article emphasizes the importance of following medical indications for cesarean section and the need to inform women about the possible consequences of this intervention.*

Key words: *cesarean section, childbirth, complications, chronic diseases, maternal health, recovery after childbirth, risks for subsequent pregnancies, psychological state*

Кесарево сечение (КС) — это хирургическая операция, при которой новорожденный извлекается через разрез в брюшной полости и матке. За последние десятилетия частота кесаревых сечений значительно возросла. По данным Всемирной организации здравоохранения (ВОЗ), в 2020 году частота кесаревых сечений по всему миру составила около 21%, в то время как в 2000 году этот показатель был всего 12% (ВОЗ, 2021). В некоторых странах частота КС достигает и превышает 40% от общего числа родов, что связано с увеличением возраста матерей, широким использованием медицинских технологий, а также социально-культурными факторами. В данной статье будет рассмотрено влияние кесарева сечения на здоровье женщины, включая как положительные, так и отрицательные стороны, с использованием статистических данных.

Положительные аспекты кесарева сечения

1. Снижение риска для матери и ребенка при осложненных родах

Кесарево сечение используется для предотвращения осложнений при родах, особенно когда естественные роды могут представлять опасность. По данным исследований, кесарево сечение может значительно снижать риски при таких состояниях, как предлежание плаценты, многоплодная беременность и тяжелая гипоксия плода. В странах с высоким уровнем КС, например в Бразилии, кесарево сечение составляют до 55% от всех родов и, несмотря на высокую нагрузку на систему здравоохранения, значительно снизили уровень неонатальной смертности (ВОЗ, 2021).

2. Прогнозируемый исход и снижение стресса

По данным исследований, женщины, проходящие плановое кесарево сечение, меньше подвержены родовым травмам, и процент повреждений промежности и тканей влагалища при КС снижен до 5-7%, тогда как при естественных родах этот показатель составляет 10-15% (Finer et al., 2019). Плановое кесарево может также снижать эмоциональный стресс, поскольку позволяет женщине выбрать конкретную дату родов и подготовиться к рождению ребенка. Исследования также показывают, что это особенно важно для женщин, имеющих повышенный риск послеродовой депрессии, так как прогнозируемый исход способствует психологическому комфорту (Miller et al., 2021).

3. Возможность безопасных родов для женщин с хроническими заболеваниями

Согласно данным ВОЗ, КС снижает риск осложнений при родах для женщин с хроническими заболеваниями, например, при гипертонии или диабете. Риск сердечно-сосудистых осложнений в таких случаях снижается на 30-35% по сравнению с естественными родами (ВОЗ, 2021). В этом случае кесарево сечение снижает нагрузку на организм и позволяет более безопасно провести роды.

Отрицательные аспекты кесарева сечения

1. Осложнения, связанные с хирургическим вмешательством

Кесарево сечение, как любая хирургическая операция, связано с рисками. Исследования показывают, что частота инфекционных осложнений после кесарева сечения составляет около 9-10%, что в 2-3 раза выше, чем при естественных родах (Boyle et al., 2018). Среди осложнений можно выделить эндометрит (воспаление матки), инфекцию мочевых путей и тромбоз глубоких вен. По статистике, после кесарева сечения кровопотеря выше, чем при естественных родах, что увеличивает риск анемии у роженицы.

2. Удлиненный период восстановления

После КС женщинам требуется больше времени на восстановление по сравнению с естественными родами. Согласно исследованиям, средний период госпитализации после кесарева сечения составляет 3-5 дней, тогда как после естественных родов — 1-2 дня (Schwarz et al., 2020). Более длительный восстановительный период также сопровождается болевыми ощущениями в области шва, что снижает качество первых недель жизни матери и новорожденного, а 10% женщин нуждаются в дополнительной медицинской помощи в первые месяцы (Mylonas et al., 2018).

3. Повышенный риск при последующих беременностях

Согласно данным исследования, женщины после кесарева сечения сталкиваются с повышенным риском осложнений в последующих беременностях. Среди таких осложнений наиболее частыми являются разрыв матки по рубцу и патологическое прикрепление плаценты (Moroz et al., 2019). Эти осложнения приводят к необходимости повторного кесарева и увеличивают вероятность преждевременных родов на 20-25%. Данные также показывают, что вероятность осложнений увеличивается с числом предыдущих кесаревых сечений.

4. Влияние на психологическое состояние

Многочисленные исследования указывают, что женщины после незапланированного кесарева сечения чаще испытывают стресс и чувство разочарования из-за невозможности естественных родов. В частности, около 20-30% женщин после экстренного КС отмечают признаки посттравматического стрессового расстройства (Campbell et al., 2020). Кроме того, неудовлетворенность процессом родов, по данным ВОЗ, повышает риск послеродовой депрессии на 15-20%.

Заключение

Кесарево сечение является важным методом, который позволяет избежать серьезных осложнений при осложненных родах и предоставляет безопасный способ родоразрешения для женщин с хроническими заболеваниями. Однако при отсутствии жизненно необходимых показаний его выполнение может привести к осложнениям, длительному восстановлению и психологическому стрессу у женщины. Нужно применять по строгим показаниям.

Использованные источники:

1. World Health Organization (WHO). (2021). "WHO Statement on Caesarean Section Rates." World Health Organization. https://www.who.int

2. Vladimirovna, Sarkisova Victoria, et al. "Hyperplastic Processes of the Endometrium: Issues of Ethiopathogenesis, Clinic, Diagnosis, Treatment." (2023).

3. Miller, M. M., & Johnson, S. D. (2021). "Psychological impact of planned and emergency cesarean sections on maternal health: A review." *Psychology, Health & Medicine*, 26(4), 392-401. https://doi.org/10.1080/13548506.2020.1760154

4. Schwarz, B., Nienhuis, P., & Regeer, M. (2020). "Comparative study of postpartum recovery after cesarean and vaginal birth: A review." *Journal of Maternal-Fetal & Neonatal Medicine*, 33(14), 2492-2499. https://doi.org/10.1080/14767058.2019.1612687

Назарматов О.С., д.э.н., (DSc)
профессор
Ферганский филиал
Ташкентский университет информационных технологий
имени Мухаммада аль-Хорезми Республика Узбекистан, г. Фергана

УПРАВЛЕНИЕ СИСТЕМОЙ ЗДРАВООХРАНЕНИЯ В УЗБЕКИСТАНЕ

Аннотация:*Статья рассматривает вопросы управления системой здравоохранения в Узбекистане. В ней анализируются основные принципы и механизмы, лежащие в основе организации здравоохранения в стране, а также обсуждаются актуальные проблемы и вызовы, с которыми сталкиваются в этой области. Особое внимание уделяется вопросам доступности медицинских услуг, качества оказываемой помощи, финансирования здравоохранения и реформирования системы с целью повышения эффективности и качества медицинского обслуживания населения Узбекистана.*
Ключевые слова: *здравоохранение, управление, система здравоохранения, медицинская реформа, доступность медицинских услуг, финансирование здравоохранения, качество медицинской помощи, медицинская инфраструктура, здравоохранительная политика*

Nazarmatov O., Doctor of Economics Sciences
Professor
Fergana branch
of the Tashkent University of Information Technologies named
after Muhammad al-Khwarizmi Республика Узбекистан, г. Fergana

MANAGEMENT OF THE HEALTH CARE SYSTEM IN UZBEKISTAN

Abstract:*The article examines the management of the healthcare system in Uzbekistan. It analyzes the basic principles and mechanisms of healthcare organization in our country, and discusses current problems and challenges in this area. In order to improve the efficiency and quality of medical services to the population of Uzbekistan, special attention is paid to the issues of convenience of medical services, quality of medical care, healthcare financing and reforming the healthcare system. system.*
Key words: *healthcare, management, healthcare system, medical reform, accessibility of health services, healthcare financing, quality of health care, medical infrastructure, healthcare policy*

Управление системой здравоохранения в Узбекистане является актуальной и важной темой, поскольку здравоохранение играет ключевую роль в обеспечении благополучия населения и развитии страны в целом. В настоящее время Узбекистан сталкивается с рядом вызовов и проблем в сфере здравоохранения, таких как ограниченная доступность медицинских услуг в отдаленных регионах, недостаточное финансирование системы здравоохранения, неравномерное распределение кадров и медицинской техники, а также низкое качество оказываемой помощи. Эффективное управление системой здравоохранения становится необходимостью для решения этих проблем и обеспечения доступности высококачественных медицинских услуг для всех слоев населения.

Целью данной статьи является анализ организации и управления системой здравоохранения в Узбекистане с учетом текущих вызовов и проблем, а также предложение рекомендаций по улучшению эффективности и качества медицинского обслуживания населения страны. Основное внимание уделяется аспектам доступности, качества и финансирования медицинских услуг, а также возможным стратегиям и механизмам реформирования системы здравоохранения в Узбекистане с целью достижения оптимальных результатов в области общественного здравоохранения.

Вопрос доступности и качества медицинских услуг является одним из основных аспектов здравоохранения в Узбекистане. Основные проблемы в этой области включают:

-неравномерное распределение медицинских ресурсов: Неравномерное распределение медицинских учреждений и специалистов между городами и сельскими районами, что приводит к недостатку доступных медицинских услуг в отдаленных районах.

-недостаточное оборудование и медицинская техника: Некоторые медицинские учреждения сталкиваются с недостатком современного оборудования и медицинской техники, что сказывается на качестве оказываемых услуг.

-низкая квалификация медицинского персонала: Некоторые медицинские учреждения сталкиваются с недостатком квалифицированных специалистов, что может сказаться на качестве медицинской помощи.

Современная медицинская система сталкивается с рядом системных проблем и недостатков, которые оказывают влияние на ее эффективность и доступность для населения:

- демографические изменения, такие как старение населения и изменения в образе жизни, ставят перед системой здравоохранения новые вызовы. Увеличение средней продолжительности жизни сопровождается увеличением числа пациентов с хроническими заболеваниями, что требует более интегрированного и долгосрочного подхода к лечению. При этом социальные неравенства и доступность здравоохранения становятся значимыми факторами. Нередко бедные слои населения сталкиваются с ограниченным доступом к качественным медицинским услугам, что увеличивает риск развития серьезных заболеваний и осложняет контроль над ними.

- быстрое развитие медицинских технологий создает как новые возможности, так и новые вызовы для системы здравоохранения. С одной стороны, новые методы диагностики и лечения позволяют эффективнее бороться с заболеваниями и улучшить результаты лечения. Однако внедрение новых технологий требует значительных инвестиций и обучения медицинского персонала, что может оказаться непосильной задачей для многих стран, особенно развивающихся.

Кроме того, наблюдается недостаток квалифицированных кадров в здравоохранении. Недостаток врачей, медицинских сестер и других специалистов приводит к увеличению очередей на прием, ухудшению качества обслуживания и возможности ошибок в диагностике и лечении.

- Государство играет ключевую роль в организации и управлении системой здравоохранения. Оно должно обеспечить доступность медицинских услуг для всех слоев населения, вне зависимости от социального статуса и доходов. Это может быть достигнуто через разработку социальных программ, страховых систем или государственных медицинских учреждений. Государство также должно активно инвестировать в медицинское образование и исследования, чтобы обеспечить наличие достаточного числа квалифицированных специалистов и поддерживать инновации в области медицины.

Система здравоохранения Узбекистана переживает период интенсивных реформ и стратегических изменений с целью улучшения доступности, качества и эффективности медицинской помощи. Рассмотрим ключевые направления реформ и стратегий развития, направленных на повышение уровня здоровья населения и совершенствование медицинской системы в Узбекистане:

1. Развитие первичного звена здравоохранения. Одним из приоритетов является развитие первичного звена здравоохранения, которое играет ключевую роль в оказании медицинской помощи населению. В рамках реформ первичная медицинская помощь становится более доступной и качественной благодаря улучшению инфраструктуры, обучению медицинского персонала и внедрению современных методов диагностики и лечения.

2. Повышение доступности медицинской помощи. Стратегии развития здравоохранения направлены на улучшение доступности медицинской помощи для всех слоев населения, включая отдаленные и сельские районы. Это достигается через расширение сети медицинских учреждений, организацию мобильных медицинских бригад и развитие телемедицины.

3. Модернизация медицинской инфраструктуры. В рамках реформ проводится активная работа по модернизации медицинской инфраструктуры, включая реконструкцию и строительство новых медицинских учреждений,

обновление медицинского оборудования и внедрение информационных технологий для улучшения управления и мониторинга здравоохранением.

4. Развитие системы медицинского образования и подготовки кадров. Для обеспечения качественной медицинской помощи необходимо иметь высококвалифицированный медицинский персонал. Поэтому стратегии развития включают в себя развитие системы медицинского образования, подготовку кадров и повышение их квалификации.

5. Внедрение системы страхования здоровья. В целях обеспечения финансовой устойчивости и справедливости в доступе к медицинской помощи в Узбекистане проводятся реформы по внедрению системы обязательного медицинского страхования. Это позволяет обеспечить финансирование здравоохранения за счет взносов населения и работодателей, а также эффективнее распределить ресурсы в системе здравоохранения.

В прошлом Узбекистан сталкивался с вызовами в сфере здравоохранения, включая ограниченный доступ к медицинским услугам, недостаточную финансовую поддержку системы здравоохранения и недостаточное внимание к профилактике заболеваний. В ответ на эти вызовы были проведены реформы, такие как модернизация медицинской инфраструктуры, улучшение кадрового обеспечения, внедрение программ по профилактике заболеваний и укреплению здоровья населения. В настоящее время в Узбекистане активно продолжаются реформы в системе здравоохранения. Одним из ключевых направлений является развитие первичного звена здравоохранения и повышение его роли в системе. Также ведется работа по улучшению доступности медицинских услуг для всех слоев населения, модернизации медицинской инфраструктуры, развитию системы медицинского образования и внедрению страхования здоровья. Перспективы развития системы здравоохранения Узбекистана связаны с дальнейшим совершенствованием медицинских услуг, повышением качества их оказания и расширением доступности для всех граждан страны. Ключевыми стратегическими направлениями развития являются развитие первичного звена здравоохранения, модернизация медицинской инфраструктуры, улучшение качества медицинского образования и внедрение системы страхования здоровья. Узбекистан также активно сотрудничает с международными организациями и другими странами в области здравоохранения. Обмен опытом, технологиями и лучшими практиками позволяет стране учиться на опыте других и эффективнее решать свои собственные проблемы в сфере здравоохранения. Проведение анализа текущего состояния системы здравоохранения Узбекистана и его управления позволяет сформулировать ключевые выводы и рекомендации для дальнейшего совершенствования этой сферы:

- наличие прогресса: В последние годы Узбекистан сделал значительные шаги в улучшении системы здравоохранения, включая расширение доступности медицинских услуг, модернизацию инфраструктуры и развитие медицинского образования.

- необходимость дальнейших усилий: Однако, несмотря на достигнутый прогресс, остаются нерешенными проблемы, такие как недостаточное финансирование, неравномерное распределение ресурсов и недостаток квалифицированных кадров.

Важность комплексного подхода: Управление здравоохранением требует комплексного подхода, включающего в себя не только медицинские аспекты, но и организационные, экономические и социальные аспекты.

Для дальнейшего совершенствования системы управления здравоохранением в Узбекистане необходимо проведение дополнительных исследований в следующих направлениях:

-экономический анализ: Исследования по оценке экономической эффективности медицинских программ и инвестиций в здравоохранение.

-социологические исследования: Изучение потребностей и ожиданий населения от системы здравоохранения, а также их уровня удовлетворенности услугами.

-междисциплинарные исследования: Анализ взаимосвязи между здоровьем населения, социальными факторами, экономическим развитием и другими аспектами общественной жизни.

В целом, дальнейшие исследования в области управления здравоохранением в Узбекистане могут способствовать разработке более эффективных стратегий и политик, направленных на улучшение здоровья населения и качества медицинской помощи.

Реформы в системе здравоохранения Узбекистана представляют собой непрерывный процесс, направленный на повышение качества жизни и здоровья населения. Несмотря на достигнутые успехи, перед страной стоят новые вызовы и задачи, решение которых требует совместных усилий государства, медицинских учреждений, общественных организаций и международного сообщества. Вместе мы можем создать сильную и устойчивую систему здравоохранения, способную обеспечить здоровье и благополучие всех граждан Узбекистана.

Использованные источники:

1. Абдумалеков Ш.М. и др. (2018). "Развитие системы здравоохранения в Узбекистане". Издательство "Издательский дом Китоб".
2. Юсупов А. и др. (2020). "Управление здравоохранением: опыт Узбекистана и международные практики". Научно-практический журнал "Медицина и образование в Сибири".
3. Бекбоева М.Х. (2019). "Организация и управление здравоохранением в Узбекистане". Издательский центр "Медицинская литература".
4. World Health Organization (WHO). (2018). "Health Systems Profile-2018: Uzbekistan". Официальный доклад Всемирной организации здравоохранения.
5. Международная финансовая корпорация (IFC). (2019). "Анализ системы здравоохранения в Узбекистане: возможности для частного сектора". Доклад по исследованию.

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Нармухамедова Ч.Ж.
ассистент
кафедра гистологии и Биомедицины
Ташкентская Медицинская Академия
Одилова М.К.
тудентка
Ташкентская Медицинская Академия

СОВРЕМЕННЫЕ ПОДХОДЫ К ЛЕЧЕНИЮ САХАРНОГО ДИАБЕТА И МЕТАБОЛИЧЕСКОГО СИНДРОМА: ФАКТОРЫ РИСКА И ПРОФИЛАКТИКА

Аннотация: *сахарный диабет и метаболический синдром представляют собой значительные проблемы для общественного здравоохранения, затрагивая миллионы людей по всему миру. В данной статье проанализированы текущие научные данные о природе и причинах этих заболеваний, включая их эпидемиологию, механизмы развития, симптомы и современные подходы к лечению. Особое внимание уделено влиянию инсулинорезистентности и хронического воспаления на развитие метаболических нарушений, а также обсуждаются методы профилактики, способные существенно снизить риск сердечно-сосудистых осложнений. Освещены результаты исследований, опубликованных в ведущих международных медицинских журналах, таких как Nature, Lancet и Diabetes Care.*

Ключевые слова: *сахарный диабет, метаболический синдром, профилактика, инсулин, лечение.*

Narmukhamedova Ch.Zh.
Assistant
of the Department of Histology and Biomedicine
of the Tashkent Medical Academy
Odilova M.K.
Student
of the Tashkent Medical Academy

MODERN APPROACHES TO THE TREATMENT OF DIABETES MELLITUS AND METABOLIC SYNDROME: RISK FACTORS AND *PREVENTION*

Abstract: *diabetes mellitus and metabolic syndrome are significant public health problems, affecting millions of people worldwide. This article analyzes current scientific data on the nature and causes of these diseases, including their epidemiology, mechanisms of development, symptoms and modern approaches to* *treatment. Particular attention is paid to the impact of insulin resistance and chronic inflammation on the development of metabolic disorders, and prevention methods that can significantly reduce the risk of cardiovascular complications are discussed. The results of studies published in leading international medical journals such as Nature, Lancet and Diabetes Care are highlighted.*

Keywords: *diabetes mellitus, metabolic syndrome, prevention, insulin, treatment.*

Сахарный диабет (СД) и метаболический синдром (МС) — это заболевания, которые часто сопутствуют друг другу и являются основными факторами риска развития сердечно-сосудистых заболеваний [1]. СД второго типа связан с хроническим повышением уровня глюкозы в крови, обусловленным либо сниженной продукцией инсулина поджелудочной железой, либо уменьшенной чувствительностью тканей к этому гормону [2]. В свою очередь, МС объединяет несколько метаболических нарушений, таких как абдоминальное ожирение, артериальная гипертензия и дислипидемия, что делает это состояние серьёзной проблемой для системы здравоохранения [3].

Эпидемиология сахарного диабета и метаболического синдрома: согласно данным Всемирной организации здравоохранения (ВОЗ), к 2020 году более 422 миллионов людей были затронуты СД, и прогнозируется, что к 2045 году это число достигнет 700 миллионов [4]. В особенности подвержены риску страны с низким и средним уровнем дохода, где быстротекущие процессы урбанизации и переход на западный тип питания способствуют росту этих заболеваний [5]. Современные исследования показывают, что метаболический синдром наблюдается у 25–35% взрослого населения в некоторых странах, что свидетельствует о широком распространении проблемы [3].

Механизмы развития и факторы риска: одной из ключевых причин развития СД и МС является инсулинорезистентность — состояние, при котором клетки теряют способность эффективно усваивать глюкозу. На это указывают исследования, опубликованные в журнале **Nature** (Hotamisligil, 2006), согласно которым висцеральная жировая ткань является основным источником провоспалительных цитокинов, таких как интерлейкин-6 (IL-6) и фактор некроза опухоли альфа (TNF-α). Эти молекулы способствуют развитию хронического воспаления, что, в свою очередь, усиливает инсулинорезистентность и создаёт замкнутый круг метаболических нарушений [4].

Генетическая предрасположенность также играет значительную роль в развитии СД и МС. Согласно исследованиям, проведённым Meigs и его коллегами (2000), вероятность возникновения этих заболеваний у людей, чьи родители страдали СД или МС, увеличивается в 2–3 раза. Малоподвижный образ жизни и высококалорийное питание, что увеличивает накопление висцерального жира и повышает риск развития инсулинорезистентности.

Симптомы и методы диагностики: симптомы СД и МС могут различаться в зависимости от стадии заболевания и уровня его прогрессии. К наиболее распространённым симптомам СД относятся повышенная жажда (полидипсия), частое мочеиспускание (полиурия), усталость и потеря массы тела. В свою очередь, метаболический синдром часто характеризуется такими признаками, как увеличение обхвата талии, повышенное артериальное давление и изменения липидного профиля.

Диагностика метаболического синдрома основывается на оценке нескольких ключевых показателей: индекс массы тела (ИМТ), обхват талии, уровень глюкозы натощак и липидный профиль. По данным Американской Диабетической Ассоциации [6], для постановки диагноза СД необходимо определить уровень глюкозы натощак (≥7,0 ммоль/л) или уровень гликозилированного гемоглобина (HbA1c ≥6,5%). При диагностике метаболического синдрома используются критерии, разработанные международными организациями, такими как **Американская Ассоциация Сердца** и **Национальный Институт Здоровья США** [5].

Лечение и профилактика: современные подходы к лечению сахарного диабета и метаболического синдрома предполагают комплексный подход, включающий изменение образа жизни, фармакотерапию и регулярный мониторинг состояния пациента. Как отмечают Knowler и его коллеги (2002) в исследовании, опубликованном в **New England Journal of Medicine**, даже умеренное снижение массы тела (на 5–10%) способно значительно снизить риск развития диабета и связанных с ним осложнений.

Фармакологическое лечение включает в себя препараты, повышающие чувствительность тканей к инсулину, такие как бигуаниды (например, метформин), а также ингибиторы DPP-4 и агонисты рецепторов GLP-1, которые уменьшают аппетит и способствуют снижению уровня сахара в крови. В случае наличия нарушений липидного обмена часто назначаются статины, которые помогают контролировать уровень холестерина, а для нормализации артериального давления применяются антигипертензивные препараты, такие как ингибиторы АПФ и блокаторы рецепторов ангиотензина.

Профилактика сахарного диабета и метаболического синдрома направлена на минимизацию факторов риска и раннюю диагностику возможных нарушений. Проведение профилактических мероприятий, таких как программы по снижению массы тела и диетическое консультирование, имеет ключевое значение для предотвращения развития осложнений.

Заключение: сахарный диабет и метаболический синдром остаются одной из основных медицинских проблем, требующих активного вмешательства и мониторинга. За последние десятилетия учёные значительно продвинулись в понимании механизмов их развития, что позволило усовершенствовать методы диагностики и лечения. Комплексный подход, включающий раннюю диагностику, изменение образа жизни и фармакологическое лечение, является наиболее эффективным способом предотвращения осложнений, связанных с этими заболеваниями. Мультидисциплинарный подход в лечении позволяет улучшить качество жизни пациентов и снизить риск развития серьёзных сердечно-сосудистых осложнений.

Использованные источники:

1. Grundy, S. M., Cleeman, J. I., Daniels, S. R., Donato, K. A., Eckel, R. H., Franklin, B. A., et al. (2005). Diagnosis and management of the metabolic syndrome: an American Heart Association/National Heart, Lung, and Blood Institute scientific statement. *Circulation*, 112(17), 2735-2752.
2. WHO. (2020). Global report on diabetes. *World Health Organization*.
3. Hotamisligil, G. S. (2006). Inflammation and metabolic disorders. *Nature*, 444(7121), 860-867.
4. Alberti, K. G. M. M., Zimmet, P., & Shaw, J. (2009). The metabolic syndrome—a new worldwide definition. *The Lancet*, 366(9491), 1059-1062.
5. ADA. (2020). Standards of Medical Care in Diabetes—2020. *American Diabetes Association*.

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Паязов Ш.Н.
ассистент
кафедра клинической анатомии
Самаркандский государственный медицинский университет
г. Самарканд Узбекистан

ИССЛЕДОВАНИЕ МОРФОМЕТРИЧЕСКИХ ПОКАЗАТЕЛЕЙ ПЕЧЕНИ БЕЛЫХ БЕЗПОРОДНЫХ КРЫС ПОД ВОЗДЕЙСТВИЕМ ПРОТИВОВОСПАЛИТЕЛЬНЫХ СРЕДСТВ ПАРАЦЕТАМОЛА, АСПИРИНА И ИБУПРОФЕНА ПРИ ПОЛИПРОГМАЗИИ

Аннотация:*Стремление повысить эффективность лечения в организме больного, помочь больному избавиться от всех развившихся у него заболеваний неизбежно приводит к назначению многих лекарственных средств – лекарств (лекарств), – что, в свою очередь, приводит к полипрагмазия у пациента.*

Полипрагмазия является серьезной проблемой системы здравоохранения, так как клинически проявляется снижением эффективности фармакотерапии и развитием нежелательных побочных реакций, а также значительным увеличением затрат на здравоохранение.

В медицинской литературе часто используется термин «полипрагмазия», однако общепринятого определения не существует.

Для этой цели сравнение морфометрических показателей печени чистопородных крыс в норме и под влиянием противовоспалительных препаратов при полипрагмазиипараметры были изучены.

Цель работы — восполнение данных о морфологических и морфометрических показателях ткани печени.

Ключевые слова*: полипрагмазия, морфометрия, морфология, воспаление.*

Payazov Sh.N.
Assistant Professor
Department of Clinical Anatomy
Samarkand State Medical University
Samarkand, Uzbekistan

A STUDY OF MORPHOMETRIC PARAMETERS OF THE LIVER IN WHITE NON-PEDIGREE RATS UNDER THE INFLUENCE OF THE ANTI-INFLAMMATORY DRUGS PARACETAMOL, ASPIRIN, AND IBUPROFEN IN POLYPHARMACY.

Abstract: The desire to increase the effectiveness of treatment in a patient's body and help the patient get rid of all the diseases that have developed in him inevitably leads to the appointment of many drugs - medicines (medications), which, in turn, leads to polypharmacy in the patient. Polypharmacy is a serious problem for the healthcare system, as it is clinically manifested by a decrease in the effectiveness of pharmacotherapy and the development of adverse reactions, as well as a significant increase in healthcare costs. The term "polypharmacy" is often used in the medical literature, but there is no universally accepted definition. For this purpose, a comparison of the morphometric parameters of the liver of purebred rats in the norm and under the influence of anti-inflammatory drugs with polypharmacy was studied. The aim of the work is to fill the gap in data on the morphological and morphometric parameters of liver tissue.

Keywords: *polypharmacy, morphometry, morphology, inflammation.*

Введение. Быстро увеличивается создание и внедрение многих препаратов, способных лечить заболевания, что, с одной стороны, улучшает состояние больного, а с другой, в последнее время доказано, что это серьезно вредит здоровью.

В отечественных литературных источниках полипрагмазия определяется как одновременное применение многих лекарственных средств, в том числе необоснованное их применение. В зарубежной литературе используется термин «полипрагмазия» (полипрагмазия от греческого поли- много и фармация — лекарство). В медицинских словарях полипрагмазия — это «смешивание нескольких препаратов в одном рецепте», «использование нескольких препаратов для лечения одного или нескольких». болезни»; это явление часто наблюдается у больных пожилого возраста» и в научных публикациях дано более 20 определений.

Цель и задачи исследования. Побочные эффекты лекарств, патологии почек и сердечно-сосудистой системы являются актуальной проблемой во всем мире. Ведущее место в развитии этих патологий занимают нестероидные противовоспалительные препараты (НПВП), которые являются одними из наиболее широко применяемых препаратов.

Гистологические методы анализа морфофункционального состояния печени широко используются в диагностике и дифференциальной диагностике заболеваний печени различной этиологии. Однако их результаты не всегда отражают нарушение всей структуры органа. Поэтому с точки зрения возможности изучения изменений в ткани печени при полипрагмазии с применением нестероидных противовоспалительных препаратов было произведено макроскопическое и микроскопическое исследование печени небелых крыс, а также 40 печени нестероидных противовоспалительных препаратов белых крыс исследовали макроскопически и микроскопически.

Материал и методы исследования. При обследовании на основании макроскопического и микроскопического исследования тканей печени патогистологически исследовано 40 тканей печени. Для общей морфологии разрезали по 2 кусочка каждой печени, т. е. большой кусок и кусок средней части размером 1,5x1,5 см, и замораживали в 10% нейтральном формалине. После промывки в проточной воде в течение 2-4 часов их обезвоживали в спиртах возрастающей концентрации и ксилоле, затем заливали парафином и готовили блоки. Срезы толщиной 5–8 мкм готовили из парафиновых блоков и окрашивали гематоксилином и эозином.Для изучения эффектов полипрагмазии у белых крыс опытной группы использовали следующие противовоспалительные средства:

Аспирин (производные NYaQD-салициловой кислоты), парацетамол (производные NYaQD-анилида), ибупрофен (производные NYaQD-пропионовой кислоты).

Результаты и обсуждение. Белые крысы, взятые для эксперимента, были разделены на 2 группы (n=40): I группа – (интактный) контроль (n=20); II-группа - белые крысы, получавшие 3 различных нестероидных противовоспалительных препарата: парацетамол 15 мг/кг, аспирин 5 мг/кг, ибупрофен 6 мг/кг (n=20);Дозы этого препарата рассчитывали эмпирически и вводили внутрижелудочно ежедневно в течение 10 дней в виде раствора.

Со 141-го дня развития по 150-й день крысам Контрольной группы белых беспородных крыс внутрижелудочно через металлический зонд в течение 10 дней вводили по 0,5 мл дистиллированной воды.

Срезы печени чистопородных крыс морфометрически исследовали, размеры паренхимы печени и гепатоцитов измеряли с помощью окуляр-микрометра, в котором использовали тринокулярный микроскоп китайского производства. DN-107t/ Модель NLCD-307b (Roman, Китай).

Математическая обработка полученных в ходе исследования морфологических данных осуществлялась непосредственно из общей матрицы пакета данных Microsoft Office с использованием возможностей программы «STTTGRAF 5.1» на персональном компьютере Pentium-IV «Excel 7.0», стандартного отклонения и репрезентативных ошибок. были полны решимости.

Методами вариационной параметрической статистики были рассчитаны среднее арифметическое (M), среднее квадратическое отклонение (m), средняя стандартная ошибка (m), относительные значения (частота, %) исследуемого показателя.

Статистическую значимость измерений, полученных при сравнении размеров, определяли путем расчета критерия Стьюдента (t) на нормальность распределения (по критерию эксцесса) и вероятности ошибки (P) при проверке равенства общих дисперсий. (e – тест Фишера). Для оценки статистической значимости рассчитанных критериев использовались таблицы показателей и критических значений допустимых уровней значимости (P).

За статистически значимые изменения были приняты четыре основных уровня значимости: высокий - R<0,001, средний R<0,010, низкий (предельный) - R<0,050, незначительный (неопределенный) - R>0,050.

Так, применение комплекса нестероидных противовоспалительных препаратов (НПВП), как описано выше, приводило к появлению различных патоморфологических изменений в паренхиме печени крыс (рис. 1, 2). Лечение некоторых хронических заболеваний является длительным процессом, и учитывая высокую вероятность развития у больных токсических патологий печени, в схемы лечения рекомендуется включать гепатопротекторные средства.

Заключение.

- Эта информация позволяет различать патологии и сравнивать клетки между собой с помощью микроскопа, зная нормальные показатели печени.
- Гистологические методы анализа морфофункционального состояния печени широко используются в диагностике и дифференциальной диагностике заболеваний печени различной этиологии.
- Эти данные могут быть использованы для заполнения микроскопических и макроскопических данных в учебном процессе студентов кафедр гистологии и патологии медицинских учреждений.
- Сравнение морфометрических показателей печени небелых крыс в норме и под влиянием противовоспалительных препаратов при полипрагмазиизнание его параметров облегчает постановку патогистологического диагноза.

Использованные источники:

1. Санъат Саъдинович Усанов (2021), ХАРАКТЕРИСТИКА МОРФОМЕТРИЧЕСКИХ ПАРАМЕТРОВ ПЕЧЕНИ ПРИ ПОЛИПРАГМАЗИИ, Oriental renaissance: Innovative, educational, natural and social sciences, 1(8), (613-621)
2. Usanov Sanjar Sadinovich, Khidirov Ziyadulla Erkinovich, Djumaev Husen Abdurafikovich (2023), Study Of The Morphometric Indicators Of The Liver Of Album Rats Under The Effect Of 3 Different Anti-Inflammatory Medicines In Polyprogramsis, Central Asian Journal of Medical and Natural Science, 4(6), (450-455)
3. USANOV Sanjar Sadinovich, KORJAVOV Sherali Oblakulovich, KURBONOVA Latofat Murodullaevna (2023), Morphology and morphometric characteristics of liver tissue of group four white rats, Journal of biomedicine and practice, 8(3),
4. Санжар Садинович Усанов, Зиядулла Эркинович Хидиров (2024), KALAMUSHLAR JIGARINING MORFOMETRIK KO’RSATGICHLARINI POLIPROGMAZIYA SHAROITIDA YALLIG'LANISHGA QARSHI 4 HIL VOSITALAR TA’SIRI HOLATIDA O’RGANISH, Journal of new century innovations, 48(1), (113-119)
5. Санжар Садинович Усанов, Зиядулла Эркинович Хидиров, Ширин Шухратовна Абдурайимова (2024), ОҚ ЗОТСИЗ КАЛАМУШЛАР

ЖИГАРИНИНГ НОРМАДА МОРФОЛОГИК ПАРАМЕТРЛАРИНИ ЎРГАНИШ. TADQIQOTLAR. UZ, 33(2), (98-105)
6. Sanjar Usanov, Zafarjon Abduraimov (2024), YALLIG ‘LANISHGA QARSHI DORI VOSITALARI POLIPRAGMAZIYASIDA JIGAR PARENXIMASINING MORFOMETRIK O ‘ZGARISHLARINI O ‘RGANISH, Medical science of Uzbekistan, (13-17)
7. СС Усанов, НЧ Хидиров (2024), OQ ZOTSIZ KALAMUSHLAR JIGARINING MORFOMETRIK KO’RSATGICHLARINI POLIPROGMAZIYADA YALLIG'LANISHGA QARSHI 3 HIL VOSITALAR TA’SIRI HOLATIDA ЎРГАНИШ, TECHNICAL SCIENCE RESEARCH IN UZBEKISTAN, 2(2), (173-178)
8. Usanov Sanjar (2022), MORPHOLOGICAL FEATURES OF THE LIVER IN POLYPRAGMASIA, YANGI O'ZBEKISTONDA MILLIY TARAQQIYOT VA INNOVASIYALAR, (127-129)
9. Ш Тешаев, С Усанов (2023), Yallig ‘lanishga qarshi preparatlar bilan polipragmaziyada jigar parenximasining morfologik xususiyatlari, Каталог монографий, 1(1), (1-88)
10. Сапарбайева M Usanov S,Хидиров Z (2024), ОҚ ЗОТСИЗ КАЛАМУШЛАР ЖИГАРИНИНГ МЕЪЁРДАГИ МАКРОСКОПИК ВА ГИСТОЛОГИК ПАРАМЕТРЛАРИ, International Scientific and Practical conference "ACTUAL ISSUES SCIENCE", (2-223)
11. *Паязов Шерали Нематович Лучшие интеллектуальные исследования* ЖИГАР ТЎҚИМАСИНИНГ МОРФОЛОГИЯСИ ВА МОРФОМЕТРИК КУРСАТГИЧЛАРИНИ ЯЛЛИҒЛАНИШГА ҚАРШИ ДОРИ ВОСИТАЛАРИ ТАСИРИ ХОЛАТИДА СОЛИШТИРИШТИРИШ. Часть-28_ Том-1_ Август-2024 (14-23)
12. Паязов Шерали НематовичJOURNAL OF NEW CENTURY INNOVATIONS МОРФОЛОГИЯ И МОРФОМЕТРИЧЕСКАЯ ХАРАКТЕРИСТИКА ТКАНИ ПЕЧЕНИ БЕЛЫХ КРЫС ЧЕТВЕРТОЙ ГРУППЫ. Volume–59 _ Issue-1 _ August-2024 (135-142)
13. Ismoilov I Ortik. Usanov S. Sanjar (2022), STUDY OF THE MORPHOMETRIC INDICATORS OF THE LIVER OF PUREBRED RATS UNDER THE INFLUENCE OF 4 TYPES OF ANTI-INFLAMMATORY DRUGS IN POLYPHARMACY, Biomeditsina va amaliyot jurnali, 5(5), (148-154)
14. Usanov S (2021), BCHANGES IN THE MORPHOLOGICAL STRUCTURE OF THE LIVER WITH POLYPRAGMASIA, INNOVATION IN THE MODERN EDUCATION SYSTEM, 13(13), (458-459)
15.Usanov S. (2021), Морфологические особенности печени при полипрагмазии, 1(5), (53-55)

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Паязов Ш.Н.
ассистент
кафедра клинической анатомии
Самаркандский государственный медицинский университет
г. Самарканд Узбекистан

СРАВНЕНИЕ МОРФОМЕТРИЧЕСКИХ ПОКАЗАТЕЛЕЙ ПЕЧЕНИ БЕЛЫХ БЕЗПОРОДНЫХ КРЫС ПОД ВОЗДЕЙСТВИЕМ ПРОТИВОВОСПАЛИТЕЛЬНЫХ СРЕДСТВ ПАРАЦЕТАМОЛА И АСПИРИНА В НОРМЕ И ПРИ ПОЛИПРАГМАЗИИ

Аннотация. *У людей стремление повысить эффективность лечения, помочь больному избавиться от всех развившихся у него заболеваний неизбежно приводит к назначению многих препаратов – лекарств (лекарств) – что, в свою очередь, приводит к полипрагмазии у больного.*

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Цель работы — восполнение данных о морфологических и морфометрических показателях ткани печени.

Ключевые слова*: полипрагмазия, морфометрия, морфология, воспаление.*

Payazov Sh.N.
Assistant Professor
Department of Clinical Anatomy
Samarkand State Medical University
Samarkand, Uzbekistan

COMPARISON OF MORPHOMETRIC PARAMETERS OF THE LIVER IN WHITE NON-PEDIGREE RATS UNDER THE INFLUENCE OF ANTI-INFLAMMATORY DRUGS PARACETAMOL AND ASPIRIN IN NORMAL CONDITIONS AND WITH POLYPHARMACY.

Abstract. *In humans, the desire to increase the effectiveness of treatment and help the patient get rid of all developed diseases inevitably leads to the appointment of many drugs - medicines (medicines) - which, in turn, leads to polypharmacy in the patient.*

Polypharmacy is a serious problem of the healthcare system, as it is clinically manifested by a decrease in the effectiveness of pharmacotherapy and the development of adverse reactions, as well as a significant increase in healthcare costs.

The term "polypharmacy" is often used in the medical literature, but there is no universally accepted definition.

For this purpose, a comparison of the morphometric parameters of the liver of rats in normal conditions and under the influence of anti-inflammatory drugs with polypharmacy was studied.

The aim of the study is to fill the gap in data on the morphological and morphometric parameters of liver tissue.

Keywords: *polypharmacy, morphometry, morphology, inflammation.*

Введение. В современном мире наблюдается стремительный рост создания и внедрения многих препаратов, способных улучшать течение заболеваний, которые, с одной стороны, улучшают состояние больного, а с другой - наносят серьезный вред здоровью.

В отечественных литературных источниках полипрагмазия определяется как одновременное применение многих лекарственных средств, в том числе необоснованное их применение. В зарубежной литературе используется термин «полипрагмазия» (полипрагмазия, на греческом языкеполи-многие иаптека- препарат) В медицинских словарях полипрагмазия – это «смешивание нескольких препаратов в одном рецепте», «использование нескольких препаратов для лечения одного или нескольких заболеваний»; это явление часто наблюдается у пациентов пожилого возраста» и в научных публикациях дано более 24 определений.

Цель и задачи исследования. Побочные эффекты лекарств, патологии почек и сердечно-сосудистой системы являются актуальной проблемой во всем мире.

Ведущее место в развитии этих патологий занимают нестероидные противовоспалительные препараты (НПВП), которые являются одними из наиболее широко применяемых препаратов.

Гистологические методы анализа морфофункционального состояния печени широко используются в диагностике и дифференциальной диагностике заболеваний печени различной этиологии. Однако их результаты не всегда отражают нарушение всей структуры органа. Поэтому с точки зрения возможности изучения изменений в ткани печени при полипрагмазии с применением нестероидных противовоспалительных препаратов за цель было принято макроскопическое и микроскопическое исследование печени небелых крыс, а Макроскопически и микроскопически исследована печень 64 цветных крыс.

Материал и методы исследования. В ходе обследования на основании макроскопических и микроскопических исследований тканей печени патогистологически исследовано 40 тканей печени, разделенных на две группы.Для общей морфологии разрезали по 2 кусочка каждой печени, т. е. большой кусок и кусок средней части размером 1,5х1,5 см, и замораживали в 10% нейтральном формалине. После промывки в проточной воде в течение 2-4 часов их обезвоживали в спиртах возрастающей концентрации и ксилоле, затем заливали парафином и готовили блоки. Срезы толщиной 5–8 мкм готовили из парафиновых блоков и окрашивали гематоксилином и эозином.Для изучения эффектов полипрагмазии у белых крыс опытной группы использовали следующие противовоспалительные средства:

Аспирин (производные NYaQD-салициловой кислоты), парацетамол (производные NYaQD-анилида).

Результаты и обсуждение. Белые крысы, взятые для эксперимента, были разделены на 2 группы (n=40): I группа – (интактный) контроль (n=20); II-группа - белые крысы, получавшие 2 вида нестероидных противовоспалительных препаратов: парацетамол 15 мг/кг, аспирин 5 мг/кг (n=20);Дозы этого препарата рассчитывали эмпирически и вводили внутрижелудочно ежедневно в течение 10 дней в виде раствора.

Со 141-го дня развития по 150-й день крысам Контрольной группы белых беспородных крыс внутрижелудочно через металлический зонд в течение 10 дней вводили по 0,5 мл дистиллированной воды.

Срезы печени чистопородных крыс морфометрически исследовали, размеры паренхимы печени и гепатоцитов измеряли с помощью окуляр-микрометра, в котором использовали тринокулярный микроскоп китайского производства. DN-107t/ Модель NLCD-307b (Roman, Китай).

Математическая обработка полученных в ходе исследования морфологических данных осуществлялась непосредственно из общей матрицы пакета данных Microsoft Office с использованием возможностей программы «STTTGRAF 5.1» на персональном компьютере Pentium-IV «Excel 7.0», стандартного отклонения и репрезентативных ошибок. были полны решимости.

Методами вариационной параметрической статистики были рассчитаны среднее арифметическое (M), среднее квадратическое отклонение (m), средняя стандартная ошибка (m), относительные значения (частота, %) исследуемого показателя.

Статистическую значимость измерений, полученных при сравнении размеров, определяли путем расчета критерия Стьюдента (t) на нормальность распределения (по критерию эксцесса) и вероятности ошибки (P) при проверке равенства общих дисперсий. (е – тест Фишера). Для оценки статистической значимости рассчитанных критериев использовались таблицы показателей и критических значений допустимых уровней значимости (P).

За статистически значимые изменения были приняты четыре основных уровня значимости: высокий - R<0,001, средний R<0,010, низкий (предельный) - R<0,050, незначительный (неопределенный) - R>0,050.

Так, применение комплекса нестероидных противовоспалительных препаратов (НПВП), как описано выше, приводило к появлению различных патоморфологических изменений в паренхиме печени крыс (рис. 1, 2). Лечение некоторых хронических заболеваний является длительным процессом, и учитывая высокую вероятность развития у больных токсических патологий печени, в схемы лечения рекомендуется включать гепатопротекторные средства.

Заключение.

- Эта информация позволяет различать патологии и сравнивать клетки между собой с помощью микроскопа, зная нормальные показатели печени.
- Гистологические методы анализа морфофункционального состояния печени широко используются в диагностике и дифференциальной диагностике заболеваний печени различной этиологии.
- Эти данные могут быть использованы для заполнения микроскопических и макроскопических данных в учебном процессе студентов кафедр гистологии и патологии медицинских учреждений.
- Сравнение морфометрических показателей печени инбредных крыс в норме и под влиянием противовоспалительных препаратов при полипрагмазии знание его параметров облегчает постановку патогистологического диагноза.

Использованные источники:

1. SS Usanov, Sh J Teshaev, BA Sanoev (2022), MORPHOLOGICAL AND MORPHOMETRIC PARAMETERS OF THE LIVER OF WHITE NONBORED RATS IN NORMAL, Oriental renaissance: Innovative, educational, natural and social sciences, 2(1), (75-81)
2. Usanov Sanat Sadinovich (2021), Characteristic Of The Morphometric Parameters Of The Liver In Polypragmasia, The American Journal of Medical Sciences and Pharmaceutical Research, 3(10), (28-32)
3. Санъат Саъдинович Усанов (2021), ХАРАКТЕРИСТИКА МОРФОМЕТРИЧЕСКИХ ПАРАМЕТРОВ ПЕЧЕНИ ПРИ ПОЛИПРАГМАЗИИ, Oriental renaissance: Innovative, educational, natural and social sciences, 1(8), (613-621)
4. *Паязов Шерали Нематович Лучшие интеллектуальные исследования* ЖИГАР ТЎҚИМАСИНИНГ МОРФОЛОГИЯСИ ВА МОРФОМЕТРИК КУРСАТГИЧЛАРИНИ ЯЛЛИҒЛАНИШГА ҚАРШИ ДОРИ ВОСИТАЛАРИ ТАСИРИ ХОЛАТИДА СОЛИШТИРИШТИРИШ. Часть-28_ Том-1_ Август-2024 (14-23)
5. Паязов Шерали НематовичJOURNAL OF NEW CENTURY INNOVATIONS МОРФОЛОГИЯ И МОРФОМЕТРИЧЕСКАЯ ХАРАКТЕРИСТИКА

ТКАНИ ПЕЧЕНИ БЕЛЫХ КРЫС ЧЕТВЕРТОЙ ГРУППЫ. Volume–59 _ Issue-1 _ August-2024 (135-142)
6. Санжар Садинович Усанов, Зиядулла Эркинович Хидиров (2024), KALAMUSHLAR JIGARINING MORFOMETRIK KO’RSATGICHLARINI POLIPROGMAZIYA SHAROITIDA YALLIG'LANISHGA QARSHI 4 HIL VOSITALAR TA’SIRI HOLATIDA O’RGANISH, Journal of new century innovations, 48(1), (113-119)
7. Санжар Садинович Усанов, Зиядулла Эркинович Хидиров, Ширин Шухратовна Абдурайимова (2024), ОҚ ЗОТСИЗ КАЛАМУШЛАР ЖИГАРИНИНГ НОРМАДА МОРФОЛОГИК ПАРАМЕТРЛАРИНИ ЎРГАНИШ. TADQIQOTLAR. UZ, 33(2), (98-105)
8. Sanjar Usanov, Zafarjon Abduraimov (2024), YALLIG ‘LANISHGA QARSHI DORI VOSITALARI POLIPRAGMAZIYASIDA JIGAR PARENXIMASINING MORFOMETRIK O ‘ZGARISHLARINI O ‘RGANISH, Medical science of Uzbekistan, (13-17)
9. СС Усанов, НЧ Хидиров (2024), OQ ZOTSIZ KALAMUSHLAR JIGARINING MORFOMETRIK KO’RSATGICHLARINI POLIPROGMAZIYADA YALLIG'LANISHGA QARSHI 3 HIL VOSITALAR TA’SIRI HOLATIDA ЎРГАНИШ, TECHNICAL SCIENCE RESEARCH IN UZBEKISTAN, 2(2), (173-178)
10. Usanov Sanjar (2022), MORPHOLOGICAL FEATURES OF THE LIVER IN POLYPRAGMASIA, YANGI O'ZBEKISTONDA MILLIY TARAQQIYOT VA INNOVASIYALAR, (127-129)
11. Ш Тешаев, С Усанов (2023), Yallig ‘lanishga qarshi preparatlar bilan polipragmaziyada jigar parenximasining morfologik xususiyatlari, Каталог монографий, 1(1), (1-88)
12. Санжар Усанов (2023), Морфологические особенности паренхимы печени при полипрагмазии противовоспалительными препаратами, Каталог диссертаций и авторефератов, 1(1), (2-119)
13. Ортиқ Исмоилович Исмоилов, Санжар Садинович Усанов, Зиядулла Эркинович Хидиров (2024), ОҚ ЗОТСИЗ КАЛАМУШЛАРДА ЖИГАР ТЎҚИМАСИНИНГ МОРФОЛОГИЯСИ ВА МОРФОМЕТРИК КЎРСАТГИЧЛАРИНИ НОРМАЛ ВА ПОЛИПРАГМАЗИЯДА ЯЛЛИҒЛАНИШГА ҚАРШИ ДОРИ ВОСИТАЛАРИ 4 ХИЛ ДОРИ ВОСИТАЛАРИ ТАСИРИ ХОЛАТИДА ТАҚҚОСЛАШ,ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ, 43(7), (112-121)
14. Usanov Sanjar Sadinovich, Mudit Chhajer, Kurbonova Latofat Murodilloyevna (2024), COMPARISON OF MORPHOLOGY AND MORPHOMETRIC INDICATORS OF LIVER TISSUE IN WHITE NONBRED RATS UNDER THE INFLUENCE OF 3 DIFFERENT DRUGS OF ANTI-INFLAMMATORY DRUGS IN NORMAL AND, TADQIQOTLAR. UZ, 38(7), (140-147)
15. Ismoilov Ortik Ismoilovich, Usanov Sanjar Sadinovich, Khidirov Ziyadulla Erkinovich (2024), COMPARISON OF LIVER TISSUE MORPHOLOGY AND

MORPHOMETRIC INDICATORS IN NORMAL AND POLYPRAGMOUS ANTI-INFLAMMATORY DRUGS IN ALBUM RATS UNDER THE EFFECT OF 4 DIFFERENT ANTI-INFLAMMATORY DRUGS, Multidisciplinary Journal of Science and Technology, 4(5), (368-375)

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Паязов Ш.Н.
ассистент
кафедра клинической анатомии
Самаркандский государственный медицинский университет
г. Самарканд Узбекистан

ГИСТОЛОГИЧЕСКАЯ СТРУКТУРА ПЕЧЕНИ БЕЛЫХ БЕЗПОРОДНЫХ КРЫС

Аннотация. *Белые крысы в период пренатального развития морфогенез печени регулярно меняет стадии формирования органов, подобных человеку. Несмотря на большую массу печени крыс, наличие множества долей печени и отсутствие желчного пузыря, микроскопическое строение печени крысы и цитофизиологические характеристики гепатоцитов человека принципиально не отличаются. Учитывая это, считается удобным проводить многие научные эксперименты на белых крысах.*

С этой целью были изучены нормальные параметры ткани печени белых безпородных крыс.

Цель работы — восполнение данных о макроскопических параметрах ткани печени.

Ключевые слова*: макроскопия, гистология, печень, гепатоцит.*

Payazov Sh.N.
Assistant Professor
Department of Clinical Anatomy
Samarkand State Medical University
Samarkand, Uzbekistan

HISTOLOGICAL STRUCTURE OF THE LIVER IN WHITE NON-INBRED RATS

Abstract. *White rats undergo regular stages of liver organogenesis during prenatal development, similar to humans. Despite the significant liver mass in rats, the presence of multiple liver lobes, and the absence of a gallbladder, the microscopic structure of the rat liver and the cytophysiological characteristics of human hepatocytes are fundamentally similar. Given this, it is considered convenient to conduct many scientific experiments on white rats. With this goal in mind, the normal parameters of liver tissue in white non-inbred rats were studied. The aim of the work is to supplement the data on the macroscopic parameters of liver tissue.*

Keywords: *macroscopy, histology, liver, hepatocyte.*

Введение. Одним из важных органов для человека является печень, на которую могут оказывать неблагоприятное воздействие метаболические, токсические, микробиологические, нарушения кровообращения, неопластические факторы.

С целью изучения и предотвращения этих патологических изменений проводится множество научных работ. В то время, когда подобную научную работу невозможно проводить на людях, тот факт, что тело белых крыс похоже на тело человека, облегчает нашу работу. Поэтому мы задались целью изучить макроскопические параметры печени чистопородных крыс и дополнить полученную к настоящему времени информацию.

Цель и задачи исследования. Гистологические методы анализа макроскопического и морфофункционального состояния печени широко используются в диагностике и дифференциальной диагностике заболеваний печени различной этиологии. Однако их результаты не всегда отражают нарушение всей структуры органа. Все это в совокупности повышает интерес исследователей к поиску новых методов оценки патологии печени, что может быть связано с микроскопической оценкой критериев изменения патоморфологических структур печени при одновременном применении противовоспалительных препаратов, что в случае полипрагмазии.Поэтому с целью изучения нормальных данных ткани печени и сравнения их с патологическими процессами было направлено макроскопическое и микроскопическое исследование печени небелых крыс, макроскопически и микроскопически исследовано 46 печени небелых крыс.

Материал и методы исследования. В ходе обследования на основании макроскопического и микроскопического исследования ткани печени патогистологически исследовано 46 тканей печени.Для общей морфологии разрезали по 2 кусочка каждой печени, т. е. большой кусок и кусок средней части размером 1,5х1,5 см, и замораживали в 10% нейтральном формалине. После промывки в проточной воде в течение 2-4 часов их обезвоживали в спиртах возрастающей концентрации и ксилоле, затем заливали парафином и готовили блоки. Срезы толщиной 5–8 мкм готовили из парафиновых блоков и окрашивали гематоксилином и эозином.

Результаты и обсуждение. Вес крыс контрольной группы колебался от 130 до 140 г, в среднем -135 г. Крысы контрольной группы имели массу печени от 7,6 г до 9,8 г, в среднем - от 8,50 г до 0,36 г. средний массовый коэффициент -6,68 г, до 0,20 г.

Печень снаружи покрыта соединительнотканной капсулой, которая пронизывает паренхиму печени и образует комковатую и бугристую структуру. Лишь в области портальных трактов сегментарный вид отчетлив. Как и у человека, фиброз у крыс не разделен фиброзными прослойками. Границы отделов представляют собой условные линии между портальными трактами. Клетки печени и гепатоциты располагаются относительно правильными рядами внутри долей и образуют два ряда радиальных пластинок печени.

Поперечный размер гепатоцитов (расстояние от центра одного ядра гепатоцита до центра ближайшего ядра другого гепатоцита) варьирует от 21,0 до 28,0 мкм, в среднем - от 25,1 до 0,45 мкм. Они имеют многоугольную форму с четкими границами. Цитоплазма амфофильная, зернистая. В перинуклеарной зоне и со стороны синусоидального полюса на фоне относительно бледной цитоплазмы имеется мелкозернистое базофильное вещество, соответствующее зернистой эндоплазматической сети.

Среднее поперечное сечение цитоплазмы гепатоцитов колеблется от 403,0 мм2 до 731,0 мм2, среднее — от 594,5 до 21,6 мм2. Ядра гепатоцитов расположены центрально, содержат одно или два четко выраженных ядрышка, различаются по размеру и форме, часто имеют округлую форму. Ядра обычно расположены в центре клеток печени, но могут перемещаться вокруг них. Большинство гепатоцитов мононуклеарные, но встречаются и двуядерные гепатоциты. Перипортальные гепатоциты несколько мельче, их ядра гиперхромны, цитоплазма более базофильна.

Число двуядерных гепатоцитов на 100 гепатоцитов находится в пределах 10-18, в среднем 0,72 против 14,2 гепатоцитов. Поперечные показатели ядер гепатоцитов контрольной группы крыс колебались от 102,0 мм2 до 143,0 мм2, средние - до 119,4%, до 2,58 мм2.

В центре долей печени расположены центральные сосуды, являющиеся первичным соединением сосудов печени. Диаметр центральных вен от 48,0 до 76,0 мкм, средний от 60,55 до 1,74 мкм. Портальные тракты расположены вокруг долей, в которых проходят артерия, вена и желчный проток.

Диаметр междольковых вен от 22,0 до 36,0 мкм, в среднем от 30,1 до 00,870 мкм.

Эти сосуды отдают ветви очень малого диаметра, которые со временем переходят в венулы и делятся на ветви синусоидальных капилляров, образующих лабиринтоподобный сосудистый пучок доли печени. Междольковые артерии отдают большую часть своих ветвей кровоснабжению желчных протоков, участвуют в образовании перибилиарных пучков, плотность которых увеличивается по мере увеличения диаметра желчных протоков.

Диаметр междольковых артерий колеблется от 9,9 до 16,3 мкм, в среднем от 14,2 до 0,40 мкм. Меньшая часть концевых артерий участвует в образовании синусоидальных сосудов (капилляров), переходящих в артериолы, диаметр которых меньше диаметра междольковых вен (в 2 раза и более). Они расположены между долями печени.

Синусоидальные капилляры направлены преимущественно в радиальном направлении к центру долей, впадают в центральные вены. Эти гемокапилляры имеют размер поперечного сечения от 9,0 до 13,0 мкм, в среднем от 11 до 0,26 мкм. Одна сторона гепатоцита обращена к синусоиде (синусоидальная сторона), а другая сторона — к соседнему гепатоциту, где образуются желчные капилляры (желчная сторона).

Желчные протоки триады покрыты однослойным кубовидным эпителием, высота которого от 4 до 6 мкм, средняя — 4,77 мкм, толщина — до 0,17 мкм. Размер желчных протоков колеблется от 16,0 до 35,0 мкм, в среднем - от 22,5 до 1,18 мкм. Паренхима между портальными трактами и центральными сосудами представлена долями, состоящими из двух рядов клеток печени.

Заключение.

- Эти данные позволяют выделить патологии и сравнить их между собой макроскопически, зная нормальные показатели печени.
- Эти данные могут быть использованы на кафедрах анатомии, клинической анатомии и патанатомии медицинских учреждений для заполнения микроскопической и макроскопической информации в ходе учебного процесса.

Использованные источники:

1. Sanjar Usanov, Zafarjon Abduraimov (2024), YALLIG ‘LANISHGA QARSHI DORI VOSITALARI POLIPRAGMAZIYASIDA JIGAR PARENXIMASINING MORFOMETRIK O ‘ZGARISHLARINI O ‘RGANISH, Medical science of Uzbekistan, (13-17)
2. СС Усанов, НЧ Хидиров (2024), OQ ZOTSIZ KALAMUSHLAR JIGARINING MORFOMETRIK KO’RSATGICHLARINI POLIPROGMAZIYADA YALLIG'LANISHGA QARSHI 3 HIL VOSITALAR TA’SIRI HOLATIDA ЎРГАНИШ, TECHNICAL SCIENCE RESEARCH IN UZBEKISTAN, 2(2), (173-178)
3. Usanov Sanjar (2022), MORPHOLOGICAL FEATURES OF THE LIVER IN POLYPRAGMASIA, YANGI O'ZBEKISTONDA MILLIY TARAQQIYOT VA INNOVASIYALAR, (127-129)
4. Ш Тешаев, С Усанов (2023), Yallig ‘lanishga qarshi preparatlar bilan polipragmaziyada jigar parenximasining morfologik xususiyatlari, Каталог монографий, 1(1), (1-88)
5. Санжар Усанов (2023), Морфологические особенности паренхимы печени при полипрагмазии противовоспалительными препаратами, Каталог диссертаций и авторефератов, 1(1), (2-119)
6. Ортиқ Исмоилович Исмоилов, Санжар Садинович Усанов, Зиядулла Эркинович Хидиров (2024), ОҚ ЗОТСИЗ КАЛАМУШЛАРДА ЖИГАР ТЎҚИМАСИНИНГ МОРФОЛОГИЯСИ ВА МОРФОМЕТРИК КЎРСАТГИЧЛАРИНИ НОРМАЛ ВА ПОЛИПРАГМАЗИЯДА ЯЛЛИҒЛАНИШГА ҚАРШИ ДОРИ ВОСИТАЛАРИ 4 ХИЛ ДОРИ ВОСИТАЛАРИ ТАСИРИ ХОЛАТИДА ТАҚҚОСЛАШ,ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ, 43(7), (112-121)
7. Usanov Sanjar Sadinovich, Mudit Chhajer, Kurbonova Latofat Murodilloyevna (2024), COMPARISON OF MORPHOLOGY AND MORPHOMETRIC INDICATORS OF LIVER TISSUE IN WHITE NONBRED RATS UNDER THE

INFLUENCE OF 3 DIFFERENT DRUGS OF ANTI-INFLAMMATORY DRUGS IN NORMAL AND, TADQIQOTLAR. UZ, 38(7), (140-147)
8. ***Паязов Шерали Нематович Лучшие интеллектуальные исследования*** ЖИГАР ТЎҚИМАСИНИНГ МОРФОЛОГИЯСИ ВА МОРФОМЕТРИК КУРСАТГИЧЛАРИНИ ЯЛЛИҒЛАНИШГА ҚАРШИ ДОРИ ВОСИТАЛАРИ ТАСИРИ ХОЛАТИДА СОЛИШТИРИШТИРИШ. Часть-28_ Том-1_ Август-2024 (14-23)
9. Паязов Шерали НематовичJOURNAL OF NEW CENTURY INNOVATIONS МОРФОЛОГИЯ И МОРФОМЕТРИЧЕСКАЯ ХАРАКТЕРИСТИКА ТКАНИ ПЕЧЕНИ БЕЛЫХ КРЫС ЧЕТВЕРТОЙ ГРУППЫ. Volume–59 _ Issue-1 _ August-2024 (135-142)
10. Сапарбайева M Usanov S,Хидиров Z (2024), ОҚ ЗОТСИЗ КАЛАМУШЛАР ЖИГАРИНИНГ МЕЪЁРДАГИ МАКРОСКОПИК ВА ГИСТОЛОГИК ПАРАМЕТРЛАРИ, International Scientific and Practical conference "ACTUAL ISSUES SCIENCE", (2-223)
11. Teshaev Sh. Usanov S. (2022), Polypragmas with Anti-Inflammatory Drugs: Morphological Characteristics of the Liver Parenchyma, American Journal of Medicine and Medical Sciences, 11(12), (1115-1119)
12. Усанов С.С. Тешаев Ш.Ж. (2022), ЯЛЛИҒЛАНИШГА ҚАРШИ ПЕРЕПАРАТЛАР ПОЛИПРАГМАЗИЯСИДА ЖИГАР ПЕРЕНХИМАСИДАГИ МОРФОМЕТРИК ЎЗГАРИШЛАР, Tibbiyotda yangi kun, 10(48), (328-334)
13. Ismoilov I Ortik. Usanov S. Sanjar (2022), STUDY OF THE MORPHOMETRIC INDICATORS OF THE LIVER OF PUREBRED RATS UNDER THE INFLUENCE OF 4 TYPES OF ANTI-INFLAMMATORY DRUGS IN POLYPHARMACY, Biomeditsina va amaliyot jurnali, 5(5), (148-154)
14. Usanov S (2021), BCHANGES IN THE MORPHOLOGICAL STRUCTURE OF THE LIVER WITH POLYPRAGMASIA, INNOVATION IN THE MODERN EDUCATION SYSTEM, 13(13), (458-459)
15.Usanov S. (2021), Морфологические особенности печени при полипрагмазии, 1(5), (53-55)

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Паязов Ш.Н.
Ассистент
кафедра клинической анатомии
Самаркандский государственный медицинский университет
г. Самарканд Узбекистан

МОРФОЛОГИЧЕСКАЯ И МОРФОМЕТРИЧЕСКАЯ СТРУКТУРА ПЕЧЕНИ У БЕЛЫХ БЕСПОРОДНЫХ КРЫС

Аннотация. *Печень – один из самых важных органов человека. К вредным факторам оказывающие отрицательные действия к печени можно отнести метаболические, токсические, микробиологические, нарушения микроциркуляции крови и неопластические факторы. Патология печени и её терапевтические аспекты подчёркивают важность проведения широких научных опытов и исследований у лабораторных и сельскохозяйственных животных, так как они позволяют объективно оценивать эфективность, безопастность и экономичность применения лекарственных препаратов, при заболеваниях человека и цельскохозяйственных животных. На основании этих обстоятельств, нами было изучины физиологические параметры паренхимы печени у белых беспородных крыс.*

Основной целью работы является дополнение данных по морфологическим и морфометрическим параметрам печеночной ткани.

Ключевые слова*: морфология, морфометрия, гистология, гепатоцит.*

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Payazov Sh.N.
Assistant Professor
Department of Clinical Anatomy
Samarkand State Medical University
Samarkand, Uzbekistan

MORPHOLOGICAL AND MORPHOMETRIC STRUCTURE OF THE LIVER IN WHITE OUTBRED RATS

Abstract: *The liver is one of the most important human organs. Harmful factors that negatively affect the liver include metabolic, toxic, microbiological, microcirculatory disturbances, and neoplastic factors. Liver pathology and its therapeutic aspects underscore the importance of conducting extensive scientific experiments and studies on laboratory and farm animals, as they allow for an objective assessment of the efficacy, safety, and cost-effectiveness of drug use in human and animal diseases. Based on these circumstances, we studied the* *physiological parameters of liver parenchyma in white outbred rats. The main goal of this study is to supplement the data on the morphological and morphometric parameters of liver tissue.*

Keywords: *morphology, morphometry, histology, hepatocyte.*

Введение. В настоящее время описательный подход к изучению патологических процессов в печени недостаточен. Для точной и объективной оценки изменений в органах и тканях необходимо широко использовать микроскопические, в частности морфометрические методы исследования и статистический анализ полученных данных, что не только повышает точность оценки характера и описания изучаемых явлений, но и делает морфологический диагноз более объективным.

Цель и задачи исследования. Гистологические методы анализа морфофункционального состояния печени широко используются в диагностике и дифференциальной диагностике заболеваний печени различной этиологии. Однако их результаты не всегда отражают нарушение всей структуры органа. Все это в совокупности повышает интерес исследователей к поиску новых методов оценки патологии печени, что может быть связано с микроскопической оценкой критериев изменения патоморфологических структур печени при одновременном применении противовоспалительных препаратов, что в случае полипрагмазии.Поэтому с целью изучения физиологических данных ткани печени и сравнения их с патологическими процессами было направлено макроскопическое и микроскопическое исследование печени белых крыс, макроскопически и микроскопически исследовано 42 печени белых крыс.

Материал и методы исследования. В ходе обследования на основании макроскопического и микроскопического исследования ткани печени патогистологически исследовано 42 ткани печени. Для общей морфологии разрезали по 2 кусочка каждой печени, т.е. большой кусок и кусок средней части размером 1,5х1,5 см, и замораживали в 10% нейтральном формалине. После промывки в проточной воде в течение 2-4 часов их обезвоживали в спиртах возрастающей концентрации и ксилоле, затем заливали парафином и готовили блоки. Срезы толщиной 5–8 мкм готовили из парафиновых блоков и окрашивали гематоксилином и эозином.

Результаты и обсуждение. Вес крыс контрольной группы колебался от 130 до 140 г, в среднем -135 г. Крысы контрольной группы имели массу печени от 7,6 г до 9,8 г, в среднем - от 8,50 г до 0,36 г. средний массовый коэффициент -6,68 г, до 0,20 г.

Печень снаружи покрыта соединительнотканной капсулой, которая пронизывает паренхиму печени и образует комковатую и бугристую структуру. Лишь в области портальных трактов сегментарный вид отчетлив. Как и у человека, фиброз у крыс не разделен фиброзными прослойками. Границы отделов представляют собой условные линии между портальными трактами. Клетки печени и гепатоциты располагаются относительно правильными рядами внутри долей и образуют два ряда радиальных пластинок печени.

Поперечный размер гепатоцитов (расстояние от центра одного ядра гепатоцита до центра ближайшего ядра другого гепатоцита) варьирует от 21,0 до 28,0 мкм, в среднем - от 25,1 до 0,45 мкм. Они имеют многоугольную форму с четкими границами. Цитоплазма амфофильная, зернистая. В перинуклеарной зоне и со стороны синусоидального полюса на фоне относительно бледной цитоплазмы имеется мелкозернистое базофильное вещество, соответствующее зернистой эндоплазматической сети.

Среднее поперечное сечение цитоплазмы гепатоцитов колеблется от 403,0 мм2 до 731,0 мм2, среднее — от 594,5 до 21,6 мм2. Ядра гепатоцитов расположены центрально, содержат одно или два четко выраженных ядрышка, различаются по размеру и форме, часто имеют округлую форму. Ядра обычно расположены в центре клеток печени, но могут перемещаться вокруг них. Большинство гепатоцитов мононуклеарные, но встречаются и двуядерные гепатоциты. Перипортальные гепатоциты несколько мельче, их ядра гиперхромны, цитоплазма более базофильна.

Число двуядерных гепатоцитов на 100 гепатоцитов находится в пределах 10-18, в среднем 0,72 против 14,2 гепатоцитов. Поперечные показатели ядер гепатоцитов контрольной группы крыс колебались от 102,0 мм2 до 143,0 мм2, средние - до 119,4%, до 2,58 мм2.

В центре долей печени расположены центральные сосуды, являющиеся первичным соединением сосудов печени. Диаметр центральных вен от 48,0 до 76,0 мкм, средний от 60,55 до 1,74 мкм. Портальные тракты расположены вокруг долей, в которых проходят артерия, вена и желчный проток.

Диаметр междольковых вен от 22,0 до 36,0 мкм, в среднем от 30,1 до 00,870 мкм.

Эти сосуды отдают ветви очень малого диаметра, которые со временем переходят в венулы и делятся на ветви синусоидальных капилляров, образующих лабиринтоподобный сосудистый пучок доли печени. Междольковые артерии отдают большую часть своих ветвей кровоснабжению желчных протоков, участвуют в образовании перибилиарных пучков, плотность которых увеличивается по мере увеличения диаметра желчных протоков.

Диаметр междольковых артерий колеблется от 9,9 до 16,3 мкм, в среднем от 14,2 до 0,40 мкм. Меньшая часть концевых артерий участвует в образовании синусоидальных сосудов (капилляров), переходящих в артериолы, диаметр которых меньше диаметра междольковых вен (в 2 раза и более). Они расположены между долями печени.

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Желчные протоки триады покрыты однослойным кубовидным эпителием, высота которого от 4 до 6 мкм, средняя — 4,77 мкм, толщина — до 0,17 мкм. Размер желчных протоков колеблется от 16,0 до 35,0 мкм, в среднем - от 22,5 до 1,18 мкм. Паренхима между портальными трактами и центральными сосудами представлена долями, состоящими из двух рядов клеток печени.

Заключение.

- Эта информация позволяет различать патологии и сравнивать клетки между собой с помощью микроскопа, зная нормальные показатели печени.
- Эти данные могут быть использованы на кафедрах гистологии медицинских учреждений для заполнения микроскопических и макроскопических данных студентами в учебном процессе.

Использованные источники:

1. S S Usanov, Sh J Teshaev (2022) COMPARATIVE CHARACTERISTICS OF THE LIVER MORPHOMETRIC PARAMETERS OF WHITE UNBORED RATS IN NORMALITY AND WITH THE ACTION OF 2 DIFFERENT ANTI-INFLAMMATORY PREPARATIONS IN POLYPRAGMASIA,Oriental renaissance: Innovative, educational, natural and social sciences, 2(1),(68-74)
2. Toshmamatov Bakhtiyor Norbekovich, Korzhavov Sherali OblakulovichKorzhavov Sherali Oblakulovich, Usanov Sanzhar Sadinovich, Mustafoev Zafar Mustafoevich, Sultanbayev Shakhboz Akhmadjonovich (2021), Polypragmasia as a risk factor causing complications in viral infection, Central Asian Journal of Medical and Natural Science, 2(2), (79-82)
3. Санжар Усанов, Зиядулла Хидиров, Жасмина Олимова (2023), ОҚ ЗОТСИЗ КАЛАМУШЛАР ЖИГАРИНИНГ МЕЪЁРДАГИ МОРФОЛОГИК ВА МОРФОМЕТРИК ПАРАМЕТРЛАРИ, Евразийский журнал академических исследований, 3(11), (101-107)
4. SS Usanov (2022), Anatomical and Histological Parameters of the Liver of White Nonbored Rats in Normal, BARQARORLIK VA YETAKCHI TADQIQOTLAR ONLAYN ILMIY JURNALI, 2(1), (123-128)
5. USANOV Sanjar Sadinovich, ISMOILOV Ortik Ismoilovich (2022), OQ ZOTSIZ KALAMUSHLAR JIGARINING MORFOMETRIK KO'RSATGICHLARINI POLIPROGMAZIYADA YALLIG'LANISHGA QARSHI 4 HIL VOSITALAR TA'SIRI HOLATIDA O'RGANISH, JOURNAL OF BIOMEDICINE AND PRACTICE, 7(5)
6. SS Usanov, Teshaev Sh Zh (2022), Study of Morphological Changes in the Liver of White Unbored Rats under the Influence of 3 Different Anti-Inflammatory Preparations, BARQARORLIK VA YETAKCHI TADQIQOTLAR ONLAYN ILMIY JURNALI, 2(1), (129-132)

7. SS Usanov, Sh J Teshaev, BA Sanoev (2022), MORPHOLOGICAL AND MORPHOMETRIC PARAMETERS OF THE LIVER OF WHITE NONBORED RATS IN NORMAL, Oriental renaissance: Innovative, educational, natural and social sciences, 2(1), (75-81)
8. Usanov Sanat Sadinovich (2021), Characteristic Of The Morphometric Parameters Of The Liver In Polypragmasia, The American Journal of Medical Sciences and Pharmaceutical Research, 3(10), (28-32)
9. Санъат Саъдинович Усанов (2021), ХАРАКТЕРИСТИКА МОРФОМЕТРИЧЕСКИХ ПАРАМЕТРОВ ПЕЧЕНИ ПРИ ПОЛИПРАГМАЗИИ, Oriental renaissance: Innovative, educational, natural and social sciences, 1(8), (613-621)
10. Usanov Sanjar Sadinovich, Khidirov Ziyadulla Erkinovich, Djumaev Husen Abdurafikovich (2023), Study Of The Morphometric Indicators Of The Liver Of Album Rats Under The Effect Of 3 Different Anti-Inflammatory Medicines In Polyprogramsis, Central Asian Journal of Medical and Natural Science, 4(6), (450-455)
11. USANOV Sanjar Sadinovich, KORJAVOV Sherali Oblakulovich, KURBONOVA Latofat Murodullaevna (2023), Morphology and morphometric characteristics of liver tissue of group four white rats, Journal of biomedicine and practice, 8(3),
12. Санжар Садинович Усанов, Зиядулла Эркинович Хидиров (2024), KALAMUSHLAR JIGARINING MORFOMETRIK KO’RSATGICHLARINI POLIPROGMAZIYA SHAROITIDA YALLIG'LANISHGA QARSHI 4 HIL VOSITALAR TA’SIRI HOLATIDA O’RGANISH, Journal of new century innovations, 48(1), (113-119)
13.Санжар Садинович Усанов, Зиядулла Эркинович Хидиров, Ширин Шухратовна Абдурайимова (2024), ОҚ ЗОТСИЗ КАЛАМУШЛАР ЖИГАРИНИНГ НОРМАДА М ***Паязов Шерали Нематович Лучшие интеллектуальные исследования*** ЖИГАР ТЎҚИМАСИНИНГ МОРФОЛОГИЯСИ ВА МОРФОМЕТРИК КУРСАТГИЧЛАРИНИ ЯЛЛИҒЛАНИШГА ҚАРШИ ДОРИ ВОСИТАЛАРИ ТАСИРИ ХОЛАТИДА СОЛИШТИРИШТИРИШ. Часть-28_ Том-1_ Август-2024 (14-23)
14.Паязов Шерали НематовичJOURNAL OF NEW CENTURY INNOVATIONS МОРФОЛОГИЯ И МОРФОМЕТРИЧЕСКАЯ ХАРАКТЕРИСТИКА ТКАНИ ПЕЧЕНИ БЕЛЫХ КРЫС ЧЕТВЕРТОЙ ГРУППЫ. Volume–59 _ Issue-1 _ August-2024 (135-142)
15. ОРФОЛОГИК ПАРАМЕТРЛАРИНИ ЎРГАНИШ. TADQIQOTLAR. UZ, 33(2), (98-105)

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Саидрасулова С.С.
студентка
лечебный факультет
Ташкентская Медицинская Академия
научный руководитель: Шигакова Л.А.
ассистент
кафедра гистология и медицинская биология
Ташкентская Медицинская Академия
Ташкент, Узбекистан

ВЛИЯНИЕ ГОРМОНОВ НА ЭМОЦИОНАЛЬНОЕ СОСТОЯНИЕ В ТЕЧЕНИЕ МЕНСТРУАЛЬНОГО ЦИКЛА

Аннотация: *в данной статье рассмотрены механизмы, посредством которых гормоны регулируют эмоциональное состояние женщин в различные фазы менструального цикла. Обсуждается влияние ключевых гормонов, таких как эстроген, прогестерон и тестостерон, на настроение и поведение. Приведены данные исследований, показывающих связь между уровнем гормонов и изменениями в эмоциональном фоне, а также указаны возможные подходы для улучшения самочувствия женщин в этот период.*

Ключевые слова: *гормоны, менструальный цикл, эмоциональное состояние, эстроген, прогестерон, тестостерон, предменструальный синдром (ПМС), настроение, нейромедиаторы, психоэмоциональные изменения, серотонин, фазы менструального цикла.*

Saidrasulova S.S.
Student
of the general medicine
Tashkent Medical Academy
scientific supervisor: Shigakova L.A.
department assistant
histology and medical biology
Tashkent Medical Academy
Tashkent, Uzbekistan

THE INFLUENCE OF HORMONES ON THE EMOTIONAL STATE DURING THE MENSTRUAL CYCLE

Annotation: *this article examines the mechanisms by which hormones regulate women's emotional states during different phases of the menstrual cycle. It discusses the effects of key hormones such as estrogen, progesterone, and testosterone on mood and behavior. It presents research data showing the* *relationship between hormone levels and changes in emotional background, and suggests possible approaches to improving women's well-being during this period.*

Key words: *hormones, menstrual cycle, emotional state, estrogen, progesterone, testosterone, premenstrual syndrome (PMS), mood, neurotransmitters, psychoemotional changes, serotonin, phases of the menstrual cycle.*

Менструальный цикл представляет собой сложный процесс, регулируемый гормонами, который оказывает значительное влияние на физиологическое и эмоциональное состояние женщины. Колебания уровней гормонов, таких как эстроген и прогестерон, на протяжении цикла могут вызвать резкие эмоциональные изменения. Это объясняет, почему некоторые женщины чувствуют тревожность, раздражительность или депрессивные симптомы в разные фазы цикла. Данная статья направлена на изучение взаимосвязи между гормональными изменениями и эмоциональными реакциями.

1.Фазы менструального цикла и гормональные изменения

Менструальный цикл состоит из четырех основных фаз: менструальной, фолликулярной, овуляторной и лютеиновой.

1. **Менструальная фаза** (1-5 дни цикла): уровни эстрогена и прогестерона снижаются до минимума, что приводит к началу менструации.
2. **Фолликулярная фаза** (6-13 дни): уровень эстрогена начинает повышаться, стимулируя рост фолликула. Эстроген оказывает положительное влияние на настроение, повышая энергию и улучшая эмоциональный тонус.
3. **Овуляторная фаза** (примерно 14 день): эстроген достигает пика, вызывая выброс лютеинизирующего гормона (ЛГ) и стимулируя овуляцию. В это время женщины часто ощущают повышение настроения, социальную активность и уверенность.
4. **Лютеиновая фаза** (15-28 дни): уровень прогестерона возрастает, а эстроген постепенно снижается. Во второй половине этой фазы, ближе к менструации, может развиваться предменструальный синдром (ПМС), включающий тревожность, раздражительность и подавленное настроение.

2.Влияние эстрогена и прогестерона на эмоциональное состояние

Эстроген и прогестерон играют ключевую роль в регуляции нейромедиаторов, таких как серотонин и допамин, которые оказывают влияние на настроение.

- **Эстроген**: Этот гормон стимулирует выработку серотонина, который известен своим антидепрессивным эффектом. Повышение уровня эстрогена связано с улучшением настроения и мотивации. Исследования показывают, что низкие уровни эстрогена во время менструации могут вызывать усталость и депрессию.
- **Прогестерон**: Прогестерон, наоборот, оказывает седативное действие, способствуя расслаблению. Однако высокие уровни прогестерона в лютеиновой фазе могут вызвать тревожность и подавленное настроение.

Кроме того, прогестерон влияет на гамма-аминомасляную кислоту (ГАМК) — нейромедиатор, ответственный за успокоение. Снижение ГАМК в предменструальный период может вызывать раздражительность и повышенную тревожность.

3.Роль тестостерона и других гормонов

Тестостерон также играет роль в регуляции настроения и поведения у женщин. Он оказывает влияние на либидо, мотивацию и уверенность в себе. В овуляторную фазу, когда уровень тестостерона повышен, многие женщины ощущают повышенное желание социальной активности и чувствуют себя энергичными и уверенными.

4.Предменструальный синдром (ПМС) и гормональные изменения.

Одним из наиболее ярких проявлений гормонального влияния на эмоциональное состояние является ПМС, который наблюдается у многих женщин во время лютеиновой фазы. Симптомы ПМС включают раздражительность, тревожность, депрессию и чувство усталости. Это состояние связано с гормональными колебаниями, в частности, с падением уровня эстрогена и увеличением уровня прогестерона. У некоторых женщин в этот период наблюдается гиперчувствительность к нормальным гормональным изменениям, что усиливает эмоциональную реакцию.

5.Подходы к улучшению эмоционального состояния

Учитывая значительное влияние гормонов на эмоциональное состояние женщин, существуют различные методы, направленные на стабилизацию настроения:

- **Физическая активность**: Регулярные занятия спортом способствуют выработке эндорфинов, которые могут смягчать симптомы ПМС и улучшать эмоциональный фон.
- **Диета**: Питание, содержащее магний, витамины группы B и антиоксиданты, помогает поддерживать уровень энергии и улучшать настроение.
- **Медикаментозное лечение**: при выраженных симптомах ПМС и ПМДР (предменструального дисфорического расстройства) могут быть рекомендованы гормональные препараты, антидепрессанты или средства для стабилизации настроения.
- **Когнитивно-поведенческая терапия (КПТ)**: КПТ помогает справляться с тревожностью и депрессией, развивая у женщин стратегии для управления эмоциями в различные фазы цикла.

Заключение

Эмоциональные изменения в течение менструального цикла обусловлены гормональными колебаниями, которые оказывают значительное влияние на настроение и поведение женщин. Хотя каждое индивидуальное состояние зависит от множества факторов, включая генетику и внешние воздействия, понимание роли гормонов позволяет создать более адаптированные подходы к улучшению эмоционального состояния.

Использованные источники:

1. Vladimirovna, Sarkisova Victoria, et al. "Menstrual Cycle Disturbances in the Reproductive Period." *Central Asian Journal of Medical and Natural Science* 4.2 (2023): 389-397.
2. Vladimirovna, Sarkisova Victoria, et al. "Ovarian apoplexy and its impact on reproductive health." *Central Asian Journal of Medical and Natural Science* 4.2 (2023): 381-388.
3. Bäckström, T., Sanders, D., Leask, R., et al. "Mood, sexuality, hormones, and the menstrual cycle: II. Hormone levels and their relation to mood and behavior." *Psychosomatic Medicine*, 35(6), 2014, pp. 563-576.
4. Петрова, М.И. "Предменструальный синдром: современный взгляд на этиопатогенез и лечение." *Российский журнал женского здоровья*, 16(2), 2021, с. 23-30
5. Vladimirovna, Sarkisova Victoria, Shigakova Lyutsiya Anvarovna, and Muradova Emma Vladimirovna. "Menorrhagia-One of the Formidable Complications in Gynecology." (2023).

Умарова З.Х.
старший преподаватель
кафедра гистология медицинская биология
Ташкентская медицинская академия
Республика Узбекистан, г. Ташкент

ВЛИЯНИЕ ПЕСТИЦИДОВ НА ОРГАНИЗМ МАТЕРИ И ИХ ЭФФЕКТ НА РАЗВИТИЕ СЕЛЕЗЁНКИ У ПОТОМСТВА

Аннотация: *в статье рассмотрено влияние воздействия пестицидов на организм матери и последующее влияние этих токсичных веществ на развитие селезёнки у потомства. Особое внимание уделено механизмам, через которые пестициды нарушают развитие и функции клеток селезёнки, включая изменения в составе лимфоидных клеток, фагоцитарной активности макрофагов, окислительный стресс и эпигенетические изменения. Приведены данные исследований, показывающих, что воздействие пестицидов приводит к гипоплазии селезёнки, нарушению её структуры и снижению иммунной активности, что в свою очередь ослабляет способность организма потомства к борьбе с инфекциями.*

Ключевые слова: *пестициды, селезёнка, иммунная система, пренатальное воздействие, гипоплазия, окислительный стресс, лимфоциты, макрофаги, эпигенетические изменения, потомство.*

Umarova Z.Kh.
Senior Lecturer
of the Department
Histology Medical Biology
Tashkent Medical Academy
Republic of Uzbekistan, Tashkent

INFLUENCE OF PESTICIDES ON THE MOTHER'S BODY AND THEIR EFFECT ON THE DEVELOPMENT OF THE SPLEEN IN THE OFFSPRING

Abstract: *this article examines the impact of maternal pesticide exposure and the subsequent effects of these toxic substances on spleen development in offspring. Particular attention is paid to the mechanisms by which pesticides disrupt spleen cell development and function, including changes in lymphoid cell composition, macrophage phagocytic activity, oxidative stress, and epigenetic changes. Research data are presented showing that pesticide exposure leads to spleen hypoplasia, disruption of its structure, and decreased immune activity, which in turn weakens the offspring's ability to fight infections.*

Key words: *pesticides, spleen, immune system, prenatal exposure, hypoplasia, oxidative stress, lymphocytes, macrophages, epigenetic changes, offspring.*

Воздействие пестицидов на организм человека является актуальной проблемой современной экологии и медицины. Эти химические вещества, широко применяемые в сельском хозяйстве для защиты растений, могут оказывать токсическое влияние на биологические системы, включая репродуктивную и иммунную. Особое внимание уделяется изучению последствий, связанных с воздействием пестицидов на организм матери и их возможным влиянием на развитие органов потомства.

Селезёнка, как ключевой орган иммунной и кроветворной систем, играет важную роль в поддержании гомеостаза и иммунной защиты. Нарушения её формирования и функционирования у потомства могут быть связаны с токсическим воздействием материнского организма во время беременности. Понимание этих процессов является важным шагом для оценки долгосрочных рисков и разработки стратегий по минимизации негативного влияния пестицидов на здоровье будущих поколений.

Настоящая работа посвящена исследованию влияния пестицидов на организм матери и оценке их последствий для развития селезёнки у её потомства.

Влияние пестицидов на развитие селезёнки у потомства: Селезёнка развивается в эмбриональном периоде и продолжает расти и формироваться после рождения. Важнейшими факторами, влияющими на её развитие, являются генетическая предрасположенность и воздействие внешней среды, включая пестициды. Пренатальное воздействие токсических веществ может привести к изменению структуры и функции органов у потомства, включая селезёнку.

Известно, что воздействие пестицидов на организм матери может вызвать изменения в развитии органов потомства, включая селезёнку. Например, исследования на животных показали, что пренатальное воздействие пестицидов может привести к уменьшению массы и объёма селезёнки у потомства, а также нарушению её иммунной функции. Это может повлиять на способность организма бороться с инфекциями и развивать иммунный ответ.

Одним из механизмов, через который пестициды могут влиять на развитие органов, является нарушение процессов клеточного деления и дифференцировки. Это может приводить к дефициту клеток иммунной системы, включая те, которые находятся в селезёнке, что снижает её способность к фильтрации крови и уничтожению патогенных микроорганизмов.

Для более конкретного представления о результатах исследований, связанных с воздействием пестицидов на развитие селезёнки у потомства, рассмотрим конкретный экспериментов и их выводы.

1. **Исследования с использованием органофосфатов**

Органофосфаты, такие как малатион, широко используются в сельском хозяйстве и являются известными токсинами. В одном из исследований, проведённом на лабораторных животных (крысах), было продемонстрировано, что пренатальное воздействие малатиона на матери приводит к нарушению развития органов у потомства.

- **Методика**: Беременных крыс обрабатывали малатионом в течение всей беременности. После родов потомство анализировали на предмет морфологии и функции органов.
- **Результаты**: у потомства, подвергшегося воздействию малатиона, наблюдались признаки гипоплазии селезёнки — орган был уменьшен в размерах, и его способность к фильтрации крови была значительно снижена. Эти изменения сопровождались нарушениями в клетках иммунной системы, включая уменьшение количества лимфоцитов.
- **Выводы**: Экспозиция к малатиону на этапе эмбрионального развития может существенно повлиять на формирование и функционирование иммунных органов, таких как селезёнка. У потомства, несмотря на нормальное развитие других органов, иммунная система была ослаблена, что повышало восприимчивость к инфекциям.

Рассмотрим, что именно изменяется в клетках селезёнки у потомства, подвергшегося воздействию пестицидов:

1. **Снижение числа клеток иммунной системы**

- Селезёнка — важный орган иммунной системы, в котором происходят фильтрация крови и созревание клеток иммунной системы, таких как лимфоциты и макрофаги.
- 2. **Повреждения клеток селезёнки (окислительный стресс)**

Пестициды, такие как органофосфаты, могут повышать уровень свободных радикалов в организме, что приводит к **окислительному стрессу**.

- 3. **Изменения в генной экспрессии**

Воздействие пестицидов может вызывать изменения в **генной экспрессии**, что в свою очередь влияет на функционирование клеток селезёнки.

- 4. **Дисфункция макрофагов**

Макрофаги в селезёнке играют ключевую роль в фагоцитозе (поглощении и уничтожении патогенных микроорганизмов) и презентации антигенов.

- 6. **Нарушение сосудистой системы селезёнки**

Воздействие пестицидов может также затронуть **сосудистую систему селезёнки**, нарушая кровоток и питательные вещества, что в свою очередь может привести к недостаточному снабжению клеток органа и ухудшению его функций.

Заключение: Конкретные исследования показывают, что воздействие пестицидов, включая органофосфаты, пиретроиды и гербициды, может оказывать значительное воздействие на развитие селезёнки у потомства. Эти воздействия могут проявляться как в изменении структуры органа, так и в нарушении его функциональной активности, что, в свою очередь, влияет на иммунную систему и увеличивает риск инфекционных заболеваний у потомства.

Воздействие пестицидов на клетки селезёнки может приводить к различным изменениям на клеточном уровне, которые влияют на её структуру и функцию.

Использованные источники:

1. Бикель, А. Г., & Кудрин, А. В. (2018). Токсикология пестицидов: Влияние на здоровье человека и экосистемы. Издательство «Наука», Москва.

2. Маликов, Ильхом Решатович, and Люция Анваровна Шигакова. "цитоморфологическая характеристика органов иммуной системы черепах под влиянием гидрокартизона." *Парадигмальный характер фундаментальных и прикладных научных исследований, их генезис*. 2019.

3. Халиков, Пулат Хужамкулович, et al. "Комбинированное воздействие пестицидов и их цитогенетический эффект." *инновационное развитие науки: фундаментальные и прикладные проблемы*. 2023. 61-72.

4. Gupta, R. C., & Milatovic, D. (2014). Pesticides: Mechanisms of Toxicity and Their Role in Health Disorders. Elsevier. DOI: 10.1016/j.tox.2014.06.015

5. Heindel, J. J., & Schug, T. T. (2018). Developmental Toxicology of Environmental Chemicals: Impact on Immune System Development. *Toxicology and Applied Pharmacology*, 335, 11-19. DOI: 10.1016/j.taap.2017.10.017

6. Chen, X., & Dong, M. (2020). Effects of Prenatal Exposure to Organophosphate Pesticides on the Immune System Development in Offspring. *Journal of Immunotoxicology*, 17(4), 451-461. DOI: 10.1080/1547691X.2020.1798242

Ўрмонов А.А.
ассистент
Андижон Давлат Тиббиёт институти
Yu.H.Holboyev, к.ф.д,доцент,
Андижон Давлат Тиббиёт институти

ТИББИЙ КИМЁ ФАНИДАН “БУФЕР СИСТЕМАЛАР” МАВЗУСИНИ ЯНГИ ПЕДАГОГИК ТЕХНОЛОГИЯЛАРДАН ФОЙДАЛАНГАН ҲОЛДА ЎҚИТИШ

Аннотация: *Мақолада янги педагогик технологиялар ва уларни тиббий кимё фанидан “Буфер системалар” мавзусини ўқитишда қўлланилиши баён қилинган.*
Калит сўзлар: *Буфер система, янги педагогик технология, эритма мухити, касбий маҳорат, ўқитиш самарадорлиги, инновацион таълим технологиялари.*

O’rmonov A.A.
Assistant
Andijan state medical institute
Yu.Kh.Kholboev
Associate Professor
Andijan State Medical Institute

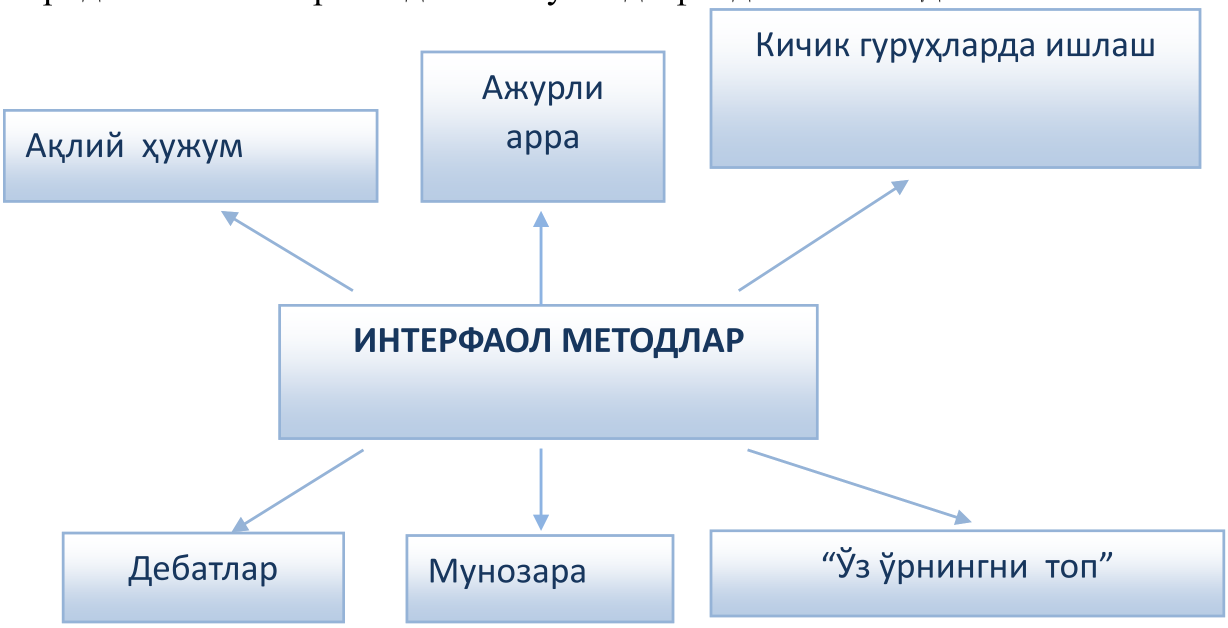
TEACHING THE TOPIC “BUFFER SYSTEMS” IN MEDICINAL CHEMISTRY USING NEW PEDAGOGICAL TECHNOLOGIES.

Anotation: The article describes new pedagogical technologies and their use in teaching the topic “Buffer systems” in medicinal chemistry.
Keywords: *Buffer system, new pedagogical technologies, solution medium, professional skills, learning efficiency, innovative educational technologies.*

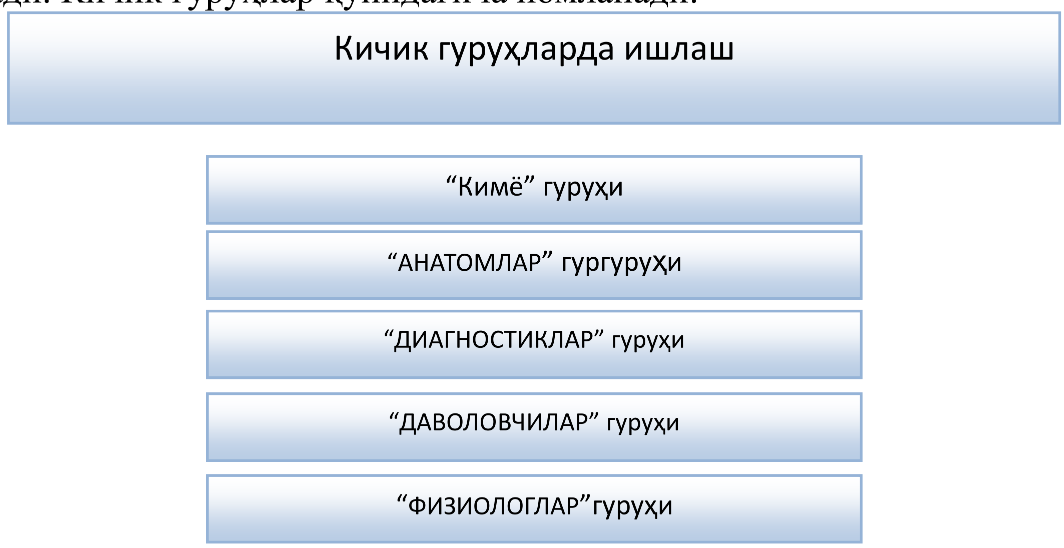
Кириш. Мамлакатимизда таълим соҳасида олиб борилаётган ислоҳотлардан асосий мақсад, юртимизда соғлом ва баркамол, билимли ва юксак маънавий-ахлоқий фазилатларга эга бўлган авлодни шакллантиришдир. Давлатимиз раҳбари раҳнамолигида айнан ана шу мақсадга эришиш учун янги даврда яшайдиган, янгича фикрлайдиган, янги ишлаб чиқариш, ижтимоий шароитларда фаолият кўрсатадиган, замонавий касбий маҳоратга эга, янги юқори технологияларда бемалол фаолият юрита оладиган мутахассис кадрлар тайёрлашда катта эътибор қаратилмоқда.

Ўзбекистоннинг келажаги, унинг истиқболи,биринчи навбатда ёшлар тарбиясига, уларни соғлом қилиб ўстиришга, миллий ғоя, миллий мафкура ва ўз Ватанига садоқат руҳида тарбиялаш билан бирга фаннинг турли сохаларида илмий изланишлар олиб боришларига боғлиқ бўлиб, бу мураккаб жараённи муваффақиятли амалга ошириш мустақил мамлакатнинг энг долзарб вазифаларидан биридир. Кўплаб бошқа фанлар қатори кимё фанини ўқитишда ҳам биринчи президентимиз айтганларидек педагогнинг асосий мақсади ўз маҳоратини узлуксиз ошириб боришдан ва фанни ўқитишдан ташқари ҳар бир талабанинг мустақил фикрлай олиш қобилиятини ривожлантиришдан иборатдир.

Тиббий кимё фанидан “Буфер системалар” мавзусини янги педагогик технологиялардан фойдаланиш. интерфаол методларнинг қуйидаги шаклларидан таълим жараёнида кенг кўламда фойдаланилмоқда:



“Кичик гуруҳларда ишлаш” усулидан фойдаланиш ўқувчиларнинг дарсдаги фаоллигини таъминлайди, ҳар бир ўқувчинингмунозарада қатнашиш ҳуқуқинива бир-биридан ўрганиш имконини беради. Бунинг учун синфдаги ўқувчилар кичик гуруҳларга бўлинади. Ҳар бир кичик гуруҳда 5-6 та ўқувчи бўлади. Кичик гуруҳлар қуйидагича номланади:



Ҳар бир гуруҳ ўз номидан келиб чиқиб, мавзуни ёритиб беради. Масалан, “Буфер системалар” мавзусини “кимё” гуруҳи кимёвий йўналишда, “анатомлар” гуруҳи эса анатомия фани асосида, “диагностиклар” гуруҳи қайси касалликларга қурилмалар ёрдамида диагноз қўйилишини, “даволовчилар” гуруҳи даволаш методлари ёрдамида, “физиологлар” гуруҳи эса қурилма ва буфер системаларнинг физиологик жиҳатдан фойда ва зарар томонларини тушунтириб берадилар.

БУФЕР СИСТЕМАЛАРИ ВА УЛАРНИНГ СИНФЛАНИШИ.

Буфер эритмалари сохасида 1900 йилдан бошлаб мукаммал текширишлар олиб борилди. Кучсиз кислотанинг, ёки кучсиз асоснинг эритмаси билан унинг тузи аралашмаси (масалан: лимон кислота эритмаси билан унинг натрийли тузи аралашмаси) жуда яхши буферлик хусусиятига эга эканлиги аниқланди. Чунки кучли кислота ва ишқорларнинг маълум pH ли суюқ эритмаларини тайёрлаш, назарий жихатдан олганда қийин эмас, лекин бундай эритмада pH жуда тез ўзгариб туради. Водород ионлари концентрациясининг барқарорлиги организмлар ички мухитининг энг характерли хосаларидан биридир. Масалан: одам қонида pH=7.36. Бу кўрсаткични доимий сақлаб туриш бир қанча физик-кимёвий ва физиологик механизмларга боғлиқ бўлиб булар ичида энг мухим бўлмиш буфер системаларнинг бирга тасир этиши туфайли таъминланади.

Буфер системалар (буферлар) деб, оз миқдорда кучли кислота ва асослар қўшилганда, хамда суюлтирилганда водород ионларининг концентрациясини етарли даражада ўзгартирмай сақлаб туриш хоссасига эга бўлган эритмаларга айтилади.

Буфер системалар (аралашмалар ёки эритмалар) таркиби жихатидан икки хил бўлади.

1) кучсиз кислота ва унинг кучли асос билан хосил қилган тузидан иборат.

Масалан: CH_3COOH + CH_3COOH ацетатли буфер

H_2CO_3 + $NaHCO_3$бикарбонатли буфер

Pt- COOH + Pt- COOHаоқсилли буфер

NaH_2PO_4 + Na_2HPO_4 фосфатли буфер

Hb + HbO_2 гемоглобин-оксигемоглобин

2) кучсиз асос ва унинг кучли кислота билан хосил қилган тузидан иборат.

Масалан: NH_4OH + NH_4Cl аммиакли буфер.

Буфер системаларнинг таъсир механизмини ацетат ва фосфат буферлари мисолида кўриб чиқамиз.

а) Ацетат буфер таъсир механизми:

$$CH_3COOH + CH_3COO^- + H^+$$

$$CH_3\,COONa = CH_3\,COO^- + Na^+$$

Бу буферга хлорид кислота қўшилганда қуйидагича реакция кетади:

$$CH_3COO^- + Na^+ + H^+ + Cl^- = Na^+ + Cl^- + CH_3\,COOH$$

Қисқартирилган ҳолда: $CH_3\,COO^- + H^+ = CH_3\,COOH$

АДАБИЁТЛАР

1. Алимходжаева Н. Т. Тиббий кимё “Ижод – Принт ” Тошкент 2019 й
2. Т. М. Бобоев, Ҳ. Р. Раҳимов. Физикавий ва коллоид кимё. Т., «ЎАЖБНТ» Маркази, 2004. 504 б.
3. Qosimova S. S., M asharipov S.M., 2005-y.
© "BILIM" nashriyoti, 2005-y.

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Шомахсутова Р.Г.
студентка
лечебный факультет
Ташкентская Медицинская Академия
научный руководитель: Шигакова Л.А.
ассистент
кафедра гистология и медицинская биология
Ташкентская Медицинская Академия
Ташкент, Узбекистан

РАННЯЯ ДИАГНОСТИКА И ГЕНЕТИЧЕСКИЕ ИССЛЕДОВАНИЯ ПРИ ОНКОЛОГИИ

Аннотация: *современные методы ранней диагностики онкологических заболеваний играют решающую роль в увеличении шансов на успешное лечение и выживаемость пациентов. Особое место занимают генетические исследования, которые позволяют выявлять предрасположенность к различным видам рака и определять возможные генетические мутации. В данной статье рассматриваются ключевые аспекты ранней диагностики и роли генетических исследований в онкологии. Обсуждаются методы выявления генетических аномалий, используемые биомаркеры, а также перспективы, которые открываются с развитием технологий секвенирования нового поколения.*

Ключевые слова: *Онкология, ранняя диагностика, генетические исследования, мутации, BRCA1 и BRCA2, TP53, Биомаркеры, Секвенирование нового поколения (NGS), полимеразная цепная реакция (ПЦР), жидкостная биопсия, персонализированное лечение*

Shomakhsutova R.G.
Student
of the general medicine
Tashkent Medical Academy
scientific supervisor :Shigakova L.A.
,department assistant
histology and medical biology
Tashkent Medical Academy
Tashkent, Uzbekistan

EARLY DIAGNOSIS AND GENETIC RESEARCH IN ONCOLOGY

Annotation: *modern methods of early diagnostics of oncological diseases play a decisive role in increasing the chances of successful treatment and patient survival. Genetic studies occupy a special place, which allow us to identify* *predisposition to various types of cancer and determine possible genetic mutations. This article examines the key aspects of early diagnostics and the role of genetic studies in oncology. We discuss methods for detecting genetic abnormalities, the biomarkers used, and the prospects that open up with the development of next-generation sequencing technologies.*

Key words: *Oncology, Early diagnosis, Genetic testing, Mutations, BRCA1 and BRCA2, TP53, Biomarkers, Next generation sequencing (NGS), Polymerase chain reaction (PCR), Liquid biopsy, Personalized treatment*

Онкологические заболевания занимают одно из первых мест среди причин смертности в мире. Одним из ключевых факторов в борьбе с онкологией является ранняя диагностика, позволяющая выявить болезнь на начальных стадиях. Генетические исследования способствуют выявлению предрасположенности к раку и диагностики потенциальных мутаций, что позволяет предсказать возможное развитие болезни и разработать индивидуальные подходы к лечению. Онкологические заболевания остаются одной из самых серьёзных угроз здоровью человека, и на протяжении десятилетий борьба с ними фокусируется на раннем выявлении и прогрессе в лечении. Однако многие виды рака развиваются скрытно и обнаруживаются лишь на поздних стадиях, когда лечение становится более сложным и менее эффективным. Новейшие генетические исследования открывают путь к ранней диагностике и персонализированному подходу, что делает борьбу с раком более целенаправленной и научно обоснованной. Генетические тесты помогают выявить предрасположенность к различным видам рака, определить точные мутации и разработать более подходящие стратегии лечения. С применением таких технологий, как секвенирование нового поколения, стало возможным глубокое изучение генетических особенностей опухолей, что позволяет врачам предсказать развитие заболевания и создать индивидуальный план лечения, нацеленный на предотвращение прогрессии рака.

Эти инновации не только помогают улучшить исходы лечения, но и дают людям шанс защитить себя и своих близких, а также предоставляют возможность управлять здоровьем, зная о своих генетических рисках.

Генетические исследования в онкологии Генетические исследования в онкологии включают анализ ДНК и РНК с целью выявления мутаций, приводящих к раковым заболеваниям. Некоторые из часто исследуемых генов включают BRCA1 и BRCA2 (ассоциированные с риском рака груди и яичников), TP53 (мутации которого способствуют развитию различных видов рака), а также APC (ассоциированный с колоректальным раком). Генетическое тестирование позволяет выявлять как наследственные, так и соматические мутации, что помогает понять механизм развития опухоли и предсказать её поведение.

1. **BRCA1 и BRCA2**

Гены BRCA1 и BRCA2 играют ключевую роль в процессе восстановления повреждений ДНК. Мутации в этих генах связаны с высоким риском рака груди и яичников. Генетическое тестирование на мутации BRCA позволяет женщинам и мужчинам с наследственной предрасположенностью узнать о своих рисках и предпринять соответствующие меры.

2. **TP53**

Ген TP53 выполняет важную функцию в контроле деления клеток и подавлении опухолевых процессов. Мутации в этом гене связаны с рядом агрессивных опухолей. Определение статуса TP53 позволяет не только оценить прогноз болезни, но и выбрать более подходящую тактику лечения.

3. **Другие гены и биомаркеры**

Среди других генов, связанных с онкологией, следует отметить EGFR, KRAS и HER2. Эти гены играют важную роль в патогенезе рака лёгких, толстого кишечника и груди, соответственно, и их мутации могут служить биомаркерами для выбора подходящих терапий.

Методы диагностики и анализа

Генетические исследования опираются на передовые технологии, такие как секвенирование нового поколения (NGS), полимеразная цепная реакция (ПЦР), флуоресцентная гибридизация in situ (FISH) и другие методы.

1. **Секвенирование нового поколения (NGS)**

NGS позволяет провести глубокий анализ генетических изменений в опухоли и значительно увеличить точность диагностики. Этот метод используется для выявления множественных генетических мутаций и оценивания их роли в развитии рака.

2. **ПЦР и FISH**

ПЦР используется для анализа точечных мутаций, тогда как FISH помогает выявить хромосомные перестройки и амплификации генов, такие как HER2 при раке груди.

Перспективы и роль генетических исследований в клинической практике

С развитием генетических исследований в онкологии возникает возможность создания персонализированных методов диагностики и лечения. Например, идентификация специфических мутаций позволяет подбирать терапию, направленную именно на определённый молекулярный путь, что может повысить эффективность лечения и снизить вероятность побочных эффектов. Использование жидкостной биопсии для анализа ДНК циркулирующих опухолевых клеток и циркулирующей опухолевой ДНК является перспективным методом, который позволяет проводить мониторинг болезни в реальном времени и выявлять возможные рецидивы на ранней стадии.

Заключение

Ранняя диагностика и генетические исследования имеют огромное значение в онкологии. Определение генетической предрасположенности и выявление мутаций позволяют провести более точное и персонализированное лечение. Современные технологии, такие как NGS и жидкостная биопсия, открывают новые перспективы в борьбе с раком. Однако для того чтобы генетические исследования стали стандартной практикой, необходимы дополнительные исследования и развитие технологий, которые позволят сделать эти методы доступными для широкого круга пациентов.

Использованные источники:

1. Cancer Genome Atlas Research Network. Comprehensive molecular characterization of human colon and rectal cancer. *Nature*, 2012.
2. Lednev, Viktor A., and Lucia A. Shigakova. "Topical issues of medical genetics of the xxi century." (2022).
3. Roberts NJ, Vogelstein JT, et al. Liquid biopsy: A tool for the molecular diagnosis and monitoring of cancer. *Nature Reviews Cancer*, 2016.
4. Шигакова, Люция Анваровна, and Лада Евгеньевна Иванова. "Актуальные вопросы медицинской генетики XXI века." (2022).
5. Siegel RL, Miller KD, Jemal A. Cancer statistics, 2020. *CA: A Cancer Journal for Clinicians*, 2020.
6. Бобумуродова, Муборак Миркомиловна. "генные мутации и их патология." (2023): 180-184.

ИНФОРМАЦИОННЫЕ И КОММУНИКАТИВНЫЕ ТЕХНОЛОГИИ

УДК 004.6

Носков С.А.
студент магистратуры, 3 курса, гр. ИСТм-21
ФГОБУ ВО «Поволжский государственный университет телекоммуникаций и информатики»
Россия, Самара
Секлетова Н.Н., к.п.н., доцент
кафедра информационных систем и технологий
ФГОБУ ВО «Поволжский государственный университет телекоммуникаций и информатики»
Россия, Самара
Тучкова А.С., ст. преподаватель
кафедра информационных систем и технологий
ФГОБУ ВО «Поволжский государственный университет телекоммуникаций и информатики»
Россия, Самара

АНАЛИЗ ПРЕИМУЩЕСТВ АВТОМАТИЗАЦИИ СИСТЕМ МЕНЕДЖМЕНТА КАЧЕСТВА

Аннотация. *В статье рассматриваются цели и принципы автоматизации систем менеджмента качества. Изучен опыт теоретиков и практиков, специализирующихся на вопросах управления качеством, с точки зрения применения информационных технологий в данной области. Проведен анализ основных преимуществ, которые может получить предприятие, внедрив информационную систему по управлению качеством производственных процессов. Сделан вывод о том, что несмотря на некоторые недостатки, автоматизированные системы управления процессами качества предоставляют значительные преимущества, способствуя повышению эффективности деятельности организации.*

Ключевые слова: *система менеджмента качества, автоматизация системы менеджмента качества, принципы автоматизации системы менеджмента качества.*

Noskov S.A.
Master's student, 3 courses, gr. ISTm-21
Volga State University of Telecommunications and Informatics, Samara, Russia
Sekletova N.N., Ph.D., Associate Professor
of the Department of Information Systems and Technologies, Volga State University of Telecommunications and Informatics, Samara, Russia
Tuchkova A.S., art. Lehrer
of the Department of Information Systems and Technologies, Volga State University of Telecommunications and Informatics, Samara, Russia

ANALYSIS OF THE BENEFITS OF AUTOMATION OF QUALITY MANAGEMENT SYSTEMS

Abstract. *The article deals with the goals and principles of automation of quality management systems. The experience of theorists and practitioners specializing in quality management issues has been studied from the point of view of the use of information technology in this area. An analysis of the main benefits that an enterprise can receive by introducing an information system for managing the quality of production processes is carried out. It is concluded that despite some disadvantages, automated quality process management systems provide significant advantages, contributing to improving the efficiency of the organization.*
Keywords: *quality management system, automation of the quality management system, principles of automation of the quality management system.*

В эпоху цифровой трансформации многие промышленные предприятия сталкиваются с необходимостью внедрения надежных систем автоматизации внутриорганизационных процессов. Особое внимание в этом случае уделяется автоматизации задач в области управления качеством. Современный менеджмент качества в организации – это плановая и комплексная деятельность, объединяющая действия, методы и средства, направленные на улучшение производимых товаров или оказываемых услуг. Важно, что система менеджмента качества (далее – СМК) обеспечивает не только изготовление продукции, отвечающей текущим запросам и потребностям рынка, но и разработку новых товаров, способных удовлетворить интересы ключевые субъекты рынка в будущем.

Автоматизация СМК – это процесс внедрения технологических инструментов в процесс управления качеством продуктов и услуг. Предполагает использование программного обеспечения для сбора, анализа и интерпретации данных, автоматического тестирования продуктов, мониторинга процессов производства [2].

В числе целей автоматизации СМК выделяют следующие:

- повышение эффективности менеджмента в области качества, обеспечение достоверности данных, снижение влияния человеческого фактора на процессы;
- повышение технологичности контроля качества, т.е. максимальное использование потенциала современных измерительных систем за счет их интеграции в специализированное программное обеспечение;
- приведение производственных процессов на предприятии к отраслевым стандартам и руководствам путем внедрения соответствующего программного обеспечения;
- укрепление репутации предприятия как применяющего наиболее передовые методы в области менеджмента качества в глазах конечных потребителей, заказчиков, аудиторов и персонала [1].

Рассмотрим также основные принципы автоматизации СМК [3]:

- интерес потребителя – автоматизация процессов контроля качества в первую очередь преследует цель удовлетворения нужд и потребностей клиентов организации;
- постоянное усовершенствование – автоматизированные системы управления качеством должны своевременно модернизироваться и расширяться в соответствии с динамично меняющимися запросами рынка, а также с развитием технологий;
- единый подход к менеджменту – автоматизации должны быть подвержены все процессы менеджмента качества, содействующие повышению результативности предприятия;
- процессный подход – автоматизация управления ресурсами позволяет превратить эту деятельность в единый эффективный процесс;
- осуществление действий, основанных на фактах – эффективные автоматизированные решения должны строиться на исследовании данных и информации;
- работа персонала – путем создания единой информационной системы на предприятии модно вовлечь в работу всех сотрудников и сделать акценты на ключевых специалистах, которые приносят максимальную выгоду организации.

Современные теоретики и практики, специализирующиеся на вопросах управления качеством и применения информационных технологий в данной области, выделяют множество выгод автоматизации СМК для предприятия. Проанализируем перечень преимуществ, который сформулировали В.И. Сырямкин и Р.О. Урсой [2]:

- повышение эффективности. Автоматизация позволяет ускорить процессы контроля качества и снизить вероятность ошибок, связанных с ручным вводом данных. Информационная система сопровождения менеджмента качества может упростить управление вариативностью форм контроля различных видов продукции, зависящих от направлений деятельности предприятия, обеспечить автоматическую маршрутизацию процессов, постановку задач сотрудникам и контроля их исполнения;

- снижение издержек. Автоматизация может помочь снизить затраты на персонал и улучшить управление процессами менеджмента качества. Внедрение систем электронного документооборота может существенно снизить административные расходы предприятия;
- улучшение качества продукции. Автоматизация системы управления качеством позволяет более точно контролировать процессы производства, что приводит к улучшению качества продукции;
- ускорение времени выпуска продукции. Автоматизация способна сократить время на контроль качества продукции, что позволяет наладить более оперативный выпуск продукции на рынок или ее прием со стороны заказчика. Переход всех участников производственного цикла продукции в масштабах отрасли позволит существенно экономить время на все коммуникационные издержки каждого контрагента включенного в жизненный цикл продукта;
- улучшение отчетности и прозрачности информации. Автоматизация способствует упрощению и улучшению процессов отчетности и увеличить прозрачность в системе управления качеством. Любая информационная система в области качества может выступать в качестве системы поддержки принятия решений, помогающей анализировать и обрабатывать данные и информацию, направлять принятие решений на основе анализа, прогнозировать и планировать деятельность предприятия;
- повышение удовлетворенности клиентов. Автоматизация позволяет улучшить качество продукции, что будет способствовать повышению удовлетворенности клиентов;
- снижение рисков. Автоматизация позволяет снизить риски, связанные с несоответствием продукции требованиям клиентов или стандартам качества. Информационная система, аккумулируя информацию о всех несоответствиях продукции, может не только помочь в устранении несоответствий, но и управлять процессами принятия решений о предупреждающих действиях в целях избежания нарушений качества в долгосрочной перспективе;
- улучшение управления процессами. Автоматизация системы управления качеством помогает сделать процессы управления более эффективными и улучшить мониторинг производственных операций;
- повышение конкурентоспособности. Автоматизация может помочь компании повысить конкурентоспособность на рынке за счет улучшения качества продукции и снижения затрат на производство;
- улучшение управления рисками. Автоматизация позволяет лучше контролировать риски, связанные с производством продукции, и улучшить управление этими рисками. Автоматизированная СМК может использоваться

для оценки альтернатив и их последствий, что позволяет выбрать оптимальный вариант для принятия решений.

Конечно, можно выделить и ряд недостатков автоматизации систем менеджмента качества, присущих автоматизации любого бизнес-процесса в целом, среди них такие как: высокие начальные инвестиции, угроза кибератак, повышенные требования к квалификации специалистов для разработки, внедрения и обслуживания таких систем и т.д.

Но, несмотря на некоторые недостатки, автоматизированные системы управления процессами качества предоставляют значительные преимущества, способствуя повышению эффективности производства, сокращению издержек, снижению рисков и повышению конкурентоспособности предприятия на рынке.

Использованные источники:

1. Горчакова, Е. Автоматизация менеджмента качества [Электронный ресурс]: Электрон. текстовые дан. – Режим доступа: https://kachestvo.pro/kachestvo-upravleniya/sistemy-menedzhmenta/avtomatizatsiya-menedzhmenta-kachestva, свободный, Загл. с экрана.
2. Сырямкин, В. И. Преимущества автоматизации систем менеджмента качества [Текст] / В. И. Сырямкин, Р.О. Урсой; Сборник трудов XIX Международной школы-конференции студентов, аспирантов и молодых ученых «Инноватика-2023». – Томск, 2023. – С. 302-305.
3. Харланов, В. А. Система менеджмента качества. Подход к системе в процессах [Текст] / В. А. Харланов, А. О. Тишина, О. В. Копосова, Д. С. Коваль // Форум молодых ученых. – 2020. – № 10 (50). – С. 682-685.

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Sharifbaeva K.Ya., PhD in Pedagogy, Associate Professor
Pedagogy and Psychology Department
"Profi University" Non-State Higher Educational Institution
Tashkent, Republic of Uzbekistan
Abdurashidova M. Zh.
3nd-year Bachelor's degree student
direction of primary education
Tashkent International University KIMYO
Tashkent, Republic of Uzbekistan

ARTIFICIAL INTELLIGENCE IN EDUCATION: POSSIBILITIES FOR PERSONALIZING LEARNING

Abstract: *This article examines the impact of artificial intelligence technologies on modern education, in particular, their potential for personalizing learning. It describes the benefits of using AI to adapt the learning process to the individual needs of students, such as increasing the effectiveness of learning, motivation, and accessibility of education. An overview of the most popular adaptive educational platforms and tools based on AI is provided. The main advantages and disadvantages of using AI in education are identified, as well as moral and ethical aspects that should be taken into account when implementing AI in the educational process.*

Keywords: *education, artificial intelligence, machine learning, personalized learning, adaptive learning, educational platforms, ethics in education.*

In the modern information society, where the volume of knowledge is constantly increasing, and access to information is becoming almost unlimited, traditional educational approaches based on standardization and unification are increasingly being questioned. The focus is on the individual needs of each student, their abilities, style and pace of knowledge acquisition. In this regard, personalization of learning, which involves adapting the educational process to the unique characteristics of each person, is becoming especially relevant [1].

Artificial intelligence (AI), due to its ability to analyze large amounts of data, identify patterns and provide personalized recommendations, opens up new opportunities for creating adaptive educational systems. The use of AI in education can not only improve the efficiency of the educational process and student motivation [2], but also make education more accessible and inclusive.

Currently, personalized learning using AI is a flexible and dynamic system where the content, methods and pace of learning are adapted to the individual characteristics of each student [3]. This approach allows you to maximize the potential of each person and ensure the successful achievement of educational goals [4]. In this study, we will consider the effectiveness of using AI to personalize learning, analyze the advantages, disadvantages and prospects for using this technology in the educational sphere.

To achieve the objectives of the study, a comprehensive approach was used, including the analysis of educational platforms and tools with AI to assess their effectiveness, content analysis of scientific publications to study the impact of AI on educational processes, as well as a comparative analysis of the collected data to identify trends, advantages and disadvantages of personalizing learning using AI, which made it possible to form a holistic view of the current state and prospects for the development of AI in the educational sphere.

As part of the study, five popular platforms with adaptive learning technologies were analyzed: Coursera, edX, Khan Academy, Duolingo and Moodle with the integration of an AI plugin. Coursera and edX stand out for their most advanced personalization features, including changing the content and pace of learning using machine learning algorithms. Khan Academy effectively uses AI to identify gaps in students' knowledge and select individual assignments. Duolingo focuses on gamification of the learning process, using AI to increase user motivation. Moodle with an AI plugin gives teachers the ability to develop adaptive assignments and tests. Century Tech uses AI to analyze student performance data and create personalized learning plans tailored to their strengths and weaknesses. Carnegie Learning uses AI to analyze learning data and provide individualized support and feedback to each student.

While popular mass online learning platforms offer courses to a wide audience and use AI primarily to analyze general student activity, there is a new class of platforms that focus on deep analytics and personalized learning.

Unlike the first type of platforms, which are usually limited to collecting basic information about course completion, assignment time, and grades, new platforms provide more detailed data and advanced analytics.

For example, IntelliBoard integrates with learning management systems (LMS) such as Moodle and provides teachers and administrators with access to detailed reports and visualization of learning activity [5]. This allows them to effectively track student progress, identify problem areas, and provide timely support. Knewton, in turn, uses AI algorithms to create personalized learning paths [6]. The platform analyzes data on each student, identifies knowledge gaps, and offers individual learning recommendations.

Modern research is actively exploring the possibilities of using artificial intelligence to create adaptive learning systems that adapt to the individual needs of each student [7]. Particular attention is paid to the development of personalized systems for the formation of STEM competencies, where AI plays a key role in adapting the educational process [8]. Platforms such as Intelliboard and Knewton collect and analyze a variety of data on student behavior, tracking their successes, difficulties, and preferences [9]. This information is used to promptly adjust the complexity of the educational material and select tasks that match the individual characteristics of each student.

As the comparative analysis (Table 1) shows, the joint use of these tools with platforms for mass online education allows for increased flexibility and adaptability of the educational process, making it more effective and focused on the individual needs of students.

Table 1.

Comparison of educational platforms with AI

Platform	**Main Purpose**	**Level of Personalization**	**Data Analytics**	**Examples of Use**	**Key Features**
IntelliBoard	Analytics for educational platforms (mainly Moodle)	Low level: focus on analytics for instructors	In-depth analytics on student performance and activity	Tracking student progress, reporting for administrators and instructors	Integration with LMS, data visualization, identification of risk zones
Knewton	Creation of adaptive courses with personalized content	High level: individual learning paths	Basic analytics integrated into the adaptive learning process	Individualization of course content to improve learning effectiveness	Adaptive algorithms, personalized recommendations
Coursera	Massive Open Online Course (MOOC) platform with a wide selection of courses	Basic level: course recommendations based on interests	Basic analytics: performance, time spent on tasks	Mass online learning with course recommendations	Wide selection of courses, certificates, mobile app
edX	Online course platform partnered with universities	Basic level: course recommendations	Basic analytics, similar to Coursera	University online courses, certificates	Courses from leading universities, mobile app

Khan Academy	Free educational platform with interactive courses and exercises	Limited adaptation of learning pace based on results	Basic analytics: performance by topic	Self-study in the format of video lessons and tests	Free access, wide range of subjects
Duolingo	Language learning platform with adaptive elements	Medium level: adaptation of exercises to the level of knowledge	Basic analytics: task completion and progress	Language learning using gamification	Game-based approach, mobile app
Moodle with AI plugins	Learning Management System (LMS) with additional AI modules for content adaptation	Medium level: AI plugins offer individual tasks	Basic analytics on activity and attendance	Internal use by educational institutions to create courses	Flexibility, integration with various plugins
Century Tech	Platform based on neurobiology and AI for personalized learning	High level: adaptation of content, pace, and feedback	Detailed analytics of progress and cognitive functions	Used in schools for personalized learning in core subjects	Neural network approach, interactive lessons, games
Carnegie Learning	Interactive textbooks and learning platform using AI	High level: personalized support and feedback	Analytics of individual errors and difficulties	Used in schools and universities for teaching math, science, and humanities	Interactive textbooks, simulations, games

In modern pedagogical science, the possibilities of using artificial intelligence to create interactive and socially-oriented educational platforms are actively studied. [10] Of particular interest are studies devoted to the formation of self-regulation skills for learning using AI within the framework of the social constructivist approach. [11] This approach emphasizes social interaction and joint activities as key factors in knowledge acquisition.

Analysis of the effectiveness of various approaches to personalizing learning using AI shows a predominantly positive impact of this technology on student performance and motivation. [12] For example, adaptive systems created on the basis of AI allow the formation of individualized educational routes that take into account the educational preferences and goals of students. This helps to increase the effectiveness of learning, maintains interest in learning and has a positive effect on academic performance.

However, the introduction of AI in education is associated with a number of challenges. The quality of the data used, the correctness of their interpretation and the variability of algorithms play an important role. [13] There are also technological limitations and difficulties in adapting content for different types of students. [14]

Advantages of personalized learning using AI:

- Adaptation of the learning process to the individual needs.
- Taking into account the interests and goals of students.
- Identification of knowledge gaps and provision of individual feedback.
- Increasing the accessibility of education.

Disadvantages and potential threats:

- Limited data and the risk of inaccurate recommendations.
- Complexity of implementation and the need for investment in technology. [15]
- Ethical issues related to data privacy and transparency of algorithms.

Prospects for development:

- Improvement of AI technologies.
- Integration of AI with technologies VR/AR, blockchain, IoT.
- Creation of adaptive learning environments.
- Development of ethical standards and guidelines.

Thus, it should be noted that personalized learning using AI has great potential to improve the efficiency and accessibility of education. However, the successful implementation of this technology requires careful consideration of ethical aspects and the development of appropriate standards. Further development of AI technologies and their integration with other technologies will open up new opportunities for creating adaptive learning environments focused on the individual needs of each student.

References:

1. Shobonov N. A., Bulaeva M. N., Zinov'eva S. A. Iskusstvennyj intellekt v obrazovanii [Artificial intelligence in education]. Problemy sovremennogo pedagogicheskogo obrazovaniya [Problems of modern pedagogical education], 2023, no. 79-4, pp. 288-290. (In Russ.)
2. Sharifbaeva H. Y., Togaev G. S., Shamsiddinova E. M. Internal factors of student self-organization of educational activities. Nauchnyj zhurnal [Scientific journal], 2018, no. 9 (32), p. 53.
3. Vajnshtejn Ju. V. Pedagogicheskoe proektirovanie personalizirovannogo adaptivnogo predmetnogo obuchenija studentov vuza v uslovijah cifrovizacii [Pedagogical design of personalized adaptive subject learning of university students

in the context of digitalization]. Diss. Sibirskij federal'nyj universitet, 2021. (In Russ.)
4. Sokolov N. V., Vinogradskij V. G. Iskusstvennyj intellekt v obrazovanii: analiz, perspektivy i riski v RF [Artificial intelligence in education: analysis, prospects and risks in the Russian Federation]. Problemy sovremennogo pedagogicheskogo obrazovaniya [Problems of modern pedagogical education], 2022, no. 76-2, pp. 166-169. (In Russ.)
5. Sadykova A. R., Krikunov A. S. Analiz luchshih praktik razvitiya massovyh otkrytyh onlajn-kursov i sistem upravleniya obucheniem [Analysis of best practices for the development of massive open online courses and learning management systems]. Vestnik MGPU. Informatika i informatizaciya obrazovaniya [Bulletin of the Moscow State Pedagogical University. Informatics and Informatization of Education], 2023, no. 4 (66), pp. 51-66. (In Russ.)
6. Yakubov M. S. et al. Analiz i novye tendencii ispol'zovaniya nejrosetej i iskusstvennogo intelekta v sovremennoj sisteme vysshego obrazovaniya [Analysis and new trends in the use of neural networks and artificial intelligence in the modern higher education system]. Ekonomika i socium [Economics and Society], 2021, no. 5-2 (84), pp. 1148-1162. (In Russ.)
7. Tapalova O., Zhiyenbayeva N. Artificial intelligence in education: AIEd for personalised learning pathways. Electronic Journal of e-Learning, 2022, vol. 20, no. 5, pp. 639-653.
8. Sharifbaeva H. Ja., Abdurashidova M. Zh. Integrirovannie v obrazovanie strategii formirovaniya STEM-kompetencij: kompleksnyj analiz ot nachal'noj do vysshej shkoly [Integrating strategies for the formation of STEM competencies into education: a comprehensive analysis from primary to higher education]. Ekonomika i socium [Economics and Society], 2024, no. 1 (116), pp. 1673-1684. (In Russ.)
9. Zhang K., Aslan A. B. AI technologies for education: Recent research & future directions. Computers and Education: Artificial Intelligence, 2021, vol. 2, p. 100025.
10. Tan S. C., Lee A. V. Y., Lee M. A systematic review of artificial intelligence techniques for collaborative learning over the past two decades. Computers and Education: Artificial Intelligence, 2022, vol. 3, p. 100097.
11. Sharifbaeva H., Abdurazzaqova D. Vozmozhnosti distantsionnogo obrazovaniya pri formirovanii navykov samoobrazovaniya u studentov [Opportunities for distance education in the formation of self-education skills among students]. Arkhiv nauchnyh issledovanij [Archive of scientific research], 2022, vol. 2, no. 1. (In Russ.)
12. Elshani L., Nuçi K. P. Constructing a personalized learning path using genetic algorithms approach. arXiv preprint arXiv:2104.11276, 2021.
13. Grinshkun V. V. Problemy i puti effektivnogo ispol'zovaniya tekhnologij informatizacii v obrazovanii [Problems and ways of effective use of informatization technologies in education]. Vestnik Moskovskogo universiteta. Seriya 20. Pedagogicheskoe obrazovanie [Bulletin of Moscow University. Series 20. Pedagogical education], 2018, no. 2, pp. 34-47. (In Russ.)

14. Drugova E. A. et al. Iskusstvennyj intellekt dlya uchebnoj analitiki i etapy pedagogicheskogo proektirovaniya: obzor reshenij [Artificial intelligence for learning analytics and stages of pedagogical design: an overview of solutions]. Voprosy obrazovaniya [Education Issues], 2022, no. 4, pp. 107-153. (In Russ.)
15. Sharifbaeva H. Ja., Abdurashidov I. Zh. U., Alimardanov R. A. U. Vozmozhnosti i perspektivy razvitiya mobil'nyh tekhnologij v vysshem tekhnicheskom obrazovanii [Opportunities and prospects for the development of mobile technologies in higher technical education]. Universum: tekhnicheskie nauki [Universum: technical sciences], 2022, no. 1-1 (94), pp. 13-15. (In Russ.)

Исмоилов Н.Б.
студент
педиатрический факультет
Ташкентская Медицинская Академия
научный руководитель: Хужамуратова Д.Х.
ассистент
кафедра гистология и медицинская биология
Ташкентская Медицинская Академия
Ташкент, Узбекистан

МОРФОЛОГИЧЕСКИЕ И ГИСТОЛОГИЧЕСКИЕ ИССЛЕДОВАНИЕ СКЕЛЕТНОЙ МУСКУЛАТУРЫ ЧЕЛОВЕКА В НОРМЕ И ПРИ НЕКОТОРЫХ ВИДАХ НЕРВНО-МЫШЕЧНОЙ ПАТОЛОГИИ

АННОТАЦИЯ*: В данном исследовании проводится сравнительный анализ морфологических и гистологических характеристик скелетной мускулатуры человека в норме и при различных видах нервно-мышечной патологии. Мышечные патологии представляют собой нарушения в метаболизме и строении мышечной ткани, приводящие к снижению силы пораженных мышц и ограничению двигательной активности. Главной целью исследования является анализ изменения в структуре и функции мышц при таких патологиях как саркопения, мышечная дистрофия, заболевания двигательных нейронов. Статья представляет собой важное введение в проблематику саркопении, мышечной дистрофии, заболевания двигательных нейронов и подчеркивает необходимость гистологического анализа для более глубокого понимания механизмов развития и прогноза данного заболевания.*

Ключевые слова: *тип мышечных волокон, нервно-мышечное заболевание, скелетная мышца*

Ismoilov N.B.
Student
of the Pediatric Faculty
Tashkent Medical Academy
scientific supervisor: Khujamuratova D.X.
department assistant
histology and medical biology
Tashkent Medical Academy
Tashkent, Uzbekistan

MORPHOLOGICAL AND HISTOLOGICAL STUDY OF HUMAN SKELETAL MUSCLE IN NORMAL CONDITIONS AND IN SOME TYPES OF NEUROMUSCULAR PATHOLOGY

***ANNOTATION**:This study conducts a comparative analysis of the morphological and histological characteristics of human skeletal muscle in normal conditions and in various types of neuromuscular pathology. Muscle pathologies represent disturbances in the metabolism and structure of muscle tissue, leading to a decrease in the strength of affected muscles and a limitation of motor activity. The main goal of the research is to analyze the changes in muscle structure and function in conditions such as sarcopenia, muscular dystrophy, and motor neuron diseases. The article serves as an important introduction to the issues of sarcopenia, muscular dystrophy, and motor neuron diseases, emphasizing the necessity of histological analysis for a deeper understanding of the mechanisms of development and prognosis of these conditions.*

***Key words:** type of muscle fibers, neuromuscular disease, skeletal muscle*

Актуальность. Понимание механизмов патологий: Исследования структуры и функций скелетной мускулатуры при нервно-мышечных патологиях позволяют лучше понять механизмы развития этих заболеваний. Это важно для разработки более эффективных методов диагностики и лечения.

Диагностика: Анализ изменений в структуре и функции мышц при различных патологиях может помочь в диагностике и классификации этих состояний. Это способствует раннему выявлению и более точному диагнозу, что в свою очередь позволяет начать лечение на более ранних стадиях заболевания.

Развитие новых методов лечения: Исследования скелетной мускулатуры при нервно-мышечных патологиях могут способствовать разработке новых методов лечения, например, целенаправленных терапий, реабилитационных программ или хирургических вмешательств.

Качество жизни пациентов: Улучшение понимания особенностей изменений в мышцах при нервно-мышечных заболеваниях может помочь разработать более эффективные подходы к реабилитации и уходу за пациентами, что в конечном итоге может повысить их качество жизни.

Таким образом, исследования в этой области имеют важное значение как для научного сообщества, так и для практического здравоохранения, так как они направлены на улучшение диагностики, лечения и ухода за пациентами с нервно-мышечными патологиями.

Цель исследования. Целью исследования является систематический анализ морфологических и гистологических характеристик скелетной мускулатуры человека в норме и при различных видах нервно-мышечной патологии. Основная задача - выявление особенностей патологических процессов в мышцах, что может способствовать улучшению диагностики и разработке более эффективных методов лечения.

Методы исследования.

Получение биопсийных образцов скелетной мускулатуры у пациентов с нервно-мышечными патологиями и здоровых доноров для сравнительного анализа.

Гистологическое исследование: Применение гистологических методов, таких как окраска тканей гематоксилином-эозином и иммуногистохимическая окраска с использованием специфических антител, для оценки морфологических изменений в мышечной ткани.

Результат исследования. Нервно-мышечные заболевания вызваны дефектами скелетных мышц или нарушениями нервной системы, что ведет к истощению и атрофии мышц. Эти состояния часто приводят к инвалидности и потере функции, оставаясь практически не излечимыми. Патологию лучше понять на клеточном уровне, исследуя связь между прогрессированием заболевания и изменениями типов мышечных волокон, а также их возможные защитные механизмы. Рассматриваемые заболевания в основном имеют генетическую природу и вызывают нарушения клеточных функций, что приводит к заболеванию. Они могут наследоваться или возникать спорадически. В этом разделе приведены некоторые заболевания мышц и двигательных нейронов, хотя список не исчерпывающий.

Саркопения — это потеря мышечной массы, особенно скелетных мышц, с возрастом. Диагностируется по слабости, трудностям при ходьбе или с помощью двухэнергетической абсорбциометрии. На уровне волокон она характеризуется потерей сателлитных клеток типа II, уменьшением митохондрий и изменениями в саркоплазматическом ретикулуме. Волокна типов I и II теряют максимальную силу из-за снижения экспрессии миозина или его окисления, что нарушает образование поперечных связей. Уровни экспрессии изоформы миозина MYH7, ответственной за медленные волокна, остаются неизменными.

Мышечные дистрофии представляют собой группу мышечных заболеваний, которые приводят к истощению скелетных мышц, вызванному некрозом мышечных волокон. Дистрофии включают мутации в генах, которые кодируют функциональные белки, участвующие в образовании дистрофина, или ферменты, модифицирующие белки дистрофина. Эти мутации влияют на скорость перекрестного цикла актиновых филаментов на миозине и, что особенно интересно, они изменяют качество и производство силы волокон типа I и типа II. Апоптоз и некроз типов волокон являются отличительными чертами заболевания, при этом каспаза 3 является известным апоптотическим геном, активность которого повышается при мышечной дистрофии по сравнению с незатронутыми людьми.

Вывод. Типовой состав мышечных волокон определяется в процессе развития, но может изменяться в зависимости от физиологических и патологических состояний. Существенные изменения наблюдаются при нервно-мышечных заболеваниях. Дополнительные исследования, такие как культура клеток скелетных мышц из плюрипотентных клеток, помогут понять спецификацию типов волокон и механизмы изменений их состава и соотношения во время эмбрионального миогенеза и заболеваний, а также влияние на физиологию и патологию мышц.

Использованные источники:

1. Янссен И., Хеймсфилд С.Б., Ван З.М., Росс Р. Масса и распределение скелетных мышц у 468 мужчин и женщин в возрасте 18–88 лет. Журнал прикладной физиологии (1985). 2000 г.;89:81-88
2. Гулдинг М., Ламсден А., Пакетт А.Дж. Регуляция экспрессии Pax-3 в дермомиотоме и ее роль в развитии мышц. Разработка. 1994 год;120:957-971
3. Чал Дж., Пурке О. Создание мышц: скелетный миогенез. Разработка. 2017 год;144:2104-2122
4. Гибни Э.Р., Нолан К.М. Эпигенетика и экспрессия генов. Наследственность (Эдинб). 2010 г.;105:4-13
5. Марини Дж. Ф., Понс Ф., Леже Дж., Лоффреда Н., Аноал М., Шевалле М. и др. Экспрессия изоформ тяжелой цепи миозина у пациентов и носителей мышечной дистрофии Дюшенна. Нервно-мышечные расстройства. 1991 год;1:397-409

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Тургунова Г.Б., д.ф.с-х.н
ассистент
кафедра «Органическое земледелие и лесомелиорация»
Андижанский институт сельского хозяйства и агротехнологий
Узбекистан.

ВЛИЯНИЕ РЕЖИМОВ ОРОШЕНИЯ ПОВТОРНЫХ КУЛЬТУР СОРТОВ ПОДСОЛНЕЧНИКА И СОИ НА АГРФОЗИЧЕСКИЕ СВОЙСТВЫ ПОЧВЫ

Аннотация: *В статье представлены результаты изучения вопросов влияния режимов орошения повторных культур сортов подсолнечника и сои на агрофизические свойств почвы. Описаны результаты исследований по влиянию режимов орошения на объёмную массу почвы и порозность почвыв условиях староорошаемых лугово-сазовых почв Центральной Ферганы Узбекистана.*

Ключевые слова: *Центральная Фергана, луговые сазовые почвы, повторный посев, подсолнечник, соя, сорт, вода, орошение, предельно полевая влагоёмкость (ППВ), объёмная масса почвы, порозность почвы.*

Turgunova G.B., PhD
assistant
of the department «Organic agriculture and forestry»
of the Andijan Institute of Agriculture and Agricultural Technologies
Uzbekistan.

THE INFLUENCE OF IRRIGATION REGIMES FOR SUPPORTED CULTURES OF SUPPOSITE AND SOYBEAN ON THE AGRICULTURAL PROPERTIES OF THE SOIL

Abstract: *The article presents the results of studying the influence of irrigation regimes of repeated crops of sunflower and soybean varieties on the agrophysical properties of the soil. The results of studies on the influence of irrigation regimes on the bulk density of the soil and the porosity of the soil in the conditions of old-irrigated meadow-saz soils of Central Fergana of Uzbekistan are described.*

Keywords: *Central Fergana, meadow saz soils, repeated sowing, sunflower, soybean, variety, water, irrigation, irrigation, field capacity (Fc), bulk density of the soil, soil porosity.*

Введение. На сегодняшний день проблема продовольственного обеспечения стала одной из приоритетных задач всех стран мира. В последние годы из-за процессов глобального потепления, в некоторых регионах происходят наводнения, в других – острая нехватка воды, учащение природных катастроф, что в первую очередь негативно сказывается на сельском хозяйстве. За последние пять лет мировое производство сои увеличилось на 60% и в 2021 году на повторных и основных посевах было высеяно сои на 128,0 млн. га, подсолнечника на 26,2 млн. га, и выращено в среднем – 28,3 ц/га сои, подсолнечника – 18,0 ц/га. По площади выращивания культура сои занимает четвёртое место в мире после пшеницы, риса, кукурузы и в 2020-2021 годах в Бразилии было выращено сои на 38,6 млн. га, в США на 33,3 млн. га, в Аргентине на 16,7 млн. га. Ежегодно в мире производится 47,3 млн. тонн подсолнечника. Украина является крупнейшим в мире производителем подсолнечного масла с годовым объёмом производства 13,6 млн. тонн, Российская Федерация производит 11,0 млн. тонн подсолнечного масла в год и занимает второе место.

Увеличение урожайности и качества подсолнечника и сои в странах-производителях масличных культур, а также правильное определение сроков и норм полива с учётом почвенно-климатических условий играет важную роль. Проведение исследований по определению оптимальных сроков и норм полива повторных посевов подсолнечника и сои, считается актуальной задачей в обеспечении продовольственной безопасности населения [1, 4].

Были проведены масштабные научно-исследовательские работы в зарубежными и отечественными учёными республики по выращиванию подсолнечника и сои в основных и повторных сроках, схеме посева, расходу семян, густоте стояния, режимах полива, биологии и агротехнологиях выращивания [1, 4].

Однако, научные исследования по влияние различных режимов орошения сортов повторных культур подсолнечника и сои на водно-физические, агрофизические и агрохимические свойства лугово-сазовых почвах в Центральной Ферганы не были проведены [2, 3].

Метода и исследования. Почвы опытного участка представляют собой лугово-сазовые почвы, по механическому составу супесчаные, с залеганием грунтовых вод на глубине 1,5–2,0 м, слабо обеспеченные усвояемым фосфором и обменным калием. Полевой опыт проводился в 2020-2022 годах на территории в Улугнорском районе Андижанской области. На опыте при повторном посеве изучались сорта подсолнечника Жахонгир и Янги замон, а так же сорта соии Орзу и Томарис при различных режимах орошения 70-70-60%, 70-75-65% и 70-80-70% от предельно полевой влагоёмкости почвы (ППВ). В опыте варианты размещены в 4 повторностях в 1 ярусе. Каждая делянка имеет длину 100 м и ширину 5,6 м. Каждый вариант состоит из 8 рядов, общая площадь поля 560 м^2, учетная площадь 280 м^2.

Результаты исследования. В проводимых нами исследованиях полученные в 2020 году данные показали, что перед посевом в пахотном слое почвы её объёмная масса составила 1,315 г/см^3, а в подпахотном слое – 1,325 г/см^3. В результате полива повторных культур (подсолнечника и сои) при предполивной влажности почвы 70-70-60; 70-75-65 и 70-80-70% от ППВ было установлено, что в пахотных слоях почвы к концу вегетации объёмная масса увеличилась соответственно на 0,037; 0,051 и 0,071 и 0,044; 0,060 и 0,076 г/см³. Данные показывают, что после выращивания подсолнечника объёмная масса почвы сохраняется в оптимальном состоянии (рисунок 1). Это объясняется тем, что корневая система подсолнечника является мочковатой и распространяется в основном в пахотном слое почвы.

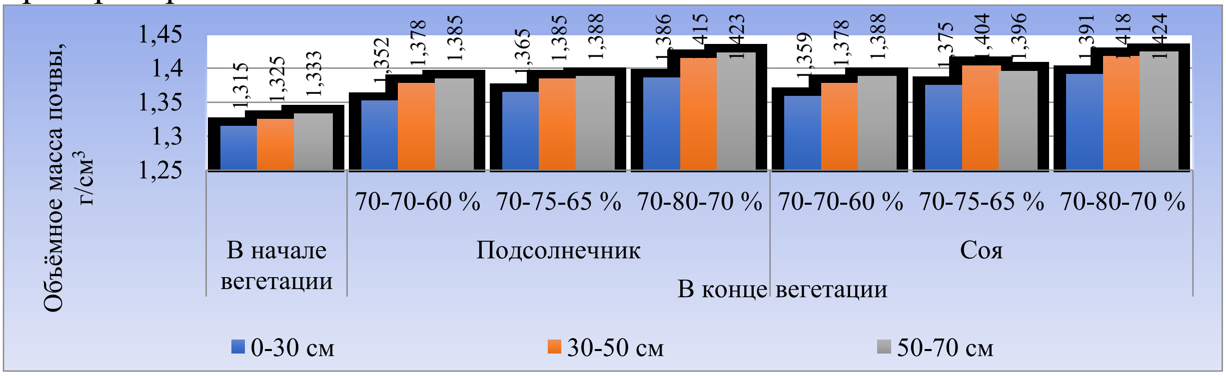

Рисунок 1. Изменения объёмной массы почвы на опытном поле, г/см³ (2020 г.)

При определении порозности почвы перед посевом подсолнечника и сои в пахотном и подпахотном слоях выявлено, что она соответственно составило 51,31 и 50,39%. В вариантах, где подсолнечник выращивался в повторном посеве при влажности почвы 70-70-60% от ППВ, порозность почвы в 0-30 см слое составила 49,93%, или уменьшилась к концу вегетации на 1,38%. При поливах подсолнечника при влажности почвы 70-75-65 и 70-80-70% от ППВ, порозность в конце вегетации уменьшилось соответственно на 1,88 и 2,63%, а при поливах сои в слое 0-30 см в конце вегетации составила 49,67; 49,07 и 48,48%, уменьшившись по сравнению с началом вегетации на 1,64; 2,23 и 2,83% (рисунок 2).

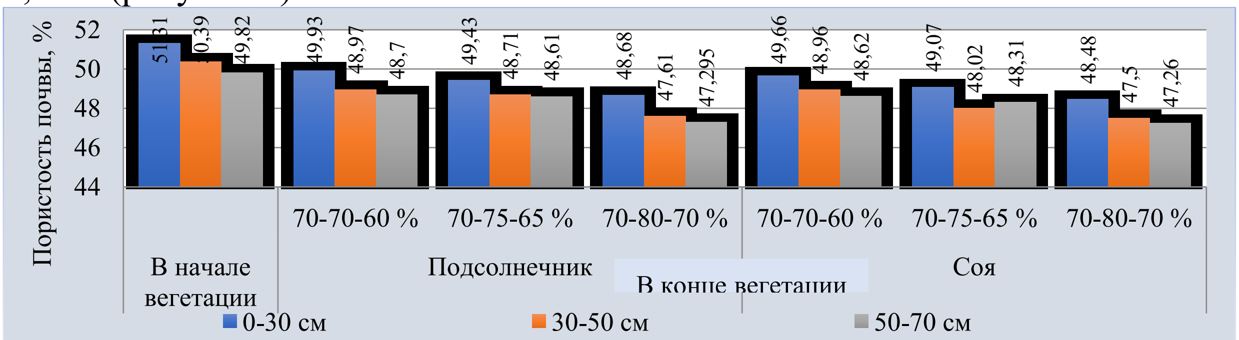

Рисунок 2. Влияние режимов орошения повторных культур подсолнечника и сои на порозность почвы, % (2020 г.)

Заключение.При поливе сортов подсолнечника с предполивной влажностью почвы при режиме орошения 70-75-65% от ППВ и сортов сои при режиме 70-80-70% от ППВ наблюдалось увеличение объёмной массы почвы к концу вегетации по сравнению с началом вегетации в слоях 0-30 и 30-50 см соответственно на 0,051-0,061 и 0,076-0,093 г/см^3. Однако, при поливе подсолнечника – 70-70-60% от ППВ, этот показатель увеличился соответственно на 0,013 и 0,007 г/см^3, а у сои – на 0,032 и 0,041 г/см^3. Порозность почвы в 0-30 см слое на варианте подсолнечника при поливе 70-75-65% от ППВ уменьшилась на 1,88% относительно к начала вегетации, а у сои при поливе 70-80-70% от ППВ уменьшилась на 2,83%.

Использованные источники:

1. Basalma D., Karaman B. A study on the standard germinaton and seed growth of some confectionary and oil seed sunflower *(Helianthus annuus. L)* cultivars//Proc. of 19 thIntern. Sunfl. Conf. Turkey, Edirne, 29 may-2June, 2016. P-200–205.

2. S.Tursunov., G.Turgunova., D.Turakulov., R.Xojiyev.,N.Sayfullayeva. Study of the optimal irrigation procedure of repeatedly planted soybean varieties. «Library Progress International» Vol.44 No.3, Jul-Dec 2024: P. 7690-7697.

3. Г.Б.Тургунова. Влияние способов орошения на высоту стебля и количество листьев повторного посева сортов подсолнечника. «Актуальные проблемы современной науки» Информационно – аналитический журнал. Москва №2 (137). 2024 г. С. 106-108.

4. Луков М. Агротехника подсолнечника гибрида F1 «Машъал».//Сельскохозяйственный журнал Узбекистана. -2019. № 2, 36 с. (на узбекском)

Эшмуротов А.
студент лечебного факультета
Ташкентская Медицинская Академия
научный руководитель: Хужамуратова Д.Х.
ассистент кафедры
гистология и медицинская биология
Ташкентская Медицинская Академия
Ташкент, Узбекистан

ИЗМЕНЕНИЯ МОРФОФУНКЦИОНАЛЬНЫХ ХАРАКТЕРИСТИК ГЕМАТО-ПЛАЦЕНТАРНОГО БАРЬЕРА ПРИ ЭКЗОГЕННОЙ И ЭНДОГЕННОЙ ИНТОКСИКАЦИИ

АННОТАЦИЯ

Статья исследует морфофункциональные изменения гемато-плацентарного барьера при экзогенной и эндогенной интоксикации. Гемато-плацентарный барьер, обеспечивающий обмен веществ между матерью и плодом, может быть нарушен токсинами, вызывая деструкцию мембран, проблемы с митохондриями, изменения в иммунной системе и активацию перекисного окисления липидов. Основное внимание уделяется гестозу, где эндогенные токсины накапливаются в организме матери, вызывая воспаление и повреждение плацентарной ткани. Понимание этих изменений важно для диагностики и лечения интоксикационных состояний при беременности.

Ключевые слова: *Гемато-плацентарный барьер, экзогенная интоксикация, эндогенная интоксикация, гестоз, плацентарная недостаточность, перекисное окисление липидов, иммунные изменения, воспаление плаценты, антиоксидантная активность, циркулирующие иммунные комплексы*

Eshmurotov A.
Student of the Faculty of Medicine
Tashkent Medical Academy
Khujamuratova D.X.
scientific supervisor, department assistant
histology and medical biology
Tashkent Medical Academy
Tashkent, Uzbekistan

CHANGES IN MORPHOFUNCTIONAL CHARACTERISTICS OF THE HEMATO-PLACENTAL BARRIER DURING EXOGENOUS AND ENDOGENOUS INTOXICATION

ANNOTATION

The article investigates the morphofunctional changes of the hematoplacental barrier in cases of exogenous and endogenous intoxication. The hematoplacental barrier, which facilitates the exchange of substances between the mother and the fetus, can be disrupted by toxins, leading to membrane destruction, mitochondrial dysfunction, alterations in the immune system, and the activation of lipid peroxidation. The focus is primarily on gestosis, where endogenous toxins accumulate in the mother's body, causing inflammation and damage to placental tissue. Understanding these changes is crucial for the diagnosis and treatment of intoxication states during pregnancy.

Key words: *Hemato-placental barrier, exogenous intoxication, endogenous intoxication, gestosis, placental insufficiency, lipid peroxidation, immune alterations, placental inflammation, antioxidant activity, circulating immune complexes.*

Актуальность. Изучение изменений гемато-плацентарного барьера при интоксикациях важно для акушерства и перинатальной медицины. Нарушения барьера могут привести к плацентарной недостаточности и осложнениям беременности. Эндогенные токсины при гестозе и экзогенные факторы (лекарства, токсины) негативно влияют на барьер, повышая риски для здоровья матери и ребенка. Понимание этих процессов улучшает профилактику и лечение осложнений беременности.

Цель исследования. Целью данного исследования является анализ морфофункциональных изменений гемато-плацентарного барьера в условиях экзогенной и эндогенной интоксикации, а также выявление их влияния на трансплантацию питательных веществ и защитных факторов между матерью и плодом, что позволит лучше понять механизмы патогенеза и разработать эффективные подходы к профилактике и лечению связанных с этим состояний.

Методы исследования. Для изучения морфофункциональных изменений гемато-плацентарного барьера при экзо- и эндогенной интоксикации использовались следующие методы:

1. **Электронная микроскопия** – для исследования ультраструктуры клеток плаценты и выявления деструктивных изменений в мембранах, митохондриях и эндоплазматической сети.
2. **Иммунологические методы** – для оценки количества и активности Т- и В-лимфоцитов, содержания иммуноглобулинов, циркулирующих иммунных комплексов (ЦИК), а также антиоксидантной активности и уровня перекисного окисления липидов (ПОЛ).
3. **Биохимические анализы** – для измерения уровней альбумина, R белков и других показателей состояния эндогенной интоксикации.
4. **Статистическая обработка данных** – для анализа результатов с использованием вариационной статистики и критерия Стьюдента.

Результаты исследования. Морфофункциональные изменения гемато-плацентарного барьера при экзогенной и эндогенной интоксикации имеют важное значение для здоровья матери и плода. Гемато-плацентарный барьер защищает плод от опасных веществ, но может быть нарушен в результате токсичности, что приводит к различным патологическим последствиям.

Структура и функция гематоплацентарного барьера.

Гемато-плацентарный барьер разделяет кровь матери и плода, обеспечивая транспорт питательных веществ, кислорода и выведение отходов метаболизма. Он состоит из синцитиотрофобласта, базальной мембраны и фетальных капилляров. В норме барьер обладает высокой избирательностью и защищает плод от токсинов. Однако экзогенные (наркотики, алкоголь, загрязнители) и эндогенные токсины могут нарушить его защитную функцию, что приводит к осложнениям беременности.

Морфофункциональные изменения при эндогенных токсинах

ОПГ-гестационный токсикоз — эндогенная токсемия, нарушающая обменные процессы у беременной и приводящая к полиорганной недостаточности и повреждению клеток, включая плаценту.

Изменения в плаценте при токсемии:

1. **Структурные изменения**: Вакуулизация и разрушение мембран в клетках синцитиотрофобласта могут вызвать некроз.
2. **Нарушение сосудистой функции**: Дисфункция эндотелия сосудов плода ухудшает гемодинамику и питание.
3. **Иммунологические изменения**: Снижение Т-супрессорных и В-лимфоцитов приводит к иммунодефициту и повреждению сосудов.
4. **Дисбаланс в окислительно-антиоксидантной системе**: Повышение реактивных форм кислорода усугубляет повреждение плаценты.

Экзогенная интоксикация и ее влияние на гематоплацентарный барьер.

Экзогенные токсины, такие как никотин, алкоголь, анестетики и наркотики, вызывают значительные изменения в гематоэнцефалическом барьере, нарушая обменные процессы между матерью и плодом. Это может привести к задержке роста плода, гипоксии и другим осложнениям.

На клеточном уровне экзогенные токсины вызывают:

1. **Повреждение клеточной мембраны синцитиотрофобласта**: Токсины нарушают барьерную функцию и увеличивают проницаемость для токсических веществ.
2. **Повреждение митохондрии**: это нарушает энергетический обмен, снижая функциональную активность и приводя к гибели клеток.

Патогенез нарушения барьера кровь-плацента-плод.

Повреждение гемато-плацентарного барьера при отравлениях бывает прямым (воздействие токсинов на клетки плаценты) и непрямым (нарушение иммунного ответа и окислительный стресс).

Снижение антиоксидантной активности усиливает окислительный стресс и повреждает клетки. Нарушение митохондрий усугубляет энергетический дефицит, а циркуляция токсинов в материнском кровотоке повышает проницаемость барьера и ухудшает симптомы токсикоза плода.

Вывод.

Морфофункциональные изменения в гематоплацентарном барьере при экзогенных и эндогенных отравлениях могут серьезно повлиять на развитие плода и здоровье матери. Нарушение целостности плацентарных клеток, изменения в иммунной системе и воспалительные реакции могут привести к плацентарной недостаточности и накоплению токсинов. Понимание этих процессов поможет прогнозировать риски во время беременности и разрабатывать методы профилактики и лечения токсических симптомов.

Использованные источники:

1. Бартова Л.М., Кулагина Н.Н., Маргулис Г.У. Методические рекомендации по определению R–белков в сыворотке (плазме) крови. М.: НИИ эпидемиологии и микробиологии им. Н.Ф. Гамалея, 1989. 8 с.
2. Вельбри С.К., Лиллеорг А.Л., Линдстрем С.Л. Одновременная оценка уровня иммунных комплексов и иммуноглобулинов для характеристики патологических процессов // Лаб. дело. 1988. №5. С. 7–11.

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Юлдашева Т.Я.
ассистент кафедры «Сельскохозяйственное право и агротуризм»
Андижанский институт сельского хозяйства и агротехнологий
Узбекистан

СОВРЕМЕННЫЙ ПОДХОД К ВОПРОСАМ ГЕНДЕРНОГО РАВЕНСТВА

Аннотация: *В статье освещаются механизмы обеспечения прав личности и обосновывается актуальность вопроса гендерного равенства. Представлены основные международные механизмы решения проблем и обеспечении прав личности, а также проанализированы проблемы гендерного равенства в обеспечении прав личности в Узбекистане.*

Как предложении выдвинуты задачи модернизации высшего образования, посредством которого будет достигнуто продвижение и утверждение идей гендерного равноправия среди студентов, а также широкое распространение гендерного подхода в учебных заведениях Узбекистана, и как конечный итог во всём обществе страны.

Ключевые слова: *права человека, международные и natsional'ные механизмы обеспечения прав личности, гендерное равенство, гендерная дискриминatsiя, утверждение гендерных отношений, гендерный подход в образовании.*

Yuldasheva T.Y.
assistant of the department «Agricultural law and agrotourism»
of the Andijan Institute of Agriculture and Agricultural Technologies
Uzbekistan

A MODERN APPROACH TO ISSUES OF GENDER EQUALITY

Abstract: *The article highlights the mechanisms for ensuring individual rights and substantiates the relevance of the issue of gender equality. The main international mechanisms for solving problems and ensuring individual rights are presented, and the problems of gender equality in ensuring individual rights in Uzbekistan are analyzed.*

The proposal puts forward the tasks of modernizing higher education, through which the promotion and approval of the ideas of gender equality among students will be achieved, as well as the widespread dissemination of a gender approach in educational institutions of Uzbekistan, and as a final result throughout the entire society of the country.

Key words: *human rights, international and national mechanisms for ensuring individual rights, gender equality, gender discrimination, affirmation of gender relations, gender approach in education.*

ВВЕДЕНИЕ. Принцип гендерного равенства, который является одним из основных принципов прав человека и считается обязательным в применение мировым сообществом, играет важную роль в обеспечении устойчивого развития мира и согласия в обществе, а также полной реализации человеческого потенциала. Не смотря на признание принципа равенства женщин и мужчин всеми современными странами, создания ими в соответствии с рекомендациями ООН всех правовых основ для обеспечения равенства, а так-же запрета всех видов дискриминации по признаку пола в своих странах, в силу различных социальных факторов этот принцип трудно реализуется в обществе. Среди причин, препятствующих усвоению этого принципа обществом, являются стереотипы и предрассудки отдельных народов в зависимости от менталитета, которые приводят к гендерному неравенству. Специалисты в данной области, размышляя над проблемой идентичности права, обычно ориентируются на представление о человеке, являющемся членом определенного общества. В юридической литературе термин «человек» трактуется двояко: как субъект общественных отношений в широком смысле и как член общества, обладающий обычными социальными качествами.

Статус человека в конкретной стране определяется совокупностью факторов в определённой страны, таких как форма правления и государственное устройство, режим государства и уровень сформированности гражданского общества, эффективной деятельностью общественных и государственных институтов.

ОСНОВНАЯ ЧАСТЬ. Право – это целая система общих обязательных принципов и правовых норм, которые представляют собой уровень свободы и ответственности участников общественных отношений, которым должны следовать все члены общества, а понятие «права личности» в этой системе используется в смысле понятия прав человека и гражданских прав. Права человека равны, естественны и неотчуждаемы для всех людей от рождения, определяются и защищаются внутригосударственными и международными законодательствами как общая основа обеспечения нормальной жизни человека. Гражданские права включают обеспечение физической и психической неприкосновенности, жизни и безопасности личности, а также обеспечение равных социальных возможностей и равной защиты со стороны закона независимо от ее личных особенностей.

Международные правила реализации гендерного равенства современными демократическими странами состоят из международных стандартов, которые государства должны применять на своей территории. Нормы международного законодательства выражены в международных документах как Конвенции, Декларации и Пакты. Как источник международного права они состоят из двух типов норм, норм о международных правах и свободах человека, и норм об ограничениях прав.

На международном уровне, как норма международных прав и свобод человека, вопрос равенства женщин и мужчин был поднят впервые в Уставе ООН от 1945 года. По сей день все государства-члены Организации Объединенных Наций обязуется создавать все возможности для обеспечения справедливого гендерного равенства в своих странах. Эти правила служат основой для всех стран и дальнейшему развитию принципов равенства и не дискриминации в мире.

В 1946 году в целях обеспечения гендерного равенства между женщинами и мужчинами была создана Комиссия ООН по положению женщин. Комиссия обеспечивает во всех странах гарантии гендерное равенство на международном и национальном уровнях путем разработки различных рекомендаций, направленных на обеспечение равенства между женщинами и мужчинами.

Согласно статье 2 «Всеобщей декларации прав человека», принятой в 1948 году, каждый должен иметь все права и свободы. В Декларации говорится, что «положения ее преамбулы являются стандартами, к обеспечению которых должны стремиться все нации и государства». Также, согласно принципу Декларации о недопустимости гендерной дискриминации, женщины и мужчины должны иметь равные права и свободы.

Следующим этапом создания международно-правовых стандартов гендерного равенства стало принятие в 1966 году Международных пактов «О гражданских и политических правах» и «О финансовых, социальных и культурных правах», эти два международно-правовых документа предусматривают запрет дискриминации по половому признаку. Согласно Международному пакту “О финансовых, социальных и культурных правах», государства-участники должны гарантировать равенство между женщинами и мужчинами, а Международный пакт «О гражданских и политических правах» направлен на обеспечение того, чтобы женщины и мужчины имели равные права при осуществлении всех гражданских и политических прав. Оба принятые международные пакты гарантируют равные политические и гражданские, социальные, экономические и культурные права для женщин и мужчин.

Принятие государствами-участниками Конвенции ООН 1979 года временных и специальных мер, направленных на ускорение установления «фактического» равенства между женщинами и мужчинами, не являются дискриминацией другой стороны, а служит цели уравнивания прав и возможности обоих полов. Подобные «краткосрочные специальные меры должны быть отменены после достижения целей - обеспечения равных возможностей и равного статуса для представителей обоих полов».

В результате принятых специальных мер были устранены стереотипы и обычаи, негативно влияющие на разрешение этих вопросов. В результате эффективности мер в ряде демократических стран женщины добились значительных успехов наравне с мужчинами.

В современных демократических, светских государствах большое внимание уделяется расширению прав и возможностей женщин, активизации уровня их участия в общественной жизни как на международном, так и на внутригосударственном уровне. Будучи демократической и светской страной, Республика Узбекистан укрепляет гарантии равных прав женщин и мужчин во всех сферах жизни общества.

Узбекистан, как и весь мир, рассматривает правовое неравенство как важную проблему современного общества, а национальное законодательство по защите прав и свобод женщин и мужчин приводится в соответствие с международными стандартами. Для обеспечения гарантий равенства, принцип гендерного равенства полов закреплён в Конституции Узбекистана принятой под новой редакцией в 2023 году.

Узбекистан как правовое государство провозгласил гендерное равенство на всей территории Республики, основанное на общечеловеческих демократических ценностях, а также были объявлены гарантии принципа юридического равенства.

Статья 19 Конституции гласит: «В Республике Узбекистан признаются и гарантируются права и свободы человека согласно общепризнанным нормам международного права и в соответствии с настоящей Конституцией. Права и свободы человека принадлежат каждому от рождения. В Республике Узбекистан все граждане имеют одинаковые права и свободы, равны перед законом независимо от пола, расы, национальности, языка, религии, убеждений, социального происхождения, общественного положения. Льготы устанавливаются только в соответствии с законом и должны соответствовать принципам социальной справедливости»,

Статья 58 Конституции гласит: «Женщины и мужчины имеют равные права. Государство обеспечивает равенство прав и возможностей женщин и мужчин в управлении делами общества и государства, а также в других сферах общественной и государственной жизни». Закрепления эти принципы и его гарантии в Конституции Республики Узбекистан обязуется следовать им в своей деятельности.

Конституция Республики Узбекистан не содержит дискриминационных положений в отношении женщин и мужчин, государство возлагает на себя обязанность «поддерживать семью, материнство, отцовство и детство». В связи с этим часть 3 статьи 78 Конституции предусматривает, что «Материнство, отцовство и детство охраняются государством», чем государство берёт на себя и защиту прав как материнства, так и отцовство, как часть общественных отношений.

По инициативе Президента Узбекистана Ш. Мирзиёева на 78-й сессии Генеральной Ассамблеи ООН в 13-14 мая текущего года, в городе Самарканде состоялся Азиатский женский форум на тему «Региональный подход к вопросам экономических, социальных и политических прав женщин и расширения возможностей». Это мероприятие ещё раз доказывает приверженность Президента Республики укреплению роли женщин-лидеров в регионе и содействию их всестороннему участию в различных сферах жизни страны.

В форуме приняли участие женщины-парламентарии из Восточной, Юго-Восточной, Южной и Центральной Азии, а также лидеров правительств, представителей государственных органов, гражданского общества, деловых кругов, экспертов, политологов, активистов и ученых. На форуме были обсуждены вопросы роли женщин в образовании, научной и инновационной деятельности, цифровых технологий, сокращение бедности посредством расширения экономических прав и возможностей женщин, путём привлечения их к предпринимательству и инновациям, обеспечение их лидерства в современной глобальной экономике страны и мира.

Приводя итоги следует сказать, что Конституция и законодательство Республики Узбекистан соответствуют общепризнанным принципам и законам международного права о гендерном равенстве. Укрепление принципов международного права в Конституции и законах нашей страны, а также реализация их в общественных отношениях во всех сферах жизни общества, служит повышению статуса и влияния законодательства Узбекистана в общественной жизни народа и в международном сообществе.

В тоже время, по нашему мнению, для полноценного решения данной проблемы в Узбекистане нужна модернизация образования и общества, с целью продвижения идей гендерного равноправия в обществе и более широкому распространению в высших учебных заведениях гендерного подхода.

Реализация гендерного подхода в высших учебных заведениях позволит сформировать представление что пол не является основанием для дискриминации, что он дает возможность обеим сторонам пользоваться всеми правами человека, даст возможность человеку независимо от его половой принадлежности свободно выбирать свой путь и форму самореализации на индивидуальном уровне.

Цель гендерного подхода в образовании - деконструкция традиционных культурных ограничений и стереотипов в развития потенциала личности в зависимости от пола, которая приведёт к осмыслению гендерной проблематики, а также созданию условий для максимальной самореализации и раскрытию способностей студентов в разрешении данной проблематики, их информационной поддержке и оснащению учебными пособиями.

ЗАКЛЮЧЕНИЕ. Модернизация высшего образования, даст возможность продвижению и утверждению идей гендерного равноправия, более широкому распространению гендерного подхода в высших учебных заведениях Узбекистана, как конечный итог во всём обществе страны.

Использованные источники:

1. Конституция Республики Узбекистан, Yuridik puvlish, 2023 г.

2. Устав Организаций Объединённых Наций (Принят в г. Сан-Франциско 26.06.1945) // Действующее международное право. Т. 1. – М.: Московский независимый институт международного права, 1996. – С. 7 – 33.
3. «Всеобщая декларация прав человека» (принуата Генералной Ассамблеей ООН 10 декабря 1948 г.) [Электронный ресурс]. URL: http://www.consultant.ru/
4. Великоселская И. Э. Международные механизмы обеспечения гендерного равенства. // Право и политика. – 2009. – № 8. – С. 1635–1642.
5. Алиева, К.Р. Правовые вопросы обеспечения гендерного равенства в Узбекистане. // Монография //, ООО «ЛЕССОН ПРЕСС», 2015.
6. Столярчук, Л.И. Методология гендерного подхода в педагогическом исследовании / Л.И. Столярчук // Язык педагогики в контексте современного научного знания: материалы Всероссийской методологической конференции-семинара / Гл. ред. В.В. Краевский; Ред. А.А. Арламов, Р.В. Почтер - Волгоград; Краснодар; М., 2008. - 284 с. С.232-238.
7. Штылева, Л.В. Фактор пола в образовании: гендерный подход и анализ / Л.В. Штылева. – М.: ПЕР СЭ, 2008. – 316с.
8. Каменская Е. Н. Гендерный подход в педагогике: дис. докт. пед. наук: 13.00.01 / Е. Н. Каменская. – Ростов н/Д, 2006.
9. Митрофанова, А.А. Гендерный подход в педагогике / А.А. Митрофанова // Введение в гендерные исследования: Учеб. пособие для студентов ВУЗов / Под ред. Н.А. Скоморохова
10. Юлдашева, Т. Я., & Исомиддинов, С. (2024). Ўзбекистон Республикаси Конституцияда ёшлар ҳуқуқ ва эркинликлари лафолати. *Science and innovation*, *3*(Special Issue 20), 311-313.

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Девятых С.Ю., канд. психол. наук
доктор социально-политич. наук КНДР, доцент
заведующий кафедрой социально-гуманитарных дисциплин
и агробизнесаУО «Витебская
ордена «Знак почета» государственная академия
ветеринарной медицины»,
г. Витебск, Беларусь

КУЛЬТУРНЫЙ ИМПЕРИАЛИЗМ КАК РЕАЛИЗАЦИЯ НЕОКОЛОНИАЛЬНЫХ УСТРЕМЛЕНИЙ ЗАПАДА

Аннотация. *В статье показано, что культурная экспансия экономически развитых стран Запада – культурный империализм – имеет своей целью политическое, экономическое и культурное подчинение незападных стран до полного их отказа от своих национальных интересов.*

Ключевые слова: *американизация, вестернизация, культурный империализм, неоколониализм.*

DevyatykhS.Yu.
Candidate of psychological sciences
Doctor of Social and Political Sciences of the DPRK, Associate Professor
Head of the Department of Social and Humanitarian Disciplines
and Agribusiness, Educational Institution «Vitebsk
State Academy of Veterinary Medicine»,
Vitebsk, Belarus

CULTURAL IMPERIALISM AS THE REALIZATION OF THE NEOCOLONIAL ASPIRATIONS OF THE WEST

Abstract. *It is shown in the article that the cultural expansion of economically developed Western countries – cultural imperialism – aims at the political, economic and cultural subordination of non-Western countries until they completely abandon their national interests.*

Keywords: *americanization, westernization, cultural imperialism, neocolonialism.*

Ликвидация колониальных империй, завоеваниебывшими колониями национальной независимости – одна из великих побед национально-освободительного движения в XX веке. Тем не менее, это не означает полного уничтожения колониализма на планете. Он и сегодня продолжает существовать. Приняв новую форму – неоколониализма.

И сегодня, многие страны, еще недавно освободившиеся от пут колониализма, фактически остаются зависимыми от экономически развитых стран Запада.

Экономическая зависимость значительной части бывших колоний от мирового империализма покоится, с одной стороны, наих экономической отсталости, с другой, определяется господствующим положением стран империализма в мире: монополизацией рынка товаров и услуг, капитала, современных средств производства и высокоэффективных технологий, научно-технических знаний без опоры на которые не может быть преодолена экономическая отсталость и достигнута экономическая независимость [3].

Отметим, что именно отсталость многих постколониальных стран не позволяет им разорвать цепи экономической и политической зависимости от империалистических держав, достигнуть самостоятельности.Сегодня эта зависимость находит свое выражение в низком уровне развития производительных сил, уродливой односторонней структуре экономики,высокой удельной доле тяжелого ручного труда, низкомуровне производительности труда.

Как и прежде, страны-эксплуататоры думают только о том, чтобы получать максимальные прибыли, беспрепятственно распоряжаться людскими и природными ресурсами постколониальных стран, а для этого империалисты делают все, чтобы удержать бывшие колонии рамках мировой капиталистической системы и не допустить их перехода на некапиталистический путь развития.

Вместе с тем, если в прошлые времена для поддержания своей колониальной власти страны-эксплуататоры использовали, прежде всего, методы прямого военного вторжения и откровенного террора, то теперь в арсенале новых колонизаторов преобладают методы идеологической обработки и культурной экспансии [4; 5]. Хотя и прямая военная сила продолжает оставаться в арсенале современного империализма (вспомним Ирак, Сирию, Ливию) чтобы удержать под своим контролем страны, всерьез задумывающиеся о самостоятельности.

Многие современные политологи называют такую идеологическую и культурную экспансию «культурным империализмом». Отметим, что культурный империализм может принимать самые разные формы и реализовываться не только в культуре, но и в политике, экономике, коммуникациях, военной сфере.

Политика культурного империализма обычно предполагает использование экономического и политического влияния для навязывания ценностей, присущих культуре Запада. Делается же это за счет подавления культур других народов [6]. Как совершенно справедливо отмечал уважаемый товарищ **Ким Чен Ын**, империалисты на основе американского взгляда на ценности пытаются обеспечить реализацию попыток установления господства над другими странами [2, с. 92].

Хотя современные западные культурологи с охотой декларируют уникальность и ценность каждой культурной традиции, на деле они делают все, чтобы распространять ценности, прежде всего, европейской культуры. В первой половине XX века это явление называли «европоцентризмом». Однако после того, как Соединенные штаты Америки стали ведущей державой, все чаще говорят о вестернизации. По своей сути вестернизация и европоцентризм генетически связаны. Они, по сути, являются разновидностями этноцентризма, суть которого в данном случае состоит в том, что Западныеценности, традиции и институты преподносятся его представителями Западного мира как единственно истинные [5].

Стоит упомянуть о таком явлении современности, как американизм, то есть расширение норм и ценностей американской культуры. Американизм является логическим следствием и продолжением европейской культурной традиции. Поэтому, когда мы говорим об американизме, нужно понимать не только и не столько экспансию американской традиции, сколько процессы общей вестернизации мировой культуры [4].

Обратим внимание на несколько аспектов культурной вестернизации незападных стран: во-первых, навязывание индивидуализма и высмеивание коллективизма, во-вторых, перенос потребительских ориентаций и западного образа жизни в национальную культуру, в-третьих, Западная культура превозносится и насаждается как универсальная, не знающая альтернатив, и преподносится как вершина развития мировой культуры, а достижения других культур высмеиваются, принижаются или отрицаются.Для получения наибольшего эффекта идеологический и культурный поток организуется в одностороннем порядке [6].

Продвижением культурного империализма занимаются ведущие западные компании, которые претендуют на звание экспертовв сфере индустрии развлечений. Активное участие в духовном подчинении других народов принимают западные средства массовой информации.

При активном участии западных политических элит в странах, подвергшихся культурной экспансии, происходит формирование социокультурных элит, настроенных на активное продвижение западных ценностей, культурных стандартов и идеологии. Выращенные западом культурные элиты из туземцев всячески содействуют установление прозападных ориентиров во всех сферах культуры: литературе, музыке, живописи, кино, моде. В конечном счете, все это служит опорой для влияния Запада в отдельно взятом государстве [5].

Конечной целью культурной экспансии империализма становится политическое и экономическое подчинение другой страны до такой степени, что в ней происходит отказ от своих национальных интересов. За примерами ходить не надо – краху социализма в СССР предшествовала активное навязывание советским людям западной культуры и западных ценностей.

Конечно, без взаимных культурных обменов в сегодняшнем мире не обойтись. И здесь следует помнить слова Президента **Ким Ир Сена**, который говорил: «прежде чем следовать примеру других, пережевывай его как следует; и если твой желудок принимает его, проглатывай, а если нет, выплюни» [1, с. 57].

Еще одно направление культурной экспансии империализма– внесение раскола, вражды между народами и странами, выступающими носителями общей истории и общей культуры.

Наиболее яркими примерами такого раскола выступают процессы, инспирированные западным империализмом в отношениях между Россией и Украиной или между Корейской Народно-Демократической Республикой и Республикой Корея. Ни КНДР, ни Россия не захотели следовать в фарватере за Соединенными Штатами Америки, не примкнули к своре их сателлитов.

И как результат – кровавая война на Донбассе илисудьба разделенного народа на Корейском полуострове.

Не все народы готовы мириться с навязыванием им чуждой культуры. Культурная экспансия запада нередко вызывает у представителей этих культур законное неприятие европейских и американских ценностей. В арсенале у неоколонизаторов для таких народов есть свой кнут – объявить их террористами и удушать военными и экономическими мерами.

И здесь следует прислушаться к совету товарища **Ким Чен Ына**: в борьбе за реализацию самостоятельности страны мира должны совместно выступать в защиту самостоятельности, должны сплачиваться и сотрудничать между собой под знаменем атниимпериализма и самостоятельности [2, с. 93].

Использованные источники:

1. Ким Ир Сен. Сочинения. Т. 42 / Ким Ир Сен. – Пхеньян, 1997. – 529 с.
2. Ким Чен Ын. Отчетный доклад Центрального Комитета Трудовой партии Кореи VII съезду партии / Ким Чен Ын. – Пхеньян, 2016. – 128 с.
3. Агафонов, Б. И. Культурный империализм без грима. – Москва : Правда, 1995. - 97 с.
4. Саид, Э. В. Культура и империализм / Пер. с англ. А. В. Говорунова. – Санкт-Петербург : Владимиръ Даль, 2012. - 736 с.
5. Latouche, Serge. The Westernization of the World / Serge Latouche. - Polity Press, 1996. – 140p.
6. Laue,Theodore H. Von. The World Revolution of Westernization: The Twentieth Century in Global Perspective / Theodore H. Von Laue. - Oxford University Press, -1989. - 418 p.

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Сланов В.В.
студент Института права
Тольяттинский государственный университет
Россия, г. Тольятти

ОБЩАЯ ХАРАКТЕРИСТИКА ЦЕЛЕЙ УГОЛОВНОГО НАКАЗАНИЯ

Аннотация*: в данной научной статье дается общая характеристика целей уголовного наказания. В статье также подробно описываются признаки целей наказаний.*

Ключевые слова*: цели уголовного наказания, виды наказаний, признаки наказаний.*

Slanov V.V.
Institute of Law
Tolyatti State University
Russia, Tolyatti

GENERAL CHARACTERISTICS OF THE OBJECTIVES OF CRIMINAL PUNISHMENT

Abstract: *this scientific article provides a general description of the goals of criminal punishment. The article also describes in detail the characteristics of the purposes of punishment.*

Key words: *goals of criminal punishment, types of punishment, signs of punishment.*

Цели уголовного наказания в законодательствах разных стран обычно направлены на обеспечение справедливости, предотвращение преступлений и коррекцию поведения осуждённых. Эти цели не только способствуют поддержанию общественного порядка и безопасности, но и направлены на то, чтобы лица, совершившие преступления, понесли наказание, соответствующее тяжести их действий, и имели возможность исправиться и социально адаптироваться.

Справедливость как цель уголовного наказания требует, чтобы наказание было соразмерно совершённому деянию, чтобы обеспечить чувство законности и справедливости как для жертвы, так и для общества в целом. Это способствует укреплению доверия к правовой системе и уважению к закону.

Превентивная функция уголовного наказания направлена на предотвращение будущих преступлений как путём отпугивания потенциальных правонарушителей, так и путём демонстрации негативных последствий для тех, кто уже совершил преступления. Таким образом, оно действует как сдерживающий фактор, который помогает снизить вероятность повторного совершения преступлений.

Исправительная функция уголовного наказания направлена на реабилитацию осуждённых, предоставляя им возможности для обучения, получения профессиональных навыков и психологической поддержки, что способствует их успешной социальной адаптации после освобождения. Такое направление исправления помогает снизить уровень рецидивов и способствует интеграции бывших правонарушителей в общество как полноценных его членов [2].

Система наказаний с позиции того насколько эффективно она осуществляет уголовно-правовое воздействие на лиц, которые совершили преступные деяния, а также на остальных граждан, должна соответствовать следующим требованиям:

– система должна включать в себя разные наказания исходя из их содержания;

– для суда система наказаний должна обеспечить возможность реализовывать требования индивидуализации назначения наказаний;

– задачи уголовного законодательства могут быть решены системой наказаний лишь при условии ее относительной стабильности;

– для цели наказаний свойственен исторически изменчивый характер, т.е. при изменении социальной действительности возникает необходимость в своевременном ее реформировании.

А.Г. Безверхов считает, что главным в цели наказания является определенность и делимость [1].

Основное уголовно-правовое значение цели наказаний заключается в её способности действовать как средство сдерживания, профилактики и исправления. Система наказаний должна быть сбалансированной таким образом, чтобы обеспечивать адекватность наказания в соответствии с тяжестью совершённого преступления, тем самым способствуя справедливости и чувству законности.

Важным аспектом цели наказаний является также её гибкость и способность адаптироваться к изменениям в общественных взглядах и технологиях, что обеспечивает её актуальность и эффективность. Прозрачность и справедливость в применении наказаний укрепляют доверие общества к правосудию, тем самым поддерживая общественный порядок и уважение к закону.

В юридической литературе выделяют следующие признаки цели наказаний, на которые указывают авторы:

1. Именно уголовный закон определяет перечень видов уголовных наказаний. Такое положение соответствует принципу «нет наказания без указания на то в законе» (с латинского - «nullum poena sine lege»). В ст. 3 УК РФ установлен принцип законности, который закрепляет, что только УК РФ может быть определена преступность деяния, а также его наказуемость и

другие уголовно-правовые последствия. В иных законах и подзаконных актах уголовные наказания предусмотрены быть не могут.

В настоящее время перечень наказаний законодателем закреплен в ст. 44 УК РФ, который включает в себя 13 видов наказаний:

– штраф;
– лишение права занимать определенные должности или заниматься определенной деятельностью;
– лишение специального, воинского или почетного звания, классного чина и государственных наград;
– обязательные работы;
– исправительные работы;
– ограничение по военной службе;
– ограничение свободы;
– принудительные работы;
– арест;
– содержание в дисциплинарной воинской части;
– лишение свободы на определенный срок;
– пожизненное лишение свободы;
– смертная казнь.

Из перечня уголовных наказаний, предусмотренных ст. 44 УК РФ, в 2003 г. был исключен такой вид наказания как конфискация, а в 2011 г. перечень был дополнен новым видом наказания – принудительными работами. Также следует отметить, что в 2009 г. были внесены изменения в УК РФ и Уголовно-исполнительный кодекс РФ в отношении исполнения такого вида наказания как ограничения свободы. В настоящее время на практике не применяются арест и смертная казнь. Что касается правоприменительная практика в отношении принудительных работ только с 2017 г. начала свое исчисление в силу определенных организационных и финансовых причин, что в первую очередь связано с построением и введением в действие исправительных центров и изолированных участков исправительных учреждений, которые функционируют как исправительные центры.

Так в 2018 г. за первые полгода в Российской Федерации к принудительным работам приговорено 499 лиц. В связи с тем, что в уголовном законе предусмотрены наказания, которые в действительности на практике по ряду причин не находят свое применение, мы можем, говорит о существовании «реальной» цели наказаний, которую мы видим на практике, и «идеальной», которая закреплена в ст. 44 УК РФ.

2. Для судов предусмотренная уголовным законом система наказаний носит обязательный характер. Иными словами, суды могут применять только те наказания, что содержатся в перечне наказаний в ст. 44 УК РФ, который законодателем определен исчерпывающим образом. Назначить меру, которая в ст. 44 УК РФ не предусмотрена в качестве наказания, суды не могут. Суды

при назначении наказания за определенное преступное деяние исходят из содержания санкции конкретной статьи Особенной части УК РФ.

В качестве исключения выступает возможность назначения наказания в виде лишения права занимать определенные должности или заниматься определенной деятельностью, которое в соответствии с положениями уголовного закона может быть назначено как дополнительный вид наказания и тогда, когда в санкции статьи Особенной части УК РФ оно не предусмотрено исходя их степени и характера общественной опасности совершенного преступного деяния, а также личности лица, признанного виновным, если суд придет к выводу о том, что сохранение за ним права заниматься определенной деятельностью либо занимать определенную должность является невозможным.

Кроме того, суд также может отступить от санкции статьи Особенной части УК РФ при применении положений ст. 64 УК РФ (назначение более мягкого наказания, чем за данное преступление предусмотрено), т.е. суду предоставлена возможность назначить более мягкий вид наказания, чем предусмотрен статьей Особенной части УК РФ, или назначить наказание ниже низшего предела, который установлен в санкции статьи Особенной части, либо не применять предусмотренный в качестве обязательного дополнительный вид наказания. Судам также предоставлена возможность вместо предусмотренного санкцией статьи наказания назначить иную меру уголовно-правового характера, например, в соответствии со ст. 73 УК РФ признать наказание условным.

3. Социальная обусловленность. Для цели наказаний свойственен исторически изменчивый характер, поскольку наказания соответствуют морально-этическому, культурному и экономическому состоянию общества в соответствующий исторически определенный период времени, в котором они подлежат применению, а также принятым историческим традициям.

Система наказаний в случае изменения условий жизни общества также неизбежно меняется. В противном случае происходит снижение эффективности использования как всей цели наказаний в целом, так и отдельных видов наказаний. Например, применение членовредительских или телесных наказаний, которые широко были распространены в царской России, а также наказаний, которые унижают достоинство человека, с современными представлениями о ценности личности человека и морали являются несовместимыми. Можно обратиться и к примеру последних десятилетий истории отечественного уголовного права, чтобы проследить социальную обусловленность цели наказаний. Так, система наказаний по Уголовному кодексу РСФСР 1960 г. предусматривала такие виды наказаний как возложение обязанности загладить причиненный вред, общественное порицание, высылку и ссылку, направление в лечебно- трудовой профилакторий. Действующий уголовный закон все эти виды наказаний не предусматривает.

Исходя из изменившихся социальных, политических, экономических и духовных реалий в ныне предусмотренную систему наказаний законодатель включил новые виды, которые советскому уголовному праву были не известны: пожизненное лишение свободы, арест, ограничение свободы, ограничение по военной службе, обязательные работы. Отдельные виды наказаний в УК РФ в настоящее время по сравнению с советским периодом предусмотрены в измененном виде.

4. Наказания в системе располагаются в четко определенном порядке.

Законодатель расположил в ст. 44 УК РФ наказания исходя из их суровости – от менее строго наказания к более строгому. Законодатель установил определенную «лестницу» наказаний в том виде, в котором она содержится в ст. 44 УК РФ, что есть ничто иного как выражение гуманистических начал уголовного закона [3].

Таким образом, правоприменителя законодатель ориентирует на сдерживание «репрессий» и применение более строго вида наказания только тогда, когда менее строгое наказание за определенное преступное деяние достижение его целей обеспечить не может. Система наказаний свое выражение находит и в иных нормах УК РФ, например, в ст. 72, которая предусматривает порядок исчисления сроков наказаний и зачет наказания, в ст. 71, которая устанавливает порядок определения сроков наказаний при их сложении, в ст. 64 УК РФ, которая предусматривает возможность для суда назначить более мягкое наказание, чем предусмотрено санкцией статьи Особенной части УК РФ за совершение определенного преступления, а также в нормах, которые определяют порядок замены одного наказания другим (например, ч. 5 ст. 46 УК РФ) [3].

5. Система наказаний, предусмотренная ст. 44 УК РФ, включает исчерпывающий перечень наказаний. Только те меры уголовно-правового характера относятся к наказаниям, которые законодателем в такой перечень были включены. В связи с этим, санкции статьей Особенной части УК РФ могут указывать только меры, которые включены в предусмотренный ст. 44 УК РФ перечень. Таким образом, систему наказаний можно определить в качестве предусмотренного уголовным законодательством социально-обусловленного перечня наказаний, который обязателен для судов и который расположен в конкретной последовательности от менее строгого к более строгому (в зависимости от возрастания степени их тяжести (репрессивности)).

Сдерживающий эффект наказания заключается в предотвращении новых преступлений путём демонстрации возможных последствий для потенциальных правонарушителей. Однако, помимо устрашения, наказание также направлено на исправление осуждённых, стремясь изменить их поведение с помощью реабилитационных программ и условий, которые способствуют их социальной адаптации после отбытия наказания.

Таким образом, уголовное наказание служит не только инструментом наказания и устрашения, но и средством обеспечения социальной справедливости и содействия личностному росту осуждённых, что, в свою очередь, способствует созданию более безопасного и стабильного общества.

Использованные источники:

1. Безверхов, А. Г. О законодательном закреплении дефиниции уголовного наказания // Российская юстиция. – 2015. – № 12. – С. 14 – 17.

2. Коняхин В. П., Полтавец В. В. Институт назначения наказания: понятие и структурно-функциональный анализ // Российский следователь. – 2016. – № 14. – С. 18 – 25.

3. Уголовный кодекс Российской Федерации: от 13 июня 1996 г. № 63-ФЗ // Справочно-правовая система «КонсультантПлюс»: [Электронный ресурс] / Компания «КонсультантПлюс».

Оглавление