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SURXONDARYONING MINERAL SUVLI BULOQLARINI O'RGANISH VA KARTALASHTIRISH MASALALARI

Annotatsiya. Mazkur maqolada Surxondaryo viloyatidagi mineral suvli buloqlar bayon qilingan va ular ArcGIS dasturida kartalashtirilgan.

Kalit so'zlar: Mineral suvli buloqlar, oltingugurt-vodorodli suvlar, doimiy kuzatuvda bo'lgan buloqlar, buloqlarni kartalashtirish.

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ISSUES OF STUDY AND CARTOGRAPHY OF MINERAL WATER SPRINGS OF SURKHANDARYA

Annotation. this article describes mineral water springs in Surkhandarya region and they are mapped in the ArcGIS program.

Keywords: mineral water springs, sulfur-hydrogen waters, springs under constant observation, cartography of springs.

Mineral suvli buloqlar insonlar salomatligini tiklashda eng samarali tabiiy vositalardan biri. Ko'p mineral suvli buloqlar insonning ichki kasalliklarini davolashga xizmat qilsa, aksariyatlari esa tana va teri to'qimalari bilan bog'liq bo'lgan kasalliklarda shifo ekanligi ma'lum. Mineral suvli buloqlarning tarqalishida ham o'ziga xos qonuniyat mavjud.

Buloqlarning ko'p yoki kam bo'lishi hududga tushadigan yog'in miqdori bilan ifodalanadi. Surxondaryo viloyatining shimoliy, g'arbiy va sharqiy tomonlari tog'lardan iborat bo'lganligi uchun buloqlar tog'li hududlarda ko'pchilikni tashkil etadi. Asosan viloyatning g'arbiy qismlaridagi tog'larda, tog' etaklaridagi soyliklarda va daryo bo'ylariga yaqin joylarda buloqlar ko'pchilikni tashkil etadi. Viloyatning sharqiy qismidagi Bobotog' va uning etaklarida buloqlar nisbatan kamroq. Bunga asosiy sabab Bobotog'ning viloyatdagi qolgan tog' massivlariga nisbatan past ekanligi hamda yog'in miqdorining kamligi bilan ifodalash mumkin.

Aynan buloqlarning paydo bo'lishiga asosiy sabablardan biri yog'in miqdoridir. Yer osti suvlari esa ko'pincha tekislik qismida vujudga kelgan

buloqlarning asosiy manbayi hisoblanadi. Demak bundan ko‘rinib turibdiki, buloqlarning geografik tarqalishida hudud omili, ya’ni relyef omili muhim hisoblanadi. Turli adabiyotlarda Surxondaryo viloyatida tarqalgan buloqlarning soni haqidagi ma’lumotlar bir biridan farqni ko‘rishimiz mumkin. Viloyatda 247 ta buloq mavjudligi qayd etilgan [1]. Buloq suvidan olingan namunalarda mutaxassislar tomonidan tekshiruvdan o‘tkaziladi va buloq suvining holati o‘rganiladi.

Bugungi kunda Surxondaryo viloyati gidrogeologiya qo‘mitasi mutaxassislari tomonidan 6 ta yo‘nalishdagi 33 ta buloqda doimiy kuzatish ishlari amalga oshirilib kelinmoqda (1-jadval).

1-jadval

Surxondaryo viloyati gidrogeologiya qo‘mitasi tomonidan doimiy kuzatuvda bo‘lgan mineral buloqlar haqida ma’lumot

T/r	Yo‘nalishlar	Buloqlar nomi	Joylashgan hududi	Dengiz sathidan balandligi
1	Sariosiyo-Uzun yo‘nalishi	Gazarak	Sariosiyo	-
		Xufar	Sariosiyo	-
		Xufar-1	Sariosiyo	-
		Tog‘chiyon	Sariosiyo	-
2	Denov-Bobotog‘ massivi yo‘nalishi	Tolichashma	Uzun	-
		Pistamozor	Uzun	820
		Tombuloq	Uzun	-
		Terakbuloq	Uzun	1800
3	Sho‘rchi-Oltinsoy-Sho‘rchi yo‘nalishi	Xo‘jaipok	Oltinsoy	1000
		Vaxshivor	Oltinsoy	1420
		Qo‘tirbuloq	Oltinsoy	1500
4	Boysun yo‘nalishi	Sanjarbuloq	Boysun	-
		Omonxona	Boysun	1217
		Haydarbuloq	Boysun	-
		Sharsharota	Boysun	-
		Padang	Boysun	-
		Ovlot	Boysun	-
		Mirqorako‘z	Boysun	1148
		Sayrob	Boysun	1035
		Xo‘jamayxona	Boysun	1163
		Katta qorovul	Boysun	-
		G‘ajirqoya	Boysun	-
		Olchabuloq (Machay)	Boysun	-
Olchabuloq (To‘da)	Boysun	1580		
5	Sherobod-Poshxurt yo‘nalishi	Tagirchakota	Sherobod	-
		Anjirota	Sherobod	-
		G‘o‘rimbuloq	Sherobod	1840

		O'lanbuloq	Sherobod	-
6	To'palang suv ombori yo'nalishi	843 nomli	Sariosiyo	-
		844 nomli	Sariosiyo	-
		845 nomli	Sariosiyo	-
		846 nomli	Sariosiyo	-
		847 nomli	Sariosiyo	-

Manba: Jadval ma'lumotlari Surxondaryo viloyati gidrogeologiya qo'mitasi ma'lumotlari asosida qaytadan to'ldirildi.

Jadvalda berilgan ma'lumotlardan To'palang suv ombori yo'nalishidagi buloqlar bevosita mazkur nomda ataluvchi suv ombori bilan bog'liq. To'palang suv omborining suv sathi ko'tarilsa, buloq suvi ham ko'payadi. Suv omboridagi suv sug'orishga sarflanganda ya'ni suv sathi pasayganda buloq suvlari ham kamayib qoladi, ba'zi buloqlar qurib ham qoladi.

O'zbekiston Respublikasi geologiya va mineral resurslar qo'mitasi Surxondaryo viloyati gidrogeologiya qo'mitasi ma'lumotiga ko'ra viloyatda bugungi kunda 300 dan ortiq buloqlar mavjud bo'lib, hozirgi kunda 6 ta uchaskaga qarashli 33 ta mineral suvli buloqda viloyat gidrogeologiya qo'mitasi xodimlari tomonidan muntazam kuzatuv ishlari olib borilmoqda [2]. Mazkur buloqlarning asosiy qismi tog'li va tog'oldi hududlarida joylashgan.

Viloyat hududida joylashgan mineral buloqlarning asosiy qismi To'polang, Sangardak va Xalqajar daryolari havzalaridagi baland va o'rtacha tog'li hududlarga to'g'ri keladi (2-jadval). Asosan tarkibida 0,5-0,8 g/l tuz bo'lgan chuchuk suvli buloqlar 2550-3600 m balandlikga to'g'ri kelib, qadimgi paleozoy, yura va bo'r davri yotqiziqlari bilan chegaralanadi.

2-jadval

Surxondaryoning o'ng sohili bo'ylab joylashgan oltingugut-vodorodli va boshqa mineral buloqlarning kimyoviy tarkibi.

№	Buloqlarining joylashgan o'ri va nomi	Buloqlarining dengiz sathidan balandligi. (metr hisobida)	Suv chiqayotgan jins	Suvni miqdori (l/s)	Suvni harorati (°C)	Umu-miy mineral-lar miqdori (g/l)	Suv tarkibidagi kimyoviy elementlar
1	Xalqajar daryosi havzasida joylashgan "Xo'jaipok" bulog'i	1000	ohaktosh	120	20	2,0	Ca, C ₃ , O ₄ , K, HCO ₃

2	Machaydar yo havzasida joylashgan "Xo'jamayxona" bulog'i	2500-3000	ohaktosh	2000	10	1,2-1,3	C ₂ O, H ₁₂ , O ₅
3	Sangardak-daryo havzasidagi "Oqsuv" bulog'i	3000-3200	-----	2000	4	1-1,5	Ca, C ₃ , K
4	To'polang-daryo havzasidagi "Obi shifo" bulog'i	2400-2500	ohaktosh	10	24	1,5	Ca, C ₃ , O ₄ , K, Md, HCO ₃
5	To'polang-daryo havzasidagi "Shivirbo'yin" bulog'i	1800-1900	Qumtosh - ohaktosh	10	-----	2,5	Ca, C ₃ , O ₄
6	Sherobod-daryo havzasidagi "Obi shifo" bulog'i	-----	ohaktosh	9	14	0,5	Ca, C ₃ , O ₄ , K, HCO ₃
7	Sherobod-daryo havzasidagi "Avliyo" bulog'i	-----	Osh tuzi	2	2	9,3	Ca, C ₃ , O ₄ , K, HCO ₃

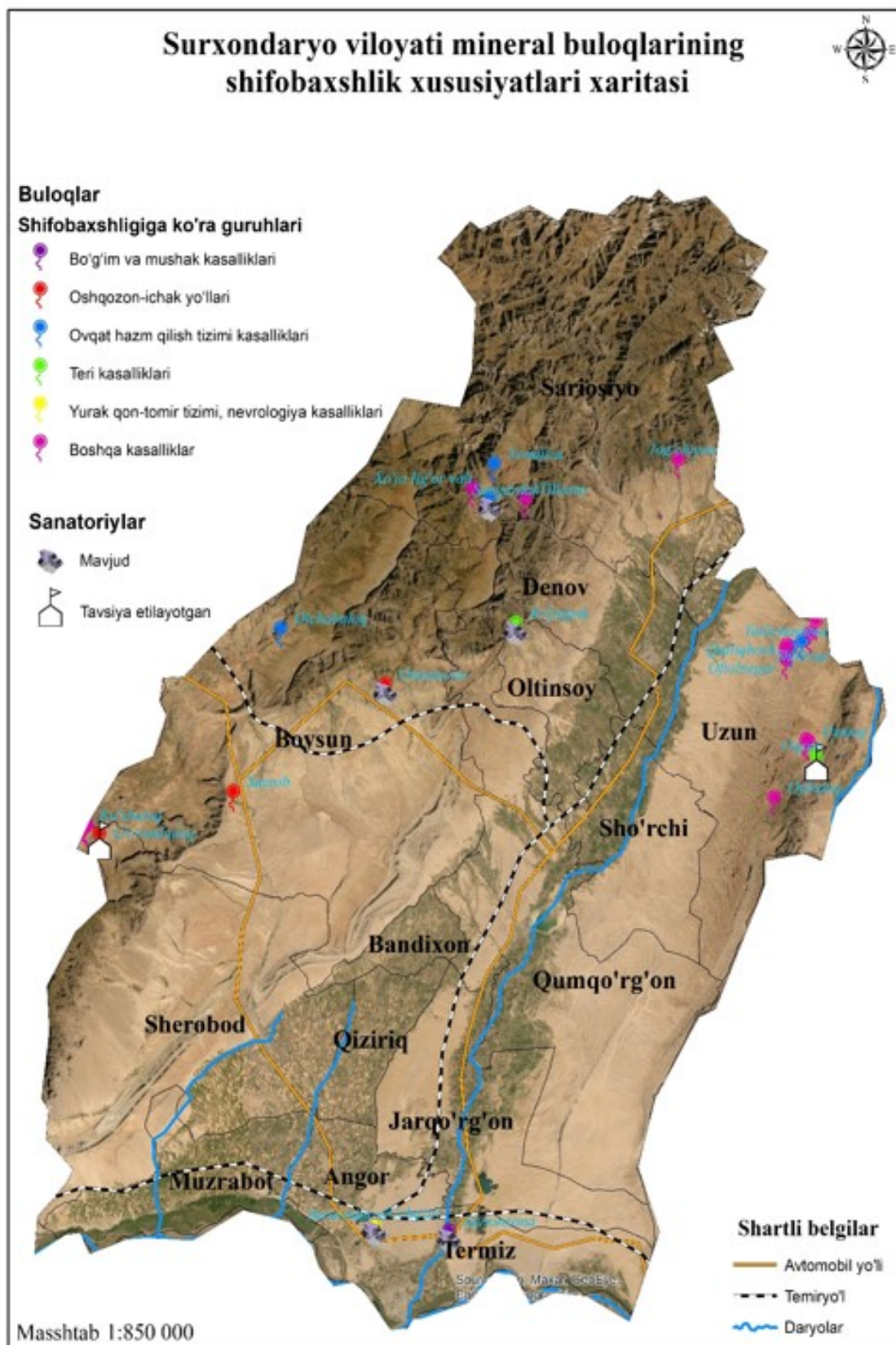
Manba: Viloyat gidrogeologiya qo'mitasi ma'lumotlari va adabiyotlardagi ma'lumotlar umumlashtirilib qayta tahlil qilindi.

Viloyatda buloqlar ko'p bo'lishiga qaramasdan ularni ilmiy tadqiq qilish, kartalashtirish ishlari amalga oshirilmagan. Hozirgi zamonaviy ilm-fanda geografik kartalarni tuzish dolzarb masala kasb etmoqda, shuningdek hozirgi yaratilayotgan kartalarda GAT texnologiyalaridan keng foydalanilmoqda. Mazkur ishda Surxondaryo viloyati hududida joylashgan mineral suvli buloqlar ArcGIS dasturidan foydalanib kartalashtirildi (1-rasm), mineral buloqlar atrofida asosan buloq nomi bilan ataluvchi sihatgohlar va kelajakda barpo etilishi kerak bo'lgan sihatgohlar haqida ma'lumotlar berilgan.

Viloyatda mineral buloqlar negizida bir qancha sihatgohlar barpo etilgan. Boysun tumanidagi “Omonxona” mineral bulog‘i, “Xo‘jamayxona” bulog‘i, Oltinsoy tumanidagi “Xo‘jaipokota” bulog‘i, Sherobod tumanidagi “G‘o‘rimbuloq” bulog‘i kabi buloqlar o‘zining shifobaxshligi bilan alohida ajralib turadi. Xususan, “Omonxona” bulog‘i, Sherobod tumanidagi “G‘o‘rimbuloq” buloqlari ichki a‘zolar hastaligi jumladan, oshqozon-ichak, jigar o‘t toshi, buyrak toshi kasalliklarga davo ekanligi isbotlangan.

Viloyatdagi ayni vaqtda geografik o‘rni qulay, shifobaxshlik xususiyati yuqori bo‘lgan buloqlar atrofida sanatoriyalar bunyod etilgan bo‘lib, kelajakda ularning sonini viloyatda ko‘paytirish imkonimiz mavjud. Chunki viloyatimizdagi mineral buloqlar turli xil insondagi xastaliklarni davolashga qodirligi bilan ahamiyatlidir.

Viloyatda ayni vaqtda mineral buloqlar negizida bunyod etilgan sanatoriyalar ko‘pchilikni tashkil etmaydi. Biroq viloyatdagi ko‘pgina mineral buloqlar atrofida bunday maskanlarni tashkil etsak bo‘ladi. Masalan biz o‘rganib chiqqan mineral suvli buloqlardan G‘o‘rimbuloq bulog‘i yoki Bobotog‘ massividagi mahalliy tilda Oqsuv nomi bilan ataluvchi buloq shular jumlasidandir.



1-rasm. Surxondaryo viloyati mineral buloqlarining shifobaxshlik xususiyatlari ko'ra guruhlashtirish xaritasi (Manba: Xarita ArcGIS dasturida ishlandi).

Viloyatdagi mineral suvli buloqlarni o'rganish bilan bilan bir qatorda ular joylashgan geografik obyektlarni xaritada belgilash, buloqlarni xaritalashtirish, buloqlarga olib boradigan zamonaviy yo'l ko'rsatgich yo'nalishlarini ishlab chiqish va uni google karta ilovasiga birlashtirish kabi dolzarb masalalar mavjud. Kelajakda bu yo'nalishdagi tadqiqotlar ko'lami kengayib, tadqiqot natijalarini axboratlashtirish ishlari zamonaviy ko'lamda amalga oshirilishiga ishonch bildirib qolamiz.

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THE INFLUENCE OF FOOTBALL ON THE PHYSICAL QUALITIES OF A PERSON

Abstract. The article examines the process of influence of football practice on the basic physical and mental qualities, improvement of health, influence on the communication properties and lifestyle of athletes.

Keywords: football, game, team, endurance, goal, qualities.

At the current stage of the development of sports and related sports culture, football is the most popular sport in the world. This is due to several factors: Entertainment, Atmospheric, Unpredictable, Easy to learn and Collective. All this has brought football to a higher level compared to other sports. Football players are currently the highest-paid athletes in the world, and the World Cup draws hundreds of millions of spectators at stadiums and screens. Despite the birth and design of football in England, in recent decades this sport has become universal for most countries, unlike purely national sports.

The topic of developing physical and mental qualities through football is the most relevant in our time. In the age of computer and information technology, human work is becoming less mobile and assiduous. A person develops a brain, but the rest of the body remains practically stationary. There are also many "sedentary" jobs where neither one nor the other is actually developing. Football is just one of those sports where both are developing. Despite the above described factor of ease of learning, this sport is one of the most difficult and flexible. If many people can control the ball well and score goals in street football, then in professional football this will not be enough at all. Without tactics, strategy, the ability to assess the current situation and teamwork skills, even the fastest and most enduring athlete will not be able to do anything.

Questions arise: why was football chosen as the topic of the article, and what is the worse for other sports to develop a person's physical and mental qualities? Of course, other sports cope with human development no worse. However, in our opinion, football is the most complex of all related and similar sports, requiring an analysis of the specific situation. If we compare football with handball, a game where there are also opposite gates and a playing field, the requirement of endurance and the requirement for situational and flexible thinking, then there is a big difference. In handball, hands and feet are involved, and it is much easier to move the ball and give passes with your hands. It is much easier to throw the ball with your hands, thereby bypassing the opponent's players. In football, an athlete has only his legs. Legs are not only a means of movement,

as in handball, but also a means of moving the ball across the field, passing to a teammate, hitting the goal. From the foot level, it is much more difficult to give long-range passes, as well as score a goal bypassing the opponent. The slightest idea of using your hands, even if the ball hits them accidentally, can lead to heated arguments with the referee, followed by disqualification, the innocence of which will be very difficult to prove. In football, the head can be used, but its use is limited to the frontal part, and its maneuver is significantly limited compared to other parts of the body. However, it is not always recommended to use the head. Incorrect reception of the ball by the head, as well as the high force of its impact, together with the speed of flight, can cause dangerous injuries to one of the most important parts of the body. To sum up, the limited use of legs, which also act as a means of movement and gaining speed, which are significantly inferior to hands in terms of ease of use of the ball, make football, in our opinion, more difficult than handball. A football player has a greater number of mental and analytical processes in the brain, how to use his legs in a particular situation.

In each of the two main physical characteristics, you can also identify several qualities that football develops.

Endurance. The most important physical quality reflecting the general level of human performance. Endurance is a multifunctional property of the human body and integrates a large number of processes occurring at various levels: from the cellular to the whole organism. The effectiveness of sports training, and especially in the technical component when playing football, develops an important property of the musculoskeletal system of the ability to muscle relaxation-flexibility.

the ability of a person in certain specific conditions to instantly react with high speed movements to a particular stimulus, performed under the condition of significant external resistance, complex coordination of muscle work in a minimum period of time for these conditions and not requiring high energy consumption.

Football classes develop the ability to quickly master motor actions and quickly rebuild motor activity in accordance with a changing environment. Dexterity in football is manifested in movements with the ball, without the ball, in constantly changing game situations. Movements related to driving, stroking, picking and hitting the ball require players to display the widest possible coordination capabilities. In addition, motor activity in football takes place in conditions of martial arts and constantly changing external conditions (for example, the state of the field, spectators, weather), which requires a high degree of dexterity.

The ability to overcome external resistance or counteract it through muscle tension. Power abilities are divided into proper-power and speed-power. The game of football requires, first of all, speed and strength abilities: players must show strength abilities when performing movements with and without the ball, strikes, starts, jumps, pushes, etc. in very short periods of time.

The goal of physical training in football is for players to achieve and maintain such a physical level that allows them to achieve the highest result during a match. Physical training solves two main tasks: to comprehensively develop the player's motor system and, in accordance with the requirements of football, to improve specific motor abilities.

In addition to influencing the main qualities described above, football also affects the general condition of the body. Regular football training contributes to a significant improvement in multifunctional performance. They contribute to varying the pace of movement, trains speed qualities, coordination of movements, motor memory, the predominance of running movements, endurance jumps with the development of reserves of the cardiovascular and respiratory systems.

Increasing the elasticity of ligaments and tendons, improving the extensibility of muscles increase the amplitude and freedom of movement, increases the efficiency and endurance of the body. Exercises performed at a fast pace, as well as with the inclusion of large muscle groups, train the heart, enhance lung ventilation. A series of exercises related to changing the position of the body regulate blood circulation in the vessels of the brain, improve the functions of the nervous system, strengthen the muscles of the abdominal wall.

The athlete must build in his head not only the tactics of the game outlined by the coach on the board, but also think about how it will work in a real game. In the process of making quick, situational decisions; imagination helps a football player to correctly formulate an algorithm of his actions in his head, especially the possible movement of the ball.

Constant training and a sporty lifestyle require a lot of willpower from the player. It will be impossible to make an undisciplined player part of a team where everyone performs their task. A highly organized team is more likely to beat an experienced, but not disciplined, disjointed team.

Develops the player's ability to resort to a non-standard way of achieving a goal. An athlete with a developed creative mindset goes against the expected pattern of actions from him, which can confuse the opponent, disorganizing him. The manifestation of his initiative in the way of playing, which does not correspond to the tactics developed before the game, has brought the team victory more than once in the history of football.

Constantly changing combinations of movements, actions and rest, sudden changes in the situation are associated with the fact that it is necessary to monitor the moving ball, assess the situation in a split second and immediately respond to it with precise movement. And both personally and in joint actions. This means that the speed of the response is also important, which contributes to the rapid execution of movements [6].

Preparation before the game from the position of studying the weaknesses and strengths of the opponent is an important component of the game. As before and after the game, the player must understand what to expect from this or that player, which tactical scheme the team most often resorts to. There is also a

responsibility on the coach, who must not only choose the right strategy in the current game and for the season, but also the correct placement of players on the field, the opportunity to competently use the substitution of players to achieve victory.

Conclusions.

A football team is a well-established mechanism where each cog performs its function to achieve a goal. Awareness and self-identification of an athlete as part of a large team, where everyone is important, is an indispensable quality in the game. Without unity of team spirit and knowledge of their teammates and their abilities, it will be impossible to apply even the most 100% tactics. Discord and confrontation within the team usually immediately escalates into setbacks during the game. Without basic communication skills, which only improve while playing football, a future athlete will not be able to join the gameplay. To summarize, it is worth highlighting the following points. Football is not only a game for the development of physical properties, but also a great thought process. Playing on the field with the ball, where the athlete is confronted by well-trained opponents who have their own tactics and scenario of possible team actions, in front of millions of spectators, is a very difficult task both physically and morally. Actions with the ball in rapidly changing, critical situations very seriously develop and improve in a person those qualities that are in demand in most areas of society. Despite the high risk of injury, football also has positive aspects, improving overall health, improving the cardiovascular and respiratory systems, endurance, and brain activity. Football is not only a sport, but also a way of life that requires constant maintenance of athletic fitness, improvement of existing skills and communication with teammates, not only within the game, but also beyond.

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THE ROLE OF TECHNOLOGY IN EDUCATION

Abstract. The article describes issues based on analyzing theoretical basis of application innovative methods in teaching process as a core of modern education. Currently, significant changes are taking place in the educational policy of our country. This is due to the transition to the position of personality-oriented pedagogy. One of the tasks of modern education is to unlock the potential of all participants in the educational process, to provide them with opportunities to display their creative abilities. The solution of these problems is impossible without the implementation of the variability of educational processes, in connection with which there are various types of educational institutions that require deep scientific and practical processes.

Keywords: Education, technology, teaching, ICT.

INTRODUCTION

Technology is transforming how students learn inside and outside the classroom and empowering educators to deliver immersive, personalized learning experiences that prepare students to thrive in the workplace of the future.

Technology is embedded into every part of our lives because it provides a wealth of benefits—efficiency, access, connectivity, and personalization, to name a few. The same can be said for the benefits of technology in education when used as a tool for learning and teaching. In today’s blended learning environment, rightsized technology and technology infrastructure can help maximize student learning both in and outside of the classroom and support educators and academic leaders in achieving educational priorities and goals.

In the world that we currently live in, technology is a vital factor. With each passing day a new software or gadget is being brought into the market that serves to improve our lives in one way or another. Technology plays a major role in every field and one such field where its presence is utmost is in education sector. With the advancement in technology, education among the people has begun to proliferate and there is continuous research and development going on in introducing advanced technologies to make education easier, joyful and accessible. Nowadays with the help of technology the education for children is no longer boring and cumbersome as the educational technologies have made it much more interesting and easy to use.¹

Study while playing has been made possible only by the new technology. Distance education is a great aid to students who were not able to pursue their

¹Aleksanina, N.S. Innovative activity in education // The world of education - education in the world. - 2006. - No. 4. - P. 119-124.

degrees. Now due to rapid change in technology, distance is no more barrier. Educational technology usage is broadly classified as:

1. Technology as a tutor
2. Technology as a Teaching tool
3. Technology as a learning tool

COMPARISON OF TRADITIONAL EDUCATION AND TODAY'S EDUCATION

Traditional and Modern education are both related to each other and also different from each other. In fact modern education is inherited from the traditional education. In the past there were no schools or institutions for children. They acquired the education or knowledge in gurukuls from their gurus who mainly focus on the rituals or customs. In contrast to this modern education focuses on reading, writing, arithmetic and religion. With the invention of new technologies the modern education was able to replace the indigenous education.

ROLE OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT)

Information and communication technology (ICT) is a boom for students today as it has a significant and positive effect on student achievement. ICT basically includes television, computers, internet etc. when used appropriately it can strengthen, expand and raise quality of education. The use of computers and the internet for enhancing the quality of education by making learning more relevant to life has been seen as an ideal by educational institutions. The citizens of tomorrow who are our students now are going to live in the age of the electronic media. ICT can boost creativity and problem solving capability in students.²

ADVANTAGES OF TECHNOLOGY IN EDUCATION

Easily access to learning material: - E-books, revision guides and past examination papers that are available on World Wide Web and students can take advantages of these to improve knowledge base.

Continuous learning: - With the help of information technology in education it is possible for students to keep on learning, irrespective of where they are even at home. This has greatly enhanced efficiency in the education sector.

Sharing of knowledge: - Students from all over the world can come together and can share the experiences; the geographical distances are no more barriers, it has been made possible only through technology.

Learning aids: - By using audio and visual materials, we can put some practical aspect to the theory taught in class, students can develop a better understanding of topics being taught.

Distance learning: - Now its possible to attend a college overseas without even getting out of your home country and at your own convenience. With the help of online courses anyone can get the second degrees or additional certifications.

²Denisenko V.A. Innovative development of modern science of education // Innovations in education. - 2006. - No. 3. - S. 5-11.

Proper record keeping: - Unlike in the past when records used to be kept manually and there were many cases of lost files, the use of information technology in education has made it possible for safe and proper record keeping.³

LIMITATIONS OF TECHNOLOGY IN EDUCATION

Access to inappropriate content: The biggest concern to the use of technology is that how easy pornographic, violent, and other inappropriate materials can be easily accessed and viewed.

A disconnected Youth: The harmful effect of technology is that when people are attached to their screens almost 24/7, which is causing an entirely new set of social issues to pop up.

Cyber bullying Trap: Giving students access to anonymous accounts and endless contact avenues can only lead to trouble. Cyber bullying has become a problem among young people today. This harassment has no end. There is no way to monitor or discipline students who are involved in it.

Inevitable Cheating: Easy access to information may seem like a great thing, it can become a real problem in a test taking environment. Cell phone have made cheating easier than ever.

A major Distraction: Attentiveness drops drastically in the classroom when students have their cell phones or other technologies out. The focus shifts from their teacher and education, to whatever they are looking at, playing, or doing on their phones.⁴

CONCLUSION

Technology has given education such a new meaning that it is obvious that the always developing technology has changed our educational system. We can now better prepare kids for lifelong learning, which calls for innovative teaching strategies that use technology more and more in the classroom and in students' daily lives. It is acknowledged that the path to individual achievement is a well-rounded education. It puts pupils on a route to lifelong learning, which equips them to thrive in a world that is always changing.

People may improve their societies and their own lives by embracing new ideas and possibilities and broadening their horizons via education. Students must be able to interact and connect with individuals anywhere at any time in a world where geographical borders are becoming less distinct. This will allow them to communicate knowledge in more interesting and dynamic ways. The role that education plays in competitive economies is also important to take into account, since once-local sectors increasingly face global competition. It's an exciting time to be a teacher, and we should take use of it to push lawmakers nationwide, students, administrators, and ourselves to ensure that all educators are utilizing the technological resources at their disposal to the fullest.

³ Herold, Benjamin (5 February 2016). "Technology in Education: An Overview". Education Week. Archived from the original on 1 November 2016. Retrieved 31 October 2016.

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NEW APPROACHES IN TEACHING AND LEARNING

***Abstract.** The presented paper explored the possibilities of integrating generative AI in learning theories and in higher educational frameworks. Based on the results of a perspective-oriented discussion, main benefits of AI application were identified: an opportunity to create adaptive learning environments, personalized feedback, upgrade research and data analysis capacities, perform routine administrative tasks automatically, and use innovative assessment methods. Two proposals developed during the synthesis concern AI literacy for teachers and students and the lack of reliability of the information processed by AI systems. Both advantages and obstacles, evaluated critically in the current paper, suggest that AI tool may significantly improve the educational sphere of higher education if managed properly.*

Keywords: AI, New Approaches, Learning Theories, Diagnosing, Decomposing, and Reframing model, EAP, DPI.

Introduction

Utilizing artificial intelligence (AI) is a significant move in the evolution of higher education as schools and universities drift towards digital learning settings. AI contributes to improving education functioning in fundamental ways. This paper seeks to examine how AI is revolutionizing and transforming higher education specifically on independent learning methods, educational policy, and long-run problems in teaching and evaluation. AI implementation is based on the main theories and concepts concerning learning, including behaviorism, cognitivism, and Constructivism. The mentioned theories play a crucial role in students' active participation in educational processes as AI makes learning programs flexible and adjusts them to existing students' rigors.

According to educational theory historical perspectives, the system merging between connectionist killing models and the principal concern of artificial neural networks confides a sturdy schooling ideology to which the mollified might approach this example. As Evers states (2000), the "educational extensions", therefore, related to AI based on technological developments cogency's implementation pivotal tools in promoting comprehending frameworks as well as the redistribution of school "know-how skills" (Grubaugh, Levitt, & Deever, 2023). Furthermore, the AI based on the organized intellectually constructed education, which enables the anchorage of artificial intelligence to

traditional discoursing. AI-based on the organized intellectually constructed education, which enables the anchorage of artificial intelligence to traditional discoursing. Furthermore, AI in education, allied to this a revolutionary idea s, also can better AI through requisite learning, such as messages about learners' world-founding exile's active things shaping how they see it as the cognizant interaction which means that constructivism and cognitivism are vital when determining the influence of AI on education. AI paradigms the constructivist erudition provisions when extending it can provide learners with custom feedback that profound their comprehending in that that their practice is mentally engaging (Grubaugh, et al., 2023). AI also assists in the cognitivist zone in which it permits teachers to process extensive data elements to indicate imitates originated in that data then accordingly creating foreign information promotion that attains their comprehending length and processing discernments (Baker & Smith, 2019). And transformative theory can help students who may agree to doubtfully reconsider the suggested ideas (Anderson & Dron, 2021).

One of the fundamental shifts that AI integration into the educational sector has entailed is the development of individual tools with educational trajectories, including AI tutors and adaptive learning systems, that contribute to the learner-centered educational paradigm (Zawacki-Richter et al., 2019). Specifically, these shifts entail the capacity for instant adjustment to individual students and activities, facilitating the combination of enhanced learner engagement and instant adjustability of the educational experience and the associated learning outcomes (Baker & Smith, 2019). Overall, AI integration into the novel educational paradigm, particularly in the online and hybrid educational models, has significantly increased the range of available educational opportunities, making education substantially more interactive and flexible (Li & Ma, 2020). However, as Weller et al., (2020) and Acar (2023) pointed out that the AI implementation in the educational sector remits challenges concerning data privacy and the digital divide. In this way, the AI educational phenomenon appears to be two-faced and necessitates continued research specifically aimed at coordinating its implications. An essential component of any educational or professional domain is the process of problem formulation, as it predicates the efficiency of the associated solutions; as Acar suggested, AI-related tools enable students to articulate and reformulate problems by decomposing the overarching issue.

Diagnosis means it is to find the root of a problem and lay bases for sustainable solutions. Decomposition means to break down the problem into smaller, more manageable pieces. Reframing means the shift in perspective toward a problem in a creative manner to come up with new, innovative solutions. This, therefore, makes the approach of problem-solving in teaching English for Academic Purposes (EAP) and Developing Professional Identity (DPI) a substantial assistance to university students. The Diagnosing, Decomposing, and

Reframing (DDR) approach is hence illustrative in this hypothetical classroom situation.

Discussion: Showcases in EAP and DPI

First, identify major root challenges students are having in handling academic English; these may include issues related to academic writing, reading, or conventions of academic discourse. Then it can be an AI-driven diagnostic test that can assess the individual needs of students. It may attempt to determine specified areas of problems—for example, deficiencies in vocabulary, grammatical accuracy, coherence in writing. From here, these can be decomposed into smaller, targeted learning objectives by an instructor. For example, when a student has a problem even with the structure of the essay, the exercise may be made simpler with keen emphasis on how to understand the thesis statement, topic statements, and supporting arguments. Personalized learning platforms then serve up exercises targeting each of these, offering practice and feedback at every level. Finally, reframing these into opportunities for growth comes on the stage. In other words, this may suggest a change in the attitude of the student towards the problem, making him/her see that academic English is by no means a certain set of rules which constrains, but rather a tool for developing complex ideas, elaborating on the possibility of college debate art. In this perspective, through AI, it is made possible to trigger into an authentic academic scenario applied to real life, like debates, research groups, and so on, all of them in a virtual space, so that the student develops his or her creative and critical use of the language. Showcase one involves a teacher of EAP at the university who provides the following steps: at the commencement of the semester, students undertake a diagnostic test, using AI for assessing the places where strengths and weaknesses were potentially found within academic English. Afterward, the teacher, working with the data produced by the tests, develops for each of the students an individualized study plan. For instance, an average student weak in writing argumentative essays would practice AI-driven exercises on developing and arguing a thesis, counterarguments. The instructor sets up an academic conference in an AI environment where the entire class is supposed to present their essays rather than give traditional lectures, get AI feedback reflected as continuous comments in real-time over their use of academic language and arguments. This will enable them to look at EAP not only as a part of academic coursework but actually as quite a useful practical skill set for their life after studies. In the light of these, when a problem-based approach integrates with AI tools in EAP education, it may enhance the student's learning experience since it becomes more personalized, focused, and relevant toward becoming a member of his/her academic and professional life.

In showcase two, this phase looks into how this aspect of the module of Developing Professional Identity is learned. This scenario takes into consideration the DDR model but instead is contextualized towards these learning theories: when Diagnosing, Decomposing, and Reframing to solving problems, it can

greatly enhance the process of development and learning and be better integrated with learning theories such as Constructivism, Behaviorism, and Cognitivism. For instance, since the integration would increase the student's internalization of what actually should be their roles and responsibilities as an emerging professional. Therefore, this step should diagnose where the student is in their process of professional identity formation. Educators can also use AI-driven diagnostic assessment tools to find the current perception and understanding of students with regard to their future profession. This diagnosis may indicate the following: lack of knowledge, misunderstanding of the profession, or dissonance with the professional values. The stage is such that, according to constructivist principles, students can be exposed to their existing knowledge and beliefs while an opportunity for them to recognize further growth or changes is also provided. For instance, the tool can be used to assess a class of nursing students' understanding of the patient care principles. AI can diagnose general problems: for instance, the student knows the procedures on caring for the patient but does not appreciate the empathetic approach lying underneath, which is a must for a nurse to be professional. Decomposing the term "professional identity" that is, explaining it in terms of its smaller constituents. Control believes that learners have the ability to process information in chunks, which is especially useful in complex tasks like developing professional identity. A breakdown of the disciplines in nursing would separate technical skills, ethical reasoning, interpersonal skills, and self-care. AI could influence this through learning modules made for each part, hence encouraging a more intricate approach to learning.

Namely, the application of an AI platform in which the students of themselves while putting themselves in challenging situations relating to the different components of professional identity. One such interaction could be with a virtual patient and the nursing student's use of their empathetic communication, clinical reasoning, and decision-making reasoning process, as well as their ethical reasoning and understanding of clinical knowledge. From the reframing of professional identity, the same reframed the learners of the same to them that it was to be reflected by themselves with the professional norms, standards of behaviors, and even the ethics associated with the field. The reframing is closely associated with the behaviorist perspective, where learning is changed by the surroundings through reinforces. For example, the role-play simulations provided by the AI tools, which gave the learners real-time feedback on their performance. This feedback would act upon the learners as a reinforcement measure that would reinforce the correct understanding of the same, or, where there is a misinterpretation, it would make the learners adapt to the same. Along this line, the examples have been fitted so as to view in the context of the theories of learning in the best way of learning through the same. For example, the law program would best utilize the constructivist approach, in which the learners can build up a case study collaboratively and interact with an AI-driven legal database. This would, through reflection, and their active interaction build for them, a

professional identity in the field of law. Further still, the application could be that of an AI program, which has been built within a behaviorist approach. This would reinforce learners for their correct ethical decision-making in the presence of systems of rewards after pursuing a course in engineering ethics. This would make the learners align themselves more with the professional standards of their professional.

Finally, speaking about cognitivism, how much can an AI application help the learning process of a student of finance and economics? In fact, it sounds too difficult. However, in reality, the application can help to see the way of approaching myriads of complicated and sophisticated financial data, enhancing the understanding of economic theories and financial models. Therefore, the future economist or financial analyst can understand his future duties criminalist better, a mix of multiple economic indicators, market trends and financial statements to make the right decisions. For example, a learner can use an AI platform. The application can include some useful features – interactive statistics graphics, comparing talking historical information, and predicting models – to help the student form and make predictions about the market behavior, which will lead to independent determination and development of patterns in decision-making about future financial positions. This simple example shows the great future of higher education of AI is creating a completely new education environment. During this paper's development, we have learned a lot of details about AI integration in educational technologies – support in personalized ease of learning through adaptive strategies and in ethical questions concerning human interaction subtleties in a digital learning form on the heads. Therefore, the role of AI is to create an more group for learning opportunities, a learning landscape responsive to a particular case, with possibilities according to an educational approach, making learning more open.

Nevertheless, the way for AI in education has just been paved by the practitioners. While rapid technological change offers new opportunities, it also poses serious threats. However, it is clear that additional research is needed. First of all, it does not seem possible to visualize very clearly that the ultimate arch would be harmed in the long run. There are simply too many unknowns and knowledge collecting needs to be done. The way the most essential needs would be better understood is with very systematic research about how exactly are these technologies used to advance the educational goal. Data privacy and security remain major concerns, and it should be a concern that must be kept vigilant by educators and those they educate. There is also the area of developing inclusive AI systems, which bridges the gap so that the winnings of technological advancement are available to everyone. Again, the process must happen exactly like this as educators and learners' needs remain up-to-date, and so should these supporting technologies. It is meant to be a process as it is essential to restate a disparity in learning experiences that are most social, most effective, and more available to attain the full potential of AI.

Thus, the use of AI in higher education presents an opportunity to revolutionize the field of learning. Through utilizing the capabilities AI provides, while also addressing its challenges with caution and insight, an inspiring and ethical pathway for the use of AI in education is possible. The path to achieving this goal is exciting and, at times, daunting. Therefore, it is essential to unite educators, technologists, and policymakers in the collaborative effort to harness the potential of AI in the domain of education. The case study illustrates evidently the incorporation of AI in higher education, not only as a technology but also as a means through which pedagogies can advance. The understanding of the art of problem formulation is essential for all parties involved to realize the best that the AI technologies have to offer at any given learning experience. Moreover, its application transcends the impact it has on an individual and reflects the relevance of AI in developing the twenty first century academic and professional skills. The facets it embraces do not only enhance the understanding and desire to pursue the topics by students.

Conclusion

Lastly, speaking about cognitivism, how critical does an AI application help the learning session of a finance and economics student? Actually, it seems as well difficult. Rather, the application may help to reveal the appropriate method to access billions of intricate and important economic information, understand economic theories and economic models. Subsequently, the future economist or financial analyst might comprehend their future responsibilities, criminalist best, combine multiple revenue indicators, market-movements, and financial statements to render decisions from accurate, a blend of numerous data. Following, a student might operate an AL platform, with factual variations in stock markets that one can visualize and harness, for instance, how economic instances influencing market positions. The AL – application includes links – interactive statistic graphics, multiple historical evidence into becoming charts and forecasting models – to help facilitate the student tutorial and is possible to answer on what market work model, producing independent recognition and improvement patterns in considering future financial posture. The basic version this way discovers the promising prospect of higher study and AI is creating a noticeably new educational environment. While developing this paper is fetching, we have discovered more elements around AI synthesis in educational technologies – sustenance in personalized human learning cooperation by many personalized strategies and human interaction essence in digital learning forms. Accordingly, the role in AI is to facilitate a broader spectrum of learning, a learning sphere that reacts to the specialized case in hand, by beneficial outcomes according to the educational approach, as shown. Nevertheless, the path for AI in information is barely an opening by actors. Rapid technological variation may prove new opportunities but additionally major threats. Nevertheless, it is obvious that additional research is needed, as It is very challenging to see perfectly how students are ultimately deprived anywhere in the lay long-term. There are ample

unknowns and learning remains. The method the barely essential problems will the better recognized are with systematic shows exactly how are these technologies being used to develop educational scholarships. Privacy and security are still major oppressions due to the disturbing factors, and it remains a task that worthy of educators' vigilance. It is proposed to be a developing process because there is a true regular shift in technological utilization prevailing assigned to execute a culture with education grounded to guarantee that the more useful, more efficient, and many open to do get the total impact of AI.

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POSTOPERATIVE PAIN MANAGEMENT IN NEWBORNS

Abstract. The frequency of use of analgesics, their combination, method of administration, indications for use and duration of postoperative pain relief in 325 newborns were analyzed.

An analysis of postoperative pain relief showed that a limited number of drugs are used for analgesia in newborns, mainly opioid analgesics and metamizole sodium. Every third child uses methods for pain relief that do not meet modern principles of postoperative pain relief: intramuscular injection, "according to indications," and monoanalgesia. It has been determined that one of the determining factors in the choice of postoperative pain relief is the nature of the surgical disease.

The implementation of modern principles of postoperative pain relief in newborns is possible only by selecting the optimal combination of drugs and doses, as well as routes of administration of analgesics.

Keywords: pain relief, newborns, analgesics.

Introduction: Despite the abundance of analgesic methods and analgesics, the problem of postoperative pain relief remains relevant to this day. 10-50% of adult patients report persistent pain after surgery, of which 8.4-13.4% rate the pain as very intense. Chronic pain develops in approximately 2-10% of patients [1, 3]. Because newborns are unable to report pain, an even higher incidence of postoperative pain should be expected in this age group. A multicenter study on postoperative pain management in newborns showed that 12% of children after minor surgical interventions and 7% after major and traumatic operations do not receive pain management in the early postoperative period [4]. The main method of postoperative pain relief in newborns remains opioid analgesia, which is used in 60-84% of cases; in some children, analgesics are replaced with sedatives [2, 4].

The purpose of the study: to study the quantitative and qualitative characteristics of pain therapy in newborns after surgery.

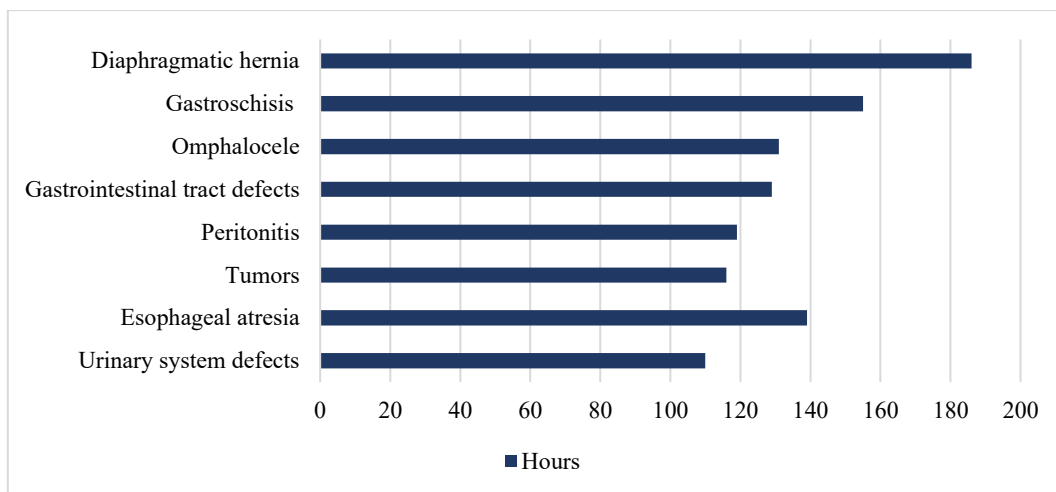


Fig. 1. Duration of postoperative pain relief depending on surgical pathology (M, h)

Materials and methods. The study was conducted on 325 newborns in the department of surgery, resuscitation and intensive care of newborns of the Andijan regional children's multidisciplinary medical center. The gestational age of the children ranged from 26.5 to 42 weeks (average age - 37.7 ± 2.4 weeks), of which 252 were full-term and 73 were premature. Age at the time of surgery - 106 ± 98 hours. Surgical diseases of newborns were represented by congenital malformations of the urinary system (58 people), gastroschisis (40 people), omphalocele (20 people), formations of various locations (51 people), diaphragmatic hernia (25 people), esophageal atresia (21 people), malformations of the gastrointestinal tract (71 people), peritonitis (27 people) and other diseases (12 people). The frequency of use of analgesics, their combination, method of administration, indications for use and duration of pain relief were analyzed. In addition, the factors influencing analgesic therapy in the postoperative period were assessed. Statistical processing was carried out using the "Statistica 6" software package (Stat-Soft Inc., USA) with the calculation of absolute and relative frequencies, $M \pm m$ and $Me [Q1, Q2]$ of the studied characteristics. To compare groups, we used the Kruskal-Wallis and Mann-Whitney nonparametric statistics methods.

Research results. The study showed that analgesic therapy after surgery was prescribed to 324 (99.7%) children. Analgesics were not used in only one newborn: after surgery to remove a teratoma of the tongue on a narrow base. The average duration of postoperative pain relief was 129 ± 55 hours (from 20 to 336 hours).

It was determined that the need for analgesics in the postoperative period depends on the nature of the surgical pathology (Fig. 1). Rank analysis of variations according to the Kruskal-Wallis method with further pairwise comparison using the Mann-Whitney method revealed statistically significant differences in the duration of pain relief between children with diaphragmatic hernia and other surgical diseases ($p < 0.002$), with the exception of newborns

with gastroschisis ($p = 0.014$). In addition, pairwise comparisons revealed differences in the duration of postoperative analgesia in children with gastroschisis and malformations of the urinary system ($p = 0.0001$), gastroschisis and formations of various locations ($p = 0.005$).

Due to serious age restrictions, the choice of drugs for postoperative pain relief is small, and opioid analgesics occupy a leading place in postoperative pain relief in newborns. The most frequently used drugs were promedol, tramadol and metamizole sodium (Fig. 2). In the postoperative period, promedol was administered at least once to 148 (45.5%) children; metamizole sodium and tramadol were used equally often (173 (53.2%) newborns).

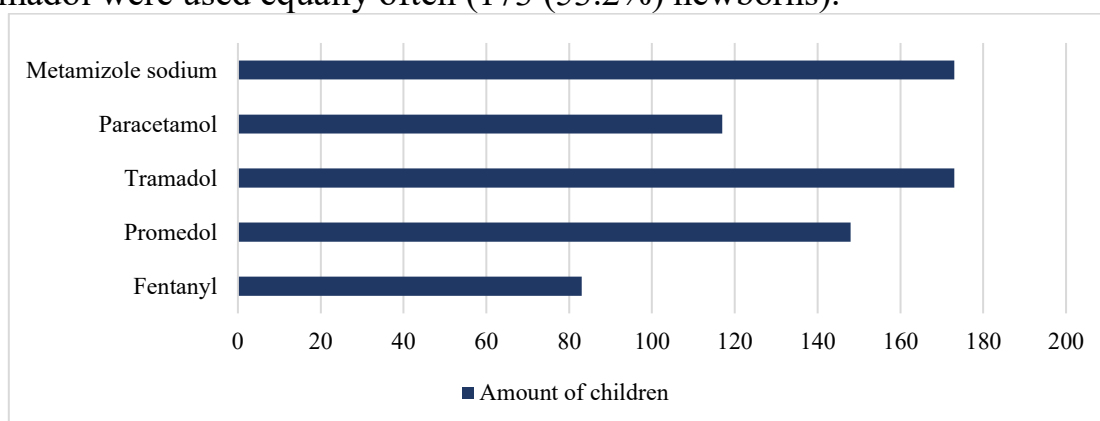


Fig. 2. Analgesics for postoperative pain relief in newborns* (absolute frequency).

Note. * – children who received the drug at least once in the postoperative period were taken into account.

When analyzing the indications for prescribing pain relief, 3 groups of children were identified. Group 1 consisted of 27 (8.3%) children who were administered analgesics “according to indications” (at the onset of pain), intravenously or intramuscularly, within 75.0 ± 28.6 hours after surgery.

Group 2 included 181 newborns (55.7%). They received routine analgesic therapy for 129.6 ± 50.3 hours after surgery. Pain management included intravenous infusion of opioid analgesics (fentanyl, promedol, or tramadol), routine intravenous bolus or intramuscular analgesics (tramadol or metamizole sodium), and rectal suppositories (paracetamol).

In group 3, 117 (35.9%) patients were administered analgesics as planned in the next 97.6 ± 54.4 hours after surgery, and were used “according to indications” over the next 64.3 ± 40.3 hours.

Postoperative monitoring using the CRIES neonatal pain scale was performed in 211 (64.9%) children. The selection of analgesia was carried out according to the ratings of this scale: with values of 4 or more points, analgesia was enhanced. If the scores were low, the dose of the analgesic was reduced. In the remaining 114 (35.1%) newborns in whom pain monitoring was not used, the selection of analgesic therapy depended on the physician's personal beliefs and

knowledge of postoperative pain in newborns. More often, pain relief was intensified when the child showed external signs of discomfort (crying, restlessness). Analgesics were often replaced with sedatives, so therapy “according to indications” was often untimely, and pain in newborns could remain undetected.

The study determined that the most common method of postoperative pain relief in newborns is continuous intravenous administration of opioid analgesics using a syringe pump. In 261 (80.3%) children, an infusion of opioid analgesics (fentanyl 0.5-10.0 mcg/kg/h, promedol 0.01-0.2 mg/kg/h or tramadol 0.02-0.2 mg/kg/h). Of these, 28 (8.6%) children received sequential infusions of two opioid analgesics in the postoperative period.

The average duration of fentanyl infusion was 100.8 ± 61.9 hours, promedol - 76.3 ± 44.5 hours and tramadol - 55.7 ± 27.3 hours (Fig. 3).

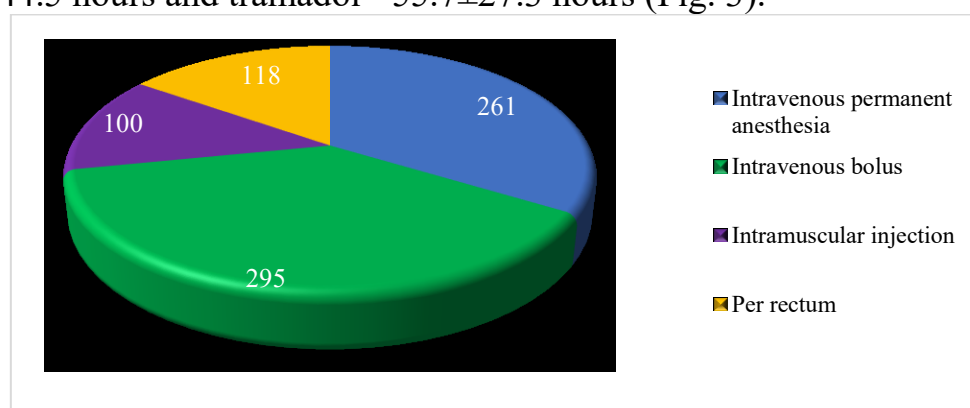


Fig.3 Routes of administration of analgesics (absolute frequency).

It should be noted that intramuscular administration of analgesics was also often used in newborns: intramuscular promedol or tramadol, at least once, was administered after surgery in 30.8% (100 children). Intramuscular injections are quite painful and should be avoided in newborns. Intravenous continuous infusion of analgesics is preferable to the intramuscular method, since this method creates a more stable level of analgesia.

Therapy with one analgesic throughout the entire postoperative period was carried out in 114 (35.1%) children. In the remaining 211 (64.9%) newborns, two or more drugs with analgesic activity were simultaneously administered (Fig. 4); a combination of several analgesics was more often used in the first 3 days after surgery. The use of multimodal postoperative pain relief allows the use of low doses of analgesics, including opioids. In addition, the combination of drugs with different application currents creates more adequate pain relief.

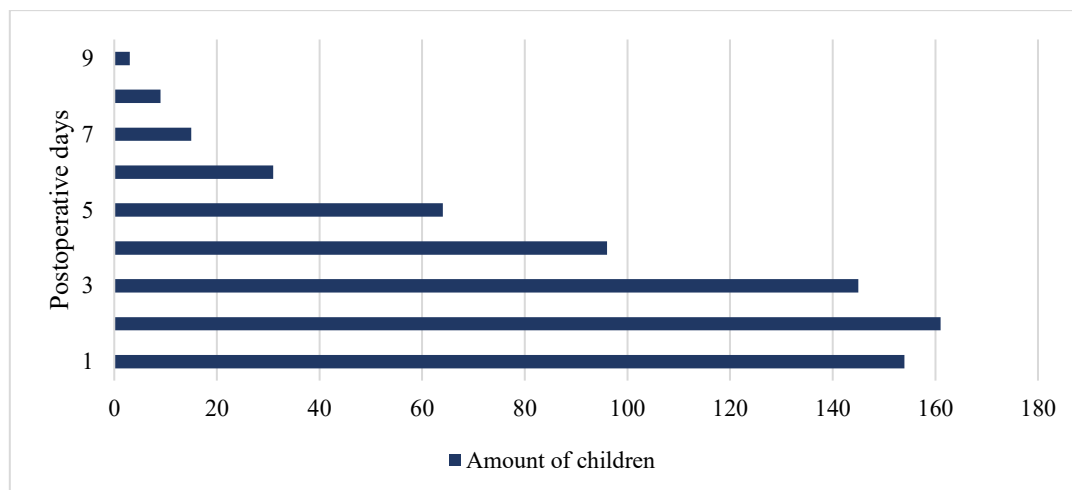


Fig. 4. Number of children in whom several analgesics were simultaneously administered (absolute frequency).

In the postoperative period, 119 (36.6%) children were administered sedatives (diazepam, midazolam, GHB, phenobarbital) together with analgesics, and in 26 (8%) newborns, muscle relaxants (atracurium) were used in the next 1-4 days after surgery).

It has been determined that the choice of an analgesic, the method and duration of its administration, and combination with other drugs depends on a number of factors. Thus, the majority of children with congenital diaphragmatic hernia (92%, 23 of 25) and esophageal atresia (61.9%, 13 of 21) received fentanyl infusion in the postoperative period. In children with gastroschisis (57.5%, 23 of 40) and peritonitis (55.6%, 15 of 27), promedol was used more often and other analgesics were used less often. Newborns with nephro-urological diseases (81.0%, 47 of 58) and tumor formations (74.5%, 38 of 51) received tramadol by infusion or intramuscular injection for postoperative pain relief (Fig. 5).

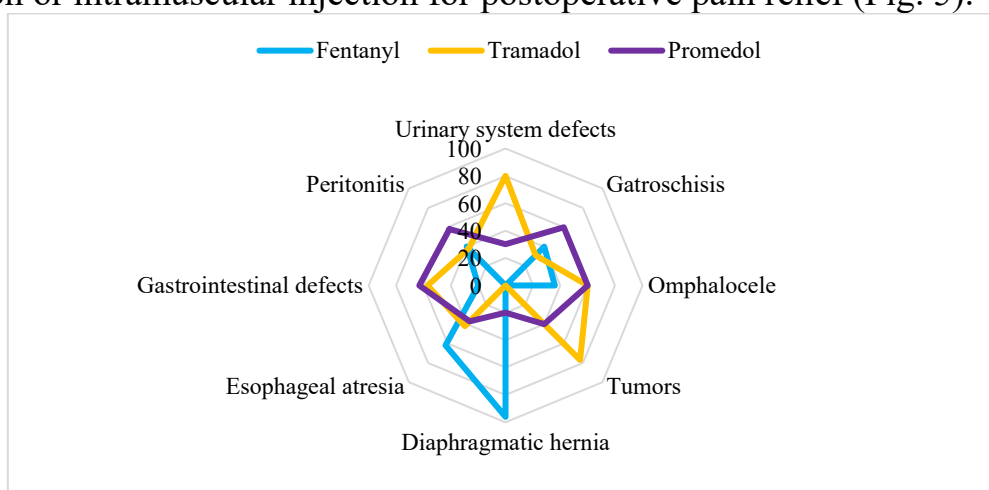


Fig. 5. Dependence of the choice of opioid analgesic on surgical pathology (relative frequency, %)

A combination of several analgesics for pain relief was more often used in children with urological diseases (50 children, 86.2%) and less often with peritonitis (7 children, 25.9%) ($p = 0.000003$, Kruskal-Wallis method). In other diseases, the simultaneous prescription of several analgesics was noted in more than half of the children: from 57.1% with esophageal atresia to 70% with omphalocele (Fig. 6).

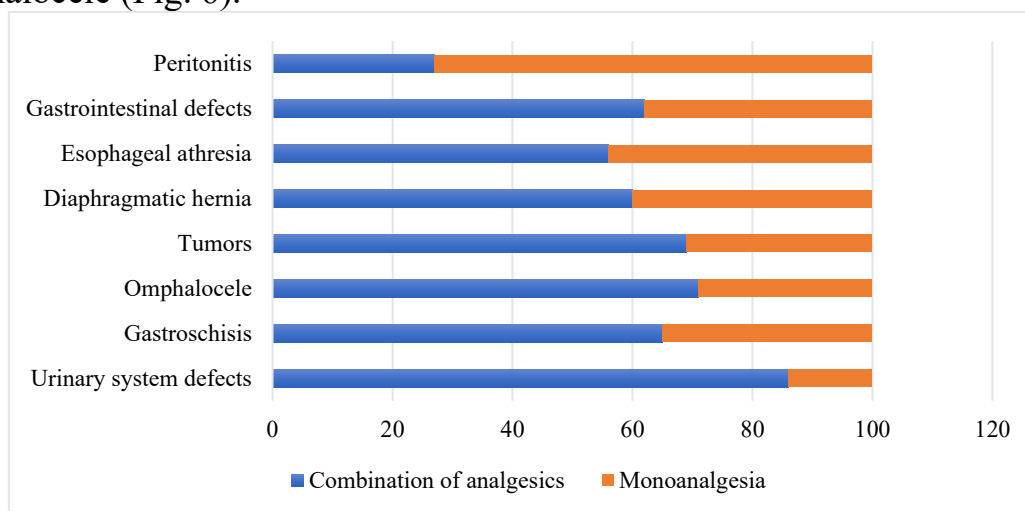


Fig. 6. Frequency of combination of analgesics depending on surgical pathology (relative frequency, %)

Conclusion:

Postoperative pain relief is an important component of intensive care for newborns with surgical diseases, determining the course of the postoperative period and its complications, as well as the comfort of the child's stay in the hospital. The severity of postoperative pain syndrome is determined by a number of factors, primarily the area and nature of the operation, as well as the individual characteristics of the child. An analysis of postoperative pain relief in newborns showed that a limited number of drugs are used for analgesia, mainly sensations and reliable blockade of the somatic and vegetovisceral components of pain, was continuous, did not have adverse effects on the main vital functions of the body, did not give adverse reactions, opioid analgesics and Metamizole sodium. Every third child uses methods that do not meet modern principles of postoperative pain relief: intramuscular injection, analgesia "according to indications" and monoanalgesia. In neonatal practice, doctors often do not differentiate the individual characteristics of patients, are late in prescribing pain medications or prescribe ineffective dosages, wanting to avoid side effects, which in most cases leads to inadequate analgesia, aggravates the patient's condition and complicates the course of the postoperative period.

It is obvious that modern medicine has not yet developed an ideal method of postoperative pain relief and has not created an ideal analgesic, therefore postoperative pain relief remains one of the most pressing problems of modern anesthesiology and intensive care. The ideal method of postoperative pain relief

should be considered one that would ensure the absence of severe pain and is easy to use. Despite the fairly diverse range of methods and drugs used, to date no method has been found that would meet all the requirements for post-operative pain relief and would be free of side effects and negative effects on the state of vital functions of the body. Currently, the solution to the problem of postoperative pain relief is based on preventive measures regarding the development and perception of acute pain, the fundamental direction of which is the multimodal principle [1, 4]. Due to the characteristics of the neonatal period, many methods of pain relief cannot be implemented in this age group; the range of drugs that can be used in newborns is significantly limited. Therefore, the implementation of modern principles of postoperative pain relief is possible only by selecting the optimal combination of drugs, doses and routes of administration of analgesics.

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INNOVATIVE CONSTRUCTION TECHNOLOGIES OF THE 21st CENTURY IN UZBEKISTAN

Abstract. The article discusses innovative construction technologies of the 21st century in Uzbekistan. The modern world is growing at a rapid pace in all areas, and construction is not lagging behind. In this article we talk about some of the innovations used in modern construction.

Key words: innovation, construction, technology, smart home, energy efficient home, BIM technologies (Building Information Modeling).

In Uzbekistan, innovative construction technologies are actively used, especially in residential construction. Some of these technologies include:

1. 3D printing: The first houses in Central Asia with the use of 3D printing were built in Uzbekistan. This technology allows to significantly speed up the construction process and reduce costs.

2. Energy-efficient materials: In Uzbekistan, energy-efficient materials such as insulating panels and solar batteries are widely used. This helps to reduce heating and electricity costs.

3. Smart homes: In Uzbekistan, smart home technologies are also actively developing, which allow to automate the management processes of a house and improve living comfort.

4. Use of BIM technologies: BIM technologies (Building Information Modeling) allow to create digital models of buildings, which simplifies the design and construction process.

5. Use of eco-friendly materials: In Uzbekistan, eco-friendly materials such as wood and clay are actively used, which helps to reduce the negative impact on the environment.

These are just some of the innovative construction technologies used in Uzbekistan. The development of these technologies improves the quality of life for people and makes construction more efficient and environmentally friendly.

Consider 3D printing: 3D printing in construction is an innovative technology that allows you to create three-dimensional objects by sequentially laying down layers of material. This printing method is used to create a variety of designs, ranging from small architectural details to entire buildings.

The main advantage of 3D printing in construction is the ability to create complex shapes and structures that are impossible or very difficult to produce using traditional methods. In addition, this method can significantly reduce construction time and cost, since many operations are performed automatically without human intervention.

For 3D printing in construction, special materials are used, such as concrete, plastic, metal, etc. The choice of material depends on the requirements for the structure and its operating conditions.

The 3D printing process begins by creating a digital model of an object, which is then divided into many thin layers. Each layer is then printed separately to form the final object.

3D printing in construction has great potential for development. It can be used to create individual residential buildings, industrial facilities, bridges, roads and other infrastructure structures. Thanks to this technology, it is possible to create unique architectural solutions that were previously impossible.

Let's take a closer look at smart homes.

Smart home technologies are a system of interconnected devices and appliances that are controlled automatically or remotely. These devices may include lighting, heating, air conditioning, security, audio/video systems, appliances and more.

A smart home is controlled using a central controller, which can be connected to the Internet and controlled through a mobile application or web interface. Thus, the user can control all systems of his home from anywhere in the world.

The benefits of using smart home technologies are obvious. Firstly, they increase the level of comfort of life. For example, the user can set a schedule for the air conditioner or heater to create an optimal microclimate in the house. It can also control lighting, creating different lighting scenarios for different occasions.

Secondly, smart home technologies help save energy. For example, the system can automatically turn off unnecessary appliances or reduce their power when not in use. In addition, the user can receive notifications about possible problems in the operation of systems and quickly respond to them.

Finally, smart home technologies provide a high level of security. They may include video surveillance systems, motion sensors and door/window opening sensors, as well as access control systems. All of these elements work together to protect your home from burglary and other threats.

Thus, smart home technologies are becoming increasingly popular due to their efficiency, convenience and security. They help users manage their home more efficiently and economically, making life more comfortable and safe.

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ECO-HOUSE CONSTRUCTIONS DIFFER FROM CONVENTIONAL HOUSES

Abstract. This article also provides examples of how eco-house constructions differ from ordinary houses and how they are designed. Information is provided that the main focus should be on the thermal efficiency of constructions for heat storage in Eco.

Key words: Eco house, heat, inertia, greenhouse, efficiency, eco house materials, solar cells, solar collectors, economical.

Many traditional structural solutions and materials can be used in eco-house construction. The main part of the house is its body. The main task of the housing is to provide sufficient accommodation with comfortable conditions. The housing should be mechanically strong, long-lasting and save heat in the building.

The main thing in the development and creation of decoration of Eco-house is the use of natural, ecologically pure materials for decoration. The same applies to plumbing, kitchen and other equipment. Eco-house historical solutions have their own special features, they are properly connected with special engineering equipment options and recommended internal walls (between rooms), buffer zones, mansards and other structures.

Built-in furniture is recommended, it is advisable to place cabinets along the northern walls, such placement serves to create additional areas that increase heat protection.

Eco-house housing differs from ordinary houses in that it has relatively high requirements for heat consumption. It is necessary to make the housing of the house from such materials as to reduce the amount of heat loss as much as possible and ensure that the heat accumulated in the summer (day) reaches the whole winter (night). For this, the thermal resistance of the building's barrier structures should not be less.

In order to increase the heat protection efficiency of the building, a buffer from cold rooms is installed along the perimeter of the regions: a greenhouse, a porch, a garage, a workshop, winter storages and other auxiliary rooms are designed on the south side.

A greenhouse, also known as a greenhouse, is a facility designed to grow plants under controlled conditions. It is usually made of glass or plastic and has a metal frame. A microclimate is created inside the greenhouse, which maintains optimal conditions for plant growth, such as temperature, humidity and illumination.

Greenhouses are used in agriculture to grow vegetables, fruits and flowers all year round. They are also popular with amateur gardeners who want to extend the growing season or create a tropical atmosphere for exotic species.

There are various types of greenhouses, including lean-to, gable, polygonal and domed. The choice of greenhouse type depends on climatic conditions, available space and personal preferences.

The greenhouse structure must be strong enough to withstand wind and snow loads, as well as have good ventilation to prevent overheating in hot weather.

Inside the greenhouse, plants can be installed on beds or hung on trellises. Heating, irrigation and lighting systems can be used to maintain optimal conditions inside the greenhouse.

Greenhouses play an important role in agriculture, allowing food to be grown all year round and expanding the geography of their production. They also help protect plants from adverse weather conditions and pests.

To save heat in an eco-house, the main attention should be paid to the thermal efficiency of window, door and entrance structures.

The main elements of the external installation of the eco-house of the building are shown. They include: a greenhouse on the south side, technical rooms (garage, workshop) built as buffer zones built on the north side, glazed verandas (from the west or east). Eco-house is oriented to the south, which allows maximum use of passive solar heating. On the roof (or outside the house, depending on specific conditions) solar cells, solar collectors (air and water) are placed.

Since Eco-house has buffer zones, ordinary light channels are installed in them in addition to windows to provide economical lighting. Since the heating of the house is periodic (in the sun, turning on the stove once a day), internal heat accumulators are necessary to maintain a constant temperature in the house. Accumulators collect and store excess heat, and when it is not enough, it provides heat inertia to the house and starts to emit heat.

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PROBLEMS AND SOLUTIONS OF BUILDING ENERGY EFFICIENCY IN THE CONSTRUCTION FIELD

Abstract - The article analyzes the current state of problems arising in the design of roofs of low-rise buildings. For this purpose, various design concepts are considered, based on which roof structures are created. As one of the elements of the implementation mechanism of these plans, specific examples of energy-efficient roof design are presented.

Keywords: construction, energy-saving, climate, energy consumption, construction of houses, thermal energy, design.

Energy saving is becoming one of the urgent issues from year to year. The limited energy resources, the high cost of energy, the negative impact of its production process on the environment, all this requires saving energy in the conditions of limited resources and finding a solution to the problem. In this direction, scientific and practical work is being carried out in the world to reduce energy consumption, to effectively use new, alternative energy sources. From November 4, 2016, the Paris Agreement on global climate change will enter into force, which aims to ensure that the average temperature of the planet does not exceed 2°C, move to the stage of carbon-free cities, and reduce SO₂ emissions. According to UN data, in 1950, 30 percent of the population lived in cities, and in 2015, this figure increased to 54 percent. Forecasts show that by 2050, 66-70 percent of the population will live in cities. Currently, about 15,964 million (51%) of the population of Uzbekistan live in cities, and the remaining 5,612 million (49%) live in rural areas. According to the data, Tashkent is the leading city in terms of population among large cities in Uzbekistan, with 2 million inhabitants. 353 thousand people live there. 49% of all energy consumed in Uzbekistan in one year or 17 million tons of oil equivalent is accounted for by buildings. Energy saving issues are neglected in the design and construction of buildings, which

leads to excessive energy consumption. It is known that the majority of our population, i.e. 76.8 percent, lives in low-rise houses. This is almost 24.6 million. means a person. Unlike high-rise buildings, the heat energy system supplied to low-rise private residential buildings is decentralized, and the variety of design solutions leads to an increase in the factors affecting their energy consumption. Rapidly growing urbanization processes and a sharp increase in the number of people in cities cause a shortage of construction land. For this reason, today, many state and non-state design organizations offer to design a cozy and comfortable mansard floor at the design stage of low-rise residential buildings. This is definitely an acceptable architectural-artistic solution. But in the territory of our republic with dry heat and severe continental winter conditions, turning the attic part into a living room has the effect of increasing the energy consumption several times. Increasing the energy efficiency of the roof structures of low-rise buildings, reducing the energy consumption of the attic part, and the thermal-physical solutions used in the conditions of Uzbekistan in this direction, the use of solar panels, and their economic efficiency have not been thoroughly studied. In the design of modern low-rise residential buildings in dry hot climates due to the limited and increasing cost of traditional energy sources, especially during the period of operation, the energy efficiency issues of the attic roof structure, in which the economic efficiency indicator of solar energy solutions are carefully considered. requires learning. By increasing the energy efficiency of the roof structure of a low-rise building, it is possible to increase the overall energy efficiency of the building and thereby save energy consumption.

From a number of studies carried out in this direction [1], it became known that the main aspect in the energy efficiency of the roof is the location of the thermal insulation material. Incorrect selection of the mutual location of the layers of the roof structure has a direct impact on the non-reduction of heat loss, and requires alternative solutions for the temperature-humidity regime. In 1983, Tashkent was the first in the former Soviet Union to achieve a reduction in energy consumption by 40-50% per year as a result of experimental experiments with a heating system using solar water heaters placed on the roof [2]. "Designing energy-efficient buildings under the conditions of Uzbekistan" [3] covers the issues of energy saving in the design of social sector buildings and residential houses. Traditional and non-traditional energy sources, their use in the conditions of Uzbekistan, ways to increase the energy efficiency of buildings, the technical and economic basis of choosing their options, and the issues of energy saving and energy efficiency of buildings were examined separately in "Physical-technical aspects of building design" In the book "basics of design" [4], the issues of energy saving in the design of buildings are covered in depth, climatological effects in the conditions of the Republic of Uzbekistan, ways of reducing them, the effect of seasonal changes on buildings and the design of new buildings should be paid attention to. some aspects are shown.

During the winter of 2023, thousands of people in Uzbekistan were forced to live without reliable energy supply for almost two weeks during anomalous cold weather. Power outages have exposed the vulnerability of aging infrastructure and the inadequacy of existing energy-saving technologies. In some areas of the country, due to the lack of energy sources such as natural gas or electricity, residents have switched to burning coal to heat their homes. This has had negative consequences, especially in terms of air quality and the accumulation of greenhouse gas emissions.

In conclusion, it can be said that creating comfort conditions on attic roofs in dry and hot climates, improving the technology of assembling building materials that make up the roof structure, implementing measures to reduce the energy consumption of structural elements of the building, and improving the energy efficiency of the roof structure and this way with increasing the general energy efficiency indicators of the building. This provides an opportunity to use new energy-efficient design and technological solutions in construction practice.

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EFFECT OF BUILDING STRUCTURES ON BUILDING ENERGY EFFICIENCY

Abstract. The article analyzes the current state of problems arising in the design of roofs of low-rise buildings. For this purpose, various design concepts are considered, based on which roof structures are created. As one of the elements of the implementation mechanism of these plans, specific examples of energy-efficient roof design are provided.

Key words: construction, energy-efficient, climate, energy consumption, construction of houses, heat energy, design.

Energy saving is becoming one of the urgent issues from year to year. The limitation of energy resources, the high cost of energy, the negative impact of its production process on the environment, all this requires energy conservation and finding a solution to the problem in the conditions of limited resources. In this direction, scientific and practical work is being carried out in the world on reducing energy consumption, effective use of new, alternative energy sources.

From November 4, 2016, the Paris Agreement on global climate change will enter into force, which aims to ensure that the average temperature of the planet Earth does not exceed 2°C, move to the stage of carbon-free cities, and reduce SO₂ emissions. According to UN data, in 1950, 30 percent of the population lived in cities, and in 2015, this figure increased to 54 percent. Projections show that by 2050, 66-70% of the population will live in cities. Currently, about 15,964 million (51%) of the population of Uzbekistan live in cities, and the remaining 15,612 million (49%) live in rural areas. According to information, Tashkent is the leading city in terms of population among large cities in Uzbekistan, with 2 million inhabitants. 353 thousand people live there. 49% of all energy consumed in Uzbekistan in one year or 17 mln. tons of oil equivalent corresponds to the contribution of buildings. Energy saving issues are neglected

in the design and construction of buildings, which leads to excessive energy consumption. It is known that the majority of our population, i.e. 76.8 percent, lives in low-rise houses.

This means almost 24.6 million people. Unlike high-rise buildings, the heat energy system supplied to low-rise private residential buildings is decentralized, and the variety of design solutions leads to an increase in the factors affecting their energy consumption. Rapidly growing urbanization processes, a sharp increase in the number of people in cities cause a shortage of construction land.

For this reason, today, many state and non-state design organizations offer to design a cozy and comfortable mansard floor at the design stage of low-rise residential buildings. This is certainly an acceptable architectural-artistic solution. But in the territory of our republic with dry heat and severe continental winter conditions, turning the attic part into a living room is achieved at the cost of increasing energy consumption several times.

Increasing the energy efficiency of the roof structures of low-rise buildings, reducing the energy consumption of the attic part, and in this direction, the thermal-physical solutions used in the conditions of Uzbekistan, the use of solar panels in this regard, and their economic efficiency have not been thoroughly studied.

In the design of modern low-rise residential buildings in a dry hot climate due to the limitation of traditional energy sources and their price increases year by year, the increase in costs, especially during the operation period, energy efficiency issues of the attic roof construction, which requires a thorough study of the economic efficiency indicator of solar energy solutions.

By improving the energy efficiency of the roof structure of a low-rise building, it is possible to increase the overall energy efficiency of the building and thereby save energy consumption.

From a number of studies carried out in this direction [1], it became clear that the main aspect in the energy efficiency of the roof is the location of the thermal insulation material. Incorrect selection of the mutual location of the layers of the roof structure has a direct impact on the non-reduction of heat loss, and requires alternative solutions for the temperature and humidity regime.

In 1983, Tashkent was the first in the former Soviet Union to achieve a reduction in energy consumption by 40-50% per year as a result of experimental experiments with a heating system using solar water heaters placed on the roof [2].

"Designing energy-efficient buildings under the conditions of Uzbekistan" [3] covers the issues of energy saving in the design of social sector buildings and residential houses. Traditional and unconventional energy sources, their use in the conditions of Uzbekistan, ways to increase energy efficiency of heliobuildings, them citing the technical and economic basis of the choice of options, in matters of energy saving and energy efficiency of buildings examined separately.

In conclusion, it can be said that creating comfort conditions on attic roofs in dry and hot climates, improving the technology of assembling the building materials that make up the roof structure, improving the energy efficiency of the roof structure in exchange for implementing measures to reduce the energy consumption of the structural elements of the building, and in this way, the building is to increase the overall energy efficiency indicators. This provides an opportunity to use new energy-efficient design and technological solutions in construction practice.

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SOLAR SYSTEMS IN THE REPUBLIC OF UZBEKISTAN USED BUILDINGS

Abstract. The article presents proposals for the effective use of the amount of heat in the room to protect from sunlight in the summer and prevent heat loss in the winter in buildings where solar systems are used in the Republic of Uzbekistan.

Key words: Passive solar systems, active solar systems, mixed solar systems, wall stained glass windows, winter garden, trombone wall, solar house, heat, energy.

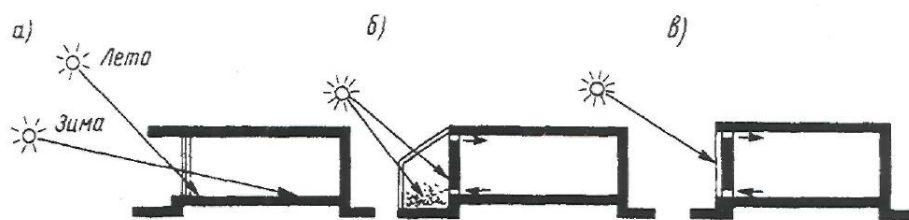
Passive, active and mixed or in other words integrated solar systems can be used to meet the heating needs of buildings.

In passive solar systems, the function of receiving and processing solar energy is performed by the building, its premises and structures, heat distribution is carried out by convection.

In active solar systems, there is much more special engineering equipment-collectors and heating networks for receiving, processing, transmitting, collecting and distributing solar energy-than in passive systems.

Mixed solar systems use elements of both passive and active solar systems, which increases the efficiency of solar energy use. Currently, three types of passive solar systems have been developed and are used in practice: stained glass wall, greenhouse, and "thrombotic wall".

Passive systems: a – wall stained glass; b – greenhouse; c – "Thrombus wall".



Stained glass - the surface of the wall of the premises facing the south of the building is glazed. As a result of direct sunlight entering through the window, the room temperature rises and the internal surface heats up. As a result of long-wave radiation from stained glass windows, the air receives additional heat, and the room temperature rises. At night, the warmth in the room is provided by the internal surface, made of structures made of materials designed to retain the heat capacity heated during the day.

A sunny house with a winter garden in a foreign country (USA) is a south-facing two-story winter garden that connects all the living rooms of the house, and the winter garden space retains air during the day.

The windows of the winter garden are equipped with transformable blinds, which retain heat at night and during the cold season, and also prevent overheating on hot summer days. Additional curtains are used for blinds to protect from direct sunlight.

The “stained glass” solar house in New Mexico, USA, has a semi-cylindrical shape, which reduces heat loss when exposed to cold northern winds. The southern façade is completely glazed. The common room and the green room leading to it - the entrance is two stories high.

The stained glass window is protected from summer sunlight by a horizontal barrier. The solution allows you to save energy from 17% to 25% and prevent heat loss from the sun in summer and winter. The heat of the day warms the greenhouse space. Convertible blinds are used to retain heat at night and on cold days of the year, as well as to protect against overheating on hot summer days.

Thus, folding blinds are used to protect from the sun in summer and prevent heat loss in winter. This solution helps save energy from 17% to 25%.

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DATA ANALYTICS IN COMMERCIAL BANKING: LEVERAGING BIG DATA FOR STRATEGIC DECISION MAKING

Abstract. In today's commercial banking landscape, data analytics has emerged as a transformative force, offering unprecedented opportunities for strategic decision-making. With the advent of Big Data technologies, banks now have access to vast amounts of data that can be harnessed to gain valuable insights into customer behavior, market trends, and risk management. This article delves into the evolving role of data analytics in commercial banking, highlighting its significance in driving strategic initiatives and enhancing competitiveness in an increasingly dynamic industry.

Keywords: data analytics, commercial banking, big data, strategic decision making, customer segmentation, risk management, predictive modeling, prescriptive analytics, customer relationship management, fraud detection, marketing, product development, regulatory compliance, privacy concerns, machine learning, artificial intelligence, open banking, fintech, data governance, security measures, digital transformation, predictive analytics, market trends, credit risk assessment, customer retention, competitive advantage, business intelligence, regulatory compliance, data security, innovation, customer experience, cross-selling, upselling, portfolio management, automation, optimization, compliance, data privacy, third-party providers, financial stability.

Introduction:

The banking sector has witnessed a profound shift in recent years, driven by rapid technological advancements and evolving customer preferences. In this era of digital transformation, data has emerged as a critical asset, reshaping the way commercial banks operate and compete. The proliferation of digital channels and the increasing digitization of financial transactions have led to the generation of massive volumes of data, commonly referred to as Big Data. Harnessing this data through advanced analytics techniques has become essential for commercial banks seeking to gain a competitive edge and drive strategic decision-making processes.

The Evolution of Data Analytics in Commercial Banking:

Data analytics in commercial banking has undergone a remarkable evolution, progressing from traditional reporting and descriptive analytics to more sophisticated predictive and prescriptive analytics techniques. Initially, banks relied on basic reporting tools to generate standardized financial reports and monitor key performance indicators. However, with the emergence of Big Data

technologies, banks began exploring advanced analytics methods to extract actionable insights from their data.

Over time, the evolution of data analytics in commercial banking has been marked by several key milestones:

1. Data Warehousing and Business Intelligence: Commercial banks began investing in data warehousing and business intelligence tools to centralize and analyze data from disparate sources. This allowed banks to gain a holistic view of their operations and make more informed decisions based on data-driven insights.

2. Predictive Modeling: With advancements in statistical modeling and machine learning algorithms, banks started developing predictive models to forecast customer behavior, identify market trends, and anticipate potential risks. Predictive modeling techniques such as regression analysis, decision trees, and neural networks enabled banks to uncover hidden patterns in data and make more accurate predictions.

3. Prescriptive Analytics: Building on predictive modeling capabilities, banks began exploring prescriptive analytics techniques to optimize decision-making processes and drive desired outcomes. Prescriptive analytics involves using optimization and simulation techniques to recommend actions that will lead to the best possible outcomes. For example, banks can use prescriptive analytics to optimize loan approval processes, pricing strategies, and marketing campaigns.

Key Applications of Data Analytics in Commercial Banking:

Data analytics has myriad applications across various functions within commercial banking, driving value creation and innovation in key areas such as customer relationship management, risk management, fraud detection, and marketing.

1. Customer Segmentation and Targeting: One of the primary applications of data analytics in commercial banking is customer segmentation and targeting. By analyzing customer transaction data, demographic information, and behavioral patterns, banks can identify distinct customer segments with unique needs and preferences. This enables banks to tailor their products and services to better meet the needs of different customer segments, ultimately enhancing customer satisfaction and loyalty.

2. Risk Management: Data analytics plays a crucial role in risk management, enabling banks to assess credit risk, detect fraudulent activities, and monitor market trends in real-time. By leveraging advanced analytics techniques such as machine learning and predictive modeling, banks can enhance their ability to identify and mitigate potential risks, thereby safeguarding their financial stability and reputation.

3. Marketing and Product Development: Data analytics also enables banks to optimize marketing efforts and develop innovative products and services tailored to evolving market demands. By analyzing customer data and market trends, banks can identify new opportunities for cross-selling and upselling,

personalize marketing messages, and launch targeted promotional campaigns. Additionally, data analytics can inform product development efforts by providing insights into customer preferences, competitive offerings, and emerging trends in the marketplace.

Challenges and Opportunities:

While data analytics holds great promise for commercial banks, it also presents several challenges that must be addressed to fully realize its potential. One of the main challenges is the sheer volume and complexity of data generated by modern banking operations. Commercial banks must invest in robust data infrastructure and analytics capabilities to effectively manage and analyze this data.

Additionally, banks must navigate regulatory and privacy concerns related to the use of customer data, ensuring compliance with data protection laws and regulations such as the General Data Protection Regulation (GDPR) and others. Failure to adhere to these regulations can result in hefty fines and reputational damage, underscoring the importance of implementing robust data governance and security measures.

Despite these challenges, data analytics presents numerous opportunities for commercial banks to gain a competitive edge and drive business growth. By leveraging advanced analytics techniques, banks can uncover actionable insights that enable them to optimize operations, enhance customer experiences, and develop innovative products and services tailored to evolving market demands.

Case Studies:

Several commercial banks have successfully leveraged data analytics to drive strategic initiatives and achieve tangible business outcomes. For example, Bank of America implemented a predictive analytics model to identify customers at risk of attrition and proactively intervene with targeted retention offers. This initiative resulted in a significant reduction in customer churn and increased customer retention rates, ultimately driving revenue growth and profitability.

Similarly, JPMorgan Chase utilized data analytics to improve credit risk assessment and enhance lending decisions. By leveraging advanced analytics techniques to analyze credit risk factors such as borrower demographics, financial history, and economic indicators, JPMorgan Chase was able to identify high-risk loans and adjust lending criteria accordingly. This led to a reduction in loan defaults and improved portfolio performance, demonstrating the value of data analytics in mitigating credit risk and optimizing lending practices.

Future Trends:

Looking ahead, the future of data analytics in commercial banking appears promising, with continued advancements in technology driving innovation and unlocking new opportunities. Artificial intelligence (AI) and machine learning (ML) are poised to play an increasingly prominent role in data analytics, enabling banks to automate decision-making processes and uncover insights at scale.

Furthermore, the proliferation of open banking initiatives and the emergence of fintech startups are reshaping the competitive landscape, presenting both challenges and opportunities for traditional commercial banks. Open banking initiatives seek to promote greater competition and innovation in the banking sector by facilitating the sharing of customer data between banks and third-party providers.

Conclusion:

In conclusion, data analytics has become indispensable for commercial banks seeking to thrive in an increasingly competitive and dynamic industry. By leveraging Big Data and advanced analytics techniques, banks can gain valuable insights into customer behavior, market trends, and risk management, enabling them to make informed strategic decisions and drive business growth. While challenges remain, the potential benefits of data analytics far outweigh the risks, making it essential for commercial banks to embrace data-driven decision-making as a core competency. As technology continues to evolve and consumer expectations evolve, commercial banks must continue to invest in data analytics capabilities to remain competitive and deliver superior value to their customers.

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KASABA UYUSHMA TASHKILOTINING HUQUQIY ASOSLARI – DEMOKRATIYA VA OSHKORALIK PRINSIPLARINI SHAKLLANISHI

Annotatsiya. Ushbu maqolada Kasaba uyushma tizimini isloh qilish jarayonlari va unga g'ov bo'lgan to'siqlarning samarali yechimlarining mazmun-mohiyatini haqida berilgan. Kasaba uyushmalar faoliyatida Demokratiya va oshkoralik prinsiplarini shakllanishi masalalari ochib berilgan.

Tayach so'z va tushunchalar: Kasaba uyushma, Prinsip, islohat, Demokratiya va oshkoralik prinsiplari, hamkorlik, ijtimoiy himoya.

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LEGAL BASIS OF TRADE UNION ORGANIZATION - FORMATION OF THE PRINCIPLES OF DEMOCRACY AND TRANSPARENCY

Abstract. This article describes the processes of reforming the trade union system and the essence of effective solutions to the obstacles that are a source of it. Issues of the formation of the principles of democracy and transparency in the activities of trade unions are revealed.

Keywords Trade union, Principle, reform, Principles of democracy and transparency, cooperation, social protection.

Kirish. Bugungi kunda Respublikamizda amalga oshirilayotgan keng ko'lamlı islohatlarning mazmun-mohiyati inson manfaatlariga yo'naltirilganligi bilan juda xarakterlidir. Xalqimizning asrlar davomida tinch, osuda va yaxshi hayot kechirish orzusida yashashishi shakllangan ilm sari intilish fazilati yana bir bor namoyon bo'lmoqda. Insonlarni go'zal turmush kechirish, egallagan kasbi bo'yicha doimiy ish o'rniga ega bo'lish, insoniy qadr-qimmatini kamsitishga yo'l qo'ymaslik, qisqacha aytganda, farovon hayot uchun harakat qilyapti va bu jarayonda kasaba uyushmalarining roli beqis ahamiyat kasb etmoqda.

Masalan, mehnat qonunchiligiga ko'ra kasaba uyushmalari tuzish xodimlarning mehnat huquqi bo'lib hisoblanishi umumiy qoida sifatida belgilab qo'yilgan. Har bir xodim kasaba uyushmalariga hamda xodimlar va mehnat jamoalarining manfaatlarini ifoda etuvchi boshqa tashkilotlarga birlashish huquqiga egadir. (O'zbekiston Respublikasi Mehnat kodeksi) lekin boshqa bir qonunda, ya'ni "Kasaba uyushmalari, ularning huquqlari va faoliyatining kafolatlari to'g'risida"gi Qonunda xodimning kasaba uyushmalari tuzishga bo'lgan asosiy mehnat huquqlari to'g'risida bir nechta qoidalar belgilab o'tilgan.

Mavzuning dolzarbligi. Kasaba uyushmalarining korxonalarda xodimlar nomidan vakillik kilishi, ularning huquqlari va manfaatlarini himoya qilish usullari hamda shakllari yuqorida tilga olingan qonun, Mehnat kodeksi va boshqa qonun xujjatlarida belgilab quyiladi.

Ushbu maqsaddan kelib chiqqan holda quyidagi vazifalarni bajarish qo‘yladi:

- Kasaba uyushma tizimini isloh qilish jarayonlari va unga g‘ov bo‘lgan to‘siqlarning samarali yechimlarining mazmun-mohiyatini ochib berish;

-Kasaba uyushmalarning huquqiy asoslarini tayyorlashning yangi mexanizmlarini shakllanishi bo‘yicha amalga oshirilgan chora-tadbirlarini bosqichma-bosqich tahlil qilish va o‘rganish;

- Rivojlangan mamlakatlarning kasaba uyushma faoliyati borasidagi tajribalari asosida yangicha qarashlar jarayonini yoritib berish va bayon qilish;

Tadqiqotning obyekti. Kasaba uyushma tizimini isloh qilish jarayonlari va unga g‘ov bo‘lgan to‘siqlarning samarali yechimlarining mazmun-mohiyatini ochib berish.

Tadqiqotning predmeti: tarixiy tajribalar, tizimdagi islohotlar, kabi masalalar tashkil qiladi.

Tadqiqotda tizimlilik, umumiylik, qiyosiy-tahlildan foydalanildi. Tadqiqotning empirik manbaini anketa va so‘rovnomalarning natijalari tashkil etdi.

Maqolaning ilmiy yangiligi.

- mustaqillik davrida O‘zbekistonda kasaba uyushma tizimini isloh qilish jarayonida aniqlangan ayrim muammolar mazkur tizimni tubdan takomillashtirishning asosiy yo‘nalishlarini belgilab bergan islohotlarni ishlab chiqish zarurati paydo bo‘lganligi asoslanadi;

- O‘zbekistonda kasaba uyushma xodimlarining tashabbuskorligi va innovatsion ijtimoiy himoyalarni shakllantirishga xizmat qilishi bilan izohlanadi.

Asosiy qism. Davlat tashkilotlari bilan bir qatorda mamlakatning mehnat qilayotgan aholisi huquqlarini himoya qiluvchi kasaba uyushmalari yurtimizdagi eng ommaviy jamoat birlashmalari hisoblanadi. Bugungi kunda kasaba uyushmalari tashkilotlari davlat boshqaruv organlaridan mustaqildirlar hamda faqat xodimlar va jamoa manfaatlarini uchun faoliyat ko‘rsatadilar.

O‘zbekiston Respublikasining “Kasaba uyushmalari, ularning huquqlari va faoliyatining kafolatlari to‘g‘risida”gi qonunining 3- moddasida aytilganidek: “Kasaba uyushmasi — fuqarolarning o‘z faoliyati yoki o‘qishi turi bo‘yicha umumiy kasbiy manfaatlarini bilan bog‘liq bo‘lgan, ularning mehnatga oid, boshqa ijtimoiy-iqtisodiy huquq va manfaatlarini ifodalash hamda himoya qilish maqsadida tuziladigan, o‘z ustavi asosida faoliyat ko‘rsatadigan ixtiyoriy jamoat birlashmasi”⁵.

⁵ O‘zbekiston Respublikasining Qonuni „Kasaba uyushmalari to‘g‘risida” gi O‘zbekiston Respublikasining Qonuni, 06.12.2019 yildagi O‘RQ-588-son. 3-moddasi.

Kasaba uyushmalarining korxonalarda xodimlar nomidan vakillik kilishi, ularning huquqlari va manfaatlarini himoya qilish usullari hamda shakllari yuqorida tilga olingan qonun, Mehnat kodeksi va boshqa qonun xujjatlarida belgilab quyiladi. Kasaba uyushmasiga qabul qilinganlarga kasaba uyushmasiga a'zolikni tasdiqlovchi belgilangan namunadagi a'zolik guvohnomasi beriladi. Kasaba uyushmasiga a'zolik kasaba uyushmasiga qabul qilinganlik to'g'risidagi qaror qabul qilingan kundan boshlanadi.

Jamoat nazorati jamiyatda ijtimoiy adolat qaror topishi uchun shaxs, jamiyat va davlat aloqalarida muvozanatini, tenglik, o'zaro mas'uliyat va javobgarlikka xizmat qiluvchi asosiy omil bo'lib kelmoqda. Mazkur institut insonning huquq va erkinliklari nafaqat davlat tomonidan kafolatlangani, balki davlat organlari faoliyatida ustivor ahamiyatga ega ekanligini ta'minlaydi va bunda jamoatchilik nazoratining mavjudligi siyosiy hokimiyatning xalq tomonidan saylab qo'yilgan vakil bo'lmoqda.

Kasaba uyushmalari bo'yicha yanada aniqroq to'htalsak, mehnatkashlarni jinsi, diniy e'tiqodi, irqiy va milliy mansubliklaridan qat'iy nazar ishlab chiqarish va noishlab chiqarish sohalarida ijtimoiy-iqtisodiy huquqlari va o'z a'zolari manfaatlarini himoya qilish maqsadida birlashtiruvchi ommaviy jamoat tashkilotlari. XVIII-asr oxirida G'arbiy Yevropa mamlakatlari va AQShda o'zaro yordam jamiyatlari sifatida paydo bo'lgan. Rivojlangan mamlakatlarda XIX-asrda qonuniy tarzda faoliyatini boshlagan. Kasaba uyushmalari xodimlarning mehnat sharoiti, ish haqi, turmush, madaniyat va shu kabi sohalaridagi manfaatlarini himoya qilishga da'vat etilgan. 14 yoshga to'lgan va mehnat (kasb) faoliyati bilan shug'ullanayotgan har bir kishi o'z xohishiga ko'ra, o'z manfaatlarini himoya qilish uchun Kasaba uyushmasini tuzish, ularga kirish, Kasaba uyushmasini faoliyati bilan shug'ullanish va Kasaba uyushmasidan chiqish huquqiga ega. Eng yirik xalqaro Kasaba uyushmasini markazlari: Jahon Kasaba uyushmasini federatsiyasi (1945-yil Parijda tuzilgan, 80 dan ortiq mamlakat milliy kasaba uyushma markazlarini birlashtiradi, kasaba uyushma umumiy a'zolarining soni 20-asrning 90-y.larida 213 mln.dan ortiq bo'lgan), Xalqaro erkin kasaba uyushmalari konfederatsiyasi va Jahon mehnat konfederatsiyasi (1920-yil Vatikan yordamida Xalqaro xristian Kasaba uyushmasini konfederatsiyasi nomi bilan tuzilgan, 14 mln.dan ortiq a'zosi bor, qarorgohi Bryusselda)⁶.

Ma'lumki, kasaba uyushmalari faoliyati xodimlar mehnat shartnomasini bekor qilishda muhim ahamiyat kas etadi. Chunonchi, amaldagi Mehnat kodeksining 101 –moddasiga ko'ra, basharti jamoa kelishuvi yoki jamoa shartnomasida mehnat shartnomasini ish beruvchining tashabbusi bilan bekor qilish uchun kasaba uyushmasi qo'mitasi yoki xodimlar boshqa vakillik organining oldindan roziligini olish nazarda tutilgan bo'lsa, shartnomani bunday rozilikni olmay turib bekor qilishga yo'l qo'yilmaydi.

⁶ https://uz.wikipedia.org/wiki/Kasaba_uyushmalari

Mehnat shartnomasi:

korxonaga tugatilishi munosabati bilan;

korxonaga rahbari bilan tuzilgan shartnomani ushbu Kodeks 100-moddasining ikkinchi qismida nazarda tutilgan asoslardan biriga ko'ra;

ushbu Kodeks 100-moddasi ikkinchi qismining 6-bandiga ko'ra ish beruvchining tashabbusi bilan bekor qilingan taqdirda kasaba uyushmasi qo'mitasi yoki xodimlar boshqa vakillik organining roziligini olish talab etilmaydi.

Kasaba uyushmasi qo'mitasi yoki xodimlarning boshqa vakillik organi xodim bilan mehnat shartnomasini bekor qilishga rozilik berish masalasi bo'yicha qabul qilgan qarori haqida ish beruvchiga yozma ravishda xabar berishi kerak, bunday xabar mehnat shartnomasini bekor qilish huquqiga ega bo'lgan mansabdor shaxsning yozma taqdimnomasi olingan kundan boshlab o'n kunlik muddat ichida ma'lum qilinadi.

Ish beruvchi kasaba uyushmasi qo'mitasi yoki xodimlar boshqa vakillik organining xodim bilan mehnat shartnomasini bekor qilishga rozilik berish to'g'risidagi qarori qabul qilingan kundan boshlab bir oydan kechiktirmay, mehnat shartnomasini bekor qilishga haqlidir.

Mehnat intizomini buzganlik uchun (100-moddada ikkinchi qismining 3 va 4-bandlari) mehnat shartnomasini ish beruvchi tomonidan bekor qilishga intizomiy jazolarni qo'llanish uchun belgilangan muddatlar (182-moddada) o'tib ketgandan keyin yo'l qo'yilmaydi.

O'zbekiston Respublikasida "Kasaba uyushmalari, ularning huquqlari va faoliyati kafolatlari to'g'risida"gi qonunning 11 moddasining 2 qismida belgilanganidek, kasaba uyushmalari mehnatkashlarning mehnat huquqlarini himoya qilib, da'vo ariza bilan sudga murojaat qilishga haqlidir. Shu maqsadda kasaba uyushmalari huquqiy yordam xizmatlari va boshqa zarur idoralarga ega bo'lishi mumkin.

Fuqarolik jamiyati institutlari faoliyatini demokratlashtirish va erkinlashtirish, ularning ijtimoiy-siyosiy va ijtimoiy-iqtisodiy islohotlarni chuqurlashtirish jarayonidagi keng ishtirokini ta'minlash yuzasidan ham salmoqli ishlar amalga oshirildi. Xususan, ushbu institutlar faoliyatining huquqiy asoslarini yaratishga alohida e'tibor qaratildi.

Jumladan, O'zbekiston Respublikasi Konstitutsiyasining XIII bobi "Fuqarolik jamiyati institutlari" deb nomlanib, bunda jamoat birlashmalari faoliyatining konstitutsiyaviy asoslariga bag'ishlangan bo'lib, unda ushbu tashkilotlarning turlari, faoliyat ko'rsatish tartibi, ularning davlat hokimiyati organlari va mansabdor shaxslardan mustaqilligi kabi tamoyillar mustahkamlab qo'yildi. O'zbekiston Respublikasi Konstitutsiyasining 70-moddasida "O'zbekiston Respublikasida qonunda belgilangan tartibda ro'yxatdan o'tkazilgan kasaba uyushmalari, siyosiy partiyalar, olimlarning jamiyatlari, xotin-qizlar, faxriylar va yoshlar tashkilotlari, ijodiy uyushmalar, ommaviy harakatlar

va fuqarolarning boshqa uyushmalari jamoat birlashmalari sifatida e'tirof etiladi", deb belgilab qo'yildi.

Shuningdek, Konstitutsiyamizning boshqa moddalarida ham fuqarolik jamiyati institutlari faoliyatiga oid bo'lgan konstitutsiyaviy tamoyil va qoidalar mustahkamlab qo'yilgan. Xususan, Asosiy Qonunimizning 39-moddasi O'zbekiston Respublikasi fuqarolarining kasaba uyushmalariga, siyosiy partiyalarga va boshqa jamoat birlashmalariga uyushish, ommaviy harakatlarda ishtirok etish huquqiga ega ekanligini e'tirof etish bilan birga, siyosiy partiyalarda, jamoat birlashmalarida, ommaviy harakatlarda, shuningdek hokimiyatning vakillik organlarida ozchilikni tashkil etuvchi muxolifatchi shaxslarning huquqlari, erkinliklari va qadr-qimmatini hech kim kamsitishi mumkin emasligini belgilab qo'ygan.

Asosiy Qonunimizning 12-moddasida O'zbekiston Respublikasida ijtimoiy hayot siyosiy institutlar, mafkuralar va fikrlarning xilma-xilligi asosida rivojlanishi hamda hech qaysi mafkura davlat mafkurasi sifatida o'rnatilishi mumkin emasligi to'g'risidagi konstitutsiyaviy tamoyil o'z ifodasini topgan.

Iqtisodiy islohotlar va bozor munosabatlari sharoitida Kasaba uyushmalarni tashkiliy jihatdan mustahkamlash, kuch va mablag'larni birlashtirishga ehtiyoj kuchaydi. Endilikda O'zbekiston Kasaba uyushmalar federatsiyasi o'z faoliyatini ijtimoiy sherikchilik asosiga qurmoqda va hukumat, vazirliklar, idoralar, viloyat hokimliklari bilan ikki tomonlama hududiy va tarmoq bitimlari tuza boshladi. Mehnatga layoqatli aholini ish bilan ta'minlash, ishsizlikning oldini olish, mehnatkashlarga ijtimoiy xizmat ko'rsatish, mehnatkashlar va ularning oila a'zolarini sog'lomlashtirish masalalari bilan shug'ullanish Kasaba uyushmalar faoliyatining eng muhim yo'nalishlari bo'lib qoldi.

Xulosalar. Bugungi kunda Mehnatga oid munosabatlar ishtirokchilari sifatida Xodimlar va ish beruvchilarning vakillik idoralari: kasaba uyushmalari va ularning korxonadagi saylab qo'yiladigan idoralari ham kiritishimiz mumkin.

Mamlakatimizda ijtimoiy sherikchilikni yaxshi yo'lga qo'yish uchun kerakli huquqiy baza barpo qilingan bo'lsada, ammo, bozor munosabatlarining chuqurlashib borayotganligi, malakatimizda fuqarolik jamiyati yaratish ishlari ko'lamining kengayib borayotgani, jamiyatni erkinlashtirish yuzasidan yuritilayotgan izchil siyosat bu sohadagi ishlar miqyosini kengaytirishlikni taqozo qilmoqda. Bunda xodimlar va ish beruvchilar o'rtasidagi ijtimoiy sherikchilik tushunchasiga legal tarif beruvchi hamda uning maqsad – mohiyati, amalga oshirilish prinsiplari va shakllarini nazarda tutvchi normalar Mehnat kodeksiga kiritilishi lozim. Mehnat kodeksiga muvofiq tarzda 21-moddasida ko'rsatilgandek, mehnatga oid munosabatlarda xodimlarning manfaatlarini himoya qilishni korxonadagi kasaba uyushmalari, ularning saylab qo'yiladigan idoralari (kasaba uyushmasi qo'mitalari) mehnat nizolari komissiyalari hamda tuman va shahar sudlari amalga oshirishi mumkin. Korxonada xodimlar manfaatlarini ifoda etayotgan tashkilotlar faoliyati faqat ularni saylagan

xodimlarning qaroriga binoan, shuningdek, amaldagi qonunlarga zid harakatlar amalga oshirilganida — sud tomonidan tugatilishi mumkin. Bozor munosabatlari rivojlanishi sharoitida mehnat shartnomasini tuzayotgan tarafarning har biri korxonaga faoliyatini yaxshilashdan manfaatdor, chunki bunda har bir xodimning farovonligi ham oshadi. Shu bilan birga mehnat faoliyati jarayonida mehnat huquqining alohida norma(me'yor)larini qo'llash sababiga ko'ra kelishmovchilik va nizolar kelib chiqishi mumkin. Bunda muammolarni oldini olishga va bartaraf qilishga ham ko'p jihatdan kasaba uyushmasi qo'mitalariga katta mas'uliyat yuklaydi.

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O‘ZBEKISTONDA EKOLOGIYA IQTISODIYOTINI RIVOJLANTIRISH: ASOSIY MUAMMOLAR VA ULARNING YECHIMI

Annotatsiya. Maqolada O‘zbekistonda mavjud bo‘lgan ekologik muammolar va ularni bartaraf etish yo‘llari o‘z aksini topgan. Ekologik muammolarni echimi sifatida qayta tiklanadigan energiya manbalarining o‘rni va ahamiyati yoritilgan.

Kalit so‘zlar: ekologik iqtisodiyot, qayta tiklanadigan energiya manbalari, atrof-muxit, yashil iqtisodiyot, tabiiy resurslar.

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DEVELOPMENT OF ECOLOGICAL ECONOMY IN UZBEKISTAN: MAIN PROBLEMS AND THEIR SOLUTIONS

Abstract. The article reflects on the environmental problems of Uzbekistan and ways to solve them. The role and importance of renewable energy sources as a solution to environmental problems are emphasized.

Keywords: ecological economics, renewable energy sources, environment, green economy, natural resources.

Iqtisodiyotning rivojlanishi xo‘jalik aylanmasiga tobora ko‘p hajmdagi tabiiy resurslarni jalb etishni talab qiladi, bu esa, o‘z navbatida atrof-muxitga antropogen bosimning ortib borishiga olib keladi. Boshqa tomondan, shakllangan atrof-muxit holati va uning sifati ishlab chiqarish kuchlarining rivojlanishi va hududiy tashqil etilishiga ta‘sir ko‘rsatadi. Bu ziddiyatli xususiyatlarni to‘g‘ri hisobga olish, iqtisodiyotni esa ularga mos yulida rivojlantirish o‘rishni tezlashtiradi. Ularga zid harakatlar esa sekinlashtiradi yoki umuman o‘rishga katta to‘siq bo‘ladi.

Aynan shunday yondashuv va tamoyillar O‘zbekistonni o‘rta va uzoq istiqbolda ijtimoiy-iqtisodiy rivojlantirishga qaratilgan reja va dasturlarimiz, ustuvor yo‘nalishlarimiz asosida mujassam bo‘lmog‘i darkor. Shu munosabat bilan dunyoda sodir bo‘lishi tobora tezlashib borayotgan ekologiya inqilobi sharoitida O‘zbekiston iqtisodiyotini ham uning talab va tamoyillarga muvofiq eng ko‘p ekologik iqtisodiy ijtimoiy-iqtisodiy natijalarga erishishni kafolatlaydigan yunalishlarda amalga oshirishni zaruratga aylantirmoqda. Ana

shu mezondan kelib chiqqan holda bir qator ekologik muammolar, chunonchi, Orolning qurib borayetgani va Orolbo'yining saxroga ayla yotgani, Qoraqalpog'iston Respublikasi, Xorazm, Navoiy, Fargona viloyatlarida ekologik vaziyatni murakkabligi, shuningdek atmosfera havosining ifloslanishi, suv resurslarining tanqisligi va ifloslanishi, aholining toza ichimlik suvi bilan yetarli ta'minlanmaganligi, tuproq sho'rlanishi va ifloslanishi, biologik mahsuldorlik va xilma-xillikning kamayishi, yaylovlar digressiyasi, chiqindilarning ko'plab to'planib qolishi, qayta tiklanadigan energiya manbalarining cheksiz salohiyatidan foydalanish deyarli yo'lga qo'yilmaganligi va boshqa qator muammolar hal etilishi lozim.

Ekologik muammolarning hamma jihatlari o'zaro murakkab tarzda chatishib ketganligi va asosan iqtisodiyot ta'sirida paydo bo'lganligi va tarmoqlararo xarakterga egaligi sababli ularni bartaraf etish xo'jalik faoliyatning turli jabhalarida (sanoat, agrar, xizmat ko'rsatish sohalari va boshqalar) o'ziga xos yo'nalishlarda amalga oshirishni talab qiladi. Masalan, energetika, xom ashyo, oziq-ovqat ishlab chiqarish sohalarida quyidagi tuzilmaviy o'tkazilishi kerak:

1) energetikada ko'mir, neft, gazdan asta-sekin quyosh, shamol, geotermal, vodorod energetikasiga o'tish;

2) xom ashyo sektorida mavjud to'g'ri chiziqli iqtisodiyot modelidan (xom ashyoning kon shaxtalari yoki o'rmondan chiqindixonalariga o'tishi) qayta foydalanish yoki qayta ishlash modeliga o'tish. Bunday yopiq siklda (tabiatda sodir bo'ladigan ko'rinishda) ishlaydigan yangi tizimda qayta ishlash bilan shugullanadigan tarmoqlar asta-sekin qazib oluvchi tarmoqlarni siqib chiqaradi;

3) oziq-ovqat sektorida eng ko'p o'zgarish ishlab chiqarish tuzilmasida emas, balki boshqarish usulida, ya'ni soha tarkibini qayta qurishda sodir bo'ladi. Bunda birinchi darajali vazifa-tabiat boyliklaridan tugamaydigan yo'nalishda (ularni takror barpo etish asosida) oqilona foydalanish hisoblanadi.⁷

Qishloq xo'jaligini "yashillashtirish" mamlakat aholisi soni va ularning oziq-ovqatga talabining oshib borishi sharoitida tabiatga zarar yetkazmasdan mazkur muammolarni hal etishga imkon beradi. Bunda faoliyatning ekologik xavfsiz metodlaridan (suvdan samarali foydalanish, organik va tabiiy o'g'itlarni keng qo'llash, yerga optimal ishlov berish, shuningdek agrar sektorda chiqindilarni kamaytirish, qishloq xo'jaligi va chiqindilarni kompleks nazorat qilish, tuproq unumdorligini, o'simlik va hayvonlar sog'lig'ini hamda fermalarni mexanizatsiyalashni boshqarish va boshq.) foydalanish va agrar, suv xo'jaligini tashkiliy tuzilmalarni mustaxkamlash infratuzilmani rivojlantirishga investisiyalarni ajratish o'rinni egallaydi.

Oziq-ovqat sanoati samaradorligini oshirish bugun va istiqbolda oziq-ovqat xavfsizligini ta'minlashning muhim omili hisoblanadi. Qishloq xo'jalik mahsulotlarini saqlash, qayta ishlash quvvatlarining yetishmasligi oqibatida katta yoqotishlarga yo'l qo'yilmoqda. Olimlarning tadqiqotlari natijalari oziq-ovqat

⁷ M.Q. Allayarova, S.V. Mamajonova, M.N. Nurmuxamidova. Yashil iqtisodiyot – barqaror rivojlanish asosiy yonalishiing. Monografiya. – Gulistan.: Ziyonashr-matbaa, 2022. 92 bet

mahsulotlarini ishlab chiqarish va iste'mol qilishning barcha bo'g'inlari zanjiridagi yo'qotishlar va chiqindilarni 50 foizga kamaytirish imkoniyati mavjudligini ko'rsatadi.

Transport tizimida hozirgi shovqinli, atrof-muxitni ifloslantiruvchi avtomobil transporti o'rniga shaharlarda asosan relsli transportdan (tramvay, metro, poyezd) foydalanishga o'tiladi. Velosipedda yurish uchun keng imkoniyatlar yaratiladi. Yangi transport tizimida bugungi kabi avtomobil, relsli transport, avtobus va ishtirok etadi. Lekin ularning nisbati o'zgaradi. Shaxar transportida yangi ekologik toza va tejamli transport sxemasi barpo ugiladi.

Transport sohasini yashillashtirishda quyidagi yo'nalishlar katta ahamiyatga ega bo'ladi:

1) Transport yo'nalishlari marshrutlarini optimal rejalashtirish asosida ortiqcha tashishlarni kamaytirish, ishlab chiqarish va iste'molni muvofiqlashtirish;

2) Ekologik transport turlarini, ayniqsa yo'lovchilar tashishda jamoat transportini shu jumladan tezyurar avtobus aloqalarni timini rivojlantirish va relsli transportga o'tish, yuk tashish transportini alohida rivojlantirish;

3) Atrof-muxitga zararli ta'sirni kamaytirish maqsadida transportda foydalaniladigan yoqilg'i va transport vositalarini samarali yo'nalishda tartibga solish (toza yoqilg'i, energiya samaradorligini oshirishga imkon beradigan transport turlari).

Umuman "yashil iqtisodiyotni barpo etishda barcha tarmoqlarda, xususan uy-joy kommunal xo'jaligi, sanoat va transportda, agrar soha ba energiya samaradorligini oshirishga imkon beradigan texnologiyalarni joriy etish qayta ishlashni tubdan tiklanadigan energiya manbalaridan foydalanishni rivojlantirishga investisiyalar ajratishga alohida e'tibor berish lozim.

O'zbekistonning o'ziga xos geografik o'rni, tabiatining g'oyat xilma xilligi (cho'l, sug'oriladigan tekislik, tog' zonalari) uning ulkan tiklanadigan energetika zaxiralariga ega bulishiga sabab bo'lgan Ularning umumiy hajmi 51 mlrd t. neft analentiga (t.n.e.) teng bo'lib, mavjud texnologiyalar ularning 179 mln t i dan foydalanishga imkon beradi. Bu mamlakat bo'yicha bir yilda qazib olinadigan barcha yoqilg'idan uch barobar ko'pdir (1-jadval).⁸

Mavjud texnik imkoniyatlardan to'liq foydalanilganda, ular 447,5 mln. t. CO₂ chiqindi gazi chiqadigan miqdordagi yoqilg'idan foydalanishning o'rnini bosishi mumkin. Boshqacha aytganda, mazkur yo'nalishda atmosferani ifloslantiruvchi asosiy manbalarni yo'qotishga imkoniyat yaratilar edi.

⁸ T. Djumaev. Ekologiya iqtisodiyoti. Monografiya. –Tashkent. Metodist nashriyoti. 2022. 120 bet.

O‘zbekistonda qayta tiklanadigan energiya manbalarining imkoniyatlari

Imkoniyati	Jami (mln t.n.e.)	Shu jumladan, energiya (mln t.n.e.)			
		Gidro	Quyosh	Shamol	Geotermal suvlar
Yalpi	50984,6	9,2	50973,0	2,2	0,2
Texnik	179,0	1,8	176,8	0,4	-
O‘zlashtirilgan	0,6	0,5	-	-	-

Mamlakatimizda qayta tiklanuvchi energiya manbalarining texnik imkoniyatlari tuzilmasida quyosh 98,8 foiz, gidroenergiya 1 foiz, shamol energiyasi 0,2 foizni egallaydi. Bu raqamlar O‘zbekiston haqiqiy quyosh o‘lkasi, quyosh esa uning asosiy muqobil energiya manbai ekanini isbotlaydi. Quyosh energiyasining texnikaviy salohiyati respublikaning energiyaga bo‘lgan yillik talabini to‘rt barobar qoplaydi. Lekin hozir quyosh energiyasining atigi 0,3 foizdan (0,6 mln t.n.e.) foydalanilmoqda.

Shuningdek, mamlakatimizda shamol energiyasi va sun energiyasi resurslari salohiyati ham katta bo‘lib, ulardan foydalanish darajasi pastligicha qolmoqda.

Yaqin kelajakda qayta tiklanadigan energiya manbalarining ulkan salohiyatidan foydalanish asosida energetikada tizimli o‘zgarish va qayta qurishni amalga oshirish vazifasi turibdi. Bunda ilgor xorijiy tajriba va texnologiyalar hamda iqtisodiy-ekologik instrumentlardan keng miqyosda foydalanish lozim.

Biosferaning normal holati va ishlab turishini, demak, atrof tabiiy muxitning barqarorligini g‘oyat turli-tuman biotik dunyo uchun qulay yashash sharoitini yaratmasdan ta‘minlab bo‘lmaydi. Mamlakatimiz tabiatning biologik landshaftlar xilma-xilligi qimmatli resurslar ishlab chiqaradigan hamda va "ekologik xizmatlar" ko‘rsatadigan bu g‘oyat muxim "jonli fabrika" ulkan milliy boyligimiz bo‘lib, unga putur yetkazish yoki uni yuqotish nafaqat inson farovonligini xavf ostiga quyibgina qolmay, tabiat tanazuliga va ekologik xavf-xatarning kuchayishiga olib keladi.

O‘zbekiston hududining asosiy qismini cho‘llar (70 foiz) egallaydi, qolgan qismi sug‘oriladigan antropogen tekislik (10 foiz) va tog‘lar (foiz) bilan band. Shu nuqtai nazardan mavjud ekotizimlar quyidagicha klassifikatsiya qilinadi: 1) cho‘l zonasi ekotizimlari (cho‘l, chala chul, kirgokbuyn, su-bot lik i mari); 2) sugoriladigan tekislik (madan ajotnimlari); 3) tog‘oldi-tok zonasi ekotizimlari (past tog, urta tog, baland tog ekotizimlari).

Mamlakat faunasi 97 turdagi sut emizuvchi, 424 turdagi kush. 58 turdagi reptiliya va 83 turdagi baliqlarni o‘z ichiga oladi. 34 turdagi sutemizuvchi (35,1 foiz), 48 turdagi kush (11,3 foiz), 16 turdagi reptiliya (27,6 foiz). 18 turdagi balik (21,7 foiz) O‘zbekiston Respublikasi "Qizil kitobi"ga kiritilgan.

Mamlakatimizda ekologiya iqtisodiyotini barpo etish va rivojlantirishda davlat siyosatining qator instrumentlari - solik byudjet boshqaruv dastaklari, davlatning tartibga solishi, ekologik markirovka, ekologik sporti, bozor

lisenziyalari (kvota) asosiy o‘rinni egallaydi. Ulardan ekologik xavfsiz faoliyat turlarini ragbatlantirish, aksincha, ifloslantiruvchi va emiruvchi sohalarni cheklashda keng foydalanish lozim. Bunda "foydalangan to‘laydi", "ifloslantirgan to‘laydi", "tejamkorlik va obod qilish imtiyozga (soliq, subsidiya) ega bo‘ladi" tamoyillariga amal qilish muxim ahamiyatga ega.

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CHO'LLARDAGI SAMUM, KUY VA SAROB

Annatsiya. Inson hayoti davomida tabiatdagi ko'p hodisalariga bevosita va bilvosita uchraydi. Ba'zilarining sababini biladi ba'zilarinikini bilmaydi. Bilgan hodisalarga uchrasa undan qanday chiqib ketishni yaxshi bilgani uchun bu vaziyatdan oson chiqib ketadi, lekin unga noma'lum bo'lgan holatga tushsa undan chiqib ketishga ancha qiynaladi. Qadimda insonlar ham shunday bo'lishgan. Ular sarob yoki cho'llardagi kuy va samumlar haqida yetarlicha ma'lumotga ega bo'lishmagan, shuning uchun ular haqida turlicha afsonaviy fikrlarda bo'lishgan.

Kalit so'zlar. Sarob, optik hodisa, havo qatlamlari, ilyuziv cho'llar, "ko'lli sarob", "yuqori sarob", refraksiya, samum, qum bo'roni.

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SAMUM, KUY AND SAROB IN THE DESERTS

Annotation. Occurs directly and indirectly to many phenomena in nature throughout human life. Some know why some do not know that some. He gets out of this situation easily because he knows how to get out of it if he gets into an accident that he knows, but he has a lot of difficulty getting out of it if he gets into a situation that is unknown to him. In ancient times, human beings were as well. They did not know enough about sarob or the Muses and samums in the steppes, so they had different mythical opinions about them.

Keywords. Sarob, optical phenomenon, air layers, illusory deserts, "lacustrine sarob", "upper sarob", refraction, samum, Sandstorm.

Kirish. Har doim, odamlar saroblarni ko'rishgan. Qadimgi davrlarda ular sarobni xudolar yoki ruhlarning aralashuvi bilan bog'lashgan. Bugungi kunda boshqa dunyo kuchlarining bunga aloqasi yo'qligi ma'lum. Sarob - bu atmosferadagi optik hodisa, yorug'lik nurlari o'yinidir, shu tufayli ob'ektlar tasavvur maydonida ko'rish maydonida paydo bo'ladi. Ushbu hodisa turli zichlikdagi havo qatlamlari orqali o'tadigan nur sinishi tufayli yuzaga keladi. Bunday holda, uzoqdagi narsalar ko'tarilgandek ko'rinishi mumkin. Ularni buzish va eng hayoliy shakllarni olish mumkin. Mazkur tabiat hodisalari odatda cho'llar

bilan bog'liq bo'lsa-da, ularni tog'larda, suv sathidan yuqori qismida, hatto megapolislarda ham kuzatish mumkin. Bu ajoyib rasmlarni haroratning to'satdan o'zgarishi sodir bo'lgan joyda ko'rish mumkin.

Tadqiqot metodlari. Mazkur maqolani tayyorlash davomida shu mavzu doirasidagi tadqiqotlar, fikr va g'oyalar tahlil etildi. Qiyosiy tahlil, tabiiy geografik yondashuv, kartografik tahlillardan keng foydalanildi.

Muhokama va tahlillar. Saroblar bir necha turga kiradi. Birinchisi, quyi (ko'l) saroblarni o'z ichiga oladi - uzoq va tekis sirt ochiq suv shaklini olganda. Shunga o'xshash ilyuziya cho'llarda, asfalt yo'lda paydo bo'ladi. Isitilgan sirt ustidagi havodan bir xil qatlam hosil bo'ladi. Yerga eng yaqin qizigan va kam uchraydigan qatlamdan o'tgan yorug'lik to'lqinlari buziladi, chunki ularning tezligi muhit zichligiga bog'liq. Ko'l saroblari eng keng tarqalgan; ikkinchi darajali saroblar yuqori yoki uzoqdagi saroblar deb ataladi. Ular pastdagilar bilan taqqoslaganda yanada chiroyli, ammo ular kamroq ko'rinadi. Osmonda teskari ko'rinishda uzoq ob'ektlar paydo bo'ladi, ba'zan esa ularning ustida xuddi shu ob'ektning bevosita tasviri paydo bo'ladi. Kuzatuvchilardan yuzlab kilometr uzoqlikda joylashgan shaharlar va tog'lar bunday havo ekranida aks etishi mumkin. Bunday saroblar sovuq mintaqalar uchun xos bo'lib, sovuq qatlam ustida iliq havo qatlami mavjud bo'lganda ko'rinadi. Yuqori saroblarda narsalar aniqroq ko'rinadi. Quyosh tomonidan kuchli isitiladigan vertikal yuzalar yonida yonbosh saroblar paydo bo'ladi. Ushbu tur ko'pincha Jeneva ko'lida paydo bo'ladi va boshqa bir sarob turi Fata Morgana deb nomlangan. Bu shunday hodisalarning eng chiroylisi. Ba'zan iliq suvlar ustida sovuq havo qatlami hosil bo'lib, unda sehrlil qal'alar, ertaklar saroylari va bog'lar paydo bo'ladi. Ushbu hayoliy rasmlar doimo o'zgarib turadi. Arab afsonalariga ko'ra, yovuz peri Morgana chanqagan sayohatchilarni masxara qilishni yaxshi ko'rar edi, u ularni hayajonli favvoralar, gullab-yashnayotgan vohalar, yam-yashil bog'lari bo'lgan saroylarni ko'rsatib, ularni eng jirkanch joylarga jalb qilgan. Dengizchilar ba'zida ko'radigan ko'plab "uchib yuradigan gollandiyaliklar" ham Fata Morganga tegishli.

Jazirama yozning issiq kunlarida katta cho'l hududlaridan o'tayotganda taxminan 2-3 kilometr narida goh katta-katta ko'llar paydo bo'lib, ular ba'zida ikkiga bo'linib ketadi, so'ngra bir joyda yo'qolib, ikkinchi joyda paydo bo'ladi.

Tabiatda uchraydigan bu hodisa sarob deb ataladi. Cho'llarda sarob ko'pchilik sayyohlarni dog'da qoldiradigan, hammasini hafsalasini pir qiladigan va ko'pincha, ularni butunlay umidsilikka solib qo'yadigan va yo'ldan adashtiradigan hodisa hisoblanadi.

Jazirama issiqdan va chanqoqlikdan tinkasi qurigan yo'lovchilar ko'ziga 2-3 kilometrcha masofada ba'zan suvi quyoshli oftobda yarqirab turgan katta ko'l ko'rinadi, sayyohlar ko'l tomonga yuradilar, lekin ular oldinga yurgan sari ko'rinadigan ko'l orqaga chekina boradi, sayyohlar bilan ko'l o'rtasidagi masofa hech o'zgarmaydi; nihoyat ko'l havoda erib ketgandek, bir lahzada ko'zdan g'oyib bo'ladi.

1798 yili Misrda shu turdagi sarobni o'z ko'zi bilan ko'rgan fransuz matematigi G. Monj shunday hikoya qiladi: "Oftobda kuni bilan misdek qizib ketgan yer yuzasi kechga yaqin ozgina soviy boshlagan paytda taxminan 4 kilometrcha uzoqda hammayoqni suv bosib ketganga o'xshaydi. Yanada nariroqdagi qishloqlar ulkan ko'l o'rtasidagi orollarga o'xshab ko'rinadi. Har bir qishloqning tagida uning suvdagidek teskari, biroq xiraroq aksi ko'zga tashlanadi, u shamolga chayqalib turgandek tuyuladi, ammo mayda qismlari ko'rinmaydi. Atrofni suv o'rab turgandek ko'ringan shu qishloqlarga yaqinlashub borilsa, soxta suvning qirg'og'i uzoqlashaveradi, bizni qishloqdan ajratib turgan suv tarmog'i asta-sekin toraya borib, nihoyat ko'zdan g'oyib bo'ladi, ammo ko'lning ko'rinishi o'zgarmaydi, u endi qishloqning narigi tomoniga o'tgan bo'ladi va undan uzoqroqdagi boshqa qishloqlarni o'zida aks ettirib turardi". Sarobning bu turi "ko'lli sarob yoki "pastki sarob" deb yuritiladi.

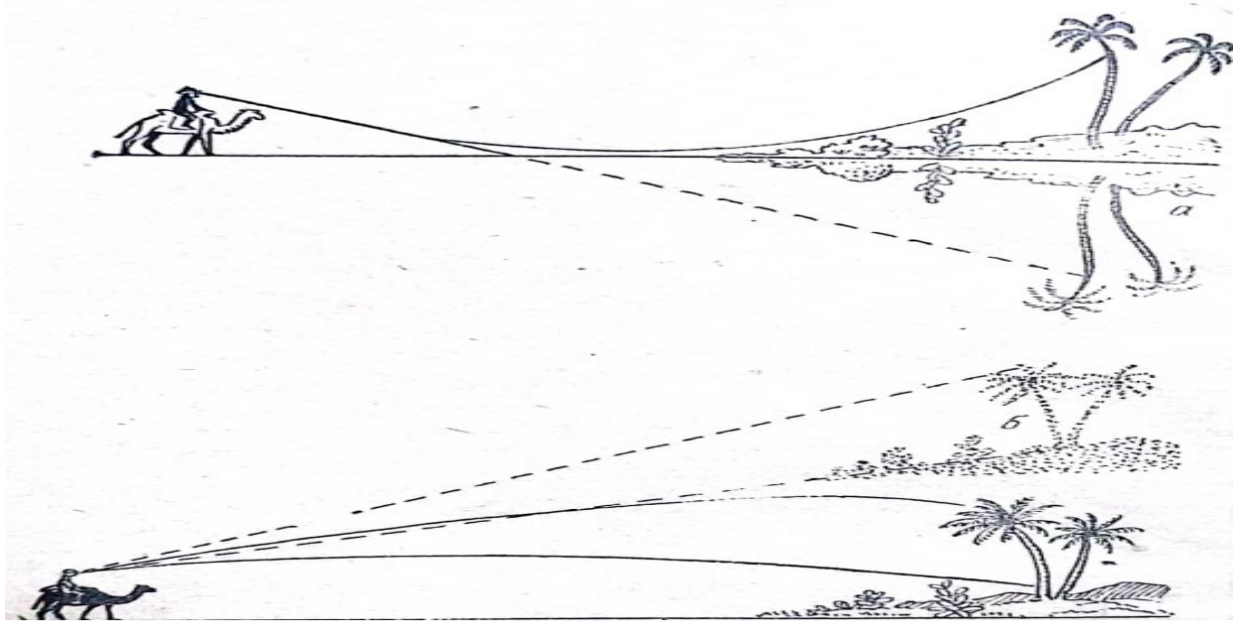
Bunday sarob quyidagicha paydo bo'ladi. Quyosh nurlari yer yuzasini qattiq qizdiradi. Yerdan ko'tarilayotgan issiqlikdan havoning pastki qatlami qiziydi. Yorug'lik nurlarining hamisha issiq havo qatlamlaridan sovuq havo qatlamlariga qiyshayish qoidasi fizika fanidan ma'lum. Demak osmonning ufqqa yaqin qismidan pastga yo'nalgan quyosh nuri yo'lovchilarga qiya holatda yetib keladi. Nurlarning yuqori ko'tariluvchi havo oqimlari ta'sirida titrashi suv sathining jimirlashidek idrok qilinadi. (1- rasm).

Sarobning yana bir turi "uzoqdan ko'rish" yoki "yuqori sarob" dir. N.V. Gogolning "Dahshatli qasos" asarida sarobning bu turi shunday tasvirlangan: "Kiyevdan o'tgandan keyin mo'jiza yuz berib, to'satdan olamning hamma tomonlari olis-olislargacha ko'rina boshladi. Uzoqdan liman ko'kimtir rangda tovlanib turar, uning ortida Qoradengiz chayqalib ko'rinardi. Ko'pni ko'rgan katta kishilar dengizdan tog'dek ko'tarilib turgan Qrimni ham, botqoqli sivashni ham tanib qolishdi.

-Hu anavi nima?- deb so'rashardi to'plangan xalq, uzoq ufqda sirti oqish rangda tovlanib turgan, miltillab ko'rinayotgan va ko'proq bulutga o'xshab ketadigan narsalarni ko'rsatib.

-Bu Karpat tog'lari – deyishardi keksalar..."

"Pastki sarob" bilan "yuqori sarob" hodisalarining vujudga kelishi bir-biridan biroz farq qiladi. "Pastki (ko'lli) sarob"da pastda issiq va siyrak havo, uning tepasida nisbatan salqin va zich havo qatlami vujudga kelgan bo'lsa, "yuqori sarob (uzoqdan ko'rish)" da aksincha pastga nisbatan salqin va zich havo, uning tepasida issiq va siyrak havo qatlamlari vujudga keladi, hamma narsalar kuzatuvchining ko'ziga ancha balandda ko'rinadi. Kuzatuvchiga ko'rinayotgan narsa ufqqa qancha yaqin bo'lsa, refraksiya (yorug'lik nurlarining sinishi) shunchalik katta bo'ladi (1-rasm).



1-rasm. Yuqori va pastki sarob

Sarob-atmosferadagi optik hodisa hisoblanadi. Bunda uzoqdagi narsa (yoki osmonning bir qismi) bilan birgalikda uning mavhum tasviri ham boshqa joyda koʻzga koʻrinadi. Agar narsa ufqdan pastda boʻlsa, uning mavhum tasvirigina koʻrinadi. Sarob narsa tagida, narsa ustida uning yon tomonida koʻrinishi

mumkin. Sarob atmosferaning pastki qatlamlarida havo zichligi (shuningdek, temperaturasi) ni notekis taqsimlanishi taʼsirida, yaʼni uning odatdan tashqari katta vertikal yoki gorizontaal gradiyentlari sababli yuzaga keladi. Natijada narsadan keladigan yorugʻlik nurlari qiyshayadi, atmosferadagi yorugʻlikning sindirish koʻrsatkichi anomal taqsimlanadi. Ustki sarob koʻp hollarda yuqori kengliklarda, zichlikning balandlik boʻylab tez pasayishi, yaʼni sovuq yer yuzasida temperaturaning inversiyasi paytida roʻy beradi. Pastki sarob isib turgan tekis yer (choʻl, yoʻl) ustida temperaturaning juda katta vertikal gradiyenti (yaʼni balandga koʻtarilgan sari temperaturaning tez pasayishi) natijasida paydo boʻladi. Osmonning tasviri Yer yuzasida suvga oʻxshab koʻrinadi. Yon tomondagi sarob juda qizib ketgan qoyatoshlar yoki devorlar yonida koʻrinadi.

Samum (arabcha -issiq shamol), quruq issiq shamol, odatda gʻarbiy va janubi-gʻarbiy yoʻnalishlarda, Shimoliy Afrika va Arabiston yarim orolining choʻllarida. U kuchli qisqa muddatli toʻlqinning xususiyatiga ega (20 daqiqadan 2-3 soatgacha), baʼzida momaqaldiroq bilan, koʻpincha Quyoshni tutib turadigan koʻp miqdordagi issiq qum va chang (chang-qum boʻroni) oʻtkazilishi bilan birga keladi. Samumning yaqinlashishi havoga koʻtarilgan qum tomonidan yaratilgan oʻziga xos shovqin bilan birga keladi. Yilning istalgan vaqtida kuzatiladi, lekin koʻpincha bahor va yozda kuzatiladi. Samum esganda qum boʻroni turib, harorat 50 darajaga yetadi va undan ham oshadi.

Arabiston yarim oroli va Shimoliy Afrika cho'llaridagi quruq issiq va dahshatli shamolning nomi. samum deb aytiladi. Samum paytida osmonga ko'tarilgan chang to'zon, kuchli qumli bo'ron, Quyoshni to'sib atrof g'ira-shira bo'ladi, havo juda og'irlashadi, nihoyatda qizib ketadi va nafas olish qiyinlashadi. Bunday shamol vaqtida cho'ldan antiqa kuylar eshitiladi go'yoki cho'l kuylagandek bo'ladi.

Rus sayyohi A.V. Yeliseyev Sahroi Kabirda bo'lgan samumni bunday tasvirlaydi:

“Karvonimiz uch kun yurgandan keyin cho'l xuddi tumantushgandek qorong'ilasha boshladi. Yo'l boshlovchilar bir mudhish hodisani sezayotgandek bir-birlariga qarab qo'yishdi. Nimagadir ko'ngil g'ash. Quyosh ayovsiz qizdirar, havo diqqinapas, tevarak-atrofdan sokinlik hukm surardi. Bir necha soatlab yo'l yursak ham qizigan qum dengizida hayot asari ko'rinmaydi. Tush paytida dam olish uchun to'xtadik va jazirama issiqdan qochib chodir ichiga berkindik. Shu payt havoda qandaydir sirli ohang quloqlarga chalindi, ohang tobora zo'rayib, goh hamma tomondan eshitilayotgandek, goh osmondan kelib yer bag'riga singib ketayotgandek tuyulardi. Yo'l boshlovchilardan biri: “Qumning kuylashi yaxshilikka olib kelmaydi, shamol ketidan ajal keladi” deb qo'ydi.

Qum goh sho'x, goh g'amgin ohangda kuylardi, jonsiz qumning kuylayotganligiga odamning ishongisi kelmasdi. To'satdan kuy tindi. Atrofni sukunat bosdi. Tuyalar ham mudhish hodisa – dahshatli shamol yaqinlashib kelayotganligini sezib bezovtalana boshladi.

Shamol turdi. Shamol chodirimiz yaqinidagi baland qumtepadan qumlarni uchira va qum uyumlarini to'zg'ita boshladi, havo xiralashdi, osmon go'yo yerga yaqinlashgandek ko'rindi. Janub tomonni qizg'ish chang to'zon qoplab oldi. Osmonga shiddat bilan ko'tarilgan chang-to'zon bir necha minut o'tar – o'tmas Quyoshni to'sib qo'ydi. Qum bo'roni kuchayaverdi. havo juda dim bo'lib qoldi. Hatto tuyalar ham nafas olishga qiynalishardi. Tevarak atrof qoramtir-qizg'ish to'zon ichida qoldi. Shu on yana yig'iga o'xshash g'alati ovoz eshitila boshladi. Xullas qum bo'roni yer yuzidagi jamiki mavjudotni sidirib olib ketgudek bo'lar edi. Biz qandaydir ofat yaqinlashib kelayotganini sezib, vahimaga tushdik, buni samum deyishga tilimiz kelmas edi. Yaqinlashib kelayotgan mash'um samumni xuddi qismatimizni kutayotgandek kutardik-u, ammo u bilan kurashishga ojiz edik. Qum kuylay boshlab yarim soat o'tgach, tabiatning eng dahshatli hodisasi – samumning markazida qoldik. Endi, mulohim kuy to's-to'poloni chiqayotgan qumlarning qumlarning shovqiniga aylandi. Bunday dahshatli shovqinni biror narsaga o'xshatish qiyin. Bu to's to'polon go'yo afsonaviy mudhish hayvon og'zidan chiqayotgan qum aralash olovni eslatardi, shovqindan bepoyon cho'l larzaga kelar, qum to'foniga yana qum qo'shilayotgandek bo'lardi. Tuyalar shamolga orqa o'girib, bo'yinlarini cho'zib, go'yo yerga singib ketayotgandek yotib olishgan edi.

Biz quloqlarimizga paxta tiqib, boshimizni kiyimlarimiz bilan o'rab, burkanib tuyalarning qorinbog'laridan ushlab, ularga yopishib oldik. Yurak

o'ynog'I boshlanib, nafas olish juda qiyinlashib juda tezlashdi. Bosh qattiq siqib o'g'rir edi. Azboroyi havoning issiqligidan badanimizni bosgan ter bir pasda qurib qolardi. Tomog'imiz qaqrab, xuddi charm yopishtirib qo'ygandek tuyular ko'kragimizdagi havo yetishmas edi. Qum to'foni bilan birga tezda ajal ham yetib keladigandek tuyulardi...

Xayriyatki, ko'p o'tmay samum bizdan uzoqlashdi. Ikki soatlar chamasi vaqt o'tgandan keyin cho'lga oh-havo asliga qayta boshladi. "...Biz quyosh nuridan o'zimizni ehtiyot qilishimizga qaramay, yuzlarimiz va qo'llarimiz qizarib, shishib ketdi, lablarimiz yorildi, badanimizga toshma toshib, qichisha boshladi. Umuman ahvolimiz og'ir edi" deb yozadi rus sayyohi A.V. Yeliseyev.

Samum ba'zida momaqaldiroq bilan birga tabiatda kuzatiladigan mana shunday dahshatli hodisalardan biridir.

Xulosa. Xulosa qilib shuni aytamizki tabiat hodisalarini bilishga odamlar qadimdan qiziqishgan. Mana shu qiziqishlari eng uzoqda joylashgan kimsasiz hududlarni, muzlik qoplagan materik va orollarni va dengiz va okeanning uzoq qismlarigacha bo'lgan joylarni kashf etishga olib kelgan.

Biz yuqorida aytib o'tgan sarob, samum haqidagi ma'lumotlarni bilish ham tabiiy geografik hodisalarni bilish va tushunishga misol bo'ladi. Masalan, ko'zga ko'rinayotgan narsa sarob yoki haqiqiy narsalar ekanligini bilish mumkin. Buning uchun olov yoqiladi, atrofga yoqilgan olov tutuni sarobni tarqatib yuboradi. Sarob cho'llarda, xususan Sahroi Kabir cho'li, Qoraqum va Qizilqum kabi yirik cho'llarda tez-tez bo'lib turadigan tabiat hodisasi hisoblanadi. Samum va cho'llarda esadigan kuylarning asl sababini bilish barcha o'quvchilarga qiziqarli bo'lishiga ishonamiz.

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MUSIQA MADANIYATI DARSLARIDA O'QUVCHILARNING MUSIQIY HIS- TUYG'ULARINI RIVOJLANTIRISH VA TAKOMILLASHTIRISHNING USLUBIY VOSITALARI

Annotatsiya. Barkamol avlodni ma'naviy ongini shakllantirishda barcha fanlar qatori musiqaning ham alohida o'rni bor. Bugungi kun musiqqa ta'limining eng muhim maqsadlaridan biri nazariy va amaliy jihatdan bilimli, ijodkor, qobiliyatli yoshlarni tarbiyalab yetishtirishdir. Ushbu maqola aynan shu haqida.

Kalit so'zlar: musiqqa, ta'lim, tarbiya, iste'dod, qobiliyat, his-tuyg'u, qo'shiq, raqs, malaka, ko'nikma.

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METHODS OF DEVELOPING AND IMPROVING STUDENTS' MUSICAL FEELINGS IN MUSIC CULTURE LESSONS

Abstract. Along with all other sciences, music has a special place in forming the spiritual consciousness of a mature generation. One of the most important goals of music education today is to educate theoretically and practically educated, creative, talented young people. This article is about this.

Key words: music, education, training, talent, ability, emotion, song, dance, skill.

Barkamol avlodni ma'naviy ongini shakllantirishda barcha fanlar qatori musiqaning ham alohida o'rni bor. Bugungi kun musiqqa ta'limining eng muhim maqsadlaridan biri nazariy va amaliy jihatdan bilimli, ijodkor, qobiliyatli yoshlarni tarbiyalab yetishtirishdir. Shu bois musiqqa ta'limining sifat va samaradorligini oshirishning turli metodik jarayonlarini yangi ta'lim mazmuniga qo'yilgan talablar asosida ishlab chiqish malakalari alohida mavzu sifatida tahlil etilmoqda. Shuningdek, musiqqa madaniyati darslarida o'quvchilarning musiqiy his-tuyg'ularini rivojlantirish va takomillashtirishda ularning psixologik-fiziologik xarakterlariga oid hamda yosh xususiyatlariga mos musiqiy asarlar haqida ma'lumotlarni umumlashtirish, o'rganish va tahlil qilish dolzarb muammolardan hisoblanadi.

Musiqa inson hissiyotiga kuchli ta'sir ko'rsatish imkoniyatiga ega bo'lib, o'quvchilarni nafosat olamiga olib kirish va ahloqiy - g'oyaviy tarbiyalashning muhim vositasidir. Milliy madaniyatimiz bobokaloni Abu-Nosir Al-Farobiy «Bu fan tanning sog'ligi uchun foydalidir», degan edi, bobomiz Shayx Sa'diy esa «Musiqa odam ruhining yo'ldoshidir» deb ta'kidlaydilar. Musiqa insonga tez ta'sir etuvchi emotsional hissiyotni rivojlantiruvchi vositadir.

Musiqa ta'limi o'quvchi - yoshlarga nafaqat qo'shiq kuylash, musiqa tinglash malakalarini shakllantiradi, musiqiy savodxonligini o'stiradi. Shuningdek musiqiy qobiliyatini tarbiyalashda hissiyotni o'stirishda, diqqat, xotirani rivojlantirishda, taassurot olamini boyitishi, tafakkur ko'lamini shakllantirishda alohida ahamiyat kasb etadi.

O'quvchilarning musiqiy his-tuyg'ularini rivojlantirishda musiqa darsining barcha faoliyatlarida amalga oshiriladigan ta'limiy jarayonning o'rni muhimdir. Chunki, darsning har bir faoliyatida o'rganilayotgan o'quvchilarning yoshi va psixologik-fiziologik nuqtai nazaridan ta'sir etib, ularga ma'lum bir his-tuyg'u va fikrlashni shakllantira boradi. Biz ishimizning ushbu faslida o'quvchilarning musiqiy his-tuyg'ularini rivojlantirish va takomillashtirishning dastlabki jarayonlarini yoritishga harakat qildik.

O'quvchilarda ilk musiqiy tushunchalar albatta dastlab maktabgacha ta'lim muassasalarida olib borilayotgan musiqiy mashg'ulotlar orqali amalga oshiriladi. Sekin-asta bola ulg'ayishi davomida insondagi his-tuyg'u rivojlana boradi. Maktab davridan boshlab o'quvchilarning hayotiy tajribalariga tayangan holda har bir musiqa asosi zamirida ma'lum his-tuyg'uni va fikrlar aksi namoyon eta boshlaydi.

Musiqa mashg'ulotlari jarayonida o'quvchi hayotiy voqelikni musiqaviy obrazlar orqali idrok etib boradi. O'quvchilar yoshiga mos musiqa asarlari haqida unutilmas taassurot qoldiradi, ruhiy dunyosini boyitadi. Boshlang'ich ta'limda musiqaviy ta'lim va tarbiya, badiiy adabiyot va tasviriy san'at bilan uzviy bog'langan holda amalga oshiriladi. Qo'shiq kuylash turli janrdagi musiqa asarlari, xususan milliy cholg'u pyesalarini tinglash, musiqiy o'yinlar bilan shug'ullanish va raqsga tushish jarayonida musiqa mashg'ulotlari ko'pincha badiiy so'z bilan bog'lanadi. O'quvchi badiiy obrazlarni yorqin tasavvur etishi va chuqur idrok qila olishi uchun tasviriy san'at asarlaridan unumli foydalaniladi. Ayniqsa, ayrim milliy musiqa asarlarini tinglashdan yoki kuylanadigan qo'shiq namunasidan o'quvchilar ongida hosil bo'ladigan tasavvurlarni yanada boyitish va aniqlashtirish maqsadida asar syujetiga xos badiiy sur'atlardan foydalanish ham yaxshi natija beradi. Turli metodlardan foydalanib, o'tkazilgan har bir musiqa mashg'uloti o'quvchilarda badiiy - estetik zavq uyg'otadi, ularning his-tuyg'ularini rivojlantiradi, ijodiy fikrni va nutqni o'stiradi. Bundan tashqari musiqaviy o'yin va raqslar bolalardan ritm tuyg'usi,

chaqqonlik va harakatchanlik malakalarini rivojlantiradi hamda qomatning to'g'ri o'sishiga yordam beradi.

Maktabda olib borilayotgan asosiy mashg'ulotlar, masalan, hisob

mashg'ulotlari jarayonida o'quvchilarning ko'proq abstrak fikrlash qobiliyati va mantiqiy xotira kuchi o'sib borsa, san'at mashg'ulotlari jarayonida esa ularning obrazli fikrlashi va obrazli xotirasi yaxshi rivojlanadi. Bu har ikkala psixologik xususiyatlarning parallel rivojlanishi o'quvchining aqliy rivojlanishi uchun muhim ahamiyat kasb etadi.

Maktabda musiqa o'qituvchisining asosiy vazifalari nimadan iborat? Shuni qayd etish lozimki, musiqa mashg'ulotlarining oldiga har qanday pedagogik maqsad va vazifani amalga oshirish uchun, eng avvalo, o'quvchining bir qancha komponentlaridan tashkil topgan musiqa qobiliyatini tinmay o'stirib borish shart.

O'quvchilarning bu musiqaviy qobiliyatlarini amalga oshirish jarayonidan muntazam rivojlantirib boriladi.

1. O'quvchilarning musiqaga qiziqishini oshirish va sevisga o'rgatish.
2. Musiqa asarlari bilan tanishtirish jarayonida o'quvchilarda emotsional his-tuyg'ular hosil etish yo'li ularning musiqa haqidagi tasavvurlarini boyitish.
3. O'quvchilarni oddiy musiqa tushunchalari bilan tanishtirish, musiqa tinglash, qo'shiq kuylash, musiqa bilan harakat, raqsga tushish va o'quvchilarning oddiy musiqa asboblari kuy chalish ko'nikmalarini hosil etish va ijodiy qobiliyatini o'stirib borish.
4. Musiqa asarlaridan ta'sirlanish, shu asosida musiqaviy did va badiiy muhokama yuritish malakalarini rivojlantirish.
5. O'quvchilar ovozi asrab tarbiyalash qo'shiq kuylashning elementar ko'nikmalarini hosil etish, qo'shiqlarni sodda, ravon, erkin, tabiiy va ifodaviy kuylashga o'rgatish.
6. Turli musiqa mashg'ulotlari jarayonida improvizatsiya qilish, musiqadagi badiiy obrazni o'yin va kuylash vositasida ifoda etish, ma'lum musiqaviy temaga yangi o'yin topish.
7. Musiqaviy tarbiya mashg'ulotlarini maktab hayoti bilan bog'lash, maktabda o'tkaziladigan turli mashg'ulotlarda va marosimlarda o'rganilgan kuy va qo'shiqlardan keng foydalanish, konsertlar uyushtirish vositasida musiqa kundalik hayotimizning ajralmas yo'ldoshi ekanligi haqida bolalarda tushuncha hosil qilish.

Maktabda olib boriladigan musiqa mashg'ulotlari asosan, qo'shiq kuylash, musiqa tinglash, musiqaviy riymik harakatlar va o'quvchilar yoshiga mos bo'lgan cholg'u asboblari oddiy kuylar chalishni o'rganishdan iboratdir.

Qo'shiq kuylash mashg'ulotlarining asosiy elementlaridan biri hisoblanadi. Qo'shiq kuylash musiqa bilan shug'ullanishda o'zining yetarli va oson amalga oshirishi tufayli o'quvchilar diqqatini tez jalb etadi. Eng muhimi shundaki, o'quvchilar do'stlari bilan qo'shiq kuylaganda o'z shaxsiy ijrosini nazorat qilib boradi, yon-atrofdagi o'quvchilar ovozi bilan o'zini solishtirib ko'radi. Bu birinchidan bolada musiqaviy qobiliyatlarining har tomonlama rivojlanishiga katta imkoniyat yaratadi, ikkinchidan bolada o'z-o'zidan ijodiy intilish kuchayadi. Uchinchidan, qo'shiq kuylash jarayonida o'quvchilarning fikri, nutqi, idroki o'sadi, ovoz va nafas apparati yaxshi rivojlanadi.

Al-Farobiyning ta'biricha, ovoz apparati eng takomillashgan, eng hushohang va jonli musiqa asbobidir. Musiqa ijrochiligida eng qulay vositadir, chunki, cholg'uchilikdan ko'ra qo'shiq kuylashni turli sharoitlarda sinf va sinfdan tashqari tez va oson tashkil etish mumkin, shuning uchun, maktab hayotidagi ertaliklarda, sayl vaqtida, umuman har qanday sharoitlarda o'quvchilar qo'shiq kuylash faoliyati bilan ko'proq shug'ullana oladilar. Musiqa madaniyati fani o'qituvchilari sinf va sinfdan tashqari mashg'ulotlarni asosida olib borishlari o'quvchilarda musiqiy his-tuyg'ularini shakllana borishida keng imkoniyatlar yarata boshladi. Qo'shiq o'quvchilarda turli kayfiyatlarni hosil qila oladi. Shunday ekan, qo'shiq kuylash katta tarbiyaviy ahamiyatga molik.

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SELFLESS WORK OF INDUSTRIAL WORKERS OF ANDIJAN REGION DURING THE SECOND WORLD WAR

Annotation. In this scientific article, the industrial development of Andijan region during the Second World War and the labors behind the front are mentioned. Also, the Taminoth here is also lit. Also mention the enterprises and factories in the region.

Key words: Andijan, population, labor, Second World War, industrial development, worker, military.

Regardless of the era, our country has had its glorious history with the high moral qualities, will and perseverance of our people. Among them is the great contribution of our people to the great victory during the Second World War. "During the fiery war, the entire people of Uzbekistan chanted: "Everything is for the front", "Everything is for Victory!" lived with the belief that Our country has become a solid supply base behind the front. The people of Uzbekistan delivered a large amount of weapons, food, clothing, medicine and other necessary products to the battlefields. With the selfless work of our multinational population, military products were produced in about 300 enterprises in our republic. During this period, 151 factories were moved from the front areas to our country and put into operation in a very short time. "Thousands of thousands of war veterans were treated in military hospitals established in our country."

The relocated enterprises were completed in 4-5 months, some of them even in 1-2 months, and began to supply military products for the front. Equipment that was urgently vacated or moved to newly constructed buildings in the cities of Uzbekistan was immediately placed and assembled. They were provided with manpower, raw materials, equipment, and the production of products for the front was launched. In a short period of time, industrial enterprises followed the military path and began to produce mortars and machine guns, spare parts for airplanes and tanks, and other military weapons. Also, "Until 1941, there were 6.5 million people in Uzbekistan, and within 5 months, it increased by about 10% due to the evacuations... In 1945, 60% of the vegetables and 38% of the potatoes consumed by the workers in the enterprises were grown on farms."

Andijan region, which was formed only 3 months after the beginning of the Second World War, has become one of the regions of the country that produces industrial products necessary for the front and victory. Women and girls of Uzbekistan behind the front formed the basis of personnel in production,

industry, agriculture and social sphere. In particular, women's labor was considerable in the agriculture of Uzbekistan. For example, in 1942, 50% of those employed in agriculture in Namangan region and 60% in Tashkent, Andijan and Samarkand regions were women. Women were widely involved in the construction of irrigation facilities and cleaning canals. Women tried to work on an equal footing with men in carrying stretchers, loading soil, laying concrete.

The harm to their overall and reproductive health was not taken into account. The rural population, consisting mainly of women, children and the elderly, worked at the edges of their abilities. During the war years, in almost all Soviet Union republics, women in agricultural work were involved more than men. The following reflected the above mentioned data. The years of war represented a period of growth in women's socio-economic importance in society. For example, in 1942 in Andijan region more than 2 000 leader women were elected as chairpersons of collective farms, brigade leaders. Only in Jalolquduk district of this region 43 female collective farmers were appointed as the chairpersons, deputy chairpersons of collective farms. In the same year, 1 400 female collective farmers of Kashkadarya region were promoted to the positions of heads of cotton-growing, graingrowing brigades. In Chirakchi District 45 women were elected chairpersons of the collective farms and 72 women were elected chairpersons of harvest Councils.

During the Second World War, the industrial workers of Andijan region played a crucial role in supporting the war effort. Despite facing difficult conditions and shortages, they worked tirelessly to produce essential goods and materials for the front lines. Many workers volunteered for extra shifts and overtime to meet the increased demand for military supplies. They worked long hours in factories, mines, and other industrial facilities, often under dangerous conditions. Their selfless dedication and hard work helped to ensure that the Soviet Union had the resources it needed to fight against the Axis powers. The industrial workers of Andijan region also made significant sacrifices during the war. Many of them were conscripted into the military, leaving behind their families and jobs to serve on the front lines. Others faced shortages of food and other essentials as resources were diverted to the war effort. During the Second World War, the selfless work of Andijan region's industrial workers contributed to the transformation of the most modern technologies and production processes. They are young people, professionals and workers who work in their manufacturing or service companies. These processes require strong anti-rada management, further development of innovation, new product development and joining in export. Selfless work of industrial workers of Andijan region is very important for solving the problems of light supply and development.

During the Second World War, the Andijan region played a significant role in industrial production for the Soviet Union. The region's industries were mobilized to support the war effort, producing military equipment, ammunition, and supplies for the front lines. Factories in Andijan were converted to produce

goods needed for the war, and the region's workforce contributed to the industrial output that was crucial for the Soviet war machine. The industrial capacity and output of Andijan during this time were vital in supporting the Soviet Union's efforts in the war against Nazi Germany.

During the Second World War, the selfless work of Andijan region's industrial workers contributed to the transformation of the most modern technologies and production processes. They are young people, professionals and workers who work in their manufacturing or service companies. These processes require strong anti-rada management, further development of innovation, new product development and joining in export. Selfless work of industrial workers of Andijan region is very important for solving the problems of light supply and development.

The selfless work of its employees contributes a lot to bringing about changes in the most modern technologies and production processes. They are young people, professionals and workers who work in their manufacturing or service companies. These processes require strong anti-rada management, further development of innovation, new product development and joining in export. Selfless work of industrial workers of Andijan region is very important for solving the problems of light supply and development.

Despite these challenges, the industrial workers of Andijan region remained committed to supporting the war effort. Their selfless work and sacrifice played a crucial role in the eventual victory over the Axis powers. Their contributions are a testament to their courage, resilience, and dedication to their country.

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SEED AND PLANT ROT DISEASE OF SWEET AND HOT PEPPER IN UZBEKISTAN AND MEASURES TO CONTROL IT

Abstract. Uzbekistan is currently paying a special attention to the cultivation of sweet and hot peppers. One of the serious factors hindering the sustainable production of a high and quality crop is the seedling damping-off, a widespread pepper disease in the world. The main causal agents of this disease are pathogenic fungi *Fusarium oxysporum*, some other *Fusarium spp.*, *Rhizoctonia solani* and oomycetes from the genus *Pythium*. Infection of pepper seedlings by other, rarely occurring species of fungi was reported only from some countries or their regions. This review article provides detailed information about the geographical distribution of these pathogens, the symptoms and development of the disease caused by them, and their control.

Key words: *Capsicum pepper*, *disease*, *damping-off*, *Rhizoctonia solani*, *Fusarium oxysporum*, *Botrytis cinerea*, *control measures*.

Introduction. Sweet and hot pepper (capsicum) species belong to the genus *Capsicum L.* of the order and family of Ituzumdozadas. Their homeland is the subtropical climatic regions of Mexico, Central and South America. Detailed information about the types of peppers, their properties, and the capsaicin compound they synthesize can be found in the literature (Khasanov et al., 2021; Khasanov et al., 2022; Hasanov et al., 2022).

A number of abiotic and biotic diseases occur in pepper. Biotic or infectious diseases are caused by fungi, bacteria, phytoplasmas, viruses, nematodes. According to the literature data collected by the authors, more than 130 microorganisms, including 67 fungi, 11 oomycetes, 11 bacteria, 4 phytoplasmas, 32 viruses, and more than 6 nematode species, have been reported to cause disease in pepper species and varieties in different countries. Pepper crops can also be damaged by 6 species of parasitic plants. In this article, we provide information on fungal diseases of seed pod and grass rot in pepper.

Symptoms and development of the disease. The hairs of the roots infected with the above-mentioned pathogens rot, they become hairless, the grass absorbs water and nutrients from the soil sharply, the leaves, starting from the bottom, turn yellow or not, wither and dry. The seeds are very hardy for 3-4 weeks after emerging from the soil surface. In larger plants, the disease is usually less common, most often it appears in the form of root rot after planting seedlings in the field or greenhouse.

The damage of the disease depends on the stage of plant growth: the earlier the damage starts, the higher the damage. The disease makes crops sparse and

causes premature wilting of plants and reduced yields. There are no disease-resistant varieties.

Deep planting of seeds without fungicide treatment, excessive application of nitrogen fertilizers, thick lawns, poor air circulation among them, sudden changes in weather, high concentration of salts in the soil, high soil moisture, and dense grasses compressing the root neck cause the disease. strengthens its existence and development.

The structure of dicot lawns is shown in Figure 1. The main reasons for the occurrence of the disease are the unfavorable temperature, humidity and other soil conditions for the growth and development of pepper grasses, and the presence of large amounts of propagules of pathogenic fungi in the soil (Akhatov and dr., 2013).

Rhizoctonia solani s. l. The world of real fungi (Fungi, Mycota), belongs to the phylum Basidiomycota, class Agaricomycetes, order Cantharellales (or Ceratobasidiales), suborder Rhizoctonia of the family Certiobasidiaceae. The name of the genus means "killer of roots, killer of roots" in ancient Greek, and *R. solani* means "killer of roots of vines".

Species of the genus *Fusarium* cause rot and death of germinating seeds of pepper, hypocotyl and root rot of mature grasses, lodging and dieback of grasses, root, root neck or stem rot of larger seedlings and established plants, and wilt (wilt). Reddish-brown, dry sores develop on the hypocotyls of infected lawns. Fungi that damage pepper roots and stems also cause its grass to lay down and die.

Species of the genus *Pythium*. *Pythium* species live as saprophytes in the soil, they are preserved for a long time in plant residues with their oospores, and they can be preserved in the soil with mycelium. Grasses are damaged when the soil moisture is high and the temperature is low (between 10 and 20°C). The optimum temperature for *Pythium ultimum* is 10-15°C, damage is reduced at temperatures above 15°C, lawns are not damaged at 22-24°C. *P. aphanidermatum* and *P. myriotylum* are distinguished from other *Pythium* species by their heat-loving nature, and the comfortable temperature for them is 25-30°C. *P. aphanidermatum* can also damage plants at 13-18°C, but the ideal optimum for this is 30-35°C. *Pythium* species are spread in the soil by their sporangia, which produce hundreds of zoospores in the presence of moisture and favorable temperature. Rooted zoospores turn into cysts, from which infectious hyphae pierce the root tissue and grow to form new hyphae, which digest and feed on the tissue with their hydrolytic enzymes. In rotten roots, these pathogens form oospores and chlamydospores, with the help of which they overwinter and are stored for a long time in unfavorable conditions.

***Botrytis cinerea*.** *B. cinerea* is most common in vining crops, especially in greenhouses, it damages sweet and hot peppers, eggplant and tomato seedlings in open and closed soil.

Infected seeds do not grow in the soil, become soft, mushy, turn brown, do not swell, and rot. Infected grass and seedling tissue develop darker, watery lesions that grow and die. The number of seedlings is reduced.

In the field, *Botrytis cinerea* is maintained by its mycelia and sclerotia in crop and weed residues. Sclerotia are stored freely in soil and between seeds.

Gray mold caused by *B. cinerea* is common in tomatoes and some other crops in Uzbekistan, it causes great damage to tomatoes in greenhouses, it can also damage pepper, but the reports that it is found in sweet pepper (Hasanov et al., 2009) are not confirmed by documents about the identification of the fungus.

Control measures against seed and grass rot. It is difficult to control the disease of pepper grass rot and dieback, because the fungi that cause this disease live in the soil, damage many types of crops and weeds, feed as saprophytes on their residues and other organic substrates, and persist in the soil for a long time with their chlamydospores or sclerotia or oospores.

It is important to apply preventive measures before planting, because the plants cannot be cured after the disease has appeared. If the disease still appears, dig up the first withered and wilted plants together with the soil under them and burn them outside the greenhouses and fields (it is strictly forbidden to put the withered plants in the soil or compost), do not let the plants get into a state of stress, water them in time, do not overwater and overwater, organic fertilizer, compost, and balanced mineral fertilizers, not to increase the standards of nitrogen fertilizers, and to use phosphorus and especially potash fertilizers (Akhatov and dr., 2013). Installing a drip irrigation system in greenhouses and fields will reduce the incidence of turf and root diseases. In this case, so that the fertilizer salts do not injure the roots, it is necessary to install the water pipes at a distance from the pepper roots. Increasing the rate of mineral fertilizers later increases the damage of their salts to the roots (Akhatov and dr., 2013).

Gray rot is common in greenhouses. The disease is easily recognized due to the formation of fluffy, gray mold on the affected stems and inflorescences. In cases where the disease is widespread, it has been recommended to temporarily suspend foliar feeding of crops and the use of evaporative cooling systems in buildings (Akhatov, 2011).

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EQUIPPING THE SCIENCE AND NATURE CENTER AND ORGANIZING GAME-BASED EDUCATIONAL ACTIVITIES

Annotation. Preschoolers can see the events that take place and the events that take place init, and the love of nature. Special emphasis was placed on the role of nature in the upbringing of children and the need to explain its rational use.

Keywords: nature, man, role, Central Asia, thinker, conservation, thought, history, introduction, method, science.

Nature includes the organic (living) and inorganic (non-living) world a whole world of nature - the organic and inorganic worlds, plant and animal worlds surrounding humanity with its extremely diverse forms and components. Humanity is a creature that emerged from it. Therefore, one essence of it is natural (biological), and the other essence is social. The concept of nature is used in more broad and partly narrow senses. In a broad sense, nature is the whole objective existence, real reality, the universe in various forms. In a narrow sense, nature is a science, mainly natural sciences are the object of study of natural science. Two levels of nature are distinguished in the literature: primary and secondary. The first and second of these are natural resources created with the participation of mankind - soil, water bodies and canals, groves, orchards and orchards, settlements - cities, villages, etc.

The science that studies the way of life of organisms in relation to each other and the environment surrounding them is called ecology.

Ecology (Greek "oikos" - living, home, space, "logos" - teaching) -in general, it means the habitat, space of organisms.

Such as populations, species, biocenoses, biogeocenoses and biosphere concepts are the source of ecological science. Therefore, general ecology is studied in four sections: autecology, populations ecology, synecology and biosphere.

1. Autecology (—autos is a Greek word meaning “self means) the interaction of some species with the environment in which they live, learns how they are more and organically adapted to the environment.

2. Ecology of populations (—population is a French word, —aholi degan ma‘noni bildiradi) populyatsiyalar tuzilmasi va dinamikasini, ma‘lum bir sharoitda turli organizmlar sonining o‘zgarish (biomassa dinamikasi) sabablarini checks.

3. Synecology (syn is a Greek word that means unity means) the structure and properties of biogeocenoses, some plants and animals studies the interaction of species and their relationship with the external environment.

4. The development of the study of ecosystems and the doctrine of the biosphere it is the nature that exists in a pure natural state, free of humanity, in an exceptional way; An ecological factor is a component of the environment that directly affects living organisms.

However, it is natural for people to produce material goods conditions are required. The part of nature that is closely connected with society and has a certain influence on its development is called the environment. The top layer of the earth and underground resources, climate and other such things make up the environment. The environment is a permanent, eternal and necessary condition for human production of material goods. In particular, being in the embrace of nature refreshes a person's spirit and increases his work capacity and creative activity. But "... human influence on nature and its resources is wrong due to its use, the natural environment (air, water, soil, etc.) is polluted, began to have a negative impact on the economy and, especially, on human health."

According to the researcher A.R. Meliboyev, between nature and society directions in which environmental problems appear in the field of relations identification is an extremely important pedagogical and psychological problem.

Such relations are aimed at rational use of natural resources It arises when there is a need to evaluate methods:

- the nature of the relationship of humanity to nature (non-targeted, personal interest, indifference to the environment, to a specific goal oriented, consumerist, careful, active creative);

- there is a need to assess the goals and methods of using natural resources

It happens only when it happens. The need for such assessment is important for the natural factor, both for man and society it is formed from the fact that it is a human value. The well-being and well-being of society members directly depends on the state of the environment.

It is known that nature is a priceless value for mankind. Nature, birth, it is a place of living, growth and activity. Man lives with nature, grows, develops. Humanity not only affects nature, but also directly depends on it. Factors related to nature also determine technical, economic and ecological relations. This situation requires coordination of people's relations with nature and environment. Instilling love in children by introducing them to the animal world from an early age, protecting living and inanimate nature is a problem that needs to be researched as one of the first elements of ecological education. In particular, this direction has not been specially studied, and the fact that the state and society's need for a well-rounded person has increased is an indication that it is urgent. By introducing preschool children to nature, ethetic, mental, moral education and physical development are important at all times considered as one of the urgent problems. Acquaintance with nature is a process that brings a person to spiritual

maturity. protects him from all negative mistakes. As a result, his moral beauty increases. That's it For this reason, the process of education through introduction to nature has a long history. In this regard, the peoples of Central Asia have a rich tradition in the field of nature protection. The doctrines that it is the duty of man to preserve and protect nature were expressed in the teachings of the great scientists who grew up in Turoni Turkestan. Scholars have written down rich information about the use of nature, events and incidents related to them in their time. In their works, they explained the need to cultivate love for nature and high morals. In the Middle Ages, the concept of nature was almost not developed in European countries. Western. At a time when European science was depressed, Central Asian scientists developed it. In the Middle Ages, scientists of Central Asia spoke valuable thoughts about nature, its balance, and respect for nature, when the science of ecology did not exist at all. The great scholar, encyclopedic scientist Muhammad al-Khorazmi (783-847) wrote in one of his treatises: "Know that if the eyes of the world are filled with tears, it will be filled with sorrow." People, don't take your love away from the river." Therefore, since nature and its products are for humans, it should be used wisely and fairly. Only by improving our relationship with the earth, water, and animals can we preserve our mother nature. It is full of animals. It is possible to restore the forests, the place of birds and animals, orchards, green lakes and meadows. Only man is capable of these works. Because, as the poet said: "The owner of the world is himself, that is, man, that is, nature and he can preserve it." Muhammad Musa al-Khorazmi, Abu Nasr Farabi, Abu Rayhan Beruni, Abu Ali Ibn Sina and others among the scientists who lived and worked in Central Asia in the Middle Ages made a great contribution to the development of natural science.

They are still environmental science nature and its balance, plants and animals before birth who spoke valuable thoughts about the world, respect for nature. That's it One of our greatest scholars, Muhammad Musa al-Khorazmi, wrote his " "Booksurat al-arz" was written by Abu Nasr Al-Farabi (870-810) "al-hajmi wa al-mikdor", "Kitab "almabadi al-insan" works by Abu Rayhan Beruni "Saydana", "Minerology" who wrote The nature in our Hadith Sharif is to protect nature carefully, increase it, and take care of it getting acquainted with the clauses related to doing. it is analyzed in depth.

Science, enlightenment and culture are eternal in the human world He was a torch and illuminated... In the layers of history unknown to us our hidden values, unique manuscripts, ancient Our monuments are deeply explored by our research scientists with the honor of independence is being studied. History is the path of perfection and development of a person. Ignorance of music is not self-awareness. Names of great people only people who understand themselves He always remembers those who are pure in spirit.

Tell us about the butterfly. Educate the children by asking questions such as tell us how to catch the cubes falling from the truck. Where do materials come from? Collecting materials for use at the nature center is an ongoing process that

involves parents and the community. Waste materials such as plastic trays, bowls with handles, empty lemonade bottles of different sizes, various bottles, cardboard pieces, tree parts, and gauze scraps are all useful materials for technical creativity.

Take a walk around or around the nursery to see where the rainwater goes. Check out your local creek. There is no doubt that the nature center will be enriched by the creativity of the educator. In the process of introducing children of small groups to nature, the teacher solves a number of tasks: forms the first ideas about some objects and phenomena of inanimate nature, the most common bright flowering plants, learns to distinguish the features of appearance it will animals, some parts of the body, movement characteristics, sounds. The teacher teaches children the first simple labor skills: watering plants, wiping leaves with a wet cloth, feeding fish, birds in the corner of nature. On this basis, it educates to treat plants and animals with care, awakens the feeling of joyful surprise, the first aesthetic experiences in children.

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APPLICATIONS OF TOPONYMIC TERMS IN GEOGRAPHIC RESEARCH (ON THE EXAMPLE OF OIKONYMIC TERMS)

Annotation. This article provides information about the oikonym, which is considered the most common type of toponyms. Also, the internal classification of oikonoms is analyzed data on the city, settlement, street, roads and other parts.

Keywords: toponym, oikonym, urbonym, comonym, hodonym.

Introduction. Research and any communication of new scientific knowledge require precise, established, and correct terminology. It is the terminology itself that is one of the objectives of both onomastic and linguistic research, as it enables knowledge to be disseminated more broadly. Each scientific discipline's development of its own terminology depends on how the science develops, as well as on conceptual knowledge and the knowledge of the object. On the other hand, there are convergent efforts evident for reasons of clarity, in order to satisfy the need to unify and approximate terms in a non-unified practice, when, for example, one of two terms for the same phenomenon or object is not recommended for usage due to certain criteria for creating the terminology. International terms are necessary for scientific communication internationally, while domestic terms are predominantly intended for domestic audience and for articles popularising science.

Main part. The term toponymy comes from Ancient Greek: τόπος, τόπος – “place” and ὄνομα, onoma – “name”. Toponymy, taxonomic study of place-names, based on etymological, historical, and geographical information. A place-name is a word or words used to indicate, denote, or identify a geographic locality such as a town, river, or mountain. Toponymy helps to animate the features of the historical past of peoples, set the boundaries of their location, describe the geography of cultural and economic centers, trade routes. Place names, called toponyms in scientific language, are created by the people in a particular language and provide information about the social life of that time, consequently, are the property of the people. Folk property is sacred and inviolable.

In fact, toponyms are of great importance in the lives of people. They accompany a person from birth to the last days of his life and live after them.

Toponyms contain valuable historical and cultural information about the time of assimilation of territories by certain ethnic groups, natural-geographical features, the reasons for the appearance of names and many others. Knowing the sources of place names are important for the new generations in order to possess their cultural elements, to understand and perceive their living space.

An oikonym (from Greek: οἶκος, oikos, “house, dwelling” and ὄνομα, ónuma, “name”) is a specific type of toponym that designates a proper name of a house or any other residential building, and in the broader sense, the term also refers to the proper name of any inhabited settlement, like village, town or city. The oikonoms consist of the names of settlements as city, town, village, street. Toponymist, geographer scientist S.K. Karaev noting that the oikonym are the most variable type of toponym, writes as follows: “Features of the nature of the country, historical, social and political events that have occurred in the life of society for centuries-the names of the inhabitants professions, the name of the person who first mastered the settlement or founded it, the name of the seed-tribe-ethnonym is reflected in the names”. Settlements are a socio-economic category. Therefore, the study of urban-rural composition, location, laws of naming in close connection with the concrete natural-historical and political conditions is of great scientific and practical importance.

Cities, at least as much as rural areas, are places where social memory processes quickly. Just as villages and small settlements located in rural areas are texts of rural memory related to these areas with their toponymic features, neighborhood, boulevard, street and street names in terms of urban toponymy are also important data sources for revealing the geography of social memory in cities. Toponymic nomenclature in cities gives information about the way of thinking that is effective in city memory and the use of sovereign power, while at the same time bearing the traces of historical processes, geographical factors, cultural and political reasons that the city has undergone.

Oikonoms in turn have the following structural structure, astionym, polisonym comonym, urbonym, hodonym. Below we will provide information about this.

Oikonoms (names of settlements) are divided into astionyms (names of urban settlements) and comonyms (names of rural settlements); the part of toponymy, dealing with oikonoms is called oikonomy. Names of local objects (blocks, streets, squares, boulevards, alleys, promenades, avenues, memorial monuments, theatres, museums, cinemas, cafes, hotels, shops, private houses and other small sites within settlements) are united under the term urbanonyms; the sphere, dealing with urbanonyms is called urbanonymy.

Astionyms (from Ancient Greek: ἄστυ, hastū) proper names of towns and cities. Polisonym (from Greek: “polis” – city) is the name of any city. Anoikonym is the name given to a man-made, uninhabited place. Comonyms (from Ancient Greek: κώμη, kōmē) proper names of villages. Comonyms – own name of any

rural settlement also makes a significant and rather interesting layer lexicon of any language.

Urbanonyms (from Middle French *urbain* (“belonging to a city, urban; courteous, refined, urbane”) (modern French *urbain*), or from its etymon Latin *urbānus* (“of or belonging to a city, urban; of manners or style: like those of city dwellers: cultivated, polished, refined, sophisticated”) + English *-an* (suffix meaning “of or pertaining to” forming adjectives) names of urban areas: streets, parks, also organizations, localities typically in cities. Urbanonymy is the most mobile and changing layer of toponymic vocabulary, which is a mirror of national culture, containing information about traditions and foundations characterizing a particular linguistic community. The semantics of urbanonyms reflect the value-based cultural representations of ethnosociums, the historical change of cultural and value stereotypes of society.

Hodonyms or odonyms – a street name is an identifying name given to a street or road. In toponymic terminology, names of streets and roads are referred to as odonyms or hodonyms (from Ancient Greek: *ὁδός* *hodós* “road”, and *ὄνομα* *ónoma* “name”, the Doric and Aeolic form of *ὄνομα* *ónoma* “name”). The street name usually forms part of the address. Buildings are often given numbers along the street to further help identify them. Odonymy is the study of road names. Hodonyms, as the most in-demand type of urban space, perform the function of spatial, temporal and cultural orientation of a person, since they serve as markers of space, they at the same time reflect the historical stages of development of a particular city, as well as ideological dominants inherent in a certain period or type of culture.

Conclusion. In general, in geographical names, that is, there are a lot of similar aspects in the composition of oikonoms. These should be made the same, especially the words *urbanonym* and *urbanonym*. We think that everywhere should be applied equally at all times.

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QISHLOQ XO‘JALIGI YERLARI VA EKINLARINI MONITORING QILISH TIZIMINI RAQAMLASHTIRISH HAMDA TAKOMILLASHTIRISH

Annotatsiya. Ushbu maqolada qishloq xo‘jaligiga mo‘ljallangan yerlar va ekin maydonlari monitoringi mulkchilik shakli, huquqiy rejimi, xususiyati va foydalanish muddatlaridan qati nazar, yer fondining barcha toifalaridagi qishloq xo‘jaligiga mo‘ljallangan yerlarda amalga oshirilishi hamda ular monitoring obyekti hisoblanishi, qishloq xo‘jaligiga mo‘ljallangan yerlar va ekin maydonlari monitoringi O‘zbekiston Respublikasi Milliy geografik axborot tizimidagi davlat yer kadastrining qishloq xo‘jaligiga mo‘ljallangan yerlar bo‘yicha yer turlari, maydoni, yer egalari, yerdan foydalanuvchilar va ijarachilar to‘g‘risidagi ma‘lumotlar asosida amalga oshirilishi, qishloq xo‘jaligiga mo‘ljallangan yerlar va ekin maydonlari monitoringi ushbu yerlarning tuproq, geobotanika va boshqa tadqiqotlar materiallaridan foydalangan holda, qishloq xo‘jaligiga mo‘ljallangan yerlar va ekinlarni monitoring qilish orqali amalga oshirilishi haqida ma‘lumotlar keltirilgan.

Kalit so‘zlar: Qishloq xo‘jaligi, ekin yerlar, yer monitoringi, raqamlashtirish, masofadan zondlash, davriy monitoring, joriy monitoring, tezkor monitoring.

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DIGITALIZATION AND IMPROVEMENT OF AGRICULTURAL LAND AND CROPS MONITORING SYSTEM

Abstract. In this article, monitoring of agricultural land and arable land is carried out on all categories of the land fund, regardless of the form of ownership, legal regime, characteristics and terms of use, and they are considered the object of monitoring, agriculture monitoring of land and cultivated areas for agriculture. Information on land types, area, land owners, land users and tenants of the state land cadastre of the state land cadastre in the National Geographic Information System of the Republic of Uzbekistan. based on the data, monitoring of agricultural lands and crops is provided, using soil, geobotany and other research materials of these lands, monitoring of agricultural lands and crops.

Keywords: Agriculture, arable land, land monitoring, digitization, remote sensing, periodic monitoring, current monitoring, rapid monitoring.

Hozirgi kunda dunyoda aholi soni yildan yilga ko‘payishi va aholini oziq-ovqat mahsulotlariga bo‘lgan talabi ortishi kuzatilmoqada. Oziq-ovqat mahsulotlarini aksariyat qismi qishloq xo‘jaligi yerlaridan olinishi hech kimga sir emas. Bu esa yer resurslaridan samarali foydalanishni hamda doimiy nazorat qilishni taqozo etmoqda. Ma‘lumki, yer atrof-muhitning muhim tarkibi sifatida o‘zining kenglik, relyef, iqlim, tuproq qatlami, o‘simliklari, yer osti boyliklari, suvlari bilan tavsiflanganligi holda qishloq xo‘jaligining asosiy ishlab chiqarish vositasi, shuningdek xalq xo‘jaligining barcha tarmoqlarini joylashtirishning kenglik asosi bo‘lganligi sababliyer maydonlarini o‘rganish masalalari yagona davlat yondashuvini talab qiladi. Bu esa o‘z navbatida yer maydonlarini tizimli hamda majmualar tarzida kuzatuvlar asosida nazoratni amalga oshirish zaruratini belgilaydi. Bunday tizimli nazoratni amalga oshirish mexanizmini yer monitoringi deb ta‘kidlash mubolag‘a bo‘lmaydi.

Bugungi kunda sohani isloh qilishda qishloq xo‘jaligini raqamlashtirish, qishloq xo‘jaligi subyektlari o‘rtasidagi o‘zaro munosabatlarda bozor tamoyillarini joriy etish, zamonaviy resurs tejovchi va intensiv agrotexnologiyalarni joriy etishga katta e‘tibor qaratilgan. Barcha sohalar qatori agrar sohani rivojlantirish ham nafaqat xalqimiz turmush sharoitini yaxshilash uchun xizmat qiladi, qolaversa eksport salohiyatimizni ham yanada oshib borishiga o‘z ta‘sirini ko‘rsatmay qolmaydi. Qishloq xo‘jaligi yerlaridan samarali va oqilona foydalanishda yer monitoring muhim ahamiyatga ega hisoblanadi.

Mamlakatimizda yer monitoringini yuritish bir nechta huquqiy va me‘yoriy hujjatlar asosida olib boriladi. Xususan 2022-yil 14-yanvardagi Vazirlar Mahkamasining 22-sonli qarori “Qishloq xo‘jaligiga mo‘ljallangan yerlarda monitoring ishlarini amalga oshirish, yerlarni muhofaza qilish va yer tuzish faoliyatini tartibga soluvchi normativ-huquqiy hujjatlarni tasdiqlash to‘g‘risida”gi, qaroriga asosan:

qishloq xo‘jaligi ekinlari monitoringi — ekinlarni joylashtirish ko‘rsatkichlari asosida qishloq xo‘jaligi ekinlari ekilgan maydonlarni o‘lchash,

shuningdek, ekin maydonlarida o'tkaziladigan erga ishlov berish bilan bog'liq agrotexnik tadbirlarning o'z muddatlarida bajarilishi yuzasidan kuzatuv olib borish;

qishloq xo'jaligiga mo'ljallangan yerlar monitoringi — mulkchilik shaklidan qat'i nazar, yer fondining barcha toifalaridagi qishloq xo'jaligiga mo'ljallangan yerlarda, jumladan, haydaladigan ekin yerlari, ko'p yillik daraxtzorlar, bo'z yerlar, pichanzor va yaylovlar, shuningdek, ularga xizmat qiluvchi boshqa yer turlarining (ariq, zovur, yo'l va boshqalar) holati bo'yicha kuzatuv tizimi (fuqarolarga yakka tartibda uy-joy qurish va uy-joyni obodonlashtirish uchun berilgan yer uchastkalari bundan mustasno);

Quyidagilar qishloq xo'jaligiga mo'ljallangan yerlar va ekin maydonlari monitoringining asosiy vazifalari hisoblanadi:

❖ qishloq xo'jaligiga mo'ljallangan yerlarning turlari bo'yicha ularning maydoni va ushbu yerlardan foydalanish holati yuzasidan monitoring tizimini tashkil etish va amalga oshirish;

❖ qishloq xo'jaligiga mo'ljallangan yerlardan belgilangan maqsadlarda foydalanilishini ta'minlash;

❖ yer to'g'risidagi qonunchilik hujjatlari talablarining buzilish holatlarining oldini olish va aniqlangan holatlar yuzasidan tegishli choralar ko'rish maqsadida qishloq xo'jaligiga mo'ljallangan yerlarni muhofaza qilish bo'yicha vakolatli idoralarni axborot bilan ta'minlash.

Qishloq xo'jaligiga mo'ljallangan yerlar va ekin maydonlarida monitoring ishlari davriyligi bo'yicha quyidagicha amalga oshiriladi:

➤ davriy monitoring — qishloq xo'jaligiga mo'ljallangan yerlarni turlari va maydoni bo'yicha har besh yilda xatlovdan o'tkazib borish;

➤ joriy monitoring — qishloq xo'jaligiga mo'ljallangan yerlardan foydalanish holati yuzasidan har yili monitoringni amalga oshirish;

➤ tezkor monitoring — qishloq xo'jaligi ekinlarining ekilishi va ularda erga ishlov berish bilan bog'liq agrotexnik tadbirlarning o'tkazilishi yuzasidan kunlik monitoringni amalga oshirish.

Bundan tashqari Prezidentning «Qishloq xo'jaligi yerlari va ekinlarini monitoring qilish tizimini tubdan takomillashtirish chora-tadbirlari to'g'risida»gi qarori loyihasi normativ-huquqiy hujjatlar loyihalari muhokamasi portalida e'lon qilindi. Unga muvofiq:

Qishloq xo'jaligiga mo'ljallangan yerlar va ekinlarni monitoring qilish yangi tizimini joriy etish, qishloq xo'jaligi yerlari talon-toroj qilinishi oldini olish, yer tuzish, masofadan zondlash va raqamlashtirish ishlarini yanada jadallashtirish, moddiy-texnika bazani mustahkamlash, malakali kadrlar bilan ta'minlash, xizmat ko'rsatish tizimini takomillashtirish maqsad qilingan.

Qishloq xo'jaligi vazirligida qishloq xo'jaligi yerlari to'g'risidagi geoportal tizimi tashkil etilgan va quyidagilar ushbu portalda tizimli yuritilishi ta'minlanadi:

• qishloq xo'jaligi yerlari va ulardan foydalanuvchilar konturlar kesimida ekinlarni joylashtirish ko'rsatkichlari;

• qishloq xo'jaligi ekinlari ekilishi yuzasidan monitoring ko'rsatkichlari;

- qishloq xo‘jaligi yerlari monitoringi natijasida aniqlangan yer qonunbuzilish holatlari to‘g‘risidagi ma‘lumotlar;

- qishloq xo‘jaligi yerlari unumdorlik xossa-xususiyatlari (ball boniteti) va normativ qiymati ko‘rsatkichlari.

Hozirgi vaqtda qishloq xo‘jaligida tuproq va o‘simliklar qoplaminig holatini kuzatish, baholash va bashorat qilish, zarur holatlarda yong‘in markazlarini aniqlash uchun sun‘iy yo‘ldosh kuzatuvlarining ko‘p turlari qo‘llanilmoqda. Shuningdek zararkunandalarga qarshi kurashda ham masofadan turib zondlash ma‘lumotlaridan foydalaniladi.

Sun‘iy yo‘ldosh monitoring qishloq xo‘jaligi ekinlari holatini, qishloq xo‘jaligi ekinlarining prognozi va qishloq xo‘jaligining turli sohalaridagi boshqa vazifalarini tezkor nazorat qilishni ta‘minlaydi. Agrosanoat majmuasini onlayn rejimida rejalashtirish, monitoring qilish va boshqarish bo‘yicha sun‘iy yo‘ldosh tasvirlarini avtomatlashtirilgan qo‘llab-quvvatlashni amalga oshirish uchun agrosanoat majmuasining qishloq xo‘jaligi yerlarini masofadan kuzatib borish tizimini yaratish bo‘yicha loyihalar amalga oshirilib kelinmoqda.

Yerlarning davlat monitoringini takomillashtirish sohasidagi asosiy vazifalardan biri bu barcha qishloq xo‘jaligi yerlarining samarali davlat monitoringi tizimini yaratish va yagona ma‘lumotlar banki shaklida xususan Qishloq xo‘jaligi vazirligi bazasida davlat axborot resurslarini shakllantirish hisoblanadi. Bu esa aniq ma‘lumotlarni jamlashga imkon beradi, buning asosida davlat tomonidan qo‘llab-quvvatlashni samarali rejalashtirish, shuningdek mablag‘larning maqsadli ishlatilishini nazorat qilish imkonini beradi. Qishloq xo‘jaligi yerlari monitoringini rivojlantirish va takomillashtirish xususiyatlarini o‘rganish shuni ko‘rsatmoqdaki, hozirgi vaqtda monitoringning samarali ishlashini ta‘minlash uchun yangi vositalar va texnologiyalar joriy qilinmoqda, shu jumladan masofaviy zondlash eng xolis va tezkor bir vaqtning o‘zida olingan tasvirlar asosida ma‘lumotlarni kuzatish, yig‘ish va qayta ishlash tizimlari, yerdan foydalanishni, ekinlarning joylashishi va hosilning potensial hajmini taxmin qilish imkonini beradigan dastur hisoblanadi.

Yerning su‘niy yo‘ldosh orqali kuzatilishi tuproqlarning holatini, unumdorligini, qishloq xo‘jaligi mahsulotlarini ishlab chiqarishni bashorat qilish va boshqarish uchun asos bo‘lib, jamiyat va umuman biosferaning ijtimoiy-iqtisodiy munosabatlarining barqarorligini ta‘minlashga yordam beradi.

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CONNECTING THE PUMPS TO THE PLC CONTROLLER AND DEVELOPING ITS SOFTWARE

Annotatsiya. Ushbu maqolada meliorativ yerlarda sug‘orishda artesian suvlarini ko‘tarish uchun uch fazali nasoslardan foydalanish hamda ularni masofadan turib boshqarishda PLC kontrollerlarini qo‘llash nazarda tutilgan. PLC kontrollerlariga nasosning ulanish sxemasi va uni boshqarish uchun dasturiy ta‘minot tizimini ishlab chiqishga qaratilgan.

Kalit so‘zlar: PLC kontroller, Daryolar, Orol dengizi, LOGO, Tadqiqot, Artezian quduqlar.

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CONNECTING THE PUMPS TO THE PLC CONTROLLER AND DEVELOPING ITS SOFTWARE

Abstract. This article envisages the use of three-phase pumps for raising artesian water in the irrigation of reclamation lands and the use of PLC controllers for their remote control. It is aimed at developing a pump connection scheme to PLC controllers and a software system for its control.

Key words: PLC controller, Rivers, Aral Sea, LOGO, Research, Artesian wells.

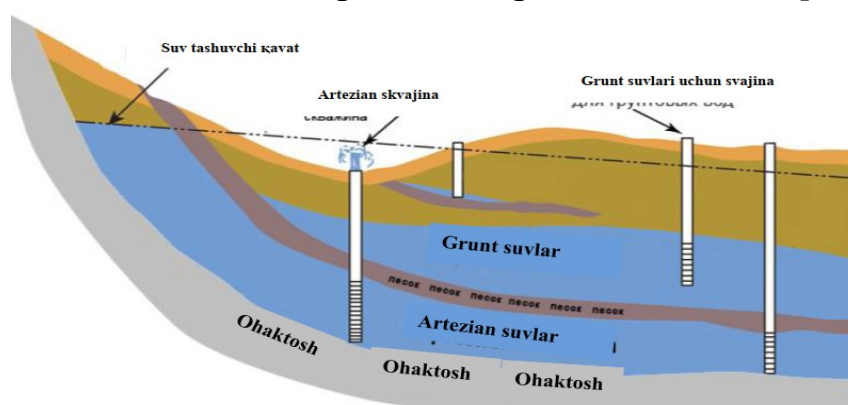
Enter. In our young independent country, which is implementing consistent and comprehensive reforms in all sectors of the national economy, great attention is being paid to the issues of providing water to the population and production, as well as the rational use of existing water resources. In addition, great work is being done to provide the population, especially rural residents, with clean drinking water [1, 2, 6]. Naturally, water supply systems are expanding,

technically improving, and at the same time becoming more complex. [3, 4, 7, 8, 9,].

Groundwater can be extracted using the following structures (Fig. 1):

1. bore wells - artesian wells;
2. mine wells;
3. horizontal water intake facilities;
4. radiant water intake structures;
5. captage (spring water collection) facilities.

Depending on the type of water sources (spring, seep and artesian water sources), water is released on the ground using different devices [1, 2, 5].



**Figure 1. Location schemes of underground water
Material and methods**

In preparation for studying this method, a number of literature, sources [6] were studied and analyzed, the compatibility of various similar materials was checked. However, publications and research results showed that there is a lack of a convenient method of three-phase electric motor in search sources. On the one hand, the lack of a theoretical basis for the full software support of this method makes it difficult for us to conduct research. The process of controlling a three-phase electric motor is presented in the PLC software system and is written using the ladder programming language.

Characteristics

Software language Ladder

Project development environment GX 3

Processor module DMK series FX3U

Program memory block STEPS RAM

Program memory 64 thousand steps

buffer battery Yes

Cycle time LD 65 ns

MOV cycle time is 642 ns

The number of RS-422 ports is 1

The number of discrete input channels is 32

Discrete input circuit type Source, consumer

The number of discrete output channels is 32
 Discrete output type relay contact
 Output load constant current / voltage 2A / 30V
 Output load AC/voltage 2A / 250V

The PLC programming language includes the following general scheme. To carry out the research, we use CADe SIMU schematic assembly program. Through this program, the rotation speed of the three-phase motor is adjusted and stabilized. Ladder diagrams are special schemes widely used to document industrial control logic systems. If we were to make a simple ladder diagram showing a pump controlled by SB1 and SB2, it would look like this:

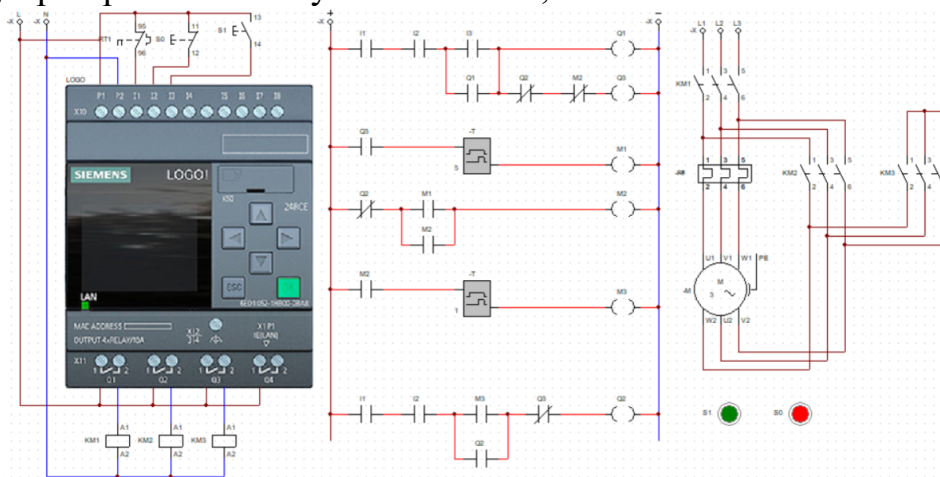
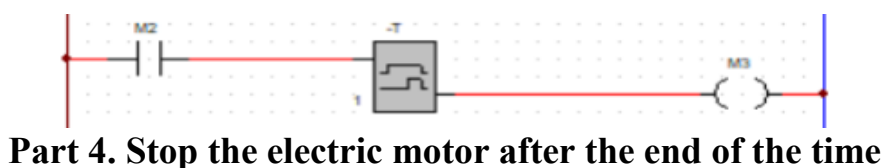
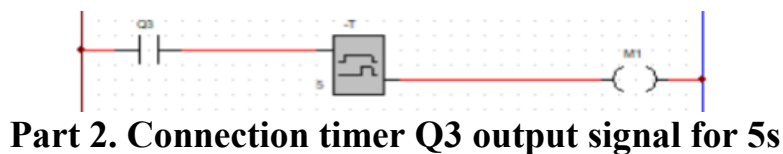
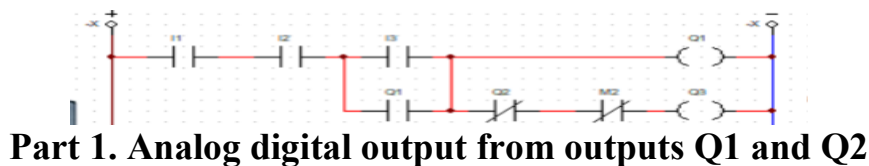
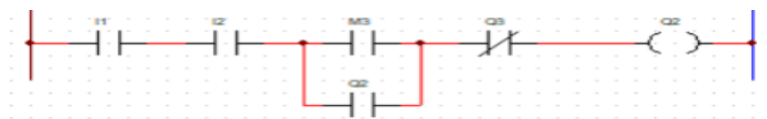


Figure 2. CADe SIMU software and controller programming in ladder language.

We write a ladder program for the controller for the pump:





Part 5. Adjusting the Q2 output signal

Results and discussion

The result of the study shows that: we identify the pump starter by the configuration of the internal logo. Configures outputs q1, q2 and q3 in logo programming (Figure 3).

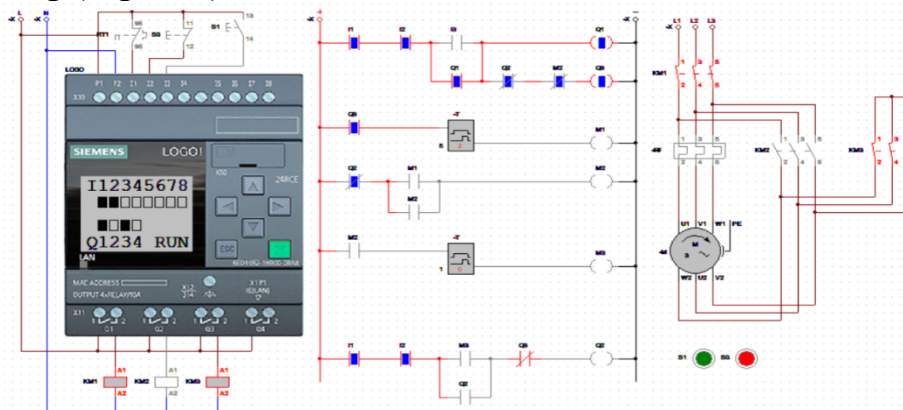


Figure 3. CADe SIMU program and the result of the program in ladder language to the controller.

The research work is devoted to the consideration of the organization of the human-machine interface in the automation of pump units. To implement the process, the most popular and highly efficient SIEMENS LOGO programmable logic controller was selected. Through this, the automation of the pump unit control process was implemented.

Summary

As a result of the research, in order to increase the efficiency of the automated process, it was required to install a human-machine interface in this system, so the necessary parameters were studied. The characteristics and parameters of all technical equipment related to the process were presented in full in the research work. As a result, the effectiveness of the developed programs and processes was proven. The results of the research showed that the automation of pump units and the organization of the human-machine interface can be a solution to issues such as the efficiency of the process, the transition from human labor to the machine system, and the establishment of intelligent water management. For this reason, the application of research work guarantees good results for us.

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THE IMPORTANCE OF IMPROVING THE PROFESSIONAL SKILLS OF EDUCATORS IN THE TEACHING OF FOREIGN LANGUAGES

Annotation. Resistance to strong competition, which in the conditions of market relations occupies a priority place in the labor market, requires each specialist to possess professional competence, consistently improve it. So what is competence? Here we will talk about these and related ideas.

Keywords: Competence, social competence, special competence, types of competencies.

The concept of "competence" has entered the field of education as a result of scientific research by psychologists. From a psychological point of view, competence refers to "unconventional situations, how a specialist behaves in unexpected cases, enters into communication, takes a new course in interaction with opponents, takes on ambiguous tasks, uses information full of contradictions, owns a plan of action in consistently developing and complex processes.

Professional competence implies not the acquisition of special knowledge, qualifications by a specialist, but the assimilation of integrative knowledge and actions in each independent direction. Competence also assumes the constant enrichment of specialist knowledge, the study of new information, the ability to understand important social requirements, the search for new information, their processing and application in their activities.

Below is a brief overview of the essence of reflective qualities on the basis of professional competence.

1. Social competence-the ability to show activity in social relations, the possession of skills, the ability to enter into communication with subjects in professional activities.

2. Special competence-preparation for the organization of professional-pedagogical activities, rational solution of professional-pedagogical tasks, real assessment of the results of their activities, which in itself represent the following content:

-psychological competence – able to create a healthy psychological environment in the pedagogical process, organize positive communication with students and other participants in the educational process, be able to timely understand and eliminate various negative psychological conflicts;

-methodological competence – methodically rational organization of the pedagogical process, correct definition of forms of educational or educational activity, ability to choose methods and tools for their intended purpose, effective application of methods, successful application of tools;

- informational competence – the search, collection, sorting, processing and use of necessary, important, necessary, useful information in the information environment, purposefully, appropriately, efficiently;

- creative competence-a critical and creative approach to pedagogical activity, being able to demonstrate that it has the skills of creativity;

- innovative competence-promotion of new ideas on improving the pedagogical process, improving the quality of education, improving the effectiveness of the educational process, successfully applying them to practice;

- communicative competence-being able to communicate sincerely with all participants in the educational process, including students, to be able to listen to them, to have a positive impact on them.

- technological competence-mastering advanced technologies that enrich professional and pedagogical BKM, being able to use modern tools, techniques and technologies.

In the work of scientists, various aspects and components have been isolated and studied, which make it possible to study competence more broadly and thoroughly from the pedagogical point of view.

S.E. The following definitions of competence are provided by Shishov:

-general competence based on knowledge, experience, values and inclinations acquired due to learning;

-the ability to establish a connection between knowledge and situations, to find a solution that suits the problem (to say that competence is permissible only if it is manifested in a single situation, unrepresented competence is a big statement, even if it remains hidden possibilities, and not competence).

L.M. Dolgova, P.V. According to Simonov and others, competence means being able to act based on acquired knowledge. In contrast to “knowledge, skills, and competencies”, which provide for pattern-like actions, competence implies the experience of independent activity based on universal knowledge. "Competence is the presence of knowledge and skills in the form of social practice, which is manifested in cases where the results of the educational process are subject to socio – cultural requirements and requirements by society," notes L.M. Dolgova.

V.V. Bashev argues that competencies are the individual ability of a person, which is manifested in the street acquisition of this ability to other conditions at a time when conditions change. Areas of application determine their specificity and accuracy (mathematical, linguistic, political and other competencies). A person who acts effectively in the field of community learning should be able to: that is, a person with competencies:

1) be able to research the situation in which he fell;

2) be able to establish communication with other people;

3) can make decisions;

4) be able to organize individual and collective actions to implement the decisions made;

5) the ability to master new methods of activity.

Thus, competency can be interpreted as the result of competency, readiness, possession of opportunity and, at the same time, a gloomy action. In other words, competence is a category of activity that is manifested in the process of professional, social and other activities of the subject aimed at performing the tasks set.

Competence means a certain degree of formation of certain qualifications and professional experiences of the individual in relation to their interaction with the objects and subjects around them, necessary for the successful functioning of the individual in society as a whole and in the professional sphere in particular.

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UNVEILING THE STAGES AND PERSPECTIVES OF INTEGRATING ARTIFICIAL INTELLIGENCE SYSTEMS INTO THE EDUCATIONAL PROCESS

Abstract. The widespread introduction of new technologies in Uzbekistan, including artificial intelligence into social protection programs and other fields, encourages the use of modern information technologies in the public and private sectors, increases the opportunities for the development of the digital economy in the country and the introduction of innovations in every field. This article discusses the stages and perspectives of integrating artificial intelligence systems into the educational process and makes several suggestions.

Key words: Artificial intelligence, computer, information, model, simulation, program, automation, technology, integration.

Introduction. In accordance with the “Digital Uzbekistan-2030” strategy and for the purpose of rapid introduction of artificial intelligence technologies and their widespread use in our country, ensuring the possibility of using digital data and their high quality, creating favorable conditions for the training of qualified personnel in this field, the President of the Republic of Uzbekistan dated February 17, 2021 Decision PQ-499 “On measures to create conditions for rapid introduction of artificial intelligence technologies” was adopted. The purpose of this decision is to develop a regulatory legal framework that defines uniform requirements, responsibility, security and transparency in the development and use of artificial intelligence technologies in the economic networks and social sphere of our country, in the state administration system.

At the moment, the development of digital technologies in science, business and education is one of the priorities in various countries. Digital technologies have a significant impact on the lives of people and society, play a major role in defining the directions of economic development, and contribute to the rapid growth of the variety and quality of relations between individuals, societies and organizations, as well as the collection and analysis of data.

Today, it is evident that digital technologies and artificial intelligence are rapidly entering the education system, are being applied in the developed countries of the world and are showing their results. The use of digital

technologies in the learning process in the educational system requires major changes in the traditional system. Also, artificial intelligence is actively used in many areas of human life, including education. In recent years, people all over the world have the opportunity to use modern technologies to improve the quality of the educational process, to effectively acquire the necessary professional skills.

Currently, scientific research and start-up projects on the creation of artificial intelligence systems require a large amount of money. This is due to the fact that companies in the large information technology fields use artificial intelligence technologies to demonstrate that their technologies are new and unique.

Introduction to Artificial Intelligence in Education. Artificial Intelligence (AI) has emerged as a game-changer in various industries, and education is no exception. With its ability to mimic human intelligence and perform tasks that are traditionally carried out by humans, AI has the potential to revolutionize the educational process. By integrating AI into education, students can benefit from personalized learning experiences, adaptive assessments, and intelligent tutoring systems. Moreover, AI can assist teachers in administrative tasks, providing them with more time to focus on individual student needs.

The Benefits of Integrating AI into the Educational Process. The integration of AI into the educational process offers numerous advantages. Firstly, AI-powered systems can provide personalized learning experiences tailored to each student's needs and learning pace. This personalized approach ensures that students receive the necessary support and resources to succeed academically. Additionally, AI can analyze vast amounts of data to identify patterns and trends in student performance, enabling educators to make data-driven decisions and improve teaching strategies.

Secondly, AI can enhance the assessment process by offering adaptive assessments. These assessments adjust the difficulty level of questions based on the student's performance, providing a more accurate measure of their knowledge and skills. This not only reduces the workload for teachers but also allows students to be evaluated based on their individual capabilities, promoting a fairer assessment system.

The Stages of Integrating AI in Education. The integration of AI in education can be divided into several stages. The first stage involves the development of AI-powered tools and platforms that support teaching and learning. These tools can range from intelligent tutoring systems to virtual reality simulations, providing students with interactive and engaging learning experiences.

The second stage focuses on the implementation of AI in administrative tasks, such as grading and attendance tracking. AI algorithms can analyze and process large volumes of data, automating time-consuming administrative tasks and freeing up teachers' time.

The third stage involves the integration of AI into the curriculum. This includes the development of AI-driven educational content, such as virtual lessons and adaptive learning materials. By incorporating AI into the curriculum, students can benefit from personalized and dynamic learning experiences that cater to their individual needs.

AI Technologies Used in Education. Several AI technologies are used in education to enhance the learning experience. Natural Language Processing (NLP) allows AI systems to understand and interpret human language, enabling them to provide intelligent responses and support in real-time. Machine Learning (ML) algorithms enable AI systems to learn from data and make predictions or recommendations based on patterns and trends. Computer Vision (CV) technology enables AI systems to process visual information, making it possible to develop interactive and immersive learning materials.

Virtual Reality (VR) and Augmented Reality (AR) technologies create immersive learning environments, enabling students to explore virtual worlds and interact with digital objects. These technologies are particularly useful in subjects such as science and geography, where students can visualize complex concepts. Finally, Natural Language Generation (NLG) technology allows AI systems to generate human-like written or spoken content, making it possible to develop interactive tutorials and intelligent tutoring systems.

Perspectives on Integrating AI in Education. The integration of AI in education has sparked various perspectives and opinions. Supporters argue that AI can bridge the gap between personalized learning and efficient teaching, providing students with tailored educational experiences. AI systems can adapt to individual learning styles, provide instant feedback, and offer additional resources to enhance understanding.

On the other hand, critics express concerns about the potential dehumanization of education through the excessive use of AI. They argue that AI cannot replace the human touch in education, such as the emotional connection between teachers and students. Moreover, there are concerns about data privacy and security, as AI systems collect and analyze vast amounts of student data.

Challenges of Implementing AI in Education. Implementing AI in education comes with its fair share of challenges. One of the main challenges is the need for sufficient infrastructure and resources to support AI integration. Educational institutions must invest in hardware, software, and training to ensure successful implementation.

Another challenge is the resistance to change. Teachers and administrators may be reluctant to adopt AI technologies due to a fear of job displacement or a lack of understanding of AI's potential benefits. Overcoming this resistance requires comprehensive training programs and ongoing support to familiarize educators with AI and its applications in education.

Ethical Considerations in AI-Powered Education. The integration of AI in education raises important ethical considerations. Student data privacy is a

critical concern, as AI systems collect and analyze vast amounts of personal information. It is essential to establish robust data protection measures and ensure compliance with privacy regulations to safeguard students' sensitive data.

Another ethical consideration is the potential bias in AI algorithms. AI systems learn from historical data, which may contain biases or inequalities. If these biases are not addressed, they can perpetuate discrimination or reinforce existing inequalities in education. It is crucial to develop transparent and accountable AI algorithms to minimize bias and ensure fair and equitable outcomes.

Successful Examples of AI Integration in Education. Several successful examples demonstrate the positive impact of AI integration in education. One such example is the use of intelligent tutoring systems that provide personalized instruction and feedback to students. These systems adapt to individual learning styles and offer additional resources and support, resulting in improved student performance.

Another example is the implementation of chatbot assistants in educational institutions. Chatbots can provide students with instant support and guidance, answering questions and directing them to relevant resources. This not only enhances the learning experience but also reduces the workload for teachers.

Future Trends in AI-Powered Education. The future of AI-powered education holds great potential. As AI technologies continue to advance, we can expect further improvements in personalized learning experiences. Intelligent adaptive systems will become even more sophisticated, providing tailored educational content and resources based on individual student needs.

Additionally, AI-powered tools and platforms will continue to transform administrative tasks, saving time and improving efficiency for educators. Virtual reality and augmented reality technologies will become more mainstream, enabling students to immerse themselves in interactive and engaging learning environments.

Conclusion. The integration of AI into the educational process is an ongoing evolution that holds immense promise. From personalized learning experiences to intelligent tutoring systems, AI has the potential to enhance education in unprecedented ways. However, it is crucial to address challenges such as infrastructure, resistance to change, and ethical considerations to ensure the responsible and effective implementation of AI in education. By embracing the opportunities and overcoming the obstacles, we can navigate the evolution of AI in education and unlock its full potential for the benefit of students and educators alike.

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GENDER-RELATED FEATURES IN THE DEVELOPMENT OF ANEMIA IN PATIENTS WITH DIABETES

Abstract. Anemia is a common complication in patients with diabetes, affecting a significant portion of individuals with the disease. While anemia can occur in both men and women with diabetes, there are gender-related features that may influence the development and progression of anemia in these patients. Understanding these gender differences is crucial for the effective management and treatment of anemia in individuals with diabetes.

Keywords: gender, anemia, gender-based outcomes, mechanism, resources, diabetes.

Introduction: In the past, gender-specific medicine often meant studying women's health. However, it is clear that sex issues are biologically based and that both sexes need to be analyzed in a gender-sensitive manner. Gender-based outcomes and utilization of health resources can have a significant impact on long-term health of both men and women. Understanding the mechanisms underlying gender differences in disease, and the resulting different responses to treatment, may lead to more effective treatment and better health for both sexes. Although certain diseases are more prevalent in one sex or the other, this in itself does not demonstrate a gender difference.

The case of iron-deficient anemia in diabetes is an example of a disease which is more prevalent in women, but it is not clear whether this is due to the biology of being female, or the fact that women live longer and thus have a greater lifetime risk of developing diabetes. At the same time, there is evidence to suggest that the clinical impact of anemia is more profound in men. Conditions that increase iron availability, such as hemolytic anemias and iron-loading anemias are associated with increased risk of developing diabetes. Therefore it is important to understand the impact of anemia on both sexes, in order to properly assess the burden of disease. The first step in doing so, is to understand if there is a gender-specific difference in the development of anemia in diabetes. This cross-sectional study is a preliminary step in understanding the issue.

Background

ACD is a result of an inflammatory disease and any chronic infection, malignancy, or other diseases and is the second most common form of anemia in diabetes. Inflammation is known to affect the level of iron in the blood, causing a disruption of production of the red blood cells and a reduced lifespan of mature red blood cells. This is crucial as iron metabolism is very important in the

development of diabetes. High concentrations of body iron may pose a risk for diabetes complications and oxidative stress in those with diabetes but can still lead to iron-deficient erythropoiesis. Erythropoiesis is the production of red blood cells which requires iron, and if not enough is available, iron-deficiency anemia can develop. ACD is also a condition common in the elderly and more frequently seen in females, whereas other types of anemia are more common in males with diabetes (mainly due to ACD it shares similarity with mild to moderate chronic kidney disease anemia, a condition also very common in the elderly. Erkan Topcu et al, 2012)

Diabetes, a chronic illness characterized by high levels of glucose in the blood, has a prevalence of 8.7% in the US population, with 90-95% having type 2 diabetes. It contributes significantly to overall mortality as well as morbidity due to the damage it causes in many organs throughout the body. A serious consequence of diabetes is that the risk of developing some form of anemia is double that of a healthy individual. Anemia is usually defined as low levels of red blood cells in the blood and can cause symptoms such as fatigue, shortness of breath, and heart palpitations. Types of anemia diabetes patients suffer from include anemia of chronic disease (ACD), iron deficiency anemia, and sickle cell anemia.

Significance of the Study

The principal goal of our current study was to determine the possible differences in the features in the development of anemia in patients with type 2 diabetes by evaluating the gender differences in progression to anemia among patients with type 2 diabetes. With that being said, our goal is to lead with defining and providing validity to the assessment of anemia, the causes that can lead to its deficit in both men and women, and then determining the differences in the features in the development of anemia in both genders, and assessing the reasons behind the findings. There are several reasons that prompted our study. First, consideration of gender in health and disease has become an important area of investigation nationally and worldwide.

Although gender and sex are not new issues in health research or epidemiology, over the past decade there has been an explosion of interest in the topic. This has largely been due to a growing awareness that gender influenced and differences in health and disease are real, and are most often a reflection of biological differences between men and women. As the importance of understanding these differences is recognized, the design and conduct of research in this area are increasingly becoming a priority. Ideally, it is becoming more common to see that a specific study or a health-related topic will examine the differences in causation, progression, and management of health outcomes in men and women. Despite this, a large proportion of research is not designed to consider or include gender in analyses. Even studies that do not have specific hypotheses related to gender may benefit from looking at the patterns of disease in both men and women, as often there are differences in disease outcomes that may provide

new insights or generate new hypotheses. There is evidence to suggest that the consideration of gender in a health-related topic can be beneficial and as such has been highly encouraged.

In particular, the NIH policy on the inclusion of women and minorities as subjects in clinical research has been an influence to increase the amount of health research that genuinely considers differences in disease and health outcomes in the past decade. This has implications in all areas of research and will hopefully continue to guide future research in ensuring that male and female subjects are studied and their results are analyzed separately. In fact, there are some who argue that gender should be considered as more than a covariate in research and instead incorporated into the actual design and analysis of studies. This is an issue that is ongoing and varies from each specific health-related topic.

Prevalence and Risk Factors

Studies have consistently shown a higher prevalence of anemia in women with diabetes compared to men. This gender disparity is particularly pronounced in postmenopausal women. The exact reasons for this difference are not fully understood, but several factors may contribute, including:

Iron deficiency: Women are more likely to develop iron deficiency due to menstrual blood loss, pregnancy, and childbirth. Iron deficiency is a major cause of anemia, and diabetic patients with low iron stores are at an increased risk.

Hormonal factors: Estrogen and progesterone have been shown to have a protective effect against anemia. After menopause, when these hormones decline, women become more susceptible to iron deficiency and anemia.

Dietary factors: Women may have lower intakes of iron-rich foods compared to men. This is particularly concerning in diabetic patients who often require dietary modifications that may limit their intake of certain nutrients.

Clinical Manifestations and Severity

Anemia in diabetic patients can manifest with a range of symptoms, including fatigue, weakness, shortness of breath, and impaired cognitive function. The severity of anemia is typically assessed based on hemoglobin levels. Studies have found that women with diabetes tend to have lower hemoglobin levels compared to men. This may be related to the higher prevalence of iron deficiency and the protective effects of hormones in men.

Management and Outcomes

The management of anemia in diabetic patients involves addressing the underlying cause. In cases of iron deficiency, iron supplementation is typically prescribed. Other treatments, such as erythropoietin-stimulating agents, may be considered in more severe cases.

Gender-specific considerations are important in the management of anemia in diabetic patients. Women may require higher doses of iron supplementation due to their increased risk of iron deficiency. Additionally, hormonal therapy may be beneficial in postmenopausal women to improve iron absorption and reduce the risk of anemia.

The outcomes of anemia in diabetic patients are influenced by several factors, including gender. Studies have shown that women with anemia and diabetes have a higher risk of cardiovascular complications and mortality compared to men. This may be related to the fact that women with anemia tend to have more severe disease and are less likely to receive appropriate treatment.

One of the key factors that contribute to the development of anemia in diabetic patients is the impact of diabetes on the kidneys. Diabetes is a leading cause of kidney disease, known as diabetic nephropathy, which can lead to a decrease in the production of erythropoietin, a hormone that stimulates the production of red blood cells. This can result in a decrease in the number of red blood cells in the body, leading to anemia. Studies have shown that women with diabetes are at a higher risk of developing diabetic nephropathy compared to men, which may explain why women are more likely to develop anemia in the context of diabetes.

Another factor that may contribute to the development of anemia in diabetic patients is the impact of hormonal changes on red blood cell production. Women experience hormonal fluctuations throughout their menstrual cycle, pregnancy, and menopause, which can affect the body's ability to produce red blood cells. This may put women at a higher risk of developing anemia, particularly in the context of diabetes. Additionally, women are more likely to experience iron deficiency anemia due to blood loss during menstruation, which can further exacerbate the risk of anemia in diabetic patients.

Furthermore, studies have suggested that women with diabetes may have a higher prevalence of autoimmune conditions such as autoimmune hemolytic anemia, which can lead to the destruction of red blood cells. This may further increase the risk of anemia in diabetic women compared to men. Additionally, women with diabetes are more likely to have coexisting conditions such as thyroid disorders, which can also contribute to the development of anemia.

Conclusion

In conclusion, gender-related features play a significant role in the development of anemia in patients with diabetes. Understanding these differences is crucial for the effective management and treatment of anemia in individuals with diabetes. Healthcare providers should consider gender-specific factors such as hormonal differences, dietary habits, physical activity levels, and genetic factors when assessing and treating anemia in patients with diabetes. By taking a gender-sensitive approach to care, healthcare providers can optimize the management of anemia in patients with diabetes and improve outcomes for these individuals.

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SOLUTION OF PROBLEMATIC SITUATIONS IN ACCOUNTING FOR TAX BENEFITS

Abstract. This scientific article presents the problems of accounting for tax credits and their solution. The need for inclusion in the chart of accounts is due to the unlawful use of tax benefits.

Key words: tax, tax credit, non-targeted tax credits, targeted tax credits.

Introduction. The research results show that in world practice, including in the tax legislation of our republic, the mechanisms for calculating and paying value added tax, determining turnover taxed at a zero rate, and tax reimbursement remain complex.

As a result of the scientific research carried out in the world to improve the methodology for calculating value added tax, a number of scientific results have been obtained. For example, it has been proven that the optimal value-added tax rate is 15-20 percent, a reduction in the tax rate leads to a shortfall in budget revenues, and the introduction of a high tax rate leads to business concealment (KPMG, London).

Verification that the tax benefits provided to the business entity and the use of the amount in accordance with the stated requirements are carried out in the information sheet of the accounting statements. To improve the accounting procedure for tax benefits, it is necessary to study their economic essence.

A literary review. Tax benefits are described in detail in various economic literature and short-term documentation.

Article 75 of the Tax Code of Uzbekistan defines tax benefits as follows: "Tax preference is an advantage of a taxpayer category over other taxpayers, which is regulated by legislation on tax collection, including the possibility of paying tax or paying an amount at a lower rate. Wages can be individual" [1].

"Credit concessions can be provided by channeling funds released from the loan for a specific purpose. In case of improper use of such funds, the funds used are subject to transfer to the budget in accordance with the established procedure with a fine. Funds released through the provision of benefits under the agreement and not used during the term of the current benefits may be used for the purposes specified in the presentation of the loan within two years after the expiration of the benefits provided. In this case, the funds unused within the specified period are subject to transfer to the budget"[1].

As for tax benefits, one of the foreign scientists I.A.Maiburov divided tax benefits into several types, including: tax credit, investive tax benefit and tax holidays [2].

V.G.Panskov explains the economic nature of a tax credit as follows: A tax credit is a targeted preferential right granted to a taxpayer or a targeted exclusion from the tax base and the object of taxation, its inclusion in the tax system is designed to achieve with its help, a specific goal can be determined and whether economic, budgetary, fiscal or social efficiency [3].

In particular, one of the scientists of our republic F.Rakhmatullayeva defined a tax benefit as follows: "a benefit is a way, a set of rights and obligations, to fully or partially reduce a taxpayer's tax liability in the form prescribed by law in order to improve the economy and solve social problems" [4].

U.H.Normurzaev claims that "Tax benefits are collected by the taxpayer using the axbopot system and by entering the necessary identification code into the receipt of the tax benefit" [5].

From the above, it can be concluded that a tax benefit is an opportunity to pay tax or pay an amount less than expected.

Research methodology. The research used methods of economic analysis, rationality and grouping. In 2017-2021, the reforms implemented in our republic in terms of creating a value-added tax chain and tax benefits, the impact of value-added tax on socially significant goods (services) regulated by the state were analyzed.

Analysis and results. Resolution of the Cabinet of Ministers of the Republic of Uzbekistan dated September 22, 2021 No. 595 "Further improvement of taxpayer accounting and adjustment of the method of reimbursement of value added tax" [6] Paragraph 6 of paragraph d of paragraph three dated December 1, 2021 the task of filling in the database on current tax benefits and closing the process of entering a unique code (identifier) of the special tax service benefits for a one-time tax benefit and the closure of the practice of submitting paper according to the tax benefit code to the taxpayer's personal account.

To solve the above tasks, it is necessary to reduce the number of tax benefits (Table 1).

Types of taxes	2018 year		2019 year		2020 year		2021 year		2022 year	
	quantity	sum	quantity	sum	quantity	sum	quantity	sum	quantity	sum
Total	59 792	22707,56	68113	29 136,00	93871	31 065,60	109363	43 479,30	195884	72 963,70
VAT	2 322	14989,50	11380	23 073,80	7 031	24 643,30	15 508	36 766,30	28 214	64 107,90
Profit tax	291	1832,02	763	2 785,40	3 335	2 930,00	2 709	2 219,50	25 015	4 641,30
Land tax	5 499	1183,69	6 736	880,10	4 531	1 313,20	11 743	2 575,90	6 204	931,80
Tax on income of individuals	8 321	393,06	33866	789,00	44093	917,90	56 165	1 073,80	41 580	1 028,30
Tax on the use of Water Resources	7	797,97	31	469,30	673	443,70	1 376	39,10	685	12,30
Social tax	30 258	495,80	3 993	340,90	6 230	346,50	11 247	386,30	52 616	1 187,40
Property tax	220	897,27	382	583,20	4 813	274,00	2 195	306,10	7 809	933,00
Turnover tax	12 530	1325,66	10962	214,30	23165	196,90	8 420	112,30	32 921	97,20

Table 1. Analysis of tax benefits applied by type of taxes in 2018-2022, billion soums

An analysis of the applied tax benefits by type of taxes in 2018-2022 is presented in Table 1. In total, 59,792 organizations received 22,707.56 billion soums of taxes in 2018, 29,136.0 billion soums for 68,113 organizations in 2019, 93,871 organizations - 31,065.6 billion soums in 2021 – 43,479.3 billion soums for 109,363 organizations and, finally, in 2022 – 72,963.7 billion soums – 195,884 organizations can see that sum tax benefits were applied.

If we consider certain types of taxes, in 2018 the amount of VAT benefits provided to 2,322 organizations amounted to 14,989.50 billion soums. When composing the sum, it is clear that it has been converted into the type of tax with the greatest benefit. In 2022, this amount will amount to 64,107.9 billion soums for 28,214 organizations for this type of tax, we see that it has the largest tax benefit, amounting to soums.

It can be stated that a large amount of the following tax benefits will correspond to the income tax paid by legal entities. In 2018, income tax amounted to 1,832.02 billion soums, for 291 organizations. And in 2022 – 4,641.3 billion soums for 25,015 organizations, it is clear that we are talking about soums.

Fees are collected by sending them to a specific destination and divided into benefits depending on the destination.

“According to tax legislation, funds released from tax benefits are completely withdrawn from the budget if they are not used for their intended purpose, and in the case of using the amount used for the specified purpose, penalties are deducted.

The amount of funds released due to the concession and other mandatory payments and not used during the term of this concession may be directed to funds determined at the time of granting the concession within two years after the end of the concession period. In this case, the funds unused during the extended period will be transferred to the state budget of the Republic of Uzbekistan”[1].

We will consider a way to account for special tax benefits that are of particular importance from an economic point of view. The accounting of this reserve is included in account 8840-“Tax benefits with targeted use”.

Now let's take a closer look at the business transactions related to this issue in accounting.

1. Goods - for the amount of money issued as a result of exemption from VAT and excise duty on the import of tangible assets:

Debit – 6990 "Calculation of VAT and excise tax benefits for imports";

Credit - 8840-“Tax benefits with targeted use”.

2. Due to the fact that the share of exported products is 56 percent of the volume of production, this amount is deducted from section 040 of the income tax bill:

Debit – 6410 “Payment budget (total)”;

Credit - 8840-“Tax benefits with targeted use”.

3. When the funds released as a result of the tax benefit are used to maintain infrastructure, consolidate infrastructure and modernize equipment:

Debit – 8840-“Tax benefits with targeted use”;

Credit – 8530 "Property received for free".

4. The funds released as a result of the tax exemption are allocated to cover the total amount of the obligation:

a) it is aimed at closing the gap according to the received towing impact;

Debit – 8840-“Tax benefits with targeted use”;

Credit – 6010 "Accounts payable to suppliers and suppliers".

b) when withholding wages:

Debit – 8840-“Tax benefits with targeted use”;

Credit – 6710 “Settlements with employees on wages”.

c) When withholding social tax from wages:

Debit – 8840-“Tax benefits with targeted use”;

Credit – 6420 “Social tax”.

5. At the end of the grace period and at the end of the reporting year, the amount of unused benefits is transferred to the state budget of the Republic of Uzbekistan (2-4 at the operational stage):

Debit - 8840-“Tax benefits with targeted use”;

Credit–6410 “Payment budget (total)”.

According to article 75 of the Tax Code of the Republic of Uzbekistan, a company can invest available funds within two years after the end of the grace period. Even in this case, if the benefit is not used, the unused amount of the benefit will be returned to the state budget next year. In order to correct this accounting error, we recommend opening a work account 8850-"Inexpediently used tax benefits" and closing it on the account page. 8850-"Inexpediently used tax benefits" when opening a current account, the following account is created:

Within two years after the end of the grace period:

Debit 8840-“Tax benefits with targeted use”;

Credit 8850-“Improperly used tax benefits”.

It will be returned to the budget two years after the end of the concession period as follows:

Debit 8850-“Inexpediently used tax benefits”;

Credit 6410-“Payment budget (total)”.

This increases the taxpayer's ability to use tax benefits. The amount of tax benefits is also reflected in the accounting report.

What is the source of the request to open a work account called 8850-"Improperly used tax benefits"? Research and analysis show that in many cases, benefits are used after the expiration of tax benefits (Table 2).

According to this table 2, in 2015, a total of 622 entrepreneurs earned 14.8 billion soums. In 2018, 579 enterprises accounted for 54.9 billion soums and

324.6 billion soums in 2021 for 1024 enterprises. Improper use of the benefit in the amount of soums, which is the basis for the cancellation of tax benefits.

Years	Businesses using the tax credit		Additional accrued taxes on misuse		Of which,			
					According to the result of the		According to the result of tax	
	quantity	sum	quantity	sum	quantity	sum	quantity	sum
2015	58377	12 450,90	622	14,8	536	11,6	86	3,2
2016	28617	10 924,40	769	21,9	677	6,1	92	15,8
2017	33631	15 753,10	267	11,4	217	2,4	50	8,9
2018	61178	22 707,50	579	54,6	380	7,9	199	46,7
2019	48765	29136,1	456	44,9	276	8,2	180	36,7
2020	59415	31065,6	786	98,3	451	24,5	-	-
2021	47482	42 089,00	1024	324,6	966	219,8	58	104,8

Table 2. Shortcomings identified in 2015-2021 in Uzbekistan, which did not use summer benefits to the full, (billion soums)

Hence, it becomes obvious that it is necessary to further strengthen financial control, including tax audits, over the targeted and effective use of tax benefits provided in accordance with tax legislation.

Conclusions and suggestions. To improve the accounting of value added tax, we offer:

1. Pursuant to the Regulation "On registration and accounting of benefits provided to legal entities for the payment of taxes, duties and mandatory payments to the budget", tax benefits provided in a targeted manner are recorded in account 8840 "Tax benefits with targeted use" stored in you.

At the end of the grace period and at the end of the reporting year, unused amounts of the grace period are written off and the following correspondence is created on the accounts:

Debit 8840-"Tax benefits with targeted use",

Credit 8530 "Property received for free" account.

In our opinion, crediting account 8720 "Accumulated profit (non-reimbursed loss)" is advisable after the end of the period of benefit for targeted tax credits, while the following accounting entry is made:

Debit – 8840-"Tax benefits with targeted use"

Credit – 8720 "Accumulated profit (uncompensated loss)".

The main purpose of this proposal is to continuously monitor the unused amount after the end of the tax credit period. Business entities can use these funds for other purposes.

2. For tax benefits that are not intended for their intended use, it is advisable to create a separate balance sheet and keep records in it. In our opinion, for this it is necessary to include account 8850 "Improperly used tax benefits" in the chart of accounts. This will strengthen control over the formation and use of non-targeted tax credits.

Working accounts for accounts 8840 -"Tax benefits with targeted use" and 8850-"Improperly used tax benefits" are opened for each type of tax, including value added tax. This makes it possible to ensure the control of tax benefits for each type of tax.

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THE ISSUE OF ACCOUNTING FOR VALUE ADDED TAX IN THE CONTEXT OF THE DIGITAL ECONOMY

Abstract. This article examines the impact of the policy implemented in the tax sphere in the digital economy in the tax system on the mechanisms for accounting for value added tax.

Key words: digital economy, tax system, tax control, tax administration, value added tax, electronic invoicing, digital taxation.

Accounting reforms are also underway in our country. In particular, 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” [1] and in decision PQ-4611 dated February 24, 2020 “On additional measures for the transition to international financial reporting standards” [2] phased transition of accounting to international financial accounting standards in our country and the task of harmonizing financial and financial statements has been set. tax accounts have been determined. In order to ensure the implementation of these tasks, the Ministry of Economy and Finance has translated financial statements into Uzbek, and since 2021, large business entities have been accounting according to international standards and preparing financial statements.

According to the decision “On approval of tax reporting forms”, registered by the Ministry of Justice of the Republic of Uzbekistan on October 20, 2020, the list of legal entities that have switched to international financial reporting standards, numbered 3221-1[3] Tax reports based on additions, including forms of value added tax reports, are close to IFRS.

K.M.Misirov, in his dissertation on “Improving financial accounting and auditing of indirect taxes”, studied the issues of improving financial accounting for value added tax and excise tax and made appropriate proposals[4]. This scientific paper highlights the problems of clarifying the VAT base based on improving the current form of the invoice for the financial calculation of value added tax.

In his scientific work, K.R.Khotamov investigated the following issues related to value added tax: approval of exports of products, application of a zero rate of value added tax, adjustment of the tax base and reflection of its results in accounting; improvement of the methodology for conducting tax audits based on documents in an automated system and accounting for indirect taxes, reflection in documents and linking processes in reporting on a practical and methodological basis, etc.

#	The content of business transactions	Based on NBU No. 21.		Based on the offer	
		Debit	Credit	Debit	Credit
1.	To the amount of value added tax paid upon purchase of raw materials (at exporting enterprises)	4410*	6010	4420	6010
2.	To withdraw funds from the budget for the application of a zero rate	5110	6410	5110	4420
3.	When the amount resulting from the application of the zero rate is directed to the repayment of arrears on other taxes	6410	4410	6410	4420
4.	To the amount of value added tax calculated in full if the export of goods is not confirmed	-	-	9430	6410
5.	If the export of goods is not confirmed, the amount of value added tax previously paid for the purchase of raw materials and supplies is taken into account	-	-	6410	4420
6.	When transferring debts to the budget from the settlement account in case of disagreement with the export of goods	-	-	6410	5110

Table 1. The procedure for reflecting transactions on the application of the zero rate in accounting [5]

According to K.R.Khotamov: Meaningfully correct accounting entries in the account will prevent confusion in accounting work, in order to avoid errors in the preparation of tax and financial statements, the amounts of overpaid indirect taxes will not be refunded from account 6410 - "Arrears on payments to the budget (by type)" 4420 accounts were proposed - "Overpayment to the budget", an offer was made to refund funds from the account (table 1).

It is advisable to reflect the amount of returned goods and the amount of value added tax paid on it after calculating the sold goods in accounting, pay attention to whether the money was paid for the sold goods or not. it is proposed to reflect accounting by calculation.

Also, in the practice of this economist, accountants reflect operations on the use of a zero rate in accounting in different ways. In order to positively solve this problem, based on the decision of the Ministry of Finance of the Republic of Uzbekistan and the State Tax Committee of the Republic of Uzbekistan dated March 3, 2016, registered with the Ministry of Justice of the Republic of Uzbekistan with No. 2775 dated April 7, 2016, it was proposed to include the accounting method in the Regulation on the procedure for refunding the amount of excess VAT resulting from the application of the rate, to the taxpayer's bank account.

F.A.Akramov, studying in his scientific works the issues of improving the verification of value added tax, highlighted some problems of calculating VAT. When the auditor checks the cases of corrections to the tax base indicated in the value added tax reports, the grounds for making corrections are studied according

to the documents. The correctness of the reflection of these operations in primary accounting documents and accounts is also checked [6].

In our opinion, these scientific papers do not take into account the specifics of calculating value added tax in the digital economy. Also, the problems in the process of transferring the calculation of value added tax to IFRS were not highlighted.

Decree of the President of the Republic of Uzbekistan dated February 24, 2020 No. UP-4611 “On additional measures for the transition to international Financial Reporting standards” on the transition and transformation of accounting in our country and the decision of the Cabinet of Ministers of the Minister of the Republic of Uzbekistan dated August 24, 2020 No. 507 “On approval of the Regulations on the procedure for recognizing the text of international Financial reporting standards and explanations” [7].

The invoice is the main source document for calculating value added tax. Article 47 of the Tax Code of the Republic of Uzbekistan describes the invoice.

Let's look at how some norms related to value added tax of the Tax Code of the Republic of Uzbekistan are reflected in accounting. The accounts involved in the calculation of value added tax are shown in table 2.

We will try to disclose some of the transactions not included in national accounting standards-21, refusing to disclose all transactions related to value added tax in the balance sheets.

Account number	Name of accounts
4010	Invoices to be received from buyers and customers
4310	Advances made to suppliers and contractors for goods and materials
4410	Advance payments on taxes and other mandatory payments to the budget (by type)
5110	Payment account
5210	Currency accounts within the country
5220	Foreign currency accounts abroad
5510	Letters of credit
6010	Invoices to be paid to suppliers and contractors
6240	Deferred tax liabilities and other mandatory payments
6310	Advances received from buyers and customers
6410	Arrears on payments to the budget (by type): Value added tax arrears
7010	Invoices to be paid to suppliers and contractors
7310	Advances received from buyers and customers
9010	Income from the sale of finished products
9020	Income from the sale of goods
9030	Income from the performance of works and services
9040	Return of sold goods
9110	Cost of finished products sold
9120	Cost of goods sold

Table 2. An accounting system that ensures the reflection of value added tax in accounting [8].

Article 239 of the Tax Code provides that the free supply of goods is included in the turnover for the sale of goods (services). The value added tax associated with this process is reflected in the balance sheets as follows.

In the accounting work plan approved by the accounting policy of an economic entity, it is determined that value added tax should be accounted for on account 6420 - "Value added tax arrears". For example, the sale of finished products is reflected in the following accounting entry:

DT 4010-"Invoices to be received from buyers and customers";

Ct 9010 -"Income from the sale of finished products."

According to the amount of VAT for this operation, the following accounting entry is made:

DT 4010-"Invoices to be received from buyers and customers";

Ct 6420-"Value added tax arrears".

№	The content of business transactions	Accounting records		
		The sum (thousands of soums)	Correspondence of accounts	
			ДТ	КТ
1.	Cost write-off of purchased products	250 000	9110	2810
2.	Purchased goods cost deduction	150 000	9120	2910
3.	To the amount of VAT related to the purchased products	30 000	9110	6410
4.	To the amount of VAT related to purchased goods	18 000	9120	6410
5	Payment of VAT to the budget	48 000	5110	6410

Table 3. Calculation of VAT on free products and goods reflected in the frames

Based on the above, we propose in order to improve the accounting of value added tax:

In order to properly organize the accounting of value added tax and ensure the reliability of the data, it is recommended to open the following working accounts under account 6420 -"Value added tax arrears".

6420- invoices-"VAT on purchased inventory items at the rate of 12%";

6421- invoices-"VAT on purchased inventory items at a rate of 0%".

This facilitates the preparation of tax reports on value added tax and serves to strengthen tax control.

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ORGANIZING NON-TRADITIONAL ACTIVITIES USING INTERACTIVE METHODS WITH PRESCHOOL CHILDREN IN THE "SCIENCE AND NATURE" CENTER

Annotation. In this article, the role and importance of the activities of preschool education organizations in the "Science and Nature" center in the development of preschool children in different age groups, ways to increase the effectiveness of training are widely covered. The task of the "Science and Nature" center and methodical recommendations for equipping this center were given in the groups of preschool educational organizations. The opinions are summarized based on the State curriculum of the preschool education organization.

Keywords: preschool, preschool, play activities, nature, center, water, sand, fire, scales, magnifying glass, aquarium, weather, calendar.

Today's preschool education relies on ensuring the development and self-awareness of the child, it is important to awaken the inner need for knowledge, to arouse interest. The children's laboratory is the most effective means of understanding the laws of the surrounding world, expanding their worldviews, and enriching the experience of independent activity. Experiments not only generate new information, but also have a positive effect on the formation of mental operations of synthesis and analysis, help to reveal creative potential, and form basic mathematical concepts.

Decree No. PF-5I98 of September 30, 2017 "On measures to fundamentally improve the management of the preschool education system" dated May 8, 2019 Decision No. PQ-43I2 "On approving the concept of development of the preschool education system of the Republic of Uzbekistan until 2030", No. 391 of May 13, 2019 "Measures to further improve the activities of preschool educational institutions" A new system was created in accordance with the decision No. 487 of June 11, 2019 "On measures to introduce advanced information and pedagogic technologies into the preschool education system".

Development of innovative ideas and imaginations of children of preschool age, application of educational content, forms and tools, normative bases for organization of educational processes are being created in our country. The Law of the Republic of Uzbekistan "On Pre-School Education and Training" provides priority tasks such as "creating alternative forms of education and training for children and introducing modern innovative and information and communication technologies for comprehensive development". One of the urgent tasks is to improve the content and technology of quality preparation of children for primary

school education with the help of innovative pedagogical activities during preschool education.

Our young children are looking for answers to many questions every day. Why does it rain? why does the wind blow? why does the sun shine?... It is a great responsibility to explain the essence of natural phenomena and the causes and consequences of what happens to young children in order to explain the laws of nature. Of course, the educator can try to explain or demonstrate, and the educator can conduct an experiment. In this case, children conduct various experiments in the "Science and Nature" center.

Experiments conducted in the center of science and nature, on the experimental testing ground, arouse interest in children and encourage them to make new inventions. This center is also the center of the greatest opportunity for children to learn about nature and its phenomena. If the activity of the center is organized correctly, children will learn 90% of the knowledge about nature. The center arouses interest not only in children, but also in pedagogues-teachers. Information about where the things used in our life came from and what they were obtained from is done by the children themselves.

Here are some examples of activities organized in the Science and Nature Center through interactive methods:

A collection of games on the theme "Silver Winter" in preschool education

In the cold season, the pedagogue should pay attention to the children's breathing through the nose. Breathing through the nose forms children's ability to breathe properly and prevents diseases of the nose and throat. It is not advisable to organize multi-action games at lower temperatures, because they accelerate breathing when children start breathing through their mouths. In such conditions, it is also wrong to hold games that encourage children to recite poems, sing songs or recite some text. Each child experiences unique difficulties when he comes to the preschool educational institution. The younger the child, the more difficult it is to adapt to new conditions. A lot depends on the characteristics of his nervous system. Children's speech is not well developed to clearly express their feelings and emotions. Unexpressed emotions (especially negative emotions) accumulate and eventually appear as incomprehensible tears from the outside, because there is no reason to trigger these emotions. The child's whims, temporary sleep disturbances, and loss of appetite all last for 2-3 weeks, and sometimes months, but every educator tries to reduce the adaptation process to a minimum.

Today, the role of a pedagogue in educating children in all-round ways in preschool education organizations is incomparable. In this regard, many positive things are being done in our country. Nevertheless, the results of our observations showed that some preschool educational organizations lack resources, experience and literature in Uzbek language to organize the educational activity of introducing objects, and those that do have it are not at the level of demand. This creates some shortcomings in the organization of educational activities of introducing children to birds and familiarizing them with experiences, and in turn,

it is necessary to eliminate this deficiency. In the "Science and Nature" development center, organization of educational activities on the topic of preparation of visual material for the middle group, analysis-synthesis activity and first forms research skills.

"The role of water in nature. Experiments"

Purpose: to introduce the properties of water, to inculcate the concept of water as a source of life.

Necessary equipment: ICT, slides, glass, water, tubes.

Course of action:

1. Discussion about the importance and properties of water.
2. Conducting experiments.
3. Discussion.
4. Conclusion.

Additional: reading poems and stories. What to pay attention to: instilling love for nature

Practical experience: Invisible air

Purpose: children study the physical properties of air, solve problems related to knowledge of the universe.

Necessary equipment and materials: 2 glasses, jar, sponge, tube (tube)

Course of action:

Experiment 1: "Air"

Turn the glass upside down and gently place it in a large container of water. Hold the glass correctly. What will happen? Does water fall into the glass? Why not? Conclusion: The glass contains air, it does not contain water.

Experiment 2: Balloons

Place the glass in a jar of water and hold it at a slight angle. What appears in the water? Air bubbles are visible. Where did they come from?

Conclusion: air leaves the glass and water replaces it.

Noteworthy aspect: increasing children's interest in learning about the world. Today, the role of a pedagogue in educating children in all-round ways in preschool education organizations is incomparable. In this regard, many positive things are being done in our country. In preschool age, the foundation is laid for the general culture of the person, in accordance with the State requirements and the State curriculum, it is envisaged to form ecological foundations in preschool children. Preschool children learn about plants, animals, humans and living beings, the connection and connections between humans and nature in the natural world; variety of values of nature, such as healing, cognitive, moral, aesthetic, practical; they will have basic knowledge that nature is the destination of human existence. Environmental education and upbringing of children is a very important problem of our time: only the ecological thinking and ecological culture of people will help to get our planet and humanity out of the current crisis. In the child, ecological ideas (including various environmental problems), ecologically sound behavioral skills, the formation of a decent attitude to the environment, his

PE building and territory, his home, yard, nearby playground, parks, based on familiarity with mountains and rivers. Also, it is considered inappropriate to introduce preschool children to topics such as the ecological situation of the entire region ("Water, air... ecology of regions"). For the purposes of ecological education, objects and events should be selected, the essence of which the child can learn in the course of his activities.

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**MAKTABGACHA TA'LIM TASHKILOTI PEDAGOGLARINING
PEDAGOGIK JARAYONNI TASHKIL ETISHDA STEAM
TEXNOLOGIYASIDAN FOYDALANISHINING AFZALLIK
JIHATLARI**

Annotatsiya. Ushbu maqolada maktabgacha ta'lim tashkiloti pedagoglarining pedagogik jarayonni tashkil etishda STEAM texnologiyasidan foydalanish, maktabgacha tarbiya yoshidagi bolalarni aqliy rivojlantirish, ularning mantiqiy fikrlash qobiliyatini rivojlantirishda maktabgacha ta'lim pedagogikasida STEAM texnologiyasidan foydalanishning afzallik jihatlari haqida yoritilgan.

Калит сўзлар: Bola, aqliy rivojlanish, mantiqiy tafakkurning shakllanishi, ta'lim-tarbiya jarayonidagi mustaqillik, integratsiyalashgan ta'lim, STEAM texnologiyasi, maktabgacha ta'lim, rivojlantiruvchi sohalar.

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**ADVANTAGES OF THE USE OF STEAM TECHNOLOGY IN THE
ORGANIZATION OF THE PEDAGOGICAL PROCESS BY
PRESCHOOL EDUCATION EDUCATORS**

Abstract. This article describes the use of STEAM technology by teachers of a preschool educational organization in organizing the pedagogical process, the advantages of using STEAM technology in the pedagogy of preschool education in the mental development of preschool children, as well as the development of their abilities for logical thinking.

Key words: Child, intellectual development, formation of logical thinking, independence in the educational process, integrated education, STEAM technology, preschool education, developmental areas.

Bugungi kunda maktabgacha ta'limning markaziy muammosi bola erkinligini ta'minlash, ularni har tomonlama rivojlangan holda maktab ta'limiga samarali tayyorlash, ta'lim-tarbiyaviy jarayondagi mustaqil faoliyatini

shakllantirish, uning shaxsini rivojlantirish orqali ta'lim maqsadiga erishishdan iborat. O'zbekiston Respublikasi Prezidentining 2020-yil 06-noyabrdagi "O'zbekistonning yangi taraqqiyot davrida ta'lim-tarbiya va ilm-fan sohalarini rivojlantirish chora-tadbirlari to'g'risida"gi PF-6108-sonli farmoniga ko'ra innovatsion ta'lim jarayoniga o'tish, ta'lim tizimiga yuqori samarali xalqaro amaliyotni joriy etish, o'zaro uzviy bog'liq fanlarni birlashtirish, zamonaviy kadrlarga bo'lgan ehtiyojni inobatga olgan holda intensiv til, AKT va ta'lim berishning yangi metodlarini o'rganish, STEAM pedagogika asoslarini o'zlashtirish, yangi kasbiy kompetensiyalarni o'zlashtirish uchun zarur bilimlar bazasini shakllantirish kabi masalalar vazifa qilib olindi. STEAM – *ingliz tilidan* olingan bo'lib, 5 ta so'zning bosh harflaridan tashkil topgan abreviatura bo'lib, bu shunday ma'noni anglatadiki, tabiiy fanlar, texnologiya, muhandislik, san'at va matematika fanlarini uyg'unlikda o'qitish uslubidir. Ushbu yo'nalishlar hozirgi zamonaviy ta'limsohasida eng mashhurdir. Shuning uchun bugungi kunda STEAM tizimi asosiy tendentsiyalardan biri sifatida rivojlanmoqda. STEAM ta'limi yo'nalishi va amaliy yondashuvni qo'llash, shuningdek, barcha 5 ta sohani yagona ta'lim tizimiga integratsiyalashuviga asoslangan. STEAM texnologiyasi ta'limdan farqli ravishda bilimlarni alohida emas, o'zaro mutanosib holda olib borishni ta'minlab beradi. O'quvchi o'zida nostandart fikrlash, muammoga bir nechta yechim topish va ijodkorlik ko'nikmalarini shakllantiradi va bu uning kelajakdagi faoliyatida juda qo'l keladi.

STEAM – bu, integratsiyalashgan ta'lim texnologiyasidir. Integratsiya nima? "Integratsiya" so'zining o'zi lotincha "integratio" - "aloqa" so'zidan kelib chiqqan. "Integratsiya" atamasi o'ziga xos yaxlitlik, tuzilish, aloqalar, takomillashtirish ma'nosini bildiradi. "Integratsiya" tushunchasi nisbatan yangi bo'lib, u 1920-yillarda paydo bo'lgan. XX asr, uning asoschilari nemis olimlari R. Shmed, X. Kelsen va D. Shindler hisoblanadi. Integratsiya – bu, o'zligini saqlagan holda, yaxlit bir butunlikni tashkil etuvchi jarayon. Integratsiya hayot, fan va texnologiyaning turli sohalarida amalga oshirilishi mumkin. STEAM ta'lim texnologiyasi o'quvchilarni yangicha o'qitish metodikasi bo'lib, an'anaviy o'qitish metodikasidan farqli metodika hisoblanadi. U o'quvchilarni bir vaqtning o'zida –fan (Science), texnologiya (Technology), muhandislik, (Engineering), tasviriy san'at (Art), matematika (Math) bo'yicha o'qitishga mo'ljallangan. STEAM fan bo'yicha emas, balki mavzular bo'yicha integratsiyalashgan o'qitish tizimidir.



STEAM yondashuvining o'quv samaradorligiga ta'siri: Uning asosiy g'oyasi shundan iboratki, amaliyot nazariy bilimlar singari muhimdir, ya'ni, o'rganish paytida biz nafaqat miyamiz bilan, balki qo'limiz bilan ham ishlashimiz kerak. STEAM yondashuvining asosiy farqi shundaki, bolalar turli xil mavzularni muvaffaqiyatli o'rganish uchun ham miyani, ham qo'llarini ishlatadilar. Ular olgan bilimlarni o'zlari «uqib oladilar». STEAM ta'lim muhitida bolalar bilimga ega bo'ladilar va

darhol undan foydalanishni o'rganadilar. Shuning uchun, ular o'sib ulg'ayganlarida va hayotiy muammolarga duch kelganda, atrof muhitning ifloslanishi yoki global iqlim o'zgarishi bo'ladimi, bunday murakkab masalalarni faqat turli sohalaridagi bilimlarga tayanib va birgalikda ishlash orqali hal qilish mumkinligini tushunadilar. Bu yerda faqat bitta mavzu bo'yicha bilimga tayanish yetarli emas. STEAM yondashuvi bizning ta'limga bo'lgan qarashimizni o'zgartirmoqda.

Amaliy qobiliyatga e'tibor berib, o'quvchilar o'zlarining irodasini, ijodkorligini, moslashuvchanligini rivojlantiradi va boshqalar bilan hamkorlik qilishni o'rganadi. Ushbu ko'nikmalar va bilimlar asosiy ta'lim vazifasini tashkil etadi, ya'ni bu butun ta'lim tizimi nimaga intilishini belgilab beradi.

Ta'limga Steam yondashuv – bu, nazariya va amaliyotni birlashtirishning mantiqiy natijasidir. STEAM texnologiyasi dastlab AQShda ishlab chiqilgan. Ba'zi maktablar o'z bitiruvchilarining martabalarini, karyeralarini rivojlantirishni e'tiborga olishdi va fan, texnologiya, muhandislik va matematika kabi fanlarni birlashtirishga qaror qilishdi va STEAM tizimi shu tarzda shakllandi. (tabiiy fanlar, texnika, muhandislik va matematika). Keyinchalik bu sohaga “Art” qo'shildi va endi STEAM oxirigacha shakllandi. O'qituvchilar ushbu mavzular, aniqrog'i ushbu fanlardan bilimlar kelajakda talabalarning yuqori malakali mutaxassis bo'lib yetishishiga yordam beradi, deb hisoblashadi. Oxir oqibat, bolalar yaxshi bilim olishga intilishadi va uni darhol amalda qo'llashadi. STEAM yondashuvining eng mashhur namunasi — Massachusetts Texnologiya Instituti (MIT) da ishlab chiqilgan. Ushbu mashhur Universitetning shiori “Mind and hand” ya'ni “Aql va qo'l” dir. Massachusetts Texnologiya Instituti bolalarga STEAM tushunchasini oldindan o'rganish va tanishish imkoniyatini berish uchun STEAM kurslarini ishlab chiqdi va hattoki ba'zi ta'lim muassasalarida STEAM o'quv markazlarini yaratdi. STEAM ta'lim tizimi orqali bolada kreativlik, qunt, qiziquvchanlik shakllanadi. Hozirgi kunda eng muhim bo'lgan xususiyat – muammoni hal qilish (problem-solving skills) qobiliyati shakllanadi.

Maktabgacha ta'limda STEAM texnologiyasidan foydalanishning maqsadi - bolalar tafakkurini rivojlantirish, bolalarda kreativlikni, bilim olish va yangilikka intilishni shakllantirish hamda ularni fan, texnologiya, muhandislik, matematika va san'at kabi fanlar uyg'unligini samarali qo'llashga o'rgatishdan iborat. O'qituvchilar esa ta'lim berishning zamonaviy va qiziqarli usullarini o'zlashtirishga ko'mak beradi. «STEAM fikrlash» bolalikdan boshlanadi. Bola yurishni bilmagan paytida ham jarayonlarning bog'liqligi, ketma-ketligi va ehtimollikni tushuna oladi. Ushbu xususiyatlar har tomonlama rag'batlantirilishi lozim. Sifatli kitob bolani STEAM tizimiga olib kirishda kuchli tramplin bo'la oladi. Bu yerda muhim jihat STEAM tamoyillariga asoslangan kitobni ensiklopediya kitoblari bilan adashtirmaslik lozim.

S-Science turkumidagi kitoblar bolalarni fan olamiga olib kirishda hayvonot olami, dengiz hayvonlari, o'simlik, hasharotlar va tabiat bilan tanishtirishda qo'l keladi. Bunday kitoblar bolaga sezdirmay turib kerakli

bilimlarni bera oladi. “Quyoshning sirli botishi” kitobi STEAM tizimining Science bo‘limiga munosib yangicha yondashuvga ega kitob. Bola tabiiy ravishda quyoshning fasllar davomida botishi haqida o‘rganib oladi, qiziqarli voqealarga guvoh bo‘ladi. STEAM – ta’limi texnologiyasi loyihalash metodiga tayangan holda uning asosida bilish va badiiy izlanish yotadi. STEAM – ta’limi bolaning rivojlanishini tashqi olam bilan bevosita bog‘laydi. STEAM –yondashuv bolalarga dunyoni tizimli ravishda o‘rganishga, atrofda ro‘y berayotgan jarayonlarni mantiqiy mushohada qilishga, ulardagi o‘zaro aloqani anglab yetishga, o‘zi uchun yangi, noodatiy va qiziqarli narsalarni ochishga imkon beradi.

STEAM –ta’limining afzallik tomonlari: - ta’lim berishni o‘quv fanlari bo‘yicha emas, balki “ mavzu” lar bo‘yicha integratsiyalab olib borish. STEAM – ta’limida fanlararo aloqa va loyihalash metodi birlashtirilgan bo‘lib, uning asosida tabiiy fanlarni texnologiyaga, muhandislik ijodiyotga va matematikaga integratsiya qilish yotadi. Bunda muhandislik bilan bog‘liq kasblarga bo‘lgan tayyorgarlik amalga oshiriladi; ilmiy-texnik bilimlarni real hayotda qo‘llash. STEAM – ta’limida amaliy mashg‘ulotlar yordamida, bolalarga ilmiy-texnik bilimlaridan real hayotda foydalanish namoyish qilinadi. Har bir darsda o‘quvchilar zamonaviy industriya modellarini ishlab chiqadi, quradi va modelni rivojlantiradi; tanqidiy tafakkur ko‘nikmalarini rivojlantirish va muammolarni yechish. STEAM –dasturi, bolalar kundalik hayotlarida duch keladigan qiyinchiliklarni yengishda zarur bo‘ladigan tanqidiy tafakkur va muammolarni yechish ko‘nikmalarini rivojlantiradi. Masalan, bolalar tez yuradigan mashina modelini yig‘adilar, so‘ngra uni sinovdan o‘tkazadilar. Birinchi sinovdan so‘ng, kutilgan natijaga erishilmasa, uning sabablari haqida o‘ylaydilar va topadilar. Balki, g‘ildiraklarining kattaligi yoki aerodinamikasi to‘g‘ri kelmagandir. Har bir sinovdan so‘ng, ular kamchiliklarni bartaraf etib boradilar; - o‘z kuchiga ishonish hissining ortishi. Bolalar ko‘prik qurish, mashina va samolyot modelini ishga tushirishda har safar maqsadiga yaqinlasha boradilar. Har bir sinovdan so‘ng, modelni takomillashtiradilar. Oxirida barcha muammolarni o‘z kuchlari bilan yengib, maqsadiga erishadilar. Bu bolalar uchun ruhlanish, g‘alaba va quvonch demakdir. Har bir g‘alabadan so‘ng, ular o‘z kuchlariga yanada ishonadilar; faol kommunikatsiya va komandada ishlash. STEAM–dasturi faol kommunikatsiya va komandada ishlash bilan farqlanadi. Muloqot davrida o‘z fikrini bayon qilish va bahs- munozara olib borish uchun erkin muhit vujudga keltiriladi. Ular gapirishga va taqdimot o‘tkazishga o‘rganadilar. Bolalar doimo o‘qituvchi va guruhdoshlari bilan muloqotda bo‘ladilar. Bolalar jarayonda faol qatnashsalar, mashg‘ulotni yaxshi eslab qoladilar; texnik fanlarga bo‘lgan qiziqishlarini rivojlantirish. Maktabgacha ta’limda STEAM –ta’limining vazifasi bolalarni tabiiy va texnik fanlarga bo‘lgan qiziqishlarini rivojlantirishdan iborat. Bajaradigan ishini sevib bajarish, qiziqishlarini rivojlantirish uchun asos bo‘lib xizmat qiladi. STEAM – mashg‘ulotlari juda dinamik va qiziqarli bo‘lganligidan bolalar mashg‘ulot paytida zerikmaydilar va vaqtning qanday o‘tganligini sezmay qoladilar.

- Loyihalarga kreativ va innovatsion yondashuv. STEAM –ta’limi 6 ta bosqichdan iborat: savol(vazifa), muhokama, dizayn, qurish, sinovdan o‘tkazish va rivojlantirish. Bu bosqichlar tizimli loyihalash yondashuvining asosi hisoblanadi.

-Bolalarni texnologik innovatsion hayotga tayyorlash. STEAM–ta’limi bolalarni texnologik rivojlangan dunyoda yashashga tayyorlaydi. Keyingi 60 yil davomida texnologiyalar jadal darajada rivojlandi.

- STEAM o‘quv dasturlariga qo‘shimcha sifatida qo‘llaniladi. STEAM yondashuvi nafaqat o‘rganish metodi, balki fikrlash usuli hamdir. STEAM ta’lim muhitida bolalar bilimga ega bo‘lib, shu bilimdan foydalanishni darhol o‘rganadilar. Shuning uchun ular o‘z o‘ziga, haqiqiy dunyoda istalgan hayot muammosiga duch kelganda, bu xoh ifloslanish yoki iqlimning global o‘zgarishi bo‘lsin, bunday murakkab masalalarni fanlardan olgan bilimlarga tayanish va birgalikda ishlash orqali hal qilish mumkinligini tushunadilar. Faqat bitta fandan olingan bilimga tayanish yetarli bo‘lmaydi.

STEAM yondashuvi o‘rganish va ta’limga bo‘lgan munosabatimizni o‘zgartiradi. O‘quvchilar amaliy ko‘nikmalarga e’tibor qaratish orqali irodasini, ijodkorligini, moslashuvchanligini rivojlantiradi va boshqalar bilan hamkorlik qilishni o‘rganadi. Ushbu ko‘nikmalar va bilimlar asosiy ta’lim vazifasini tashkil etadi, ya’ni ta’lim tizimining bosh maqsadi hisoblanadi. STEAM ilm-fanni o‘qitishning eng yaxshi usullaridan biri ekanligini ko‘rsatdi, ammo o‘zgartirish kiritish ya’ni musiqani qo‘shish kerak (STEAMM).

Xulosa qilib aytganda, shuni ta’kidlash lozimki, ta’limga Steam yondashuv an’anaviy o‘qitish uslublari bilan taqqoslaganda, bolalarni tajribalar o‘tkazishga, modellar tuzishga, mustaqil amaliy faoliyatga, ijodiyot bilan shug‘ullanishga, o‘z g‘oyalarini haqiqatga aylantirishga va yakuniy mahsulotni yaratishga undaydi. Maktabgacha tarbiya yoshidagi bola xayolot qiladi, g‘ayrioddiy narsalar haqida o‘ylaydi, bu yoshda dunyoni o‘rganishni istaydi, o‘z xayolidagi mavjud mavhum bo‘lgan holatni yaratishga harakat qiladi. Maktabgacha ta’limga STEAM yondashuv boladagi abstrakt fikrlash qobiliyatini shakllantiradi, bu hodisa esa intellektual faoliyat turi hisoblanadi. Ushbu yondashuv bolalarga jumboqlarni osonlikcha yechish imkonini beradi, nazariy va amaliy ko‘nikmalarni samarali tarzda birlashtirishga imkon beradi va keyingi ta’limbosqichini osonlashtiradi.

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MAKTABGACHA TA’LIMDA STEAM FAOLIYATIDA ROBOTOTEXNIKA ASOSLARI

Annotatsiya: maktabgacha ta’limda STEAM faoliyatida robototexnikaning tashkil etilishi, robotexnika yo‘nalishlari haqida yoritilgan.

Kalit so‘zlar: maktabgacha ta’lim; bolada ijodkorlik, tadqiqotchilik; tasavvur, tashabbus, harakatchanlik va moslashuvchanlik; mantiqiy tafakkurning shakllanishi, muhandislik, dizaynerlik, ta’lim-tarbiya jarayonidagi mustaqillik, integratsiyalashgan ta’lim, STEAM texnologiyasi.

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FUNDAMENTALS OF ROBOTICS IN STEAM ACTIVITY IN PRESCHOOL EDUCATION

Abstract. The organization of robotics in STEAM activities in preschool education and the areas of robotics are explained.

Key words: preschool education; creativity, research in the child; imagination, initiative, mobility and flexibility; formation of logical thinking, engineering, design, independence in the educational process, integrated education, STEAM technology.

Maktabgacha ta’limda robototexnika asoslarini tashkil etilishi bolalarning kreativligini, mantiqiy fikrlashini rivojlantirishning eng muhim vositasi hisoblanadi. texnik va muhandislik ko‘nikmalarini shakllantirishni ta’minlaydi. Bolalarda yuqori texnologiyali muhandislik va dasturlash bilan bog‘liq mavzularni rivojlantirishga, robototexnikani mashg‘ulotdan tashqari tadbirlarga integratsiyalashga turtki beradi. Maktabgacha ta’lim tashkilotlarida robototexnika asoslarining tashkil etilishi dolzarbligi texnik ijodkorlikni rivojlantirishning yangi vazifalari bilan belgilanadi, zamonaviy fan amaliy faoliyatda texnik va axborot bilimlarini uyg‘unlashtira oladigan mutaxassislariga bo‘lgan talabning yuqoriligidan kelib chiqadi. Har bir bolaning qobiliyatini ochib berish, yuqori

texnologiyali, raqobatbardosh dunyoda hayotga tayyor shaxsni tarbiyalash - davlat ta'lim standartida zamonaviy ta'limning maqsadlari sifatida belgilangan.[7]

Robototexnika nima va u bolalarga nima uchun kerak? Robototexnika insonning turmush tarzini yengillashtiruvchi avtonom qurilma va texnikalarni kashf etishga xizmat qiladigan soha bo'lib, bugungi kunning eng serdaromad kasbi hisoblanadi. Robotexnika - maxsus konstruktorlardan foydalangan holda robotlar yasashdir. Robotexnika 3 yo'nalishni o'z ichiga oladi: dizayn, dasturlash, elektronika.

Pedagogning vazifasi bolani mexanika asoslari bilan tanishtirish va uning ko'nikmalarini rivojlantirishdir. Jarayonga bolalar jalb qilingan, ular o'zlari robot yaratishga qiziqishadi va natijasini ko'rishadi. Faoliyat o'yin-kulgi va ta'limni birlashtiradi. Robototexnika – bu, mashinasozlik, elektrotexnika va informatika fanlarini birlashtiradigan soha. Ushbu dastur doirasida bolalar robotlarni loyihalash, qurish va ulardan foydalanish, shuningdek ularni boshqarish, fikrlar va ma'lumotlarni qayta ishlash uchun kompyuter tizimlarini o'rganadi.[9]

Bolalarda robototexnika qanday rivojlanadi? Robotlar qurish orqali bola mas'uliyatni, intizomni, jamoada ishlashni, tasavvurni va diqqatni rivojlantiradi. Oddiydan murakkabgacha bosqichma-bosqich ishlash sabr-toqat va qat'iyatni o'rgatadi. Shuningdek, konstruktor quyidagilarning rivojlanishiga hissa qo'shadi: ijodiy fikrlash; elektronika olami haqida tanishuv; qo'llarning motorika qobiliyatlari; nutq va aqliy qobiliyatlar; xotira; atrofidagi dunyo haqidagi g'oyalar; boshqa odamlarning mehnatiga hurmat; o'zaro aloqa mahorati; mustaqillik.

Konstruktiv faoliyat ancha murakkab jarayon, bola nafaqat qo'llari bilan amaliy harakat qiladi va xuddi shu paytni o'zida qurilayotgan bino yoki hunarmandchilikni idrok etadi, o'ylaydi. Loyihalashning asosiy momenti ob'ektlarni tekshirishning analitik va sintetik faoliyati bo'lib, bu dizayn usullarini aniqlash imkonini beradi. Namunani tahlil qilish va uni qurish usullarini tanlashda tarbiyachiga vizual idrok emas, balki maxsus tashkil etilgan kognitiv faoliyat yordam beradi. Analitik-sintetik faoliyat asosida bola qurilish jarayonini rejalashtiradi, g'oyani yaratadi. Rejani amalga oshirishning muvaffaqiyati asosan maktabgacha yoshdagi bolaning o'z yo'nalishini rejalashtirish va nazorat qilish qobiliyati bilan belgilanadi. Analitik va sintetik faoliyatni takomillashtirish maktabgacha yoshdagi bolaning *konstruktiv ijodkorligi* uchun asos yaratadi.[9] Maktabgacha ta'limda konstruktiv faoliyat bilan rivojlanuvchi ta'lim tizimini yaratish bolaga ijodkorlikni namoyon etish, hissiy tajribani boyitish, kognitiv va estetik ehtiyojlarni ro'yobga chiqarish imkonini beradi. Olimlarning ta'kidlashlaricha, bu soha kelajakda ham eng talabgir va serdaromad kasblardan biri. Bu kasbni o'rganish davomida bolalar intellektini rivojlantirib, konstruktiv fikrlashini oshiradi, shu bilan bir qatorda fizika, matematika va informatika kabi asosiy fanlarni o'rganishga ham amaliy yordam beradi, dasturlashni va algoritmlarni oson o'rganib olish imkoniyatiga ham ega bo'ladi. Bugungi kunda Robototexnika keng miqyosda rivojlanmoqda, jahon davlatlari bu kasbni o'z

ta'lim tizimlariga ham kiritishdi. Bundan maqsad bu sohani keng miqyosda rivojlantirish bilan birga insonlar turmush tarzini yaxshilash bu maqsadni oldiga qo'ygan har bir inson va davlat faqat va faqat rivojlanishda bo'ladi! Bolalar ko'p vaqtini kompyuterga sarflaydi. Nafaqat o'yin o'ynashga, balki internetda kerakli ma'lumotlarni qidirishga va o'rganishga, yoki "YouTube"da tarbiyaviy videolarni tomosha qilishadi. Bu esa hech bo'lmaganda kompyuter bolaga qiziq ekanligini anglatadi. Mantiqiy fikrlash. Bola qanday qilib muayyan xulosalarga kelganiga e'tibor bering. Agar u mantiqiy fikrlash zanjirida bo'sh bo'lsa, unda bu analitik fikrni ko'rsatishi mumkin. Matematika va informatika fanida muvaffaqiyatga ega bo'lsa. Agar bolaga ushbu ikkita fan yoqsa, dasturlash uni o'ziga jalb qilish ehtimoli juda katta. Bolani "mahsulot" emas, balki uning qanday ishlashi qiziqtiradi. U har doim u yoki bu dastur qanday ishlashini, maishiy texnika va boshqalarni tushunishga harakat qiladi. Ichkarida nima borligini ko'rish uchun u hamma narsani mayda detallarga ajratishga tayyor. AQSh va Kanada oliy o'quv yurtlari robototexnika bo'yicha mutaxassislar tayyorlashda shubhasiz yetakchi hisoblanadi. Tadqiqot markazlari Amerika va Kanada universitetlari negizida ishlaydi va universitetlar biznes bilan faol hamkorlik qiladi. Buning yordamida talabalar professionallardan saboq olishadi, taniqli kompaniyalarda amaliy mashg'ulotlar va amaliyotlarda qatnashadi. Odamlar robototexnika o'rganishga boradigan eng mashhur muassasalar qatoriga Nyu-Jersi Texnologiya Instituti, Fanshawe kolleji, Sheridan kolleji, Conestoga kolleji, Jorj Mason universiteti, Kolorado shtat universiteti va boshqalar kiradi. Yoshligidan dasturlash asoslarini o'rgangan bola, keyinchalik o'rganishi osonroq bo'ladi. Yangi bilimlar mustahkam asosga tushadi. Xuddi matematikaga o'xshab - raqamlarni bilmasdan turib, ularni qo'shib yoki ayira olmaysiz. Shuningdek texnik fanlarni o'rganish jarayoni asta-sekin amalga oshiriladi. Odam birinchi darajadan ikkinchi darajaga o'tadi, dasturlash bilan ham shunday.[10] Erta yoshdagi bolalarni dasturlash bo'yicha o'qitish bilim qobiliyatini oshirishga, mantiqiy fikrlashni rivojlantirishga olib keladi va ularning tengdoshlariga qaraganda mantiqiy va matematik vazifalarni engish osonroq ekanligi ilmiy jihatdan isbotlangan. Eng asosiysi, bolalarga dasturlashni ishlashi va tuzilishi tushuntirib bera oladigan yaxshi o'qituvchini topish, va ular bolalarga ko'r-ko'rona klaviatura bosishni o'rgatmaslikdir. Dasturlash bilimiga ega bo'lish bu, o'qimishlilik va muvaffaqiyatlilik garovidir. Dasturlash xuddi xorijiy til kabi foydali va kerakli bilimga aylandi. Dasturlash mantiqiy fikrlash qobiliyatini rivojlantiradi va dunyoga o'zgacha nazar solishga yordam beradi. Ehtimol,



dasturlashni eng oddiy savodxonlik bilan taqqoslash mumkin. Hozirgi raqamli asrda dasturlash xuddi o'qish va yozish, tabiiy fanlar kabi hayotimizdagi zaruriy bilimga aylanib bormoqda.[10]

Hammamiz maktabda geografiya fanini o'qiganmiz, lekin oramizda juda kamchilik geograf bo'lib yetishgan. Biz geograf bolishni istamasak ham, maktablarda bu fan o'qitiladi. Chunki geografiya fani orqali biz yashayotgan dunyoyimiz haqida ma'lumotga ega bo'lamiz. Dasturlash yo'nalishi ham xuddi geografiyadek biz uchun dunyoni tushinishda juda muhim sanaladi. Bizning dunyomiz shunchalik o'zgarib ketdiki, endi asosiy bilimlar yetarli emas. Va bu yangi dunyo qanday ishlashini to'liq tushunish uchun dasturlashni



o'rganishimiz kerak, ma'lumotlar bazasini tushunishimiz kerak. Hozirgi kunda deyarli barcha bolalarga zamonaviy gadjetlar tanish, ularni qanday ishlatishni biladilar. Ammo dasturlash qobiliyati bolaga zamonaviy texnologiyalar bilan yaqindan tanishish, ularning tuzilishi va ishini tushunishga imkon beradi. Masalan, u dasturlar bilan yanada samarali ishlashni yoki Internetda bemaolol ishlashni o'rganadi. Ehtimol, bola dasturchi bo'lmas, ammo dasturlashni o'rganish jarayonida olgan bilimlari uning hayotini yanada ongli va qulay qiladi. Dasturlash kompyuterlar va boshqa mikroprosessorli elektron mashinalar uchun dasturlar tuzish, sinash va o'zgartirish jarayonidan iborat. Aloqa texnologiyalarining jadal rivojlanishi bugungi kunda dunyoda eng rivojlanayotgan IT sohasini, yangi sohani ochdi. Agar bola o'z hayotini dasturlashga bag'ishlashni xohlamasa ham, kelajakda bu mahorat foydali bo'lishi mumkin bo'lgan bir qator sabablar mavjud: dasturlash mantiqiy fikrlashni rivojlantiradi; dasturlashning eng muhim jihati shundaki, u mantiqiy fikrlashga va mulohaza yuritishga o'rgatadi. Muammolar yechimini doimiy ravishda izlash kompleks yondashuv va intizomni talab qiladi; dasturlash kompyuter qurilmasini tushunishga yordam beradi; dasturlash ijodkorlikni ochib beradi. Kelajakda dasturlash asoslarini va texnologiya bilan ishlash qobiliyatini tushunish ko'plab texnik bo'lmagan kasblar uchun majburiy mahoratga aylanadi.

Bolalar tez o'rganadilar. Dasturlashni o'rganishni boshlash uchun eng yaxshi vaqt bolalikdir. Zamonaviy bolalar eng so'nggi texnologiyalarni osongina o'zlashtira olishadi. Dasturlashni o'rganish orqali bolada quyidagi ko'nikmalar shakllanadi: raqamli ko'nikmalar va foydali dasturlardan foydalanish; prezentatsiyalar va grafik dizayn bilan ishlash; O'qish va kundalik hayot uchun foydali bo'lgan raqamli dasturlash; internetdan foydalanish; loyihaviy fikrlash va jamoaviy ishlash ko'nikmalarini o'zlashtiradilar.[8] Bolalarning kompyuter qarshisida ishlash qoidasi: bola haftasiga 3 kundan ko'p bo'lmagan holatda kuniga 15-20 daqiqa mashg'ulot o'tkaza oladi; mashg'ulotni kunning birinchi yarmida o'tkazish tavsiya etiladi; bolalar o'tiradigan stol-stul uning bo'y-bastiga

mos bo'lishi kerak; mashg'ulotlar xonasi bolaning ko'rish tizimi zo'riqmasligi uchun yaxshi yoritilgan bo'lishi kerak. Qorong'ulikda kompyuterda ishlash mumkin emas; ko'rish zaif bo'lsa, monitor qarshisida faqat ko'zoynak bilan o'tirish tavsiya qilinadi; kompyuter qarshisidagi mashg'ulotlar chog'ida to'g'ri o'tirishga rioya qilish kerak: oyoqlar tizzadan 90 daraja burchak hosil qilgan, qo'llar tananing yon qismiga tegib turishi, tana o'rindiqqa perpendikulyar joylashishi, qomat tik bo'lishi, bo'yin va elka bo'shashgan holatda, tovon butunlay polga tegib turishi darkor; ko'zdan monitorgacha masofa 60 sm bo'lishi kerak; alohida topshiriqlar oralig'idagi dam olish vaqtlarida ko'zlar uchun mashqlarni bajarish zarur. Navbati bilan yuqoriga-pastga, o'ngga-chapga qarash, ko'z bilan geometrik shakllar (kvadrat, aylana, uchburchak) chizish; imkon bo'lsa derazadan qarash foydali; mashg'ulotlardan so'ng, sovuq suv bilan yuvinish va shug'ullanish turini o'zgartirish, masalan, faol o'yinlar o'ynash tavsiya etiladi.[6]

Dasturlash faqat kelajakda IT mutaxassisi bo'lishni istaganlar uchun kerak degan xato tushuncha bor. Biz esa dasturlash bolalar uchun ham foydali deb hisoblaymiz. Dasturlashni o'rganish orqali bolalarda matematik bilimlarni oson o'zlashtirish qobiliyati paydo bo'ladi. Dasturlash orqali aqliy rivojlanish. Dasturlash kodini yozish jarayonida bolaning tanqidiy, ijodiy va mantiqiy fikrlashi rivojlanadi. Bolalar uchun kundalik muammolarni hal qilish va ularning kelajakdagi kasbida muvaffaqiyat qozonishi uchun asosiy ko'nikma bo'lib xizmat qiladi. ☒ Dasturlash yordamida bolalar zamonaviy texnologiyalar olamidagi qurilmalarning mantig'i nima ekanligi, qanday ishlatish kerakligini va ular nima uchun mavjudligini bilib oladilar. Dasturlashni o'rganish qiziqarli sayohatdir. Bolalar o'yinlar ustida ishlash paytida ularning tasavvurlari rivojlanadi. Ammo eng muhimi, hayotda o'z kasbini topa olish imkoniyati mavjud. Ba'zan odam uchun o'z sevimli kasbini topish uchun ko'p yillar kerak bo'ladi. Dasturchi bo'lish uchun faqat kod yozish kerak desangiz adashasiz, bugun sizlar bilan bola aqliy rivojlanishiga foydali ajoyib mashg'ulotni bo'lishmoqchiman - grafik diktant. Grafik diktant – bu, kataklarda chiziqlarni berilgan xarita yordamida chizish orqali hosil bo'luvchi qiziqarli shakl yoki rasmlar. Grafik diktant dasturlash sohasini o'rganayotgan bolalar uchun juda foydali. Bolada juda muhim ko'nikmalarni rivojlantirishga yordam beradi - diqqat, qat'iyatlilik, harakatni muvofiqlashtirish, barmoqlarning harakatlantirish qobiliyati. Dasturlashni miya faoliyatiga ta'siri qanday? Dastur yozish va uni tahlil qilish inson miyasining ochilmagan qirralarini ochib beradi. Bundan tashqari dasturni oddiygina o'qish orqali ham insonda mantiqiy fikrlash birmuncha sezilarli darajada o'sadi bu esa, uzoqni oldindan ko'ra olish qobiliyatini oshishiga olib keladi. Dastur masalalari yoki amallari matematikaga o'xshashmi? Albatta "Ha", dasturning o'z algoritmi va tili mavjud. Bu esa dastur yozish davomida birmuncha ko'proq izlanishga va javoblarni qidirishga muhim bir omil bo'ladi. Qisqacha aytganda, dasturlashni o'rgangan odamning miyasi shunchaki matematika bilan shug'ullanuvchi odamning miyasidan ancha faolroq ishlaydi. Chunki dasturlashda nafaqat nazariy bilimlar o'rganiladi balki amaliy — yaratuvchanlik kayfiyati ham miya faoliyatini

yaxshilaydi. Jamoa - ishonish, bahslashish va rozilik berishni o'rgatadi. Ijtimoiylashuv - bu bolaning jamiyatda yashashi uchun foydali bo'lgan ko'nikmalarni egallash jarayoni. Jamoada ishlash - odamga boshqalarning ehtiyojlarini tushunishni, muzokara olib borishni, bahslashishni, bir-biriga ishonishni o'rgatadi. Bu - ijtimoiylashuv. [10]

Robototexnika novatorlikni yuksaltiradi! Nazariy jihatdan o'zlashtirish qiyin bo'lgan fanlarni amaliyotda robotlar yasash orqali tez va murakkab darajada o'zlashtirish mumkinmi? Albatta mumkin, chunki robotlar ham ma'lum bir fanlar asosida ishlab chiqilgan xususan: matematika, fizika va informatika. Bu fanlarni qanday qilib misol ishlamasdan, formula yodlamasdan amaliy o'rganish mumkin, deb o'ylayotgan bo'lishingiz tabiiy, lekin ishonib bu amallarni bajarmasdan ham ma'lum bir darajada o'zlashtirishning imkoni bor. Bunda bizga robototexnikani o'rganishning uch bo'limi yordamga keladi bular: Mexatronika. Robotlarning mexanik qisimlarini yasash orqali bolalar ularni o'lchaydilar va kesishadi.



Bo'laklarni bir biriga moslashtirib ulash uchun esa ular oraliq diametrni va markazlarni amalda o'lchab hisoblashadi. Elektronika. Bilamizki, robotlar motorlarsiz harakatlanishmaydi, batareyasi bo'lmasa esa hatto ishga tushmaydi ham. Bu borada endi biz fizikaning amaliy tajribalarini qo'llab ko'ramiz, ya'ni simlar orqali quvvat manbaini boshqaramiz, o'zgaruvchan

tokni nazorat qilib ma'lum bir motorlarni harakatlantiramiz va robotni hatto gapirishida ham chastotalarni nazorat qilib boramiz. Dasturlash. robotni mana shu ikkita bo'lim bo'yicha taxlaymiz va so'ngra uni harakatlanishi, gapirishini dastur yozish orqali turli buyruq dasturlari yozib boshqaramiz bunda esa biz albatta informatikani o'rganamiz. Demak, bitta robot yasab ham amalda uchta fanni o'rganish mumkin. Hamda bolalar bu fanlarni shunchaki nazariy fan deb emas, balki qiziqarli soha sifatida qabul qilishadi. Robotexnika muhandislikdagi birinchi qadamdir. Robototexnika mashg'ulotlarini tashkil etish orqali bolalarda robototexnika dunyosiga chuqur sho'ng'ish, kompyuter uskunalari va robot dizaynini o'rganish imkoniyatini beradi. Robototexnika mashg'ulotining afzallik tomoni shundaki, robototexnika dasturlari nafaqat ilm-fan, texnologiya, muhandislik va matematik tushunchalarni shakllantirishga yordam beradi, balki qiziqarli muammolarni bajarish uchun ishlayotganda bolalarning jamoaviy ko'nikmalarini shakllantirish uchun ham xizmat qiladi. Ushbu hamkorlik qobiliyatlari kelajakda qaysi sohani tanlashidan qat'iy nazar, bolalarning muvaffaqiyati uchun juda muhimdir. Robototexnika mashg'ulotining afzalliklariga quyidagilar kiradi: ijodiy fikrlash qobiliyatlari rivojlanadi; ijtimoiy ko'nikmalar shakllanadi; muammolarni hal qilish qobiliyatlari rivojlanadi; kompyuterni dasturlash qobiliyati, kompyuter qurilmalari haqidagi dastlabki

tushunchalar hosil bo‘ladi; motivatsiyani oshiradi(bilishga bo‘lgan intilish). [9] Robototexnikani o‘rganishning bola uchun 5 ta eng yaxshi sababi: robototexnika qo‘shimcha ta’limning eng ko‘ngilochar va ilg‘or yo‘nalishlaridan biridir. Ushbu darslarda bolalar aslo zerikishmaydi. Ta’limdagi robototexnika realizm nuqtai nazaridan amaliy, mazmunli ish jarayonida bir vaqtning o‘zida bir nechta fanlardan olingan bilimlarni mustahkamlashga asoslangan STEAM yondashuvining yaxshi namunasi. 1. Bolalar texnologiya dunyosida tezroq va yaxshi yo‘naltirilgan bo‘ladi; muhandislik mutaxassisliklari asta-sekin birinchi o‘ringa chiqmoqda. Shu sababli, hozirda robototexnikani o‘rganish orqali bolalar texnologiya dunyosida tezda sayohat qilishlari bilan birga, kelajakdagi har qanday kasbni osonlikcha egallashlari mumkin. Bugungi kunda ko‘plab mutaxassislar o‘z amaliyotlarida robotlardan foydalanadilar. Masalan, tibbiyot, qurilish va ishlab chiqarishda. 2. Robototexnika predmetlararo tushuncha rivojlanishini ta’minlaydi; robototexnika bir nechta fanlarni birlashtiradi: matematika, fizika, informatika, texnologiya va b. Robot yaratishni boshlashdan oldin, bolalar o‘qituvchi rahbarligida nazariyani o‘rganadilar va dastur yozadilar. Shundan so‘ng, ular modelni tuzadilar, kodni yozish to‘g‘riligini tekshiradilar va agar xatolar topilmasa, unda ularning robot yechimi "hayotga kiradi", berilgan vazifalarni bajaradi. 3. Bolalar amalda maktab intizomlari bilan tanishadilar; zamonaviy bolalar maktabda nima uchun ma’lum bir intizomni o‘rganayotganlarini tushunishlari muhimdir. Robototexnika fizika, matematika va informatika qonunlarining ayrimlari hayot bilan bog‘liqligini ko‘rish imkonini beradi. Loyiha muammolarini hal qilishda bolalar ular uchun umuman boshqacha ma’noga ega bo‘lgan bilimlardan foydalanadilar. 4. Robototexnika nutq va taqdimot qobiliyatlarini yaxshilashga yordam beradi; odatda, robototexnika ko‘plab bolalar uchun haqiqiy sevimli mashg‘ulotga aylanadi. Ayniqsa, ana shunday bolalar uchun ko‘plab mintaqaviy va xalqaro robotlar olimpiadalari, tanlovlari va festivallari o‘tkazilib, ular o‘z mahorat va qobiliyatlarini namoyish etishlari mumkin. 5. Bolalar 21-asrning jamoaviy ishlash ko‘nikmalarini va boshqa asosiy ko‘nikmalarini o‘rganadilar; har qanday robotlashtirilgan loyihani yaratishda bolalar odatiy darsda asosiy deb hisoblanmaydigan ko‘nikmalarni egallaydilar: jamoaviy ish, vaqt va resurslarni boshqarish, gipoteza va uni amalda sinab ko‘rish.[10] Jamoadagi har bir bola ma’lum bir vazifa uchun javobgardir, uni bajarmasdan guruh oldinga siljiy olmaydi. Hamda eng muhimi, bolalar bunga haqiqatan ham qiziqishadi. Robototexnika darslari quyidagilarni birlashtiradi: dasturlash; algoritmlar; mantiq; mexanika; matematika; fizika. Robototexnika mashg‘ulotlarida bola ushbu sohalar bo‘yicha dastlabki ko‘nikmalarni egallaydi. Bundan tashqari, robototexnika darslari qat’iyatlilikni rivojlantirishi va bolaning bu va boshqa fanlarni o‘rganishda muvaffaqiyatini oshiradi.

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TALABALARDA SOG'LOM TURMUSH TARZIGA OID KOMPETENSIYALARINI RIVOJLANTIRISHNING TARIXIY- IJTIMOIY PEDAGOGIK ASPEKTLARI

Annotatsiya. Doimo sog'lom yashash va uzoq umr ko'rishga insoniyat azal-azaldan intilib kelgan. Shu nuqtai nazardan oladigan bo'lsak har qanday jamiyatning oldida turgan asosiy vazifa insoniyatning ana shu intilishlarini ro'yobga chiqarishdan, ya'ni kishilar sog'liq va uzoq umr ko'rishlari uchun sharoit yaratishdan iborat. Hamma davrlarda ham sog'lom turmush tarzi sog'liqni saqlashning asosiy omillaridan, talablaridan hisoblanib kelgan. Shuningdek, Har qanday jamiyat taraqqiyotining zamonaviy bosqichida yosh avlodni har tomonlama barkamol etib tarbiyalash eng asosiy masalalardan biri sanaladi.

Kalit so'zlar. Milliy boylik, milliy qadriyat, ta'lim, sog'lom turmush tarzi, sog'liq, sog'lom, insoniyat, ma'naviy va jismoniy sifatlar.

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HISTORICAL AND SOCIAL EDITORIAL ANNOTATIONS OF THE DEVELOPMENT OF HEALTHY LIFESTYLE COMPETENCIES IN STUDENTS

Annotation. Since time immemorial, humanity has always strived to live healthy and live a long life. From this point of view, the main task facing any society is the realization of these aspirations of humanity, that is, the creation of conditions for people to live a healthy and long life. At all times, a healthy lifestyle has been considered one of the main factors and requirements of health care. Also, in the modern era of development of any society, the comprehensive education of the younger generation is one of the most important issues.

Keywords. National wealth, national value, education, healthy lifestyle, health, health, humanity, spiritual and physical qualities.

O'zining salomatligi haqida shaxsan g'amxo'rlik qilish sog'lom turmush tarzini ga oid kompetensiyalariniyoshlikdan oila va ta'limning barcha bosqichlarida jismoniy tarbiya va sportning ko'magida singdirib borish kerak.

Insonlar endilikda faqatgina soʻzda emas, balki amalda salomatligining qadriga yetib, uni milliy boʻylik, milliy qadriyat sifatida qarashga oʻtishlari lozim boʻladi.

Qadimgi faylasuf olimlar – Platon, Aristotel va boshqalarning asarlarida tarbiya taʼlim tizimida hamda insonlar solomatligi moʻtadilligini taʼminlashda jismoniy tarbiyaga yuksak baho berilgan.

Platon (miloddan avvalgi 427-347 y.y.) Afina zodagonlari vakili, faylasuf-idealist, insonning maʼnaviy va jismoniy sifatleri haqidagi nazariyaning asoschisidir. U Sparta tizimiga moyillik bildirib, harbiy-jismoniy tarbiyani aqliy tarbiya va taʼlim bilan qoʻshib olib borishni koʻzda tutdi. Platon oʻzining asarida shunday degan: “Yaxshi gimnastika oddiy boʻladi, lekin eng avvalo, harbiy gimnastika boʻlishi lozim”.

Aristotel (miloddan avvalgi 384-322 y.y.). Yirik olim va faylasuf, Platonning talabasi va Aleksandr Makedonskiyning ustози boʻlgan. Aristotel shakl va mazmun birligi haqidagi gʻoyani ilgari surgan. Shu bilan birga borliqning rivojlanishini isbotlagan. Insonning ruhi va tanasi ajralmas holda bogʻliq ekanligini tushuntirib bergan. Aristotel oʻgʻil bolalarni jismoniy jihatdan mustahkam qilib tarbiyalash tarafdori boʻlgan. U Platondan farqli oʻlaroq tarbiyada koʻproq taʼlim-tarbiyaga oʻrin berishni, gimnastika mashqlari hajmini kamaytirishni tavsiya etgan. Chunki gimnastikada koʻproq harbiy jismoniy tarbiya va taʼlim koʻzda tutilgan va u bolalar uchun juda murakkab jarayon, deb hisoblagan. Demokrit (miloddan avvalgi 460-370 y.y.) jismoniy mashqlar insonning shakllanishida muhim oʻrin tutadi, yaʼni tabiiy holatni rivojlantirishda ustunroqdir, deb taʼlim bergan. Sokrat (miloddan avvalgi 469-399 y.y.) aytishicha, mustahkam sogʻliq koʻpgina illatlardan saqlashga kafolatdir. Qadimgi grek shifokori Gippokrat (miloddan avvalgi 460-375 y.y.) taʼbiri va taʼlimi boʻyicha, jismoniy mashqlar bilan shugʻullanish turli xil kasalliklarni oldini olish va davolashda muhim ahamiyatga egadir.

Maʼlumki, hozirgi kunda respublikamizda aholi turmush farovonligini oshirish, sogʻligʻni mustahkamlash, jismoniy tarbiya va sportni aholi oʻrtasida ommalashtirish, yosh avlodni aqlan sogʻlom va jismonan barkamol qilib tarbiyalash boʻyicha katta ishlar amalga oshirilmoqda. Bugungi kundagi oʻtroq faoliyat turlarining tobora rivojlanib borishi, shaxsiy transportdan foydalanish koofitsentining ortishi insonlarda jismoniy faolligini pasayishiga olib kelmoqda. Buning natijasida yurak-qon tomir, ovqat xazm qilish tizimi buzilishi, ortiqcha vazn paydo boʻlishi kabi kasalliklarni yuza kelishiga olib kelmoqda.

Tabiiyki, bu omillar Respublika aholisining qariyb 40 foizini tashkil etuvchi yoshlar salomatligiga ham oʻz taʼsirini koʻrsatmay qolmaydi.

Bunda sogʻlom turmush tarzini shakllantirish masalasi alohida ahamiyat kasb yetadi. Maʼlumki, barcha davlatlarning taʼlim siyosatining muhim yoʻnalishlaridan biri bu taʼlim oluvchilarning sogʻlom turmush tarzini olib borishi, jismoniy tarbiya va sport bilan muntazam shugʻullanishi, buning uchun talab etiladigan sport infratuzilmasidan foydalanishi uchun sharoit yaratishdir. Jismoniy tarbiya va sport inson salomatligini saqlash, mustahkamlashga, jismoniy

yuksalishga va sogʻlom turmush tarzini shakllantirishga hissa qoʻshishi shubhasizdir. Faol sport bilan shugʻullanish natijasida ortirilgan qobiliyatlar va qadriyat yoʻnalishlari sogʻlom turmush tarziga barqaror ehtiyojni shakllantiradigan, shaxsning oʻzini oʻzi boshqarishning motivatsiyalangan, individual jarayoniga aylanadi.

Sogʻlom turmush tarziga boʻlgan ehtiyojni shakllantirish muammosi yechimi talabalarning sport oʻyinlari, turizmning faol turlari bilan shugʻullanishga qaratilgan shaxsiy motivatsiyasiga, oliy taʼlim muassasasining taʼlim maydonida ushbu jarayonni pedagogik qoʻllab-quvvatlashga bogʻliq. Shu munosabat bilan talabalarining sogʻlom turmush tarzi ga oid kompetensiyalarini rivojlantirish muammosini oʻrganish katta ahamiyatga ega xisoblanadi.

Garvartlik Monique Tello “Sogʻlom turmush tarzi: uzoq umr koʻrishning 5 ta kaliti” nomli maqolasida beshta tanlangan sogʻlom odatlar majmuasidan doimiy foydalanish tavsiya etiladi, chunki koʻplab tadqiqotlar ularning inson salomatligiga foydali ekanligini, erta oʻlim xavfini kamayishiga taʼsir koʻrsatishini koʻrsatdi. Bu sogʻlom odatlar quydagilar(1-rasm):



1-rasm. “Sogʻlom turmush tarzi: uzoq umr koʻrishning 5 ta kaliti (Garvartlik Monique Tello)

Shunday qilib, sogʻliqni saqlash va mustahkamlash muammolari, talabalarining sogʻlom turmush tarziga boʻlgan ehtiyojlarini shakllantirish, harakat faolligini yaxshilash va uzoq umr koʻrishni toʻlaqonli uzaytirish oliy taʼlim muassasalarida oʻqish vaqtida ham tugallangandan keyin ham dolzarbligicha qolaveradi. Har qanday davrda ham sogʻliq yeng yuqori qadriyat, faollik, ijodiy hayot asosi, insonning baxt-saodati, quvonchi va farovonligi hisoblangan. Zamonaviy jamiyatda sogʻlom turmush tarzi omon qolish shartiga aylanadi.

Avvalo, inson o'zining salomatligi uchun o'zi javobgardir. Shu sababli, oliy ta'lim muassasalari talabalarining sog'lom turmush tarzi ga oid kompetensiyalarini rivojlantirish, uni targ'ib qilish zamonaviy jamiyatning muhim vazifalaridan biri hisoblanadi. Muammoning dolzarbligi shundan kelib chiqadiki, olimlar talabalarni sog'lom turmush tarzini saqlash uchun motivatsiya yetishmasligini, oliy ta'lim muassasasi o'quv jarayoniga talabalar sog'lig'ini saqlash va mustahkamlashga, ularning sog'lom turmush tarziga bo'lgan ehtiyojlarini qondirishga qaratilgan zamonaviy sog'liqni saqlash texnologiyalarini yetarli darajada qo'llamasliklari ta'kidladilar. Biroq, muammoning dolzarbligi jamiyatimizning ijtimoiy-iqtisodiy rivojlanishi va ilmiy-texnik taraqqiyotini sekinlashtirishi va hatto to'xtatishi mumkin bo'lgan demografik inqiroz tufayli yuzaga keladi.

Inqiroz holatining sabablari orasida ijtimoiy-iqtisodiy va ekologik inqirozlar, ta'lim tizimini tashkil etish va sog'liqni saqlash strategiyasidagi kamchiliklar mavjud bo'lib, bu sezilarli psixo-emotsional yuklama bo'lib va odamlarning harkat faolligini yetarli darajada emasligi keltirib chiqaradi. Bundan tashqari, oliy ta'lim muassasalari talabalar salomatligi darajasining tez pasayishiga olib keladigan salbiy tendensiyalar sog'liqni saqlash madaniyatining yetishmasli va inson tomonidan sog'lom turmush tarzi normalari va qoidalariga rioya qilinmasligini aks ettiradi.

Xulosa qilib aytadigan bo'lsak, mazkur maqola yuzasidan mamlakatimiz va xorij adabiyotlari manbaalarida yoritilgan ilmiy tadqiqotlar natijalarini pedagogik tahlil qilish, ilg'or tajribalarni o'rganish, pedagogik kuzatuv, so'rovnomalar, joriy tadqiqotlar va pedagogik tajriba natijalarining qiyosiy tahlili asosida Talabalarda sog'lom turmush tarziga oid kompetensiyalarni rivojlantirishning didaktik imkoniyatlarini o'rganish bo'yicha ushbu yo'nalishda ilmiy tadqiqotlarni olib borish zarurligini ko'rsatadi.

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ADTI

SHAKAR O'RNINI BOSISHDA QO'LLANILADIGAN MODDALAR

Annotatsiya. Ushbu maqolada shakar o'rnini bosuvchi bir nechta organik moddalar, ularning ochilish tarixi, ishlatilishi, fizik xossalari haqida bayon qilingan.

Kalit so'zlar: shakar, saxarin, sukraloza, siklamat, sinergizm, taumatin.

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SUGAR SUBSTITUTES

Abstract. This article describes several organic sugar substitutes, the history of their discovery, their uses, and their physical properties.

Key words: sugar, saccharin, sucralose, cyclamate, synergism, thaumatin.

Shakar iste'mol qilish barcha orgnizm uchun birdek ta'sir qilmaydi. Shuning uchun uning o'rnini bosadigan moddalardan ham foydalanish mumkin. Iste'molchi aspartam qatorida etiketkalarda boshqa yangi shirinlashtiruvchilarni nomini ko'rsa bo'ladi. Bu sukraloza (E955) va kaliy asetosulfam (E950). Sukraloza shakardan 600 marta shirin, K asetasulfam esa 200 martaga ruxsat etilgan bir kunlik istemol meyori-15 mg/kg (tana og'irligiga nisbatan). U asosan aralashmali shirinlashtiruvchilarda ishlatiladi. Saxarozani o'rnini bosadigan shirinlashtiruvchi moddalar izlanishi natijalarida olimlar barcha o'simliklar yer mevalar va mevalarni o'rganib chiqishdi. Oddiy qarag'ay yelimidan olingan kanifoldan kislota va uning natriyli tuzi olindi, u shakardan 200 marta shirin lekin tami bemaza. Ba'zan gul ishqibozlarini uylarida steviya qizil o'simligini uchratsa bo'ladi. Bu o'simlikni qizig'i shundaki-uning barglarida shirin modda-stevnozid mavjud, uni ko'k choy sifatida ham ishlatsa bo'ladi.

Tarkibiga shirin modda kiruvchi ko'pincha mevalar, yer mevalar o'tgan asrda topilgan, lekin ularni shirin ta'miga javob beruvchi kimyoviy bog'lar strukturasi topishga yaqinda erishildi. Shunday qilib, monelin tuamatin (E957), mirokulin oqsillari topilgan. 1895 yili Nigeriyada Dioscoreophywm wmmimli yer mevasidan monelin oqsili topilgan, u shakardan 1500-2000 marta shirinroq. Undan ham kuchli, 4000 martaga saxarozadan ham kuchli bu oqsil taumatin (E957). U Afrikada o'suvchi uchburchak shaklli ketemfe o'simligidan olingan. Eng qizig'i tuamatinning shirin ta'mi intensivligi oqsil alyuminiy ionlari bilan

biriksa yana ham kuchayib boradi. Hosil bo'lgan mo'jiza talin nomini olgan, u saxarozadan 35000 marta shirin. Taumatinning shirinligi askarbin kislotasini qo'shilishi bilan 20 martaga ortadi. 1983 yili Yaponiyalik ximiklar patent olishgan. Tuamatinni kichkina parchasi bir qop shakarni o'rnini bosadi. Yana bir shirin oqsil mirakulin - o'tgan asrda sunsepalum dulcificum daniellii qizil mevalaridan bargini ichgan insonlarni tam sezuvchanligi o'zgaradi. U sirkaga qo'shilsa, vinoning ta'miga o'xshab qoladi, limon sharbati shirinligiga aylanadi, bu effekt ko'p vaqt mobaynida saqlanib qoladi.

70-yillarda shirin moddalar ichida eng shirini bo'lgan modda sintezlangan. Bu modda dipeptid, u ikkita amikislotalar qoldiqlaridan-asparagin va amipolgalon kislotalaridan tuzilgan. Dipeptidda $\text{HOOC}-(\text{H}_2-\text{CH}(\text{NH}_2)-\text{CO}-\text{NH}-\text{CH}(\text{COOH})_2$ aminamalon kislotasi qoldiqlarini, ikkita karboksil guruhi, murakkab efirli guruhlilar bilan o'rni bosilgan. Bu modda nomi - L-alfa- asportil aminomalon kislotasini metilfenxilol efiri. U saxarozadan 33000 marta shirinroq va shirinligi bo'yicha ta'mi bilan birinchi va ikkinchi o'rinlarni bo'lishadi. Uni yaratgan Yaponiyalik olimlar depeptidni yaxna ichimliklar, djemlar, murabbo, povidlolar uchun ozuqaviy to'ldiruvchi sifatida qo'lash uchun patent olishgan. Shokoladni tami yaxshi bo'lishi uchun shu ozuqaviy to'ldiruvchidan bir necha milligram yetadi. Aralashmali shirinlashtiruvchilar va alohida shirinlashtiruvchilar har doim shakarni o'rnini bosgan bilan shirinlik ko'rsatgichlari talablariga javob bermaydi. Aralashmali shirinlashtiruvchilar qo'llanganda shirin tam sifatini yaxshilashga erishish mumkin. Tamni yaxshilashda bitta shirinlashtiruvchini o'rniga bir necha shirinlashtiruvchi modda qo'llansa sifatli sinergizm hosil bo'ladi. Misol uchun kaliy asetosulfam shirinligi tez seziladi, lekin uzoq vaqt saqlanib turmaydi, aspartamni shirinligi esa tez sezilmaydi, lekin ko'p vaqt mobaynida saqlanib turadi.

Sinergizm-bu har xil shirinlashtiruvchi moddalarni aralashtirilganda ularning shirinligini kuchayishidir. Aspartam va asetasulfamni 320 mg aralashmasi, har bir shirinlashtiruvchi modda alohida bo'lgandagi 500 mg miqdoriga teng bo'ladi. Mahsulotlarni ishlab chiqaruvchilar shirinlashtiruvchilarni tayyor aralashmasidan foydalanadilar.

Siklomat: 1884 yili Amerikalik kimyogari Berlinerblau, o'zi bilmagan holda shirin modda topdi. Moddaga dulsin deb nom qo'yildi. U shakardan 200 martaga shirinroq bo'lib, yarim asr davomida qo'llanilgandan so'ng uni inson organizimi uchun xavfli ekanligi aniqlandi. Siklomatlar ichimliklar va konditer mahsulotlar ishlab chiqishda qo'llaniladi.

Ko'p vaqt mobaynida shirinlik birinchiligi, benzoldan sintez qilib olingan mahsulotlarga tegishli bo'lgan. XX-asrda Gollandiyada kimyogarlar m-nitroanilin hosilalari ustida ishlanganlar.

Bu mahsulotlar shirin bo'lgan, shuningdek ularning shirinligi kuchayib so'ng pasayib boradi. Saxaringa qaraganda, alnoksilamin nonitrobenzollar sof shirin tamga ega, og'izda bemaza tam sezilmaydi. Alnoksilaminonitrobenzollarga

shirinlik bo'yicha birinchilik 70-chi yillarda tegishli bo'lgan, lekin bu moddalar ham ozuqaviy maqsadlar uchun yaramadi.

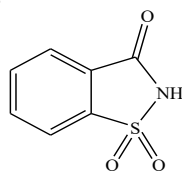
Bugungi kunda konserva sanoati uchun yangi shirinlik beruvchi moddalar-siklomatlar yoki siklogeksil sulfomat-tuzlari, ya'ni siklogeksil sulfamin kislotasidan olinadi. Xozirgi vaqtda eng ko'p ishlatiladigani natriy siklomat.

Siklomat shirinligi shakarnikidan 30 - 40 marta yuqori. Agar uning eruvchanligi 25 °Cda 68 % ekanligini hisobga olsak, 2 - 2,5 % siklomat natriyni eritib, shakar beradigan shirinlikni olish mumkin. Bir-xil shirinlik beruvchi eritmasining yopishqoqligi shakarnikidan 5 marta kam. Uni truboprovoddan o'tkazish qulay.

Yana bir afzalligi shakar 100 - 120 °C erib karamelizatsiyaga uchrasa siklomat 280 - 500 °Cparchalanadi. Bundan tashqari siklomat kislota ishqor ta'siriga chidamli va shirinligini yo'qotmaydi. Diabetiklar iste'mol qilishi mumkin. Barcha shakar ishlatiladigan texnologiyalarda 1 g siklomatni 30 - 40 g. shakar o'rnida qo'llasa bo'ladi.

Siklomat qo'shilsa bakteriya va mikroflora u bilan oziqlanmaydi. Hamda mevalarning rangi va ta'mini saqlash davomida o'zgartirmaydi. Lekin siklomatni konservant sifatida ishlatib bo'lmaydi. Chunki u murabbo, djem, povidloda konservant bo'la olmaydi.

Saxarin. Birinchi bor bu moddani 1879 yil amerikaliklar A. Gemsei va K. Falberg sintez qilishgan. Gemseining laboratoriyasida yosh Rossiyali emigrant Falberg tadqiqot ishlari olib borgan. U toluol sulfamid sintezi bilan shug'ullangan. Bir kuni u qo'lini yuvmasdan tushlik qilgani o'tirganda og'zida shirin ta'm sezgan. So'ngra laboratoriyaga qaytib, hamma reagentlarni tekshirishni boshlagan. Sintez mahsulotlaridan biri shirin ta'mga ega bo'lib chiqqan. Bu moddaga saxarin deb nom qo'yilgan.



Saxarin

Saxarinni 80 yillar atrofida ishlab chiqarish yo'lga qo'yildi. Bu yillar davomida uni tekshirish natijalari ko'p marotaba muxokama qilindi. Siklomat singari saxarin ham GRAS ga kiritilgan. Kaloriyasi bo'lmagan shirinlik beruvchi yagona moddani ta'qiqlab qo'yilayotganiga qarshi jamoatchilikning noroziligi esa milliy akademiyaning qaytadan saxarinni o'rganib chiqish vazifasini belgiladi. Olimlarning o'tkazgan tadqiqotlari shuni ko'rsatdiki, saxarin kalamushlar uchun eng past kanserogen hisoblanadi. Saxarinni kanserogenligi va epidemiologiya bo'yicha tekshirish 37 odam, 2500 kalamushda o'tkazildi. Bunda 7 kishi saxarinni ishlatish tarafdori bo'lgan bo'lsa 30 kishi qarshi ovoz berdi. Kalamushlarda esa uncha katta bo'lmagan lekin shish va siydik pufagida rakning asta sekin rivojlanganligi aniqlandi. Bundan keyingi keng ko'lamli tekshirish rak

tadqiqoti bo'yicha, milliy institutda olib borilib, bunda 6000 kishi tekshirildi. Bugungi kunda vaqtinchalik me'yor ruxsat etilgan bo'lib, 1 kg massa uchun 2,5 mgni tashkil etadi. Uning shirinligi shakarnikidan 400-500 marta yuqori. Saxarinni ishlatish (vaqtinchalik qo'shimcha sifatida) quyidagi mahsulotlar uchun ruxsat etilgan.

Saxarin natriy, kaliy va kalsiyli tuzlari ko'rinishida qo'llaniladi. Saxarinning ruxsat etilgan dozasi 1 kg massaga nisbatan 5 g dan iborat. Qandli diabet bilan kasallanganlar uchun shakarning o'rnini bosuvchi moddalar sifatida, dietik pishloq tayyorlash uchun ichimliklar va saqich ishlab chiqarish uchun qo'llaniladi. Saxarin organizmda o'zlashtirilmaydi. 98 foizi siydik bilan chiqib ketadi va diyeta miqdorida zararli emas, lekin u biroz saxarozadan ajralib turadi, chunki metallik ta'miga ega.

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THE IMPORTANCE OF FORMING A LABOR MARKET AND SOCIAL SUPPORT IN THE NEW UZBEKISTAN

Abstract. Following the establishment of Uzbekistan's independence, a legal framework reflecting market relations was created, which is used in various other countries. A similar legal framework has also been developed in the market. This law serves the civilized development and implementation of the labor market.

Key words: market attitude, labor market, modern market attitude, labor law, labor force.

Introduction. In the context of the transition to a market economy at the level of society, a situation of macroeconomic instability arises, which affects the well-being of the population and all spheres of the economy. This situation creates major macroeconomic problems that are important and necessary for the significance of the country. The solution to these problems depends on the activity of the labor market, covering the employment system, which includes solving such macro-scale problems as unemployment, providing employment and creating new jobs [1].

Literary review. Foreign scientists, scientists from the CIS countries and our Republic have carried out a number of scientific works on the development of the labor market and solving employment issues. Adam Smith, D. On the theoretical foundations of the labor market in a market economy, its problems and their solutions. Ricardo, A. studied by Samuelson. Especially abroad, scientific schools, theoretical views and conceptual approaches are put forward to study this topic.

Supporters of the classical school of labor market theory and approach Ricardo D., Mill J.S., Marshall A. developed the basic rules of the classical theory of the labor market. Proponents of the new classical theory of the labor market Perry J., Feldstein M. and Hall R. argued that the price of labor is a regulator of the labor market. Proponents of Keynesian theory Keynes J. and Gordon R. emphasized that the labor market will be in a constant and unbalanced state. Proponents of the latter approach, i.e., the monetarist theory of the labor market, have developed monetary methods for regulating the labor market. Among them are Friedman M., Kagan F., Meiselman D., Brunner K. and Meltzer A. can be included. Proponents of the new classical theory of the labor market Perry J., Feldstein M. and Hall R. argued that the price of labor is a regulator of the labor market. Proponents of Keynesian theory Keynes J. and Gordon R. emphasized that the labor market will be in a constant and unbalanced state. Proponents of the

latter approach, i.e., the monetarist theory of the labor market, have developed monetary methods for regulating the labor market. Among them are Friedman M., Kagan F., Meiselman D., Brunner K. and Molzer A [2].

Analysis and results. The modern development and progress of Uzbekistan since independence, the further development of market relations in sustainable directions depend, first of all, on solving problems in the labor market. Thus, the basis of the current government policy in the labor market are the following areas of employment of labor and the population:

- formation of a labor market by creating a market economy based on multi-economic and different property;

- implementation of programs for structural restructuring of production at the expense of state and non-state funds and the corresponding distribution of labor resources;

- regulation of labor supply and demand for it by economic and legal means;

- development of special measures to ensure social protection of the unemployed and segments of the population that are not competitive in the labor market (unemployed youth, women with children, disabled people, etc.);

- improving the quality of the workforce (improving the system of professional training, retraining and advanced training), developing economic activity of the population, supporting entrepreneurship and small businesses, etc.

It should be said that until recent years, labor force in Uzbekistan was not considered a commodity. However, in real life, which does not always correspond to the provisions of economic theory, millions of people in the country enter into employment relationships.

Most of the labor reserves in Uzbekistan (more than 60 percent) correspond to the rural labor market. According to current calculations, the labor market of the republic belongs to the category of an active labor market¹. Because about 4/5 of the workforce is employed.

Another feature of the republic's labor market is that, by international standards, this is one of the markets for young labor. Also, the labor market of our republic is not sufficiently balanced. There is a shortage of labor resources that is common to all its sectors (i.e. regional, professional, skilled, industrial and demographic sectors). Despite the high employment of labor in most regions (Ferghana Valley region, Kashkadarya region, etc.), additional demand for labor is 4-5 times higher than supply in the city of Tashkent and Tashkent region, which are major centers of industrial production. republics.

Also, the labor market of today's Uzbekistan is becoming democratic thanks to the specific economic policy of our country. The labor market of our republic and its structurally active part can be characterized by labor resources in the amount of 22714.6 thousand (22714600) people.

Taking into account the vital interests of all members of society, increasing attention to the lives of low-income citizens, observing the requirements of

fairness in the distribution of the results of social production, the most important thing is the choice of social directions [6].

The process of regulating the labor market and the principles of regulating the labor market, their implementation methods determine them. That is, when developing a strategy for regulating the labor market, you should pay attention to the following principles: first of all, it is necessary to subordinate all processes to the requirements of the progressive development of society and the economy, develop positive changes, ensure the priority of measures that ensure social and political social stability in society [3];

secondly, it is necessary to pay attention to the formation of an “active society” in which economic opportunities are created and the activity of every citizen in building a legal-democratic society is encouraged.

thirdly, an “active society” must be accompanied by a corresponding active policy in the labor market with the principle of equal opportunities. Its main goal is to eliminate or minimize inequalities in obtaining and maintaining employment that may be caused by disability, family circumstances, lack of skills and other reasons. Relations are carried out in the labor market, as in other markets. That is, within the framework of the relationships implemented in it, mainly sellers and buyers of labor force participate in this process, on the one hand, those who have a desire to work (this includes both employed and unemployed), and on the other hand, workers are included for production of goods and services, recruiters.¹ In it, as a result of the relationship between supply and demand, the quantity of goods sold (labor supply) and its price (wages) play an important role. However, the labor market is divided into 3 groups according to territorial characteristics:

1) global labor market. The entry of Uzbekistan as an independent country into the system of international economic relations requires its active participation in the global labor market;

2) international labor market;

3) regional (state) labor market.

One of the important problematic aspects of the labor market in the country is the uneven distribution of labor potential across regions (regions). Thus, the labor market as a whole obeys the laws of supply and demand, and according to many principles, according to the mechanism of its functioning differs significantly from other commodity markets, here, not only macro- and microeconomic factors are considered as regulators, but also social and socio-psychological factors, which are not always associated with wages.

In real economic life, the dynamics and changes in the development of the labor market are associated with the supply of labor and the demand for it. Therefore, the labor market in the regions is not sufficiently balanced. While there are regions with an excess of labor resources in all areas (that is, regional, professional, qualification, network, demographic areas), some regions experience a chronic shortage of labor resources.

The basis for the development of the labor market is the creation of new jobs or the basis of demand for labor. In the system of socio-economic relations that arise in the labor market, the relationship between employers and employees occupies a central place in determining employment and working conditions of the population, solving certain social problems, and eliminating social labor conflicts.

It should be said that in the context of the transition to a market economy, it is not appropriate to consider the labor market as a system that purchases and sells "labor-able" labor. Consequently, this is an open, complex, multifaceted and growing system of a socially oriented market economy and the sphere of social work, which determines the volumetric composition and the ratio of supply and demand for labor.

Conclusion. The active participation of the state in the formation of the labor market in the national regulation of the labor market shows that state intervention in labor relations and the implementation of state labor policy are appropriate. The state influences the development of the labor market primarily through the development and improvement of labor legislation.

In general, further prospects for the development of the regional labor market are based only on assumptions, and its forecast can be determined on the basis of labor market factors, which indicates the existence of an unemployment problem in the employment structure in Russia. Regional labor market. Therefore, determining the prospects for the activity and development of the labor market and developing strategic directions allows us to determine in advance the problems of the labor market and ways to solve them. This will help improve the situation on the labor market.

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TURIZMNI O'RGANISHNING ILMIY VA NAZARIY JIHATLARI

Annotatsiya. Ushbu maqolada turizm tushunchasi, turizmning mazmun va mohiyati, turizmni o'rganishning tadqiqot metodologiyasi haqida ma'lumot berilgan. Shuningdek, O'zbekistonda turizmni tadqiq qilishning nazariy asoslari haqida ma'lumot berilgan.

Kalit so'zlar: turizm, turizm turlari, turist, turizm sohasi, tadqiqot metodologiyasi.

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SCIENTIFIC AND THEORETICAL ASPECTS OF THE STUDY OF TOURISM

Annotation. This article provides information about the concept of tourism, the content and essence of tourism, the research methodology for studying tourism. It also provides information on the theoretical basis of Tourism Research in Uzbekistan.

Keywords: tourism, types of tourism, tourist, tourism industry, research methodology.

Turizm ko'p qirrali va muhim ijtimoiy hodisa. Undan mohirona foydalanish mamlakatlar iqtisodiyotining yangi jabhalarini rivojlantirishga imkon tug'diradi. Turizm so'zi (fransuzcha: our-sayr, sayohat), sayyohlik-sayohat (safar) qilish, faol dam olish turlaridan biri. Turizm deganda jismoniy shaxsning doimiy istiqomat joyidan sog'lomlashtirish, ma'rifiy, kasbiy-amaliy yoki boshqa maqsadlarda borilgan joyda (mamlakatda) haq to'lanadigan faoliyat bilan shug'ullanmagan holda uzog'i bilan 1 yil muddatga jo'nab ketish (sayohat qilishi) tushuniladi. Keng ma'noda kishilarni hayotda harakatda bo'lishlari.

Turizm sayohat demakdir. Uning negizida dam olish, hordiq chiqarish, sayr, sarguzashtlar, piyoda yurish, jismonan chiniqish, hududni o'rganish, ilmiy tadqiqotlar olib borish kabi ijtimoiy-tarbiyaviy va madaniy jarayonlar yotadi. Turizm sohasi-ko'p qirrali hodisa bo'lib, u ko'pgina shakllarda namayon bo'ladi va ilmiy adabiyotlarda juda ko'p ta'riflari mavjud. Turizm inson hayoti va faoliyatining ko'p sohalarini qamrab oladi. Aynan shuning uchun ham turizmning asosiy yo'nalishlari, turlari, kategoriyalari, turistik xizmatlar, turizm ilmi bilan bog'liq barcha masalalar haqida bilim berish, ayniqsa turizmga oid tushuncha va atamalarning har birini ta'riflash va tasniflash muhim ahamiyatga ega.

Turizmning mazmuni va mohiyati - turizmning fundamental asoslari bilan tanishtirish uning asl mohiyatini ochib berish, turizmning asosiy ilmiy tushunchalarini o'rgatish, uning taraqqiyot yo'li hozirgi kundagi muammolarini aniqlash va tahlil qilish, turizm to'g'risidagi bilimlarni yaxlit tizimini shakllantirishdan iborat.

Turizmning maqsad va vazifasi esa nazariy va amaliy materiallarga tayangan holda turizmning mohiyatini tasniflanishi va o'ziga xos xususiyatlarini ajratish, uni rivojlantirishning mamlakat iqtisodiyotidagi bevosita va bilvosita ta'sirini aniqlash, turizm bozoriga ta'sir etuvchi asosiy omillarni tahlil qilish turizmni davlat tomomidan tartibga solish vositalari, turizmda iqtisodiy jarayonlarni o'rganish zarurligi, turizm sohasini isloh qilish va turistik faoliyatni boshqarishni takomillashtirish, turizm sohasida xafsizlikni ta'minlash tamoyillarini o'rganish hisoblanadi. Jahon iqtisodiyotining barqaror rivojlanishi ko'pincha ijtimoiy soha va turizm tarmog'ining rivolanishi bilan belgilanadi. Hozirgi vaqtda turizm milliy iqtisodiyotning yetakchi tarmog'i sifatida muayyan mamlakatlarning barqaror rivojlanishida o'zining ahamiyatiga ega. Turizm sohasi inson hayoti rivolanishining muhim omili bo'lib bormoqda. bu esa aynan shu hududda yangi ish o'rinlarining yaratilishi, qo'shimcha daromad va investitsiyalarning jalb qilinishi, madaniy, tarixiy va tabiiy boyliklarni saqlash hamda to'g'ri foydalanishda o'z o'rnini topmoqda. Turizm yo'nalishidagi islohatlarni yanada jadallshtirish va sohada davlat boshqaruvi turizmni samarali tashkil qilish chora tadbirlari to'g'risida O'zbekiston Respublikasi Prezidentining 2023- yil 26- aprelgagi PQ 135-sonli, O'zbekiston Respublikasining turizm salohiyatini jadal rivojlantirish hamda mahalliy va xorijiy turistlar sonini yanada oshirishga doir qo'shimcha chora - tadbirlar to'g'risida "gi qarori muhim yo'nlish sifatida belgilab olindi. Yurtimiz jahon sayyohlik bozorida o'z o'rniga ega bo'lishiga qaramasdan, turistlarga qulaysharoit yaratish, servis xizmatini yaxshilash, sayyohlik obidalarining jozibadorligini oshirish va reklamani kuchaytirish darajasi yetarli emas edi. Endilikda mamlakatimizda turizmni rivojlanirish borasida keng ko'lamli ishlar amalga oshirishga kirishildi. Xususan turizm sohasida faoliyat yuritmoqchi bo'lgan tadbirkorlarga imtiyozli kreditlarni berish hamda yer oldi-berdi ishlarini yengillashtirib, jahon andozalariga javob beradigan mehmonxonalar sonini ko'paytirish, shu orqali raqobatni kuchaytirish, mehmonxona narxlarini arzonlashtirishga kirishildi. Ushbu prinsiplarni amalga oshirish uchun amaliyotga tadbiriq etishning ma'lum usullarini, ilmiy yo'llarini bilishni talab qiladi. Metodlar (yunoncha metodos- biror narsaga yo'l) ilmiy usullar, maqsadga erishishning nazariy vositalari, nazariyyoki amaliy natija olishning tizimlashtirilgan usuli. Usullar ma'lum bir nazariya bilan birgalikda ishlatiladi. Nazriya tanlangan ilmiy usullarga muvofiq shqakllantiriladi, ishlab chiqiriladi va sinovdan o'tkaziladi. Medotning o'zi nazriya, nazariy yondashuv (masalan: empirik usul) vazifasini bajarishi mumkin. Umumiy usllar (dialektik), maxsus (sinergitik) va xususiy (satsiologiyada mazmum tahlili) mavjud. Ilmiy

yoki amaliy natija olish usullari (yondashuvlar, usullar, sharhlar) majmui metodologiyadir.

Turizmologiyada barcha usullar (yondashuvlar) guruhlari qo‘llaniladi, tizimli yondashuv, modellashtirish, rasmiylashtirish, analogiya, taqqoslash (qiyoslash), ideallashtirish usullari alohida ahamiyatga ega. Turizm sohasini uslibiy tahlil qilish yo‘nalishiga qarab (iqtisodiyot, mehmonxona xo‘jaligi, restoran biznesi, kasb-hunar ta‘limi turizimi, turizmni huquqiy ta‘minlash va boshalar) tegishli usullar qo‘llaniladi.

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O‘zbekiston mustaqillikka erishganidan so‘ng turizmga alohida e‘tibor berila boshlandi va davlat siyosati darajasiga ko‘tarildi. O‘zbekiston jahon mamlakatlariga o‘z jozibasini ko‘rsatish uchun turizmni rivojlantirish, unga yangicha e‘tibor berish lozim edi. Mamlakatda turizm rivoji uchun zaruriy tashkiliy-huquqiy mexanizmlar yaratildi, hukumat tomonidan tegishli me‘yoriy hujjatlar qabul qilindi. Bu sohadagi ish hozir ham davom etyapti. Mamlakatda turistlarga xizmat ko‘rsatish bo‘yicha malakaviy talablarga javob bera oladigan kadrlarni tayyorlash dolzarb masala bo‘lib bormqda. Shularni hisobga olgan holda xorijiy tillarni hamda tarix va geografiyani puxta biladigan mutaxasislarni tayyorlash tizimini takomillashtirishdir.

Bu borada turizm sohasidagi oliy o‘quv yurtlari, Davlat ta‘lim standartlari va o‘quv dasturidagi ixtisoslik fanlar, darsliklar, adabiyotlar, o‘quv qo‘llanmalar yaratish ham muhim ahamiyatga ega. Xususan I. S. Tuxliyevning “Turizm asoslari”, X. M. Mamatqulov “Xalqaro turizm”, M.M. Ahmadjonovichning “Turizm asoslari”, F.E.Gulmetov “Turizm geografiyasi”, H.R.Hamroyev “Turizmologiya”, T.Xoldarov “Turizm sayyohlik”, M.R.Usmonovning “Turizm geografiyasi” kabi o‘quv qo‘llanma va darsliklar turizm yo‘nalishida o‘qiyotgan talabalarga magistr'larga, bundan tashqari tadqiqotchilar, professor o‘qituvchilar, turizm kasb-hunar kollejlari o‘ituvchilari, turizm sohasida faoliyat ko‘rsatayotgan mutaxasis-xodimlarga mo‘ljallangan.

Mualliflar tomonidan tayyorlangan ushbu darslik va o‘quv qo‘llanmalar turizm asoslarini o‘qitishda yaqindan yordam beradi. Ushbu manbalar fan haqida aniq tushunchaga ega bo‘lishni, jiddiy chegaralarini va uning mohiyatini tushunishda qo‘l keladi. Bundan tashqari bozor munosabat lari sharoiti asosida

turizmni rivojlantirishning asosiy tamoyillari va turizm to'g'risidagi me'yoriy hujjatlar berilgan. Mahalliy milliy va hududiy turizmni rivojlantirishning tamoyillari va metodlarini qo'llash orqali sezilarni darajada iqtisodiy daromad olishga alohida e'tibor berilgan. Bu adabiyotlarda har bir mavzuni talaba tomonidan yaxshi o'zlashtirish bo'yicha tayanch so'z va iboralar, mustaqil ishlash uchun topshiriqlar va test savollari o'rin olgan. Shuning uchun darsliklarda birinchi navbatda fanni anglab olish talab qilinsa, ikkinchidan esa talabalarni o'zlarining yo'nalishidagi qiziqishlari, fanga yanada ma'suliyat bilan yondashishni maqsad qilib olgan.

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USE OF ACHIEVEMENTS OF APPLIED PHYSICS IN CONSTRUCTION AND RELATED INDUSTRIES

Abstract. The article is devoted to the use of achievements of applied physics in construction and related industries. The industries where applied physics is used, what directions it has, and the role of applied physics in modern construction are considered.

Key words: applied physics, construction, modern building materials, achievements, composite materials, energy efficiency.

Modern construction cannot be imagined without the use of the latest achievements of science, including physics. Physics is one of the fundamental sciences that studies various natural phenomena and properties of matter. In this regard, the use of the achievements of applied physics in construction and related industries is of great importance for the development of these areas.

One of the main areas of using the achievements of applied physics in construction is the creation of new materials. For example, the use of composite materials can significantly increase the strength of structures, reduce their weight and improve thermal insulation properties. Also, thanks to the use of new materials, it became possible to create buildings with unusual shapes and designs.

Composite materials are a combination of two or more components with different properties that together form a new material with improved characteristics. The use of composite materials in construction can significantly increase the strength of structures, reduce their weight and improve thermal insulation properties.

Firstly, composite materials have high strength and rigidity, which allows them to be used to create structures that can withstand heavy loads. This is especially true for buildings and structures that require increased strength, such as bridges, skyscrapers and sports arenas.

Secondly, composite materials are often lighter in weight than traditional materials such as steel or concrete. This reduces the load on the foundation and supports of the building, which in turn can lead to lower construction costs. In addition, reducing the weight of the structure can reduce transportation and installation costs.

Finally, composite materials have good thermal insulation properties. They can effectively inhibit heat transfer, which helps maintain comfortable temperatures inside a building and reduce heating and air conditioning costs.

In general, the use of composite materials in construction makes it possible to create stronger, lighter and more energy-efficient buildings and structures.

Another direction for using the achievements of applied physics in construction is the development of new construction technologies. For example, the use of lasers for cutting metal can significantly speed up the process of installing metal structures. And using robotic systems to assemble buildings can significantly reduce labor costs.

Lasers have long been used in the industry to cut metals, and this method has several advantages over traditional methods such as machining or plasma cutting. Here are a few reasons why using lasers for cutting metal significantly speeds up the process of installing metal structures:

1. High precision: Lasers provide very high cutting precision, which allows you to produce parts with minimal tolerances. This means that less time is spent on additional processing of parts after cutting.

2. Speed: Lasers are capable of cutting metal at high speed, which significantly speeds up the process of installing metal structures.

3. Multi-material capability: Lasers can be used to cut a wide range of materials, including steel, aluminum, copper and others.

4. Safety: Laser cutting is a safe metal processing method as it does not require contact between the tool and the material.

5. Cost-Effective: Although the initial investment in laser equipment may be high, it proves cost-effective in the long run due to its high operating speed and low operating cost.

All these advantages make the use of lasers for metal cutting one of the most effective and fastest ways to install metal structures.

In addition, advances in applied physics are used to create new methods for quality control of construction work. For example, the use of ultrasonic waves makes it possible to detect hidden defects in concrete and other materials.

Ultrasonic waves are widely used in non-destructive testing (NDT) to detect hidden defects in various materials, including concrete. This method is known as ultrasonic testing and is based on the principle that sound waves travel at different speeds depending on the properties of the medium through which they pass.

When ultrasonic waves encounter a defect in a material, such as a crack or void, they change their speed and direction of travel. This change is recorded by

special sensors and converted into electrical signals, which are then analyzed by NDT specialists.

When using ultrasonic testing to inspect concrete, the sensors are usually placed on the surface of the concrete element. Ultrasonic waves are then directed into the material, passed through it and reflected back to the sensors. By analyzing the received signals, specialists can determine the presence and location of defects inside the concrete.

This method is especially useful for detecting hidden defects that cannot be seen visually. It also allows inspection without destroying the material, making it ideal for use in construction and other industries where maintaining the integrity of the object is important.

It is important to note that the quality of ultrasonic testing results depends on many factors, including the quality of the equipment, operator experience and testing conditions. Therefore, it is important to contact qualified specialists to carry out such checks.

Thus, the use of the achievements of applied physics in construction and related industries is of great importance for the development of these areas. New materials, technologies and quality control methods make it possible to build more reliable and cost-effective buildings, as well as increase the efficiency of builders.

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GLOBAL TURIZM SANOATINI RIVOJLANTIRISHNING ASOSIY TENDENSIYALARI

Annotatsiya. Maqolada mehmonxona korxonalarida xizmatlarning raqobatbardoshligini baholash muammolari ko'rib chiqiladi, bunda sifat ob'ekt raqobatbardoshligining muhim omili hisoblanadi. Maqolada mehmonxona korxonalarida xizmatlarning raqobatbardoshligini baholash uchun ekspert omil va parametrik usullar qo'llaniladi, shuningdek, regressiya aloqalari orqali talablar va xizmatni shakllantirish masalalari o'rganiladi.

Kalit so'zlar: sifat kafolati, "umumiy" va "maxsus" omillar, xizmat ko'rsatish sifati, izchillik, ishonchlilik, aniqlik, ma'lumotlarni uzatish tezligi, regressiya, narx-sifat nisbati.

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THE MAIN TENDENCIES OF THE DEVELOPMENT OF THE GLOBAL TOURISM INDUSTRY

Abstract. The article examines the problems of assessing the competitiveness of services in hotel enterprises, where quality is an important factor of object competitiveness. The article uses expert factor and parametric methods to evaluate the competitiveness of services in hotel enterprises, and also studies the issues of requirements and service formation through regression relationships.

Key words: quality assurance, "general" and "specific" factors, service quality, consistency, reliability, accuracy, data transfer rate, regression, price-quality ratio.

Turizm biznesi jahon iqtisodiyotining eng tez rivojlanayotgan tarmoqlaridan biridir. Ba'zi hisob-kitoblarga ko'ra, xalqaro turizm neft va avtomobil ishlab chiqarishdan keyin eksport qilinadigan uchta yirik sanoat tarmoqlari qatoriga kiradi.

Bosh qarorgohi Londonda joylashgan butunjahon sayohat va turizm kengashi 2017 yilda sayohat va turizm iqtisodiy faolligini 3,6 trillion dollarga

baholagan ya'ni yalpi jahon mahsulotining taxminan 11 foizini tashkil etadi, bu esa uni jahon iqtisodiyotidagi eng yirik sanoatga aylantiradi. Zamonaviy turizm daromadlari trillionlab AQSH dollariga baholanmoqda, bu “katta” davlatlarning yalpi ichki mahsuloti bilan solishtirish mumkin ⁹.

Sayyohlik sanoatining sayyohlik uchun eng ommabop bo'lgan mamlakatlarning YaIM tarkibiga qo'shgan hissasi hali ham juda kam.

YaIMda turizmdan eng yuqori daromad Avstriya (8%), Ispaniya (5,8%), Shveysariya (5,2%)ga to'g'ri keladi. Turizmning rivojlanish sur'ati bo'yicha Xitoy, Meksika va AQSh ajralib turadi. Biroq, ba'zi mamlakatlarda turizmdan olingan daromadlar YaIMning hal qiluvchi elementi hisoblanadi: Bermud orollari - 34,7%, Seyshel orollari - 27,4%, Antigua - 58,5%, Bagama orollari - 52,1%. Statistik ma'lumotlarga ko'ra, dunyoning eng kam rivojlangan 49 mamlakatida turizm valyuta tushumlari manbai sifatida neftdan keyin ikkinchi o'rinda turadi ¹⁰.

Iqtisodiyotning daromadli va infratuzilmali tarmog'i sifatida turizm Sovet davridan beri O'zbekistonda ustuvor asosga ega bo'lib, bu Markaziy Osiyo mintaqasi bo'yicha boshqa davlatlardan ajratib turadi. Bu hodisa, birinchi navbatda, respublikaning geografik joylashuvi, jozibador turistik marshrutlarni tashkil etish sohasidagi katta salohiyat va boshqalar bilan bog'liq.

Bularning barchasi turizmning bugungi kunda jahon iqtisodiyotida katta rol o'ynashini va ayni paytda dunyodagi eng daromadli biznes turlaridan biri ekanligini ko'rsatadi. Shuning uchun jahon iqtisodiyotining ushbu sektorining kelajagi, uning istiqbollari va kelgusi uchinchi ming yillikda rivojlanish dinamikasi haqidagi savollar juda muhim. Natijada turizm hozirda xalqaro biznesning eng jadal rivojlanayotgan turlaridan biri hisoblanadi. Tadbirkorlarning turizmga bo'lgan qiziqishi yaqqol ko'rinib turibdi va bir qancha omillar bilan izohlanadi. Birinchidan, turizm biznesini boshlash ortiqcha investitsiyalarni talab qilmaydi. Ikkinchidan, yirik, o'rta va kichik firmalar turizm bozorida juda muvaffaqiyatli o'zaro hamkorlik qiladilar. Va shu bilan birga, biznesning ushbu turi kapitalni tezda aylantirish, shuningdek (xalqaro turizm sohasida) valyuta operatsiyalari orqali ma'lum imtiyozlarni olish imkonini beradi.

G'arbiy Yevropa, AQSh, Yaponiya va Kanadaning an'anaviy bozorlaridan Markaziy va Sharqiy Yevropa kabi muqobil bozorlarga, jumladan Rossiya, Xitoy, Janubiy Koreya, Meksika, shuningdek, turizmni rivojlantirishga e'tiborning bosqichma-bosqich o'tishi kutilmoqda(1-jadval.).

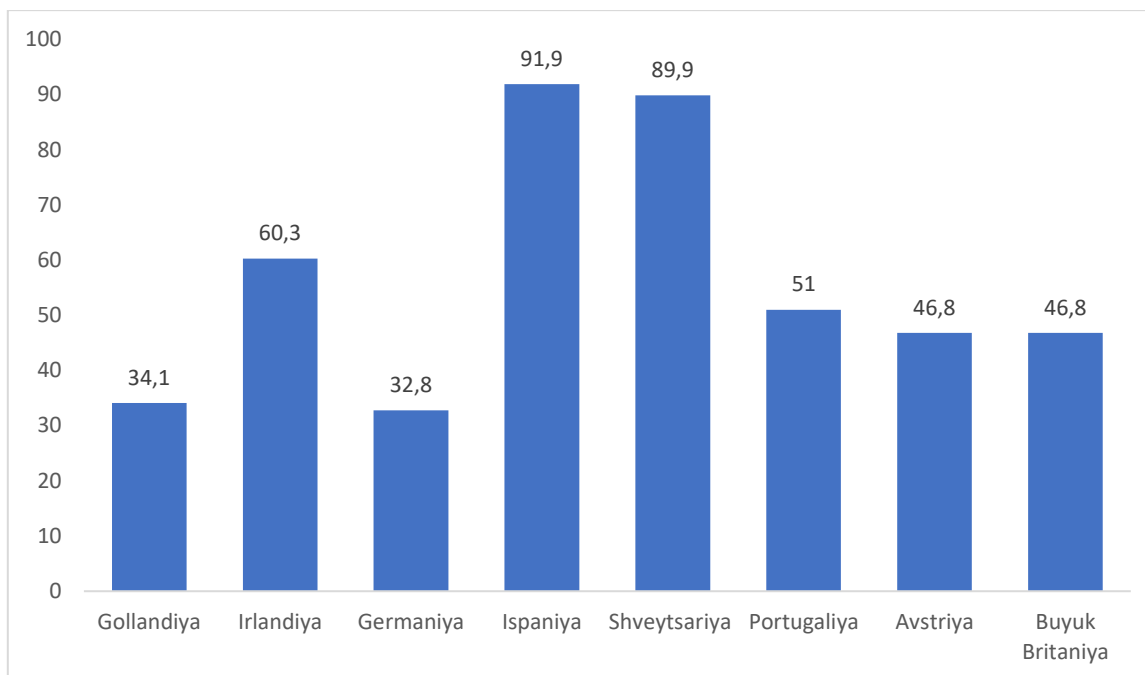
1-jadval. Kirish turizmi hajmining dunyo mintaqalari bo'yicha taqsimlanishi (xalqaro turistlar, million kishi)

Dunyo mintaqalari	Qaytish				Prognoz	
	2010 yil	2012 yil	2015 yil	2019	2020	2025
Jami	327.1	457.2	565.4	667,7	1006.4	1561.1

Afrika	9.7	15.0	20.2	27.4	47,0	77.3
Amerika (Shimoliy va Janub)	64.3	92.8	108.9	130.2	190.4	282.3
Sharqiy Osiyo (Tinch okeani mintaqasi)	31.1	54.6	81.4	92.9	195.2	397.2
Yevropa	212.0	282.7	338.4	393.4	527.3	717,0
yaqin Sharq	7.5	9.0	12.4	18.3	35.9	68.5
Janubiy Osiyo	2.5	3.2	4.2	5.5	10.6	18.8

Turizm bozori juda dinamik va turistlarni turistik markazlarda qabul qilish shartlarining o'zgarishiga darhol javob beradi. Masalan, 2004 yilda Tinch okeani mintaqasida sodir bo'lgan sunami Tailand, Malayziya va Indoneziya kabi rivojlangan sayyohlik markazlarining mavqeini jiddiy ravishda buzdi. Natijada xalqaro bozorda o'z mavqeini saqlab qolish yoki mustahkamlashga intilayotgan mamlakatlar turizmni barqaror rivojlanish tamoyillari asosida rejalashtirmoqda, bu sohaga uzoq muddatli sarmoya kiritishni nazarda tutadi va turizmni rivojlantirish bo'yicha aniq davlat strategiyalariga ega.

Jahon amaliyotida qo'llaniladigan strategiyalarning asosiy tarkibiy qismlari: global tendentsiyalar va turizm rivojlanishining multiplikativ ta'sirini hisobga olgan holda an'anaviy va istiqbolli yo'nalishlar o'rtasidagi munosabatlarni baholash bilan o'z bozorlarini batafsil tahlil qilish. Har yili ma'lum shartlar asosida xalqaro ko'rgazmalarni o'tkazish, shuningdek, turizm xizmatlari iste'molchilari bilan muloqot qilishning asosiy platformasi kabi ilg'or axborot texnologiyalaridan keng foydalanishni naarda tutadi. Turizm sohasi muvaffaqiyatli rivojlanib, mamlakatni rivojlantirishning strategik maqsadlariga erishish uchun shart-sharoitlar yaratish, ya'ni dinamik va barqaror iqtisodiy o'sish asosida aholi farovonligini oshirish, aholi bandligini ta'minlash imkonini beruvchi asosiy elementlardan biriga aylanishi mumkin. Aholining ijtimoiy va ma'naviy ehtiyojlarini qondirish darajasini oshirish va davlatning kelajakdagi rivojlanishi va xalqaro mavqeini mustahkamlash uchun salohiyatni oshiradi. Zamonaviy turizmning muhim tendentsiyasi mamlakatda umuman turizmni rivojlantirish bo'yicha davlat siyosatining rolini oshirish, shuningdek, alohida turistik mahsulotlarni ichki va xalqaro bozorlarda maqsadli targ'ib qilishdir (1-rasm).



I-rasm. Milliy turizm tashkilotlarining reklama uchun ajratilgan byudjetlari, million evro, 2018 yil

Samarali davlat siyosati asosida turizm sohasi xizmatlar sifatini oshirishni ta'minlaydi, inson kapitalini rivojlantirishni rag'batlantiradi, hayot sifatini yaxshilaydi, infratuzilmani yaratadi va yaxshilaydi.

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KUTISHLI XIZMAT KO'RSATISH TARMOG'INING BANDLIK DAVRLARI TAQSIMOTI

Annotatsiya: Maqola kutishli xizmat ko'rsatish tarmog'ining bandlik davrlari taqsimoti funksiyalari va bandlik davrida xizmat ko'rsatishning vaqt oraliqlari haqida.

Kalit so'zlar: kutishli xizmat ko'rsatish, bandlik davri, xizmat ko'rsatish vaqti, Rushe teoremasi, Bochner-Xinchin teoremasi, Laplas-Stiltes almashtirishi.

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Abstract: The article is about the functions of the distribution of busy periods of the waiting service network and the time intervals of service during the busy period.

Key words: waiting service, busy period, service time, Rushe's theorem, Bochner-Hinchin theorem, Laplace-Stiltes substitution.

Xizmat ko'rsatish korxonalarining samarali ishlashi va mijozlarga yuqori sifatli xizmat ko'rsatish uchun optimal rejalashtirish juda muhimdir. Bu, mijozlarning kutish vaqtini kamaytirish, xizmatlarini tezroq taqdim etish va xizmat sifatini oshirishga yordam beradi.

Kutishli xizmat ko'rsatish tarmog'ining bandlik davrlari, tizimning qanday ishlayotganligi va xizmat ko'rsatishga ehtiyojni ta'minlash uchun ahamiyatlidir. Bu, xizmat ko'rsatish sohasida mustahkam ish jarayonini yaratishga yordam beradi. Bundan tashqari, bandlik davrlari, xizmatni yaxshi tashkil etish va uning samaradorligini oshirishga yordam beradi.

Bitta xizmat ko'rsatish uskunasi iborat xizmat ko'rsatish sistemasiga $A(t)$ taqsimot funksiyasi orqali aniqlanadigan rekkurent chaqiruvlar oqimi kelayotgan bo'lsin. Bu chaqiriqlarga bir xil $B(t)$ taqsimot funksiya bo'yicha xizmat ko'rsatilsin. Agar chaqiruv sodir bo'lganda uskuna boshqa chaqiriqqa xizmat ko'rsatayotgan bo'lsa, u navbatga qo'yiladi va xizmat boshlanishini kutib turadi.

Vaqtning uskuna uzluksiz xizmat ko'rsatayotgan oralig'ini uning bandlik davri deb ataymiz. Bandlik davri taqsimot funksiyasi $\Pi(t)$ orqali belgilaymiz.

1-teorema. Agar $A(t) = 1 - e^{-at}$ bo'lsa, u holda

$$\pi(s) = \beta(s + \alpha - \alpha\pi(s)) \quad (1)$$

tenglik o'rinli bo'lib, bu funksional tenglama yarim tekislikda analitik, $|\pi(s)| < 1$ shartni qanoatlantiruvchi va

$$\pi(s) = \int_0^{\infty} e^{-st} d\Pi(t), \quad (\Pi(t) - \text{kamaymovchi funksiya})$$

ko'rinishda ifodalovchi yagona $\pi(s)$ funksiyani aniqlaydi. Bu yerda

$$\Pi(+\infty) = \begin{cases} 1, & \text{agar } \alpha\beta_1 \leq 1, \\ \rho, & \text{agar } \alpha\beta_1 > 1; \end{cases} \quad (2)$$

$\rho(\alpha\beta_1 > 1 \text{ bo'lganda})$ $\rho = (\beta - \alpha\rho)$ tenglikning $(0,1)$ ga qarashli yagona ildizi. Bundan tashqari

$$\pi_1 = \int_0^{\infty} t d\Pi(t) = \begin{cases} \frac{\beta_1}{1 - \alpha\beta_1}, & \text{agar } \alpha\beta_1 < 1; \\ +\infty, & \text{agar } \alpha\beta_1 \geq 1; \end{cases} \quad (3)$$

2-teorema. Agar $B(t) = 1 - e^{-bt}, b > 0$ bo'lsa, u holda

$$\pi(s) = \frac{b[1 - \gamma(s)]}{s + b[1 - \gamma(s)]}$$

$$\gamma(s) = \alpha(s + b - b\gamma(s)), \quad (4)$$

tengliklar o'rinli bo'lib, bu tengliklar $\text{Res} > 0$ yarim tekislikda $|\gamma(s)| < 1$ va, $|\pi(s)| < 1$ shartlarni qanoatlantiruvchi

$$\pi(s) = \int_0^{\infty} e^{-st} d\Pi(t), \quad (\Pi(t) - \text{kamaymovchi funksiya})$$

ko'rinishda ifodalanuvchi yagona $\pi(s), \gamma(s)$ analitik juftlikni aniqlaydi.

Bunda

$$\Pi(+0) = 0$$

$$(5)$$

$$\Pi(+\infty) = \min(1, a_1 b).$$

Bundan tashqari

$$\pi_1 = \begin{cases} \frac{b^{-1}}{1-\sigma}, & \text{agar } a_1 b > 1 \\ +\infty & , \text{ agar } a_1 b \leq 1 \end{cases}$$

bu yerda σ ($a, b > 1$ bo'lganda) $\sigma = a(b - a\sigma)$ tenglamaning (0,1) ga tegishli yagona ildizi.

Izoh. $\Pi(+\infty) < 1$ bo'lgan hol shuni anglatadiki, bandlik davri cheksiz qiymatni qabul qilishi mumkin (ya'ni sistema hech qachon bandlikdan xalos bo'lolmaydi) va uning ehtimoli $1 - \Pi(+\infty) > 0$ ga teng.

1-teoremani isbotlashdan oldin quyidagi keltiriladigan mulohazalar yordamida isbotlanadigan

$$\Pi(t) = \sum_{n \geq 0} \int_0^t \frac{(au)^n}{n!} e^{-au} \Pi_n(t-u) dB(u), \quad (6)$$

$$\Pi_n(t) = [\Pi(t)]^n,$$

formulaning o'rinli ekanligiga e'tiborimiz qaratamiz.

Faraz qilaylik, xizmat ko'rsatish tarmog'i iniversal bo'lsin, ya'ni chaqiriqlarni xizmatga abuk qilish tartibiga bog'liq bo'lmain. Bu xizmat ko'rsatilishi kutilayotgan chaqiruvlardan oxirgisini qabul etilishini anglatadi. Ko'rinib turibdiki, xizmat ko'rsatishning bunday tartibi sistemaning bandlik davriga ta'sir ko'rsatmaydi.

Bandlik davrining boshlanishida sistemada bitta chaqiruv mavjud bo'lsin. Faraz qilaylik, unga xizmat ko'rsatish vaqti $u (\leq t)$ bo'lsin. Bu vaqt oralig'ida sistemaga $\frac{(au)^n}{n!} e^{-au}$ ehtimol bilan n ta chaqiruv kelishi mumkin. Sistemaning qolgan bandlik vaqti n ta bandlik davrlarining yig'indisiga teng bo'ladi. (va $u t - u$ da oshmasligi kerak). Laplas-Stiltes almashtirishlaridan (6) formula quyidagi ko'rinishda bo'ladi:

$$\begin{aligned} \pi(s) &= s \int_0^\infty e^{-st} dt \int_0^t \sum_{n \geq 0} \frac{(au)^n}{n!} e^{-au} \Pi_n(t-u) dB(u) = \\ &= s \int_0^\infty dB(u) \int_u^\infty \sum_{n \geq 0} \frac{(au)^n}{n!} e^{-au} \Pi_n(t-u) e^{-st} dt = \\ &= s \int_0^\infty \sum_{n \geq 0} \frac{(au)^n}{n!} e^{-au} e^{-su} dB(u) \int_0^\infty e^{-sv} \Pi_n(v) dv = \end{aligned}$$

$$= \int_0^{\infty} \sum_{n \geq 0} \frac{(au)^n}{n!} e^{-au} e^{-su} [\pi(s)]^n dB(u) = \int_0^{\infty} e^{-(s+a-a\pi(s))u} dB(u),$$

Bundan esa (1) kelib chiqadi.

Faraz qilaylik, s kompleks son $Re s > 0$ shartni qanoatlantirsin.

$$z = \beta(s + a - az) \quad (7)$$

tenglamani qaraymiz. (7) ning chap va o'ng tomonlari $|z| \leq 1$ doirani o'zida saqlovchi sohada (masalan, $Re(s + a - az) > 0$, ya'ni $Rez < 1 + a^{-1}$ sohada) z bo'yicha analitik bo'ladi. B undan tashqari $|z| = 1$ bo'lganda

$$Re(s + a - az) = Res + a(1 - Rez) > 0.$$

Shuning uchun

$$|\beta(s + a - az)| \leq \beta(Re(s + a - az)) < 1 = |z|,$$

bu yerdan Rushe teoremasiga ko'ra, z va $z - \beta(s + a - az)$ funksiyalar $|z| \leq 1$ doirada bir xil sondagi nollarga ega bo'ladi. Shunday qilib, (2.2.7) tenglama, $Re s > 0$ ni qanoatlantiruvchi har bir s uchun $|\pi(s)| \leq 1$ shartni qanoatlantiruvchi yagona $z = \pi(s)$ funksiyani aniqlaydi. O shkormas funksiya haqidagi teorema yordamida tekshirish mumkinki, $\pi(s)$ funksiya $Re s > 0$ yarim tekislikda analitik funksiya bo'ladi.

Boxner-Xinchin teoremasi yordamida $\pi(s)$ funksiyani biror monoton kamaymovchi $\Pi(t)$ funksiyaning Laplas-Stiltes almashtirishi yordamida tasvirlash mumkinligini isbotlash mumkin.

$$\lim_{t \rightarrow 0} \Pi(t)$$

limit mavjud bo'lgani uchun

$$\Pi(+0) = \pi(+\infty)$$

yoki (1) ga ko'ra $|\pi(s)| \leq 1$, $\beta(+\infty) = \beta(0)$ bo'lgani uchun

$$\Pi(+0) = \beta(0)$$

tengliklarni hosil qilamiz.

Xuddi shunday, chekli yoki cheksiz

$$\lim_{t \rightarrow 0} \Pi(t) = \Pi(+\infty)$$

limit mavjud bo'lgani uchun

$$\Pi(+\infty) = \pi(+0) \quad (8)$$

Tenglik bajarilishini ko'rsatish mumkin. Bu yerda

$$\pi(+0) = \beta(\alpha - \alpha\pi(+0)) \quad (9)$$

bo'lib, $Re s > 0$ yarim tekislikda $0 \leq \pi(+0) \leq \Pi(+\infty) = \pi(+0)$ va $|\pi(s)| \leq 1$ bo'lgani uchun $\pi(s) - 0 \leq \pi(+0) \leq 1$ shartni qanoatlantiruvchi haqiqiy son bo'ladi.

Endi $\alpha\beta_1 < 1$ bo'lganda

$$x = \beta(\alpha - \alpha x) \quad (10)$$

tenglama $[0,1]$ da yagona $x_1 = 1$ yechimga, $\alpha\beta_1 > 1$ bo'lganda esa $x_0 = \rho$, $x_1 = 1$, ($0 < \rho < 1$) yechimga ega ekanligini ko'rsatamiz.

(10) ning chap va o'ng tomonlarini grafik ravishda tasvirlaymiz. $\beta(\alpha - \alpha x)$ funksiya grafigining qavariqligi pastga yo'nalganligi uchun (0,1) da nolning mavjudligi masalasi $\beta(\alpha - \alpha x)$ funksiyaning $x = 1 - 0$ nuqtadagi holatini tekshirishga keltiriladi. Uning bu nuqtadagi hosilasi $\alpha\beta_1$ ga teng. Agar $\alpha\beta_1 > 1$ bo'lsa u holda (10) ning (0,1) ga tegishli yagona ildizi mavjud; agar $\alpha\beta_1 \leq 1$ bo'lsa, u holda (10) tenglama (0,1) da yechimga ega emas. Shuni qayd etish kerakki, kompleks tekislikning $|x| \leq 1$ yopiq doirasida tenglama topilgan ildizlar bilan bir xil bo'lgan faqat haqiqiy ildizlarga ega bo'lar ekan.

Shunday qilib, $\alpha\beta_1 \leq 1$ bo'lganda $\pi(+0) = 1$. $\alpha\beta_1 > 1$ bo'lganda $\pi(+0)$ uchun ikkita hol bo'lishi mumkin: $\pi(+0) = 1$ va $\pi(+0) = \rho < 1$. Aslida esa $\pi(+0) = \rho$ bo'ladi. Bu tasdiq ixtiyoriy $\varepsilon > 0$ uchun $\pi(\varepsilon)$ ildiz $\pi(\varepsilon) = \beta(\varepsilon + \alpha - \alpha\pi(\varepsilon))$ tenglamaning $\pi(\varepsilon) < 1$ shartni qanoatlantiruvchi yagona ildiz ekanligidan bevosita kelib chiqadi.

Teorema isbotini yakunlash uchun

$$\pi_1 = \int_0^{\infty} t d\Pi(t) = \pi'(+0)$$

tenglikni e'tiborga olish yetarli.

2-teoremaning isboti. Qandaydir chaqiriqning kelishi bilan xizmat boshlanadigan sistemaga ushbu xizmat davomida k ta ($k \geq 0$) chaqiriqlar kelgan holda sistemaning ushbu chaqiriqlardan ozod bo'lish vaqtigach bo'lgan vaqt oralig'ining uzunligini ζ_k deb belgilaymiz. Xizmat qilish vaqtining davomiyligi eksponensial taqsimotga ega ekanligi munosabati bilan ζ_k , $k \geq 1$ bo'lgan holda, ungacha qancha vaqt xizmat ko'rsatilganidan bog'liq emas. Ma'lumki, ζ_0 sistemaning bandlik davridir. Shartli ravishda

$$\Pi_k(t) = P\{\zeta_k \leq t\}, \quad \bar{\Pi}_k(t) = 1 - \Pi_k(t), \quad k \geq 0.$$

$$\begin{aligned} \bar{\Pi}_k(t) &= [1 - A(t)] \left[e^{-bt} + \frac{bt}{1!} e^{-bt} + \dots + \frac{(bt)^k}{k!} e^{-bt} \right] + \\ &\quad + \int_0^t \left[e^{-bu} \bar{\Pi}_{k-1}(t-u) + \frac{bu}{1!} e^{-bu} \bar{\Pi}_k(t-u) + \dots \right. \\ &\quad \left. + \frac{(bu)^k}{k!} e^{-bu} \bar{\Pi}_1(t-u) \right] dA(u), \quad k \\ &\geq 0 \end{aligned} \quad (2.2.11)$$

tengliklar quyidagi mulohazalar asosida olinishi mumkin. Bandlik davri $\zeta_k > t$ bo'lishi uchun quyidagi hollardan birining bajarilishi zarur va yetarli bo'ladi:

1) t vaqt davomida chaqiriqlar tushmaydi hamda bu vaqt oralig'ida k dan ko'p bo'lmagan chaqiriqlarga xizmat ko'rsatiladi;

2) birinchi chaqiriq $u \leq t$ vaqtda kelib tushadi va asbob i ta chaqiriqlarga $i = (0, 1, 2, \dots, k)$ xizmat qiladi. Shundan so'ng $(k + 1 - i)$ inchi chaqiriqning xizmati bilan boshlanayotgan bandlik davri $(t - u)$ dan katta bo'lmaydi.

Faraz qilaylik,

$$\left\{ \begin{array}{l} \bar{R}(z, t) = \sum_{k \geq 0} z^k \bar{\Pi}_k(t); \\ R(z, t) = \sum_{k \geq 0} z^k \Pi_k(t) = (1 - z)^{-1} - \bar{R}(z, t) \\ \bar{r}(z, s) = \int_0^{\infty} e^{-st} d_t \bar{R}(z, t); \\ r(z, s) = \int_0^{\infty} e^{-st} d_t R(z, t) = (1 - z)^{-1} - \bar{r}(z, s); \end{array} \right. \quad (12)$$

(11) ning chap va o'ng qismlarini z^{k+1} ga ko'paytirib, k bo'yicha 0 dan $+\infty$ gacha yig'ib chiqib, quyidagini olamiz.

$$\begin{aligned} z\bar{R}(z, t) &= [1 - A(t)] \frac{z}{1 - z} e^{-bt(1-z)} + \\ &+ \int_0^{\infty} e^{-bt(1-z)} [\bar{R}(z, t - u) - \bar{R}(0, t - u)] dA(u), \end{aligned}$$

bundan Laplas-Stiltes almashtirishiga o'tsak,

$$\begin{aligned} z\bar{r}(z, s) &= \frac{z}{1 - z} \frac{s}{s + b - bz} [1 - \alpha(s + b - bz)] + \\ &+ \alpha(s + b - bz) [\bar{r}(z, s) - \bar{r}(0, s)], \\ \bar{r}(z, s) [z - \alpha(s + b - bz)] &= \\ &= \frac{z}{1 - z} \frac{s}{s + b - bz} [1 - \alpha(s + b - bz)] - \end{aligned}$$

$$-\alpha(s + b - bz)\bar{r}(0, s). \quad (13)$$

tenglik hosil bo'ladi.

1-teoremaning isboti kabi, funksional tenglamani quyidagi ko'rinishda izlaymiz:

$$\gamma(s) = \alpha(s + b - b\gamma(s)).$$

Bu tenglamaning yagona yechimi quyidagicha bo'ladi:

$$\gamma(s) = \int_0^{\infty} e^{-st} dC(t),$$

bu yerda $C(t)$ –kamaymaydigan funksiya bo'lib, bunda

$$C(+0) = \gamma(+\infty) = A(0);$$

$$C(+\infty) = \gamma(+0) = \begin{cases} 1, & \text{agar } a_1 b > 1 \\ \sigma, & \text{agar } a_1 b \leq 1 \end{cases}$$

bu yerda σ ($a_1 b > 1$ bo'lganda) $\sigma = \alpha(b - b\sigma)$ tenglamaning $(0,1)$ oraliqda yotuvchi yagona ildizidir. $z = \gamma(s)$ da (2.2.13) munosabatdan

$$\bar{r}(0, s) = \frac{s}{s + b - b\gamma(s)} \quad (14)$$

va bundan

$$\pi(s) = r(0, s) = 1 - \bar{r}(0, s) = \frac{b[1 - \gamma(s)]}{s + b[1 - \gamma(s)]}$$

tenglikka ega bo'lamiz. Bu yerda

$$\pi(s) = \int_0^{\infty} e^{-st} d\Pi(t),$$

$\Pi(t)$ –kamaymovchi funksiyaligidan quyidagi tenglik kelib chiqadi:

$$\pi(s) = \frac{\frac{b}{s}[1 - \gamma(s)]}{1 + \frac{b}{s}[1 - \gamma(s)]},$$

$\frac{b}{s}[1 - \gamma(s)]$ funksiya

$$b \int_0^t [1 - C(u)] du .$$

funksiyaning Laplas- Stiltes almashtirishidir.

2-teoremaning qolgan tasdig'i odatdagicha tekshiriladi.

Haqiqatan ham, biz bir muncha katta qiymat oldik, ya'ni

$$\bar{r}(z, s) = [z - \alpha(s + b - bz)]^{-1} \times \left\{ z \frac{1 - \alpha(s + b - bz)}{1 - z} \frac{s}{s + b - bz} - \alpha(s + b - bz) \frac{s}{s + b - b\gamma(s)} \right\}. \quad (15)$$

Bir nechta misollar ko'rib chiqamiz.

$$\int_0^{\infty} t dB(t) < \int_0^{\infty} t dA(t) < +\infty$$

deb faraz qilaylik.

1-misol. $A(t) = 1 - e^{-\alpha t}$, $\alpha > 0$. bandlik davrining birinchi va ikkinchi tartibli momentlari

$$\pi_1 = \frac{\beta_1}{1 - \alpha\beta_1},$$

$$\pi_2 = \frac{\beta_2}{(1 - \alpha\beta_1)^3}$$

bo'ladi.

2-misol. $A(t) = 1 - e^{-\alpha t}$, $B(t) = 1 - e^{-bt}$. (1.2.1) dan

$$\pi(s) = \frac{b}{s + b + a - a\pi(s)},$$

ni olamiz, bundan

$$\pi(s) = \frac{s + b + a - \sqrt{(s + b + a)^2 - 4ab}}{2a}$$

“ – ”ishorani olamiz, chunki $|\pi(s)| \leq 1$).

Bandlik davrining darslabki to'rtta momentlari

$$\pi_1 = (b - a)^{-1},$$

$$\pi_2 = 2b(b - a)^{-3},$$

$$\pi_3 = 6b(a + b)(b - a)^{-5}$$

$$\pi_4 = 24b(a^2 + 3ab + b^2)(b - a)^{-7};$$

va bandlik davri dispersiyasi $\pi_2 - \pi_1^2 = (a + b)(b - a)^{-3}$ bo'ladi

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LANGUAGE AS A CULTURAL HERITAGE

Annotation. In my article, the comparisons of the German, Russian, and Uzbek languages are examined as subsystems of the respective languages for the purpose of comparative typological observation, taking into account the usage of comparisons in intercultural communication.

Keywords: comparisons, culture, imagery, meaning.

Language is closely intertwined with culture because it is based on culture, develops within it, and expresses it in communication. This is evidenced by the fact that culture is embedded in language and can be traced in texts. This fusion of language and culture into a unified whole is termed "linguaculture."

Linguaculturology, as the study of linguaculture, is oriented both towards the human and cultural factors in language and the linguistic factor in humans. These two phenomena are characterized by common features and traits, which can be listed as follows:

1. Culture and language are forms of consciousness that reflect the worldview of individuals and communities.

2. Language and culture are artifacts created by humans and society, which connect humans with nature but also separate them from each other (culture and nature are juxtaposed).

3. Both phenomena possess individual and societal forms of existence, whether it be language and culture within an individual or within a society, personality or community, ethnicity.

4. Both language and culture have a normative, norm-compliant character, which is more or less binding for all members of the language and cultural community. Language and culture appear as "social knowledge."

5. Historicism and an evolutionary character are ontological properties of language and culture.

6. Through language and culture, a value system is prescribed to both the individual and the community.

7. Language, culture with their forms (myths, customs, rituals, superstitions), and art with their genres - all have symbolic meaning.

8. Language and culture contain archetypes, i.e., basic forms, prototypes, stereotypes of societal consciousness.

9. Thanks to language and culture, the connection from generation to generation, from epoch to epoch, is realized. The most important function of both phenomena is "intergenerational" translation, the transmission of patterns, behaviors, values, ideas. Culture and language are indispensable "carriers of tradition."

10. Culture is the unique historical memory of the people, as the oldest and most reliable "archive" of humanity, while language preserves and enriches collective memory through its cumulative (storage) function.

On the other hand, significant differences exist between the main attributes of humans and society:

While language, as a means of communication, is tailored to mass users, to average language users, in culture, its elitist nature, the uniqueness of cultural achievements, is valued (there is no mention of "mass culture" here).

Unlike language, which is a communication system, culture as a sign system is not capable of self-organization.

Language and culture constitute different semiotic systems. Culture is not isomorphic (uniform, of the same form) to language but rather homomorphic (structurally analogous). Yu. Stepanov argues that the linguistic model cannot be transferred to the domain of culture and vice versa - the model of culture cannot be applied to the domain of language. It is essential to develop a more general conceptual framework that would make linguistic analysis and cultural theory applicable.

In the study of the interaction between language and culture, three approaches are currently identified. The first approach assumes the one-sided influence of culture on language ($C \rightarrow L$). As reality changes, national-cultural stereotypes and language itself change.

The second approach addresses the contentious question of the influence of language on culture and worldview ($L \rightarrow C$). From this perspective - language shapes the worldview and mentality of the people - the linguistic relativity theory proposed by Sapir-Whorf is discussed.

The third approach is based on the idea of mutual relations and interaction between language and culture ($L \leftrightarrow C$). Language is an integral part of culture, the primary tool, and method of its appropriation.

Wilhelm Grimm already noted "proverbs and peculiar expressions of the people" as "proverbial culture" which are frequently used in the communication of all social strata and reveal their language culture.

Communication processes serve not only for information exchange but fundamentally contribute to interpersonal relationships, thus creating lifeworlds that represent cultures in general, i.e., intercultural understanding processes arise through direct (face-to-face) and indirect communication among participants. In addition to linguistic communication, non-linguistic information exchange occurs

in communication systems, partly associated with the cultural diversity of peoples: rituals, including greeting rituals in different cultures, hugs, national customs, making the sign of the cross, praying in Christian, Muslim, Buddhist, etc.

The Uzbek proverb "Сув йўгида таяммум" (When there is no water, sand is also suitable), which according to Muslim tradition implies washing before prayer, corresponds to the German phrase "In der Not frisst der Teufel Fliegen," which has a different cultural background. The Russian idiom "на безрыбье и рак рыба" (When there is a shortage of fish, a crab becomes fish) is another example. Each represents a non-linguistic realization ("behavior") of a "cultural unit" according to Els Oksaar. This communication about culturally inherited practices also belongs to communication.

Many intercultural misunderstandings and problems arise from insufficient awareness of "the cultural context of one's own and the perception of one's cross-cultural partner." Where there is no communication, culture cannot develop, and intercultural cannot emerge.

All language researchers emphasize the close connection between language and culture. In their works, culturally specific contents and culture-contrastive elements are increasingly addressed, which are particularly strong in phraseology as fixed word combinations. They all share the characteristic that two or more words are firmly connected and do not have the same meaning in this stable connection as when they are syntactically linked in a text. Thus, phraseological expressions are formulations with transferred meaning: For instance, "Wenn Sie mir auf dem Kopf herumtanzen wollen, dann sind Sie aber auf dem Holzweg" translates to "If you want to dance around on my head, then you're on the wrong path." The phrase "auf dem Holzweg" means "to be on the wrong path," not "to dance on the head."

The cultural imprint, bound to linguistic imagery and thus to the transferred meaning, often makes translation into other languages difficult. Where a German says "Der hat wohl nicht alle Tassen im Schrank" (He probably doesn't have all his cups in the cupboard), a Russian would say "У него не все дома" (He doesn't have everything at home), meaning someone is not sane.

Intercultural orientation in foreign language teaching must be fundamental because language is fundamentally rooted in the reality of culture. This close intertwining of language and culture must also be translated into the theory and practice of foreign language teaching (FLT). Therefore, the acquisition of intercultural competence becomes a new global goal for FLT. Intercultural competence is the ability to interact appropriately in normative and situational terms among people of different language cultures.

German as a foreign language is characterized by the fact that the teaching of phraseology is closely linked to promoting understanding between different cultures. The basis of good intercultural communication is good language skills because sensibly related sentences ensure communicative processes. Therefore, it

is essential for German learners to express themselves linguistically (with good knowledge of German vocabulary and especially German phraseology, which always has a cultural background) with native German speakers on a topic at the right time and place. Poor German skills will cause annoyance to the conversation partner. Correct German means successful communication and norm-compliant behavior.

To illustrate the above, let's analyze two proverbs that reflect the same meaning in German, Uzbek, and Russian, expressing the concept of "being alike as two peas in a pod":

1. "wie ein Ei dem anderen gleichen" (literally: "to resemble each other like one egg to another")

2. "худди бир олманинг икки палласидай" (literally: "to resemble each other like two halves of one apple")

3. "походить друг на друга как две капли воды" (literally: "to resemble each other like two drops of water")

In conclusion, "cultural awareness" is an undeniably important goal in foreign language learning. It involves highlighting those language-cultural phenomena that differ in form and function between the native and foreign language/culture. Therefore, it is important to collect data and conduct empirical research that are essential for the acquisition of linguocultural competence.

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ZAMONAVIY JAMIYAT TARAQQIYOTIDA EKOLOGIK MADANIYAT TUSHUNCHASI VA UNING TUTGAN O'RNI

Annotatsiya. Ushbu maqolada yoshlarda zamonaviy ekologik madaniyatni shakllantirish muammosi muhokama qilinadi. Ekologik madaniyatning mohiyati, xususiyatlari uni yoshlar o'rtasida rivojlantirish, shuningdek, yoshlar orasida ekologik madaniyatni yuksaltirish bo'yicha amalga oshirilishi zarur bo'lgan chora-tadbirlarda'kidlab o'tiladi.

Kalit so'zlar: Ekologik madaniyat, o'rta maktab o'quvchilari, ekologik antropologiya, ishchi yoshlar, ko'ngillilar.

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THE CONCEPT OF ECOLOGICAL CULTURE AND ITS ROLE IN THE DEVELOPMENT OF MODERN SOCIETY

Annotation. This article deals with the problem of the formation of the ecological culture of modern youth. The concept of ecological culture, the essence of ecoculture, the features of its development among young people, as well as the measures that need to be taken to increase the ecological culture and consciousness of young people, have been studied.

Keywords: ecological culture, values, Ecological anthropology, working youth, volunteering.

Kirish. Jamiyat rivojining hozirgi bosqichida insoniyatning texnogen sivilizatsiyasidan noosfera davriga o'tishi tendentsiyasi kuzatilmoqda, bu bo'lsa o'z navbatida V.I. Vernadskiy ta'biri bilan aytganda, biosfera rivojlanishida inson aqliy salohiyati ahamiyatining kuchayishi bilan tavsiflanishi kerak. Bu jarayon insonning yerdagi hayotini saqlab qolishga intilishi bilan o'zaro qarama-qarshi birligida aks etadi. Shu o'rinda aytib o'tish kerakki, ko'pchilik xorijiy olimlarning fikriga ko'ra, bundan buyon yadroviy falokat insoniyatni halokatga yetaklovchi yagona havf sifatida qaralmayapti, aksincha insoniyatning yer yuzidan yo'q bo'lib ketishiga yetaklovchi asosiy omil sifatida insonning tabiatni o'ziga bo'sundirishi yo'lidagi odamzod manfaatiga zid bo'lgan hatti-harakatlari, tabiat qonunlaridagi muvozanatning buzilishiga olib kelgan ilmiy-texnik taraqqiyotning vayronkor oqibatlarini natijasida yuzaga kelgan global ekologik muammolar oldinga chiqmoqda. BMTning inson muhiti bo'yicha birinchi Jahon konferensiyasi 1972-yilda Stokgolmda universal yondashuvlarni shakllantirish va xalqaro ekologik infratuzilmani yaratishning boshlanishi bo'lib, xalqaro ekologik siyosatning asosiy tamoyillari e'lon qilindi. Aynan shu konferensiyadan so'ng "Inson va biosfera", "Jahon iqlim dasturi" va "Xalqaro geosfera-biosfera dasturi" kabi yirik jahon ekologik dasturlarini amalga oshirish boshlandi, atrof-muhit holati to'g'risida muntazam ma'ruzalar chop etila boshlandi, keng qamrovli Global tizim faoliyat ko'rsata boshladi [5]. Bu bo'lsa nafaqat insoniyat uchun havf tug'idirmoqda, balki butun tirik olamning yer yuzidan yo'qolib ketishi havfini yaratmoqda. Misol uchun, N.N. Moiseev ekologik muammolarni hal qilishga bo'lgan an'anaviy yondashuvlarni keskin tanqid ostiga oladi. Uningcha, dunyo hamjamiyati yaqinlashib kelayotgan xatarni ob'ektiv baholay olmayapti. Ushbu anglashmovchilikning qanchalik ahamiyatli ekanligini 1992 yilda Rio-de-Janeyroda bo'lib o'tgan konferentsiya natijalari ko'rsatib berdi. Ushbu konferentsiyada asosiy masala sifatida insoniyat nafaqat ayrim biologik turlarni saqlab qolish bilan shug'ullanmasdan, balki ekotizimlarni asrashga ham diqqatini qaratmog'i darkor va buning uchun demografik siyosatni yuritishning asosiy tamoyillarini ishlab chiqish lozim degan fikr ilgari surilgan [1].

Bu esa o'z navbatida inson tomonidan olib boriladigan barcha ilmiy tadqiqotlarning asosiga jamiyat va tabiatning o'zaro hamjihatlikda rivojlanishini olish lozim va yagona planetar jamiyatda ijtimoiy munosabatlarning yangi strukturasi ishlab chiqish va ijtimoiy qadriyatlar tuzilmasini qayta ko'rib chiqmoq darkor. Bunday yondashuv o'z navbatida insoniyat ekologik madaniyatini tashkil qiluvchi asoslarni yangicha yondashuv asosida tahlil qilish va uni shaxs qadriyatlariga singdirishning yangi shart-sharoitlarda ostida takomillashtirishni talab etadi.

Asosiy qism. Ekologiya va madaniyat o'rtasida bevosita aloqa mavjuddir: ekologiyaning holati jamiyat madaniyatining rivojlanganlik darajasini aks ettiradi. Shu sababli ham insonlarning tabiatdan foydalanish madaniyatini o'zgartirmay turib, atrof-muhit, ekologiyadagi ijobiy o'zgarishlarga erishib

bo'lmaydi. Aynan madaniyat inson faoliyatini hayotning biosferaviy va ijtimoiy qonuniyatlariga moslashtirishi mumkin.

Madaniyat bu inson borlig'ining shunday jabhasiki uning asosida umuinsoniy – hayot mazmunini belgilovchi qadriyatlar yotadi va bu qadriyatlar o'z navbatida absolyut hisoblangan, umrboqiy qadriyatlar, boshqacha qilib aytganda umumbashariy qadriyatlarga asoslanadi. Ushbu qadriyatlarni shaxsga singdirish bo'lsa ta'lim va tarbiyaning ustuvor vazifasidir. Tarbiya madaniyatni avloddan avlodga o'tkazishda hamda har bir shaxsning madaniy tajribasini shakllantirishda ishtirok etadi.

Ekologik holatning yomonlashuvi, yoshu-qarining, ularning faoliyati qanchalik tabiatga zarar yetkazishi haqida fikr qilmagan holda, imkon qadar tez fursatlarda foyda olishga intilishi, huquqiy me'yorlarni bilmaslik va ularga amal qilmaslik, yoshlar o'rtasida zo'ravonlikning ortib borishi va boshqalar umumiy madaniyatning va, shu jumladan, ezgulikka intilish, boshqalar dardiga befarq bo'lmaslik, o'z-o'zini chegaralash va mushohada yuritish kabi qadriyatlarga asoslangan ekologik madaniyatning qanchalik past darajada ekanligini ko'rsatadi[2].

Hozirgi paytda insoniyat tobora soni ortib borayotgan ekologik muammolar bilan yuzma-yuz kelmoqda. Inson va tabiat o'rtasidagi o'zaro munosabatga oid ilmiy adabiyotlar tahlili shuni ko'rsatmoqdaki, hozirgi davrda jamiyat barqaror rivojlanishini falsafasining asosini ekologik madaniyatni shakllantirish tashkil qiladi. Ekologik madaniyatni shakllantirishga qaratilgan ta'lim va tarbiyani yo'lga qo'yish ekologik madaniyatni insoniyatning barqaror rivojlanishini harakatga keltiruvchi va uning kelajagini belgilovchi yetakchi kuchga aylantiruvchi yechimlardan biridir.

Ekologik madaniyatli insonni boshqalardan farqi shundaki, u o'z ichki olami va tashqi olam bilan uyg'unlikka erisha oladi. Bolalik davrlarida bu hislatlar maxsus bilimlar orqali, ya'ni hissiy-emotsional tarbiya va ekologik faoliyatga oid amaliy mashg'ulotlar yordamida shakllantiriladi. Insonning oilada ko'rgan tarbiyasi undagi ekologik madaniyatning shakllanishiga beqiyos ta'sir o'tkazadi. Zero, qadimdan halqimizda "qush uyasida ko'rganini qiladi" degan naql mavjud bo'lib, bu bevosita farzandning ekologik madaniyati shakllanishida ham ahamiyatga ega. Ota-ona va oiladagi navqiron insonlarning tabiiy resurslar, suv, havo, tuproq, oziq-ovqat va h.k.larning inson hayotida tutgan o'rni, ularni qadrlash va toza-ozoda tutish kerakligi haqidagi tarbiyaviy pand-nasihatlari bolalarda ongsiz ravishda ushbu resurslarga bo'lgan ezgu munosabatini, ularning umri davomida asosiy postulat vazifasini o'tovchi ekologik madaniyatning amaliy in'ikosi sifatida qoladi.

Ekologik madaniyat bu umumiy madaniyatning ajralmas qismi bo'lib, insonning tabiiy muhit bilan aloqaga kirishiuvchi tafakkuri va faoliyatida aks etadi.

Falsafada madaniyatga insonning ijtimoiy me'yorlar, ma'naviy qadriyatlar tizimida hayotiy faoliyatini tashkillashtirish va rivojlanishining hamda moddiy va

ma'naviy mehnat mahsullarida aks ettiriluvchi o'ziga xos usuli sifatida qaraladi. Bu faoliyat insonning insonlarning tabiatga, bir-biriga va o'z-o'ziga munosabatida namoyon bo'ladi.

Madaniyat va faoliyat birgalikda dialektik birlikni tashkil qiladi. Faoliyat madaniyatni yaratadi va unga hayot baxsh etadi. Madaniyat bo'lsa, ushbu faoliyatni tashkillashtiradi va nazorat qiladi, uni amalga oshirish usullariga, samaradorligiga va uni takomillashtirishning taxminiy yo'llari va yondashuvlarga aniqlik kiritadi.

Madaniyat bu faoliyatning, uning sifati va samaradorligini belgilovchi o'ziga xos mezonidir. Faoliyatning sifat ko'rsatkichi tariqasida madaniyat tafakkur va hatti-harakat usuli bo'lgan holda o'z ichiga faoliyat va uning natijalariga bo'lgan munosabatni, ya'ni faoliyatga nisbatan qadriyatlarga asoslangan me'yoriy munosabatni mujassamlashtiradi. Madaniyatning tabiat, jamiyat va shaxs bilan aloqasi o'z ichida faoliyatga asoslangan va qadriyatlarga asoslangan aspektlari mavjud [1].

Shunday qilib, madaniyat ma'lum bir aspekt doirasida insonning ijtimoiy faoliyatini tavsiflaydi, ushbu faoliyatning insonning shaxs sifatida shakllanishi, kamol topishi va uning asosini tashkil qiluvchi kuchlarning, ya'ni jamiyat tomonidan tashkil toptirilgan sub'ektiv imkoniyat va ehtiyojlar ko'rinishidagi ijtimoiy sifatlarining taraqqiy etishi va yuzaga chiqishi qanchalik qo'l kelishiga aniqlik kiritadi. Keltirilgan madaniyat ta'riflarida va uning o'ziga xos jihatlari muhokamasida madaniyatni tabiat bilan qarama-qarshilikda ta'riflash kuzatiladi. Zero, inson madaniyatining namoyon bo'lishi inson tafakkuri mahsullarining tabiat va atrof-muhitda qoldirgan izida aks etadi. Biroq inson madaniy ko'nikmalarni faqatgina tabiiy muhitga ta'sir o'tkazish va sun'iy muhit yaratish bilangina rivojlantirmagan. Aksincha, inson o'z mavjudligining butun tarixi davomida u yoki bu tabiiy muhitda istiqomat qilgan holda undan ko'p narsalarni o'rgangan.

Bugungi kunda yuksak madaniyat va ekologik madaniyatning yaqqol namoyon bo'lishi ularning ijtimoiylik va tabiiylikdan farqlanish darajasida emas balki ularning hamohangligida deb qaralmoqda. Bu hamohanglik orqali tabiat kishining insoniy borlig'iga aylanuvchi, tabiatni asrash bo'lsa jamiyat va odamni tur sifatida saqlanib qolishiga imkon yaratuvchi tabiiy ijtimoiy tizimni tashkil qiluvchi, tabiatdagi va jamiyatdagi muvozoanatga erishish imkonini beradi.

Ekologik madaniyatning mazkur tahlil doirasida shuni ta'kidlab o'tish kerakki, umumiy madaniyatdan ekologik madaniyatni ajratib ko'rsatish ilmiy xarakterga ega. Aslida madaniyat bo'linmas va bir butun hodisadir.

Madaniyatshunoslik nuqtai nazaridan ekologik madaniyat ma'lum bir jamiyat madaniyatining komponenti sanalib, o'z ichiga insonning tabiatga ta'siri, tabiatni ma'naviy-moddiy o'zlashtirish vositalari (bilim, dunyoqarash, madaniy an'analar, qadriyatlar va h.k.) majmuidir.

Shuni narsani qayd etish kerakki, ekologik madaniyat tushunchasi ilmiy doiralarga nisbatan yaqin o'tmishda kirib kelgan va shu sababli hali hanuz

ekologik madaniyat tushunchasining umumiy qabul qilingan ta'rifi va tavsifi mavjud emas. Quyida ekologik madaniyatning asl mohiyatini, bizningcha, imkon qadar to'g'ri aks ettiruvchi ta'riflarini keltiramiz.

B.T.Lixachevga ko'ra ekologik madaniyatning mazmun-mohiyatini ekologik taraqqiy etgan ong, emotsional-psixik holat va utilitar amaliy faoliyatning yakdilligi va birligida aks etadi.

V.K. Nazarov fikricha ekologik madaniyat orqali insoniyat tabiat va atrof-muhitga shunday ta'sir o'tkazadiki, ushbu ta'sir orqali insonning yuqori sifatli hayot tarziga bo'lgan ehtiyoji qondiriladi va mos ekologik ong, tafakkur, xulq-atvor orqali avloddan avlodga tabiatga oqilona munosabatda bo'lish g'oyalarini o'tkazib boradi.

Rus olimi Yu.I.Zelesskaya ekologik madaniyat shakllanishida ta'lim va tarbiyaning ahamiyatiga urg'u berar ekan unga ma'lum bir maqsadni ko'zda tutuvchi ekologik ta'lim va tarbiya mahsuli sifatida ta'rif beradi va shaxsda ekologik madaniyatning mavjudligini uning ekologik tarbiyalanganlik darajasi bilan bog'laydi.

V.A. Sitarov va V.V. Pustovoytov ekologik madaniyatni inson faoliyatining axloqiy-madaniy jabhasi sifatida ta'riflab, ushbu jabha insonning tabiat bilan o'zaro munosabatini belgilaydi hamda o'z ichiga o'zaro bog'liq bo'lgan unsurlarni: ekologik ong, ekologik munosabat va ekologik faoliyatni oladi. Bunda asosiy unsur sifatida ekologik madaniyatni ijtimoiy ong va, xususan, shaxs darajasida rivojlantirishga mas'ul bo'lgan ekologik institutlar chiqadi.

Ushbu ta'rifga faqatgina bir shart bilan qo'shilish mumkin, ya'ni ekologik madaniyat inson hayotining faqatgina axloqiy-ma'naviy jabhasini qamrab olibgina qolmay balki uning amaliy jihatlarini ham o'z ichiga olishi lozim.

Shunday qilib, zamonaviy ilmiy adabiyotlarda ekologik madaniyatning ikki aspekti: moddiy (insoniyatning tabiat bilan o'zaro munosabatga kirishishining barcha shakllari) va ma'naviy (ekologik bilim, ko'nikma, malaka va qarashlar) ajratiladi.

Ayrim mualliflar ekologiya, ekologik madaniyat va madaniyatga bag'ishlangan ishlari orqali ekotizimning insoniyat rivojida tutgan o'rni, insonning ekotizim taraqqiyotida tutgan o'rnini izohlab o'tishgan va insonning tabiat bilan o'zaro munosabati amalda qanday namoyon bo'lishini tushunirib berishgan.

Ekologik antropologiya nuqtai nazaridan yondashuvchi olimlar fikriga ko'ra, inson ekotizimning ajralmas qismi hisoblanadi va insonning ekotizimga nisbatan munosabati, uning atrof-muhit va ekotizimni tushunishi uning o'zining rivojlanishiga ta'sir o'tkazadi. Shuningdek, mualliflar ekologik madaniyat, atrof-muhit bo'yicha voqiflik va atrof-muhit ekologik degradatsiyasi keltirib chiqarishi mumkin bo'lgan havf-xatarlarni muhokama qilishadi.

Biologik-antropologiya nuqtai nazaridan frantsiyalik antropolog olim Jorj Olive inson va tabiat o'rtasidagi munosabatni muhokama qilar ekan madaniy atrof-muhitni odamlar va tabiat, odamlar va jamiyat hamda odamlar va odamlar

o'rtasidagi munosabatlarni o'z ichiga oluvchi madaniy kenglik ekanligini isbotlashga urinadi. Olivega ko'ra ekologik madaniyatga insonning tabiatdagi roli yoki tabiatning inson hayotidagi o'zni sifatida qaralishi mumkin. A.Bleyk o'z ishida insonning tabiat bilan o'zaro munosabatiga ekologik antropologiya nuqtai nazaridan baho beradi.

Ko'plab tadqiqotchilar ekologik madaniyat haqidagi bazaviy qarashlarini keltiradi. Ularga ko'ra insoniyatning barqaror rivojlanishi uchun insonlarda ekologik madaniyatni rivojlantirish global ekologik muammolarga qarshi kurashishda muhim ahamiyatga ega. Ushbu mualliflar o'z ishida insonning tabiat bilan o'zaro munosabati tarixini tizimli ravishda o'rganish orqali ushbu munosabatning barqaror rivojlanishga qanchalik ta'sir o'tkazishini isbotlashga urinadi. Shu bilan birga ushbu tadqiqotchilar inson va tabiat o'rtasidagi munosabat yo'nalishi, munosabatlardan ko'zlangan maqsadlar nimadan iborat bo'lishi kerakligini ko'rsatib o'tishadi[3].

Turli davrlarda olimlar tomonidan ekologik madaniyat nazariyalari haqida qarashlar shakllantirilgan va ekologik madaniyatning jamiyat barqaror taraqqiyotida tutgan o'zni va ahamiyati haqidagi qarashlar keltirilgan. Ba'zi mualliflar ekologik madaniyat muammosini nazariy jihatlarini iqtisodiy rivojlanish muammolarida inson va tabiat o'rtasidagi o'zaro munosabatning tutgan o'zni nuqtai nazaridan tadqiq qilishgan.

Madaniyat kontsepti turli nuqtai nazarlardan o'rganilishi mumkin. Hozirgi paytda "madaniyat" tushunchasining 400 ga yaqin definitsiyasi mavjud bo'lib, har bir madaniyatni ta'riflashga bo'lgan intilish ortida ma'lum bir ratsional nuqtai nazar yotadi. Shu jihatdan, madaniyat tushunchasiga turli aspektlarni inobatga oluvchi to'liq, yakdil ta'rif ishlab chiqilmagan. Falsafiy nuqtai nazardan qaralganda "madaniyat bu insoniyatning ijtimoiy-tarixiy rivojlanishi mobaynida inson tomonidan yaratilgan barcha moddiy va ma'naviy qadriyatlar majmui bo'lib, ijtimoiy rivojlanish maxsulidir".

Tilimizdagi "madaniyat" so'zining etimologiyasiga e'tibor beradigan bo'lsak, "madaniyat" (arabcha – madinalik, shaharlik, ta'lim-tarbiya ko'rgan) asl ma'nosi tabiat bilan va insonlarning o'zaro munosabatida namoyon bo'luvchi inson faoliyatining o'ziga xos usulini anglatishini ko'rishimiz mumkin. Madaniyat so'zi dastlabki ma'nolarida odamzodning tabiatga ta'sirini, masalan, yerga ishlov berishini, unga o'z ehtiyojlaridan kelib chiqqan holda o'zgartirish kiritishi ifodalagan bo'lsa, keyinchalik madaniyat so'zi tarbiyalash, o'qitish ma'nolarini kasb eta boshlagan. Keyingi davrlarda madaniyat deganda insoniyat tamadduniga oid faoliyat turlari va ularning natijalari tushunila boshlagan.

Rus va boshqa ko'plab g'arbiy tillarga qaraydigan bo'lsak madaniyat so'zi "kultura" (rus.), "culture" (ingl.), "culturae" (fra.) so'zlari bilan ifodalanadi. "Culture" so'zining (lotincha – o'stirish, kultvatsiyalash) ma'nosi ham birinchi navbatda yerga ishlov berish, unga insonning o'z manfaati yo'lida foydalanish uchun o'zgartirish kiritishi ma'nolarini anglatganini ko'rishimiz mumkin. Ikkala holatda ham anglashinadiki, "madaniyat" va "kultura" so'zlari etimologik

jihatdan bir-biriga juda yaqin ma'noga ega. Ya'ni insonning bevosita tabiatga ta'sir o'tkazishi va unga o'z manfaatini ko'zlagan holda o'zgartirish kiritishini anglatadi. G'arbda "kultura" so'zining insoniyat tsivilizatsiyasining intellektual hususiyati ma'nosida qo'llana boshlashi 19-asrga borib taqaladi [1]

Ekologiya so'zining etimologiyasiga qaralsa, Grekcha "oikos" so'zidan olingan bo'lib, uy, qo'rg'on, barcha mavjudotlar istiqomat qiladigan joy va shuningdek insonni o'rab turgan atrofmuhit ma'onsini beradi. Ekologik muhit deganda tabiiy atrof-muhit ham anglashinib, barcha tirik mavjudotlar yashovchi muhit va barcha tirik organizmlarning hayot faoliyatiga ta'sir ko'rsatuvchi sharoitlar tushuniladi. Ekologik muhit noorganik elementlar (havo, tuproq, suv, resurslar va b.), organik elementlar (mikroorganizmlar, hayvonlar, o'simliklar va b.) va odamzodni o'z ichiga oladi. Ekologik muhitda elementlar bir-biri bilan doimiy o'zaro munosabatda bo'lib, ular o'rtasidagi munosabat dialektik xarakterga ega va ekologiyaning asosiy qoidalarini tashkil qiluvchi qonuniyatlar asosida kechadi. Ushbu ekotizimda insonlar tug'iladi, yashab qoladi va rivojlanadi va faqat insongina, boshqa tirik jonzotlardan farqli ravishda, ushbu ekotizimga uning elementlarini bir joydan boshqasiga ko'chirish, bir shakldan boshqasiga o'tkazish va ularning umuman izsiz yo'qolib ketishi darajasigacha ta'sir o'tkaza olishi mumkin[1]

Madaniyat tabiatdan farq qilmaydi aksincha tabiatdan ajralmagan holda mavjuddir. Agar madaniyat insonning ijtimoiy rivojlanishi darajasi mahsuli bo'lsa, inson tabiat mahsuli va ijtimoiy aloqalarning dinamik sub'ektidir. Tabiat insoniyat rivojining boshlang'ich nuqtasi va rivojlanishini harakatga keltiruvchi asosiy kuch hisoblanadi. Tabiat nafaqat yashash uchun foydalanish mumkin bo'lgan mahsulot bo'libgina qolmay, balki inson madaniy faoliyatining asosiy vositasi va sharti hamdir. Inson va tabiat o'rtasidagi birlik mahalliy o'ziga xoslikni, tarix va hattoki ma'lum ijtimoiy tashqi ko'rinishni aks ettiruvchi madaniy yoshni yaratadi.

Xulosa. Shunday qilib, madaniyat bu birinchi o'rinda inson va tabiat o'rtasidagi o'zaro munosabatdir. Tabiat insoniyat yaralishining nafaqat boshlang'ich nuqtasi, balki u yashab qolishi uchun zarur bo'lgan muhit, shart-sharoit hamdir. Tabiatsiz inson o'zining jismoniy va ma'naviy ehtiyojlarini qondira olmaydi. Shu sababdan odamlar iste'mol uchun mahsulot yaratish maqsadida birlashganda ular ushbu mahsulotga madaniy ma'no ham baxsh etadilar.

Bundan anglash mumkinki, ekologik madaniyat inson faoliyati davomida uning tabiat bilan o'zaro munosabatida namoyon bo'ladi. O'zining ko'p asrlik hayoti davomida insoniyat taraqqiy etmagan ekologik madaniyat bilan yashashga, ekologik axloq va ekologiyani asrab-avaylashga yo'naltirilgan faoliyatsiz yashashga o'rganib qoldi.

Yana shu narsa alohida e'tibor berish kerakki, ekologik madaniyat ekologik ong va hulq-atvorning barchasini qamrab olmaydi, aksincha yillar davomida ildiz

otgan olomonga xos bo'lgan ekologik ong va hatti-harakatlarni o'z ichiga olib kelgan.

Ekologik madaniyatning ma'naviy asl mohiyatida, boshlanishida ekologik ong yotadi. Ekologik madaniyat jamiyat, ijtimoiy guruh, shaxs ekologik ongi taraqqiy etishining ma'lum bir darajasida 2 xil shaklda ro'yobga chiqadi: 1) g'oyalar, iedallar, qarashlar, tasavvur, maqsad, qadriyat, me'yyor, an'ana, namuna va stereotiplarni o'z ichiga oluvchi nazariy bilimlar; 2) o'z ichiga his-tuyg'u, emotsiyalar, qarash, ko'rsatmalarni oluvchi va nazariy hamda kundalik ongni oluvchi ongning ijtimoiy-psixologik unsurlari[3]

Ekologik ong atamasi odatda «inson – tabiat», tizimidagi, tabiatning o'zida kechuvchi hamda insonning tabiat bilan o'zaro munosabatga kirishishga mos strategiya va texnologiyalari majmuini anglatadi. Ekologik ong va uning shakllanishi ekologik madaniyatning ijtimoiy-psixologik aspektini tashkil qiladi.

Shunday qilib, antropologik faoliyatga ekologik imperativ tomonidan ilgari suriluvchi qat'iy cheklovlarga amal qilishni orqali ekologik xalokatning oldini olishga, jamiyat va tabiat o'rtasidagi hamjihat taraqqiy etish sari va noosfera davriga o'tish mumkin. Buni yangi ekotsentrik ekologik madaniyatsiz – yangi dunyoni anglashning yangi ekotsentrik yondashuviziz hamda inson faoliyatining yangi tabiat uchun zararsiz usul va vositalarisiz – yangi axloq, ma'naviyatsiz amalga oshirib bo'lmaydi. Mavjud ideallar va qadriyatlar, ya'ni gumanizm, demokratiya, erkinlik va tenglik singarilar yangicha mazmun, tabiatga va atrof-muhitga ehtiyotkorona munosabatda bo'lish tamoyillari bilan mazmunan boytilmog'i lozim.

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HAYOT SUG'URTASIDA SUG'URTA MUKOFOTLARI VA SUG'URTA BADALLARI

Annotatsiya. Ushbu maqolada hayotni sug'urtalash jarayonlarida qo'llaniladigan ba'zi sug'urta mukofotlari va sug'urta badallari o'rganilgan bo'lib, aktuar hisoblar yordamida sug'urta mukofotlari va sug'urta badallari miqdorlarini hisoblash formulalari keltirilgan.

Kalit so'zlar: Hayot sug'urtasi, sug'urta mukofoti muddati, aktuar hisoblar, sug'urta badallari, yillik badal miqdori.

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INSURANCE PREMIUMS AND INSURANCE CONTRIBUTIONS IN LIFE INSURANCE

Abstract. This article examines some insurance premiums and insurance contributions used in life insurance processes, and provides formulas for calculating the amounts of insurance premiums and insurance contributions using actuarial calculations.

Key words: Life insurance, insurance premium term, actuarial calculations, insurance premiums, annual premium amount.

Hayotni sug'urtasi turli ko'rinishlari uchun sug'urta to'lovlar nazariyasi qaralganda shartnoma tuzish momentiga sug'urta to'lovlar bir vaqtli qiymati aniqlanadi. Lekin hayot sug'urtasi bo'yicha uzoq muddatli shartnomalar kam hollarda bir vaqtli badal bilan to'lanadi va ularning qiymati juda ham ulkan. Odatda, sug'urta mukofoti muddati – yiliga, kvartalli va oylik to'lanadi. Agar bir vaqtli to'lovda sug'urtachi shartnoma tuzish momentida o'z majburiyatlarini to'liq bajarsa, u holda badallar davriy to'lovida ular muddatli bajariladi. Ravshanki, sug'urtachining sug'urta mukofoti to'lash usulidan sug'urtalanuvchi majburiyatlari qiymatidan bog'liq emas.

Davriy to'lanadigan badallarni hisoblashda ularni investitsiyadan foiz daromadni ham, demografik omillarni ham hisobga olish lozim. Oxirgi omil badallar miqdoriga muhim ta'sir ko'rsatadi, chunki hamma sug'urtalanuvchilar olamdan o'tish ro'y bergunga qadar shartnomada ko'zda tutilgan barcha badallarni to'lashga ulgurmaydilar. Agar davriy to'lanadigan badallar miqdori

o'zgarmas bo'lsa, bu badallar jamlanmasi to'lovlar o'zgarmas rentasini tashkil etadi. Sug'urta shartnomasi birinchi badal olingandan kuchga kirgani uchun sug'urta to'lovlar rentasi keltirilgan (postnumerando rentasi) hisoblanadi.

Sug'urta badallari miqdorini hisoblash uchun asos –sug'urtachi va sug'urtalanuvchilarning majburiyatlari shartnoma tuzish muddatida teng bo'lish sharti hisoblanadi: to'lanadigan sug'urta to'lovlari joriy qiymati to'lanuvchi joriy badallarning kutilayotgan joriy qiymatiga teng (U.R., 2022). Agar sug'urta shartnomasi x yoshda tuzilgan bo'lsin, sug'urta to'lovlari kutilayotgan joriy qiymati A ga teng, yillik sug'urta badallari noma'lum miqdori P teng bo'lsa, u holda

$$A = P\ddot{a}_{x:\overline{n}|}, (1)$$

ko'rinishga ega, bu yerda $\ddot{a}_{x:\overline{n}|}$ – birlik miqdordagi yillik to'lovlarga ega rentaning kutilayotgan joriy qiymati.

Bundan yillik badal

$$P = \frac{A}{\ddot{a}_{x:\overline{n}|}}. (2)$$

(2) formula yillik badal miqdori bir vaqtning o'zida to'lanadigan badal miqdoridan necha marta kichik ekanligini ko'rsatadi, shuning uchun $\ddot{a}_{x:\overline{n}|}$ miqdorni uzaytirish koeffitsienti deb ataladi. Agar sug'urtalanuvchilar sonining kamayishi va badallardan foiz daromadi nolga teng ($l = const, i = 0$), bo'lsa, u holda uzaytirish koeffitsienti to'lovlar muddati uzunligi n ga teng bo'ladi.

Ko'pincha sug'urta mukofotini to'lash davri sug'urta shartnomasi amal qilish muddatining qismini tashkil etadi. Sug'urta mukofoti to'lash davrida sug'urtalanuvchi to'la to'lanuvchi badallarni albatta to'lashga majbur, ya'ni o'z majburiyatlarini to'la bajarishi lozim. Mukofotlarni to'lash muddati m harfi belgilanadi. Birinchi mukofot birinchi sug'urta yili boshida - oxirgisi m -chi yil boshida to'lanadi. Yillik badal miqdori

$$P = \frac{A}{\ddot{a}_{x:\overline{m}|}} (3)$$

formula bilan aniqlanadi. Oxirgi badalni to'lash sanasidan birinчисigacha (yoki yagona) sug'urta to'lovi kutiluvchi deb ataladi. Yashaguncha kapitalni sug'urtalashda kutiladigan davr sug'urta shartnomasi muddati tugaguncha davom etadi. Rentani sug'urtalashda kutiladigan davr rentasi to'lash davri boshi bilan tugaydi.

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TAYINLANGAN BADALLI JAMG'ARMA SUG'URTASI

Annotatsiya. Ushbu maqolada hayotni sug'urtalash jarayonlarida qo'llaniladigan ba'zi sug'urta jamg'armalari o'rganilgan bo'lib, aktuar hisoblar yordamida aniqlanadigan izlanuvchi miqdor hissalarining jamg'arilgan miqdorlarini hisoblash formulalari keltirilgan.

Kalit so'zlar: Hayot sug'urtasi, sug'urta jamg'armalari, aktuar hisoblar, foiz stavkasi, tayinlangan badallar.

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DEFINED CONTRIBUTION FUND INSURANCE

Abstract. In this article, some insurance funds used in life insurance processes are studied, and formulas for calculating the cumulative amounts of contributions of the required amount determined by actuarial calculations are presented.

Key words: Life insurance, insurance funds, actuarial accounts, interest rate, defined contribution.

Sug'urtalash bu - tashkilotlar, davlat va fuqarolarning moddiy mulk manfaatlarini himoya qilish sifatida hozirgi zamonning muhim elementi hisoblanadi. Sug'urtalash ijtimoiy faoliyatning barcha sohalarini uzluksizligini hamda ma'lum hodisalar natijasida sug'urta holatlari sodir bo'lganda kishilar hayot darajasini, daromadlarini saqlashni ta'minlaydi. Aktuar hisoblar - bu ehtimollar nazariyasi va matematik statistika fanining usullari va formulalariga, makro va mikroiqtisodiy ko'rsatkichlarning moliyaviy-iqtisodiy tahliliga asoslangan murakkab matematik hisoblardir. Aktuar hisob - kitoblar iqtisodiyotning holati va uning rivojlanishining uzoq muddatli bashoratlariga, siyosiy vaziyatga va jamiyatning taxminlarini baholashga asoslangan. Aktuar hisoblarda ehtimollik nazariyasi keng qo'llaniladi. Aktuar tahlil esa sug'urta kompaniyalari va banklar faoliyatining muhim va ajralmas qismiga aylangan. Hozirgi vaqtda insonlar hayotini sug'urta qilish ommalashib bormoqda (Исматов, 2021).

Sug'urta amaliyotida ko'pincha sug'urta to'lovlari miqdorlari emas, balki to'lanadigan badallar tayinlanadigan sug'urta jamg'arma sxemalaridan

foydalaniladi. Aktuar hisoblar yordamida aniqlanadigan izlanuvchi miqdor hissalarining jamg'arilgan miqdori hisoblanadi. Bunday sxemalarning ommalashishiga sabab sug'urtachilar psixologik jihatdan daromadlilikni oson baholashga imkon beruvchi hissaning ortishi bank sxemasini osonroq qabul qiladilar. Bundan tashqari, foiz stavkaning doimiy o'zgarib borishi natijasida bank omonatlarining bugungi darmomadlilikiga bilan raqobat qilishga qodir daromad normasiga ega klassik sxema bo'yicha bir yildan ortiq muddatga sug'urtani kafolatli rejalashtirish imkoniyati mavjud emas. Tayinlangan badallar esa sxemani qo'llash har bir vaqt momentida yetarlicha yuqori raqobatbardosh saviyada tanlash mumkin bo'lgan suzuvchi foiz stavkasi bilan ishlashga imkon beradi.

Agar x yoshdagi l_x sonli guruhning har bir a'zosi jamg'armaga 1 o'lchamda to'lov to'lasa, u holda n yildan keyin jamg'arilgan mablag' $l_x s^n$ ga teng bo'ladi. $x+n$ yoshgacha yetgan har bir kishi uchun bu

$$s_{x:\overline{n}|} = \frac{l_x s^n}{l_{x+n}} \equiv \frac{1}{A_{x:\overline{n}|}^1} \quad (1)$$

ni beradi.

Bu yerda $A_{x:\overline{n}|}^1$ - birlik jamg'armaning kutilayotgan joriy qiymati.

a - regulyar davriy to'lovlar (U.R.Ismatov, 2023).

(1) formuladan ko'rinadiki, jamg'armaning ko'payishi olamdan o'tgan kishilar omonatlarini yashayotgan kishilar o'rtasida qayta taqsimlash hisobiga o'sha foiz stavkali bank omonatiga qaraganda yuqori sur'atlar bilan ro'y beradi.

Agar guruhning har bir a'zosi har yilning boshida jamg'armaga 1 o'lchamli mablag'ni (prenumerando rentasi) qo'shsa, u holda n yildan so'ng jamg'arilgan mablag' yashayotganlar hisobiga

$$\ddot{s}_{x:\overline{n}|} = \sum_{k=0}^{n-1} \frac{l_{x+k} s^{n-k}}{l_{x+n}} = \sum_{k=0}^{n-1} \frac{1}{A_{x+k:\overline{n-k}|}^1} = \sum_{k=0}^{n-1} \frac{D_{x+k}}{D_{x+n}} = \frac{N_x - N_{x+n}}{D_{x+n}} \quad (2)$$

ga teng bo'ladi.

Agar badallar har yili oxirida to'lansa (postnumerando rentasi), u holda Shunga o'xshash

$$s_{x:\overline{n}|} = \sum_{k=1}^n \frac{D_{x+k}}{D_{x+n}} = \frac{N_{x+1} - N_{x+n+1}}{D_{x+n}} \quad (3)$$

ni olamiz. Bu yerda agar l_0 sondagi bolalar guruhi tug'ilganda ularni x yoshga yetish bo'yicha birlik sug'urta jamg'armasini to'lash sharti bilan yashab qolishga sug'urta qilinganda, u holda D_x - sug'urta to'lovlari jamg'armasining kutilayotgan joriy qiymatini, ya'ni jamlangan sug'urta mukofotini beradi va quyidagi formula orqali hisoblanadi:

$$D_x = v^x l_x \quad (4)$$

Bu yerda $v = \frac{1}{1+i}$ – diskontirlash koeffitsienti, i – yillik foiz stavkasi.

(2), (3) formulalarni $\ddot{a}_x = \frac{N_x}{D_x}$ va $a_x = \frac{N_{x+1}}{D_x}$ formulalar bilan taqqoslab,

ko‘ramizki, ular

$$\frac{a_{x:\overline{n}|}}{s_{x:\overline{n}|}} = \frac{\ddot{a}_{x:\overline{n}|}}{\ddot{s}_{x:\overline{n}|}} = A_{x:\overline{n}|} \quad (5)$$

universal munosabat bilan bog‘langan.

Yuqorida keltirilgan formulalardan sug‘urta mukofotlari, sug‘urtaning elementar turlari uchun netto-mukofotlar, sof yashash sug‘urtasi, rentalar sug‘urtasi, olamdan o‘tish holati uchun hayot sug‘urtasi, aralash (kombinatsiyalashgan) hayot sug‘urtasi kabi miqdorlarni hisoblashda keng foydalaniladi.

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EDUCATIONAL VIEWS OF PEDAGOGUES TOWARDS THE ENVIRONMENT

Annotation. The concept of pedagogical culture entered the field of education as a result of the scientific research of a number of pedagogical researchers. Pedagogical culture is an integral part, a component of the general culture, which describes the level of deep and thorough acquisition of knowledge of pedagogical theory, the ability to use this knowledge independently, methodologically and with high efficiency.

In the process of continuous education, every educator should be able to use innovative methods to assess the level of knowledge from pedagogues and apply it in practice. In this process, the requirements for the teacher are as follows: - knowledge of the concept of innovative technology and its essence; - knowledge of the place and role of innovative technologies in the implementation of educational goals; - knowledge of the principles of application of innovative technologies in the sciences; knowledge of educational and business games; to know problem-based developmental education methods; to know ways to organize and ensure independent activities of students; students acquire methods of improving their independent work skills; - to know and acquire visual teaching methods. To improve the quality of education in the improvement of the continuous education system, students of physical culture should have an innovative approach to each lesson. The teacher should cooperate pedagogically with students, mainly paying attention to the following:

- finding new methods of assessment;
- changing attitudes towards the profession;
- development of pedagogical and creative abilities;

The processes of developing the professional competence of teachers organized on the basis of the innovative model include the following: - ensuring the effectiveness of the lesson;

- the content of the lesson has an integrative character;
- the role and importance of educational management and management psychology are more widely covered;
- competence in organization and management of pedagogical processes;
- innovative activity and professional personal qualities of the teacher. It is necessary not to forget the properties of students that have a mutual educational effect, the existence of a connection between their communicative relations and

activity, and determining its effectiveness. Teacher to class team and individual student; in order to achieve success in pedagogical influence, it is necessary to rationally plan the system of mutual pedagogical relations among students and change the psychological environment in a positive direction.

In order to establish a system of pedagogical relations that is properly organized and perfect in all respects, aimed at protecting the hearts and minds of the young generation, educating them in the spirit of national and universal values, each pedagogue must deeply understand the psyche, be aware of their inner potential., it is necessary to give information, exchange ideas, understand and sympathize with their grief and feelings. In order to achieve success in the pedagogical relationship, the teacher must: be able to model the future relationship with the students; know in advance the characteristics of the class team that will be in the relationship; have an advantage in the relationship of establishing a direct sincere and solidarity-based relationship, which is the main democratic requirements rational management; it is necessary to continuously analyze the positive and negative aspects of the relationship. We know that the spiritual wealth of a citizen of an advanced society, especially a teacher, is evaluated by his broad worldview, ability to think deeply, literacy, wealth of high human qualities. "The origin of all evil is ignorance," said the Greek philosopher Socrates. Therefore, we are all responsible for the young generation to become the owner of high knowledge and thinking. This responsibility is more on the responsibility of teachers. In fact, the first tool that ensures the reputation of teachers is their education level. First of all, a teacher should be spiritually healthy and able to think broadly, deeply know their national values, traditions, and the creative heritage of great figures of our nation. Therefore, he should have researched in his chosen field of specialization and science, should know the life and creativity of the scholar well, and should have logical thinking.

During the formation of the teaching profession, his pedagogical skills improve. He conducts educational activities with students with different psychological characteristics. He faces various conflicts. This, in turn, forces him to constantly create, to find and skillfully apply various means and methods of education. In order to achieve the goal set as a result of education, teachers rely on the experience and skills they have accumulated over the years. All achievements and positive results achieved by pedagogues in their theoretical and practical activities are the main means of demonstrating pedagogical skills in educators. Pedagogues should know the components of pedagogical skills and use its unlimited possibilities.

Participation in group and public events gives positive results in acquiring pedagogical skills. Therefore, in such an environment, it is necessary to exchange opinions, compare personal opinions with the views expressed by others, make sure of their correctness and truthfulness, further enrich existing knowledge, identify errors or shortcomings in time and find ways to eliminate them. there is a possibility. Possessing pedagogical skills is not only a guarantee of ensuring the

effectiveness of education, but at the same time, it increases the reputation of teachers in the community, in the social environment, and respect for them arises among students. The organization of practical activities while improving professional skills creates an opportunity to get rid of mistakes made or made in pedagogical activity, to achieve success in relations with students, colleagues and parents. Children also differ in their need for adult support. Some children need to be shown, explained, and followed several times to perform an action. For other children, it is enough to show the work to be done once. There are also children who do the given task independently.

Children differ from each other depending on their curiosity and mental activity. Some children ask a lot of questions and are active, while some children are not interested in anything. In this regard, it is extremely important that the child has acquired certain skills. Including the pedagogue, he is polite, fair and "the engineer of the child's heart". Psychologists have pointed out that the positive and negative characteristics of a child sometimes pass through the teacher. Because children imitate the way the teacher behaves, dresses, and speaks. Even though the child is young, you should not forget that he is a human being, you should not humiliate him in front of many people, you should not spoil his pride. Pedagogical scientist Kamil Zaripov bases the content and essence of the teacher's professional skills on the image of "Advanced teacher", "Creative teacher", "Innovator teacher" and defines it as follows: "Advanced teacher" First of all, he is more responsible for his work than other teachers. He learns positive experiences in this field and uses them in his lessons, educational activities outside the educational institution and the group. Through this, he achieves a certain achievement in the field of education and training. A Creative Teacher can also have the features of an Advanced Teacher.

The special readiness of a child for school is in addition to the general psychological readiness for studying at school, it is determined according to the presence of special knowledge, skills and abilities necessary for learning academic subjects such as mathematics and mother tongue. In pre-school educational organizations, the intensive work of developing children's simplest mathematical ideas, developing speech and preparing them for literacy ensures the necessary level of special preparation of children for studying at school. A child attending school should be prepared for a new way of life, a new system of interaction with people, active mental activity. He must have reached a certain level of physical development in order to take on new serious responsibilities.

There are several interrelated aspects in the general readiness of the child at school (moral-volitional preparation for studying), the most important of which are spiritual, volitional, mental and physical preparation. Ethical-volitional readiness to study at school allows the child to actively acquire a new social point of view in the development of moral behavior, will, moral qualities and consciousness by the end of preschool childhood, and to build relationships with

his teacher and classmates on a moral basis. is expressed in reaching the level that allows.

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MAIN DIRECTIONS OF TRANSITION TO A GREEN ECONOMY IN UZBEKISTAN

Annotation. This article analyzes international and national approaches to the concepts of “green economy” and “green development”. The article describes the strategy for the transition to a green economy in Uzbekistan, the country's promising indicators, and talks about the need to reorient economic activities in a direction that reduces environmental risks.

Key words: green economy, green development, green growth, green energy, energy efficiency.

Global problems associated with limited natural resources and the need for processing have a significant impact on the economic development of the world economy. The study of this scientific problem began to gain relevance in the 60-70s of the 20th century. As a result of the implementation in economic policy of the principles put forward on the basis of the development of environmental economics and ecological economics, the formation of the concept of “green economy” began. Unlike environmental economics or ecological economics, green economics is more practical in nature.

In the economic literature there is no single generally accepted approach to the concept of “green economy”. While some sources describe the “green economy” as new sectors of the economy that contribute to improving environmental protection, other scientific studies note that the “green economy” studies new technologies, ecosystems that promote and benefit nature. The third group of researchers believes that the “green economy” means a transition to a new stage of development aimed at creating environmentally friendly products.

The concept of “green economy”, developed by specialists from the United Nations Environment Program (UNEP), is widespread in the economic literature - “green economy” contributes to “improving the well-being and social equality of people, significantly reducing environmental risks and environmental deficits”.
[1]

At the same time, a number of developed countries are actively developing approaches and testing tools that will help achieve the expected sustainable economic and social development, and are taking active steps to replicate the practices obtained as a result of such innovative management activities in the economies of other countries.

The mechanism motivating national governments to pursue responsible policies was formed, first of all, as a result of discussions in the format of

international UN conferences, “within which experience was exchanged and global action plans for greening the economy and finance were developed”. [2].

The mechanism that motivates businesses to introduce the principles of responsible behavior into business strategies is the mechanism of responsible (socially responsible) investment, which involves choosing an investment object by taking into account ESG factors. The global business and political community, has come a long way before responsible investing was recognized as a necessity. [3]

The transition to a green economy has the potential to ensure sustainable development and eradicate poverty on a scale never before seen. This potential is fundamentally due to a change in the rules of the game: both our world and the challenges we face in it have changed radically and require a fundamental rethinking of our approach to economics. The findings show that, although in the short term the rate of economic growth in the green scenario may be lower than in the business-as-usual scenario, in the long term the transition to a green economy will allow achieving higher rates, both traditional and those which allows us to judge development more fully.

While most of the investment needed to transition to a green economy must come from the private sector, public policies will also have a significant role to play in addressing the imbalances caused by poorly designed subsidies and overlooked social costs. In addition, public funding will be needed to provide the initial impetus for an effective transition to a green economy.

A green economy replaces fossil fuels with clean energy and low-carbon technologies, reducing climate impact while creating decent jobs and reducing import dependence. New technologies that promote energy and resource efficiency are opening up opportunities for growth in new directions, offsetting job losses in the brown economy.

According to the above reasons, the world, including Uzbekistan, should move from a “brown economy” to a “green economy.” The formation of a “green economy” will ensure “green growth” and will contribute to the implementation of the sustainable development strategy.

The need for a transition to a “green economy” in Uzbekistan is explained by the fact that most of the energy consumed in the national economy is generated using non-renewable organic natural resources, depletion of limited resource reserves, worsening environmental problems associated with environmental pollution, and water shortages due to accelerated industrial development. Sustainable development of the economy of Uzbekistan, development of a long-term strategy for structural transformations requires taking into account internal and global processes and problems.

The economy of Uzbekistan is among the top ten countries in the world in terms of energy and carbon intensity of GDP. Energy consumption per unit of GDP in the world in 1990-2019 decreased from 0.170 kg o.e. to 0.110 kg o.e., this figure in Uzbekistan decreased accordingly from 0.689 kg o.e. up to 0.150 kg a.e.

Consequently, the energy intensity of GDP in Uzbekistan still remains above the world average. This figure is two times higher than the level in the UK, Italy, Turkey, Spain, and Germany. Despite the fact that the carbon intensity of the economy has sharply decreased in Uzbekistan, it is 1.5 times higher than the world average. [4]

The low level of energy efficiency of the national economy, the low level of use of natural resources, the slow pace of technological innovation, and the passive participation of small businesses in the implementation of innovative solutions for the development of a “green economy” hinder the achievement of sustainable development goals. In our opinion, the lack of a long-term strategy in this area did not allow for the introduction of “green technologies” and systemic measures for the transition to a “green economy”.

In order to fulfill the obligations of the Paris Agreement of October 4, 2019, the President of the Republic of Uzbekistan adopted the Resolution of the PD No. 4477 “On approval of the Strategy for the transition of the Republic of Uzbekistan to a green economy for 2019-2030.” [5]

The goal of the Strategy is to achieve sustainable economic progress that contributes to social development, reduction of greenhouse gas emissions, climate and environmental sustainability, through the integration of the principles of the “green economy” into the implemented structural reforms.

In Uzbekistan, in the long term, the transition to a “green economy” should be based on the following principles: compliance with the National goals and objectives in the field of sustainable development; rational use of resources, sustainable consumption and production; inclusion of environmental and social criteria in the economic accounting system; prioritizing the use of “green” tools and approaches to achieve the goals of socio-economic development; achieving existing macroeconomic goals by increasing competitiveness and growth rates in key sectors, creating “green” jobs, and improving the well-being of the population; ensuring the investment attractiveness of measures for the efficient use of economic resources.

In the first priority area established by the Strategy, the goal is to increase energy efficiency in basic sectors of the economy by 2 times by 2030. In particular, for this purpose, it is planned to increase energy efficiency through modernization of the infrastructure of industrial enterprises, the further use of clean and environmentally friendly technologies and industrial processes by at least 20%, energy efficiency and environmental improvement in the production of motor fuel and vehicles, and the development of electric transport. [6]

The second priority area is the diversification of energy consumption and the development of the use of renewable energy sources during the transition to a green economy in the country.

The third priority area includes problems of adaptation and mitigation of climate change, increasing the efficiency of natural resource use and preserving natural ecosystems.

The fourth direction of the strategy is aimed at developing economic mechanisms to support the “green economy”, developing the institutional framework for the introduction of “green technologies”, improving the regulatory framework in the field of “green economy”, mechanisms for regulating and monitoring energy efficiency, integrating the principles of “green economy” into education and science, increasing production potential and creating a favorable environment for the transition to a “green economy”.

The total potential of Uzbekistan for renewable energy sources is 117,984 million toe, its technical potential is 179.3 million toe. A significant part of alternative energy comes from solar energy, the total potential of which is 51 billion toe, and the technical potential is equal to 177 million toe. The technical potential of solar energy is four times higher than the country's primary energy consumption. Favorable climatic and geographical conditions in Uzbekistan allow the use of solar energy at the industrial level. [7]

The priority areas for developing financial and non-financial mechanisms for the development of a “green economy” in Uzbekistan in the long term are:

- development of institutional foundations for the introduction of “green technologies”. In particular, it is necessary to assess technological needs, determine priority tasks and select the most advanced technologies to assist in their development. To develop the economic mechanism for commercializing “green technologies” and supporting innovation, it is necessary to create organizational structures - technology supply agencies, technology business incubators, technology parks, clusters;

- improving the regulatory framework for the development of the “green economy”, in particular, it is necessary to develop proposals for inventory, improving the regulatory framework covering the priority areas of the Strategy and put into practice a national system of indicators for assessing the “green economy”.

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POPULATION DYNAMICS AND REGIONAL TYPES OF SETTLEMENT IN SAMARKAND REGION

Abstract. The article considers regional types and regionalization of the settlement of Samarkand region. The territory of the region stands out for oasis, mountain, desert and suburban types of settlement. These types of settlements are analyzed and conclusions are drawn.

Keywords: regional types, settlement, oasis, mountainous, desert, suburban, urban agglomeration, hydrographic network (system), transport network, population density.

Introduction. The geographical study of population has always occupied a central place in economic and social geography. The peculiarity of the demographic situation of the Samarkand region lies primarily in the high rates of population growth, significantly exceeding the indicators of other regions of the Republic of Uzbekistan. Intensive population growth occurs mainly due to its large natural increase. Moreover, the role of this source of demographic growth at all stages was great, it also determines the regional characteristics of population dynamics. High birth rates and relatively low mortality are responsible for the rapid growth of the population of the Samarkand region. [2.p.5]

In geographic science the concept of regionalization is of central essence. This is essentially an important attribute / property / and a specific feature of any geographical study. An important scientific and practical value it has in the geographical study of the population [1].

Urban agglomerations and other group forms of settlements are also peculiar areas of population distribution. But in this case the regionalization is based on the nature of the settlement and, therefore, the isolated group forms are

real / specific / areas of settlement, which, however, form a discrete system, that is they do not cover the whole territory.

Principally there are other approaches to regionalization of settlement. This is determined by the basic principles of regionalization. So, if the decisive role of production location is based on natural and economic specialization of different parts of the territory, it is possible to single out regional types of settlement. Such types or areas are "continuous and will include the entire territory, regardless of whether there are settlements there, or not. As for urban agglomerations and other frame-node elements or systems of settlement, they form the material basis-the backbone of regional types [2].

Main part. As Table 1 shows, in general for 1926-2022. The region's population has more than tripled.

It took more than 50 years for the region's population to double for the first time. In 1979, 2 times more people lived here than in 1926. The urban population as a whole for 1926-1995. increased by 3.9 times, while the total number of rural residents over the years increased by 2.8 times. The study shows that the rates of population, including urban and rural areas, were not the same in certain years. For example, the highest growth rates of the total population are observed in 1995–2022, and the lowest in 1939–1959.

Table 1.

Average annual population growth rate of Samarkand region (in %)

Years	Total population	Urban population	Rural population
1926-1939	1,45	1,65	1,45
1939-1959	0,70	2,80	0,04
1959-1970	1,55	0,03	2,85
1970-1979	2,60	8,65	0,45
1979-1994	3,05	2,00	3,50
1995-2022	5,00	5,00	5,00

The table was compiled by the author.

The maximum growth rates of the urban population are found in 1970-1979, which in turn is caused by the high rates of town formation and industrialization of the region. In rural areas, the population increased most dynamically in 1979-1994.

In identifying the real dynamics of the population, the analysis of the average annual growth rates and population growth for a certain period is of great importance. increased almost 1.5 times.

At the same time, Urgut, Dzhambay, Bulungur and Aktash stand out with higher rates of demographic development. At the same time, in Payaryk and Juma, the population increased relatively slowly.

Analysis of trends and factors of regional development shows that the share of the urban population in the Samarkand region for 1979-1999. did not increase. For example, in 1989 it was 31% against 37% in 1979, and in 1998 - 29%, in 2022 - 37%. Such a paradoxical phenomenon was associated with changes in the

administrative boundaries of the regional center of Samarkand, as well as the transfer of many rural settlements to the category of urban settlements in 2009.

In recent years, the population of the city of Samarkand has increased due to the connection of rural areas, which are located close to the city. For example, in 1991 the population of the city was over 391 thousand people. or about 18% of the total population of the region, and in 2022 - 564.5 thousand people. or more than 13.9%. As can be seen, the population increased by 173.5 thousand people, and the share in the total population of the region decreased by 3%.

Taking into account the above in the territory of Samarkand region the following main regional types of settlement can be distinguished:

Settlement in oases of irrigated agriculture. In the oasis areas on the basis of irrigated agriculture and manufacturing industries, relatively developed forms of settlement have developed. Accommodation of settlements in an oasis type of settlement in the main one is connected not only with the presence of irrigated lands, but also with the construction of an irrigation-meliorative network. That is why the largest settlements of this type are localized and tied to relatively large channels. Here the natural and geographical conditions are favorable for population and production. The oasis system of settlement is typical for many areas of the region, however, it is particularly widespread in the Akdarya, Samarkand, Taylak, Jambay, Ishtikhon, Kattakurgan and Pastdargom districts.

In arid conditions, rivers and irrigation channels play an important role in the formation and development of an oasis system of settlement and production. Oases are considered to be the main areas of the territorial organization of production and the population of Samarkand region, where labor-intensive branches of the economy are developed on the basis of land and water resources, high population density and population density of populated areas.

In Samarkand region in the beginning of the year of 2021 there were 240,3 thousand hectares of irrigated land. Among the districts, this indicator is the highest in Jambay, Kattakurgan, Ishtikhan districts [8].

Oasis, as a rule, is characterized by a high density of populated areas. For example, in selected areas, on average, 100 km. sq. m. account for 31,2 SOR, the average population of which is 1000 people. As it can be seen there are prerequisites for the formation of local settlement systems.

An important component of oases are not only irrigated lands, but also sources of irrigation. A network of irrigation facilities is built in the areas under consideration: the reservoirs - Kattakurgan, Khishrav, canals - Dargom, Yangiarik, Bulungur, Siyab, etc. The largest of these are the Kattakurgan reservoir and the Dargomcanal. It is along them or in the zone of their direct influence that such important points as the Kattakurgan reservoir, the urban village of Khishrav, the village of Dashtukhta on the Dargom canal, etc. In recent years, on the basis of development and settlement of new territories, the oasis settlement is expanding, which is especially noticeable in Samarkand region, in the zone of influence of the Dargom and Yangiarik canals.

Table 1

Regional types of settlement in Samarkand region (2022)

№	Settlement types	Area, sq.km.	Population, thousand people	Population density for 1 sq.km., people.
1	Oasis	5867,5	2085,6	350,0
2	Mountain	4730,8	538,6	110,3
3	Desert	6381,2	429,2	67,0
4	Suburban	2662,4	988,1	370,2

As Table 1 shows the oasis type of settlement occupies 36% of the territory of the region, where 63% of the total population live and the population density is more than 350,0 people. for 1 sq. km. In the formation of the settlement system the influence is primarily effected by the natural and territorial community, the unified hydrographic and transport network, the interconnected economy and the high density of settlements. In the same settlement area due to favorable socio-economic conditions, Samarkand agglomeration and the Kattakurgan local group of settlements have developed and are developing.

The oasis system of settlement of Samarkand region, although it has much in common with similar areas (or areas) of settlement of the population of Central Asia, is somewhat different in its scale and configuration from the latter. For example, in the classical region of the Fergana Valley or in Turkmenistan, oases are narrow-caled irrigation systems and population distribution, mainly on the cone of small rivers, which are often completely taken for irrigation. In our country, the tributaries of Zarafshan reach the main river and, oases have developed both in the basin of these tributaries and along the banks of the Zarafshan River itself. We recall that the population density in the Fergana Valley, directly near the Sirdarya, is very low [6].

Thus, oasis plots in Samarkand region were formed not only in the foothill part, at the outlet of rivers, from mountain ranges, but also in flat areas. For example, Kattakurgan, Ishtikhan, Narpay, Pakhtachi districts are mainly located in the lowland, while Samarkand, Taylak, Pastdargom, Jambay and Bulungur districts are located in the foothills. Common for them is the cultivation of labor-intensive and water-intensive crops. Thus, the Akdarya, Payarik, Ishtikhan and some other regions specialize in cotton growing, Samarkand, Taylak - on the foothill farm / vegetable growing and potato growing, Bulungur district - horticulture and viticulture.

The type of settlement in the mountainous areas include Urgut and Koshrabad districts. Settlement in Koshrabad - area due to the lack of conditions for large tracts of farming and population settlement, as well as the difficult terrain and poorly developed transport network is characterized by a low density of population and settlements. It is true that Urgut district, though geographically part of the mountainous territories (it occupies part of the Zarafshan range), but it differs somewhat in the degree of economic

characteristics. That is why the level of population of the territory is high: the average population density is 443,3 people per 1 sq. km.

The Koshrabad district, which occupies a part of the territory of the Nurata and Betaktau ranges, is characterized by typical rarely focal types of production and population distribution. In the region, livestock / meat-and-wool direction develops mainly, and the size of irrigated lands is not very large - 890 hectares or 2,7% of all agricultural land. All this causes a relatively low level of economic development of the territory and density of population.

As a whole, in these two regions that are part of the mountainous territories, 538,6 thousand people live. The level of urbanization is very low - 12.5%. The urban form of settlement is represented only in Urgut, the district center of Koshrabad does not yet have this status. However, Koshrabad district is incomparably larger than Urgut, although the economic and demographic potential of this region is small. In this respect, the Urgut district is more developed, and its close proximity to the regional center exerts some influence. It is also important here that there is a relatively large number of irrigation canals and tributaries of the river. Zarafshan, natural conditions for recreational development of territories [7].

Rarely populated is the desert territory. In this type of settlement we include the territory of Nurabad, as well as the adjacent lands of Narpay and Pakhtachi districts. The geographically named territory is partly part of the Carnabchul steppe, where sheep breeding traditionally develops.

In general, this region occupies 39.2% of the territory; here live more than 429,2 thousand people, which is about 4.8% of the total population of Samarkand region. The level of urbanization is also low - 18.9 thousand people, the population lives in the city of Nurobad (formerly Sovetabad) and in the resource village of Ingichka. The city of Nurabad is developing on the basis of the Djam quarry, Ingichka-mining industry without a dense agricultural environment.

The average population density is 67,0 people. Here there are more than 100 SNPs, the density of their deployment is 2 per 100 km square. In this case, in contrast to the densely populated oases and mountain-valley regions (for example, Urgut district), rural settlements are small. However, in this respect, the adjacent territories of Narpay and Pakhtachi districts are noticeably distinguished, where the population and settlement indicators are relatively higher.

It can be said that this part of the territory is, as it were, transitional between the desert and oasis types of regional settlement.

A peculiar type of resettlement has developed in the zone of direct influence of relatively large cities - Samarkand and Kattakurgan. Suburban resettlement is formed within oasis systems and, therefore, they should not be considered in the hierarchy or at the level of the above-mentioned regional types of settlement: the basis for this type of settlement is the structure and specialization of agricultural production, in particular the cultivation of food crops for everyday and mass consumption of citizens. And the trend is that the boundaries of this zone are

constantly expanding due to direct crops and, first of all, cotton area. In other words, as the demand of the townspeople grows, cotton fields will increasingly "leave" the zone of influence of large cities.

On the territory of the studied area, we distinguish two suburban areas of settlement. This is primarily Samarkand, as well as Kattakurgan system. At the same time, these areas of settlement do not cover the entire territory of Samarkand agglomeration and Katgakurgan local population system; they form the core of these systems, but comparatively already, than in the system of settlement.

Samarkand suburban settlement area includes the territories of Samarkand and Taylak districts, as well as part of the Jambay, Bulungur and Pastdargom districts. Within this system, except for urban settlements / Jambay, Bulungur, Superphosphate, etc.), there are large rural settlements that carry out agricultural, recreational, dacha and other functions. They include, for example, the Bagizagan village, Bagibaland, Bagimaydan, etc. At the same time, as far as the distance from the regional center, the size and function of rural settlements change, they become smaller and specialize mainly in agricultural production. In the suburban zone there are also specialized farms such as: Marokand, Navruz, Samarkand, and others [9].

Kattakurgan suburban area is relatively small, it includes urban and rural settlements that lie directly near the "second" city of the region. The largest of these are settlements - Kattakurgan reservoir and Payshanba, as well as the villages of Kadan, Maybulak, etc. There are such large farms as Karadarya, which specialize in growing vegetables, potatoes and dairy cattle.

The population of suburban areas is actively involved in pendulum migration and in the development of the city's industry. As Table 1 shows, the area of the suburban type of settlement is approximately 2.7 thousand sq. km., where there are 988,1 thousand people. of the population / or 26% of the total population of the region.

Findings. Thus, the most developed and densely populated type of settlement is the oasis system of settlement, which includes the suburban settlement of Samarkand and Kattakurgan. The remaining regional types of settlement and, above all, the desert and typical mountainous regions of Nurabad and Koshrabad, are characterized by low rates of population resettlement.

Scientific and practical conclusions and proposals arising from the content of this work can be summarized as follows.

1. Improvement of the territorial organization of the population of the region involves, first of all, the further strengthening of the city of Samarkand as the organizing center of the regional settlement system.

2. The study showed that the second largest city of the region- Kattakurgan is somewhat behind in its development. With the advent of the rapidly growing industrial and regional center of Navoi, the more ancient Kattakurgan lost its intermediary value between Samarkand and Bukhara, in the field of the settlement system of the Zarafshan valley. Now the sphere of its influence is limited only to

the western districts of the Samarkand region and the adjacent part of the Navoi region.

3. Improvement of the territorial organization of the population of the region is inextricably linked with the tasks of comprehensive development of other significant cities, such as Urgut, Bulungur, Ishtykhan, Juma and Aktash. The development of these cities should be considered in two qualitatively heterogeneous systems - within the framework of integral group forms of settlement. Samarkand and Kattakurgan and as part of the grassroots district systems, where they themselves act as the main backbone center.

4. In solving social problems, in improving the lives of the rural population, the importance of district centers is great. Currently, the Government of the Republic of Uzbekistan provides for a significant expansion of the rights of district authorities of khokimiyats to organize social and economic life in the field. Therefore, the rural district centers of the 16 of them here should assume the functions of comprehensive service of the population's farms and its social needs. To do this, it is necessary to strengthen the organizing and servicing functions of district centers, and above all, such as Koshrabad, Nurabad, Guzalkent, etc.

5. This study on the problems of interrelated development of urban and rural settlements within the framework of the regional system of resettlement allows us to conclude that it is desirable to carry out similar work in other regions of the republic. And this is the scientific and methodological basis for the development of the regional policy of the Republic of Uzbekistan on the regulation and management of the territorial socio-economic development of its constituent parts.

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ROBOT KO'Z ANALIZATORI YORDAMIDA YUZ TASVIRNI TANIB OLISH VA IDENTIFIKASIYALASH USULLARINI TANLASH VA TAHLIL ETISH

Annotatsiya. Ushbu maqolada hozirgi vaqtda videotasvir oqimlarini identifikatsiyalash masalarini echishda turli hil amaliy dasturlar majmuasi mavjud bo'lib, ulardan biometric tizim muommolarini hal qilishda robot ko'z analizatori tizimidan olingan rangli videotasvir oqimlarining yuz tasvirini identifikatsiyalashning dasturiy ta'minot tuzilmasi tahlili keltirilgan.

Tayanch iboralar: raqamli tasvir, Open MP texnologiyasi, intensivlik, piksel, vektorlashtirish, ekstremal nuqtalar, shaxs yuzi tasviri.

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SELECTION AND ANALYSIS OF FACE IMAGE RECOGNITION AND IDENTIFICATION METHODS USING ROBOT EYE ANALYZER

Annotation. This article currently presents a variety of practical programs for solving problems of identifying video image streams, including analysis of the structure of software for identifying facial images in streams of color video images received from a robot eye analyzer system and presenting a solution to problems of a biometric system.

Keywords: digital image, Open MP technology, intensity, pixel, vectorization, extreme points, image of a person's face.

Kirish. Pobot ko'z analizatori tizimi olingan rangli videotasvir oqimlarini identifikatsiyalash usullarining tahlili, rangli videotasvirdan olingan ma'lumotlarni identifikatsiyalashning o'ziga xos xususiyatlari, hamda rangli videotasvir oqimi ob'ektlarini identifikatsiyalashning matematik, dasturiy va texnik ta'minotini yaratishning umumiy tushunchalarini o'z ichiga oladi [1].

Bilimga asoslangan usullar uning xususiyatlari, shakli, tuzilishi yoki terining rangi haqidagi ma'lumotlardan foydalanadi. Ushbu usullarda ma'lum qoidalar to'plami (yuzning xususiyatlari) ajralib turadi, ular inson yuzi deb hisoblanishi uchun tanlangan ramka bo'lagiga mos kelishi kerak. Bunday qoidalar to'plamini aniqlash juda oson. Barcha qoidalar, shaxsning o'zi bor holati yoki yo'qligi holati aniqlaganda, shaxs boshqaradigan barcha rasmiylashtirilgan bilim e'tiborga olinadi.

Bir xil usullar guruhiga umumiyroq usul - shablon bilan solishtirish usuli kiradi. Ushbu usulda, yuzning alohida joylarining xususiyatlarini tavsiflash orqali ularning berilgan nisbiy holati yuz standartini (shablonni) aniqlaydi, u bilan asl tasvir keyinchalik solishtiriladi [2-3].

Tashqi xususiyatlar bo'yicha yuzlarni aniqlash usullari - muammosiga boshqa tomondan yondashiladi, ular inson miyasida sodir bo'ladigan jarayonlarni aniq rasmiylashtirishga harakat qilmaydi, balki matematik statistika usullaridan foydalangan holda yuz tasvirining farqlanuvchi naqshlari va xususiyatlarini bilvosita ochib berishga harakat qiladi. Bunday usullarda yuzni aniqlashda ma'lum belgilarni to'rtburchakka olinib, to'rtburchaklarni sanab o'tish orqali amalga oshiriladi, natijada ko'rilayotgan tasvir tasvir qaysi sinfga mansubligini aniqlanadi [4]. Bunday katta hajmdagi usul ortiqcha va yuqori hisoblash murakkabligiga ega.

Viola - Jones ob'ektni aniqlash usuli - (Viola-Jones object detection). Usul 2001 yilda Pol Viola va Maykl Jones tomonidan taklif qilingan va birinchi usul edi. Usul real vaqtda tasvirni qayta ishlashda yuqori natijalarga erishgan. Usul ko'plab ilovalarga ega, jumladan, kompyuterni ko'rish kutubxonasi bir qismi sifatida Open CV (cvHaarDetectObjects funksiyasi). Ushbu usul 2-bo'limda batafsil muhokama qilinadi.

Elastik grafikni moslashtirish usuli (Elastic graph matching) - bu usul 2D modellashtirishga tegishli bo'lib, uning mohiyati yuzlarni tavsiflovchi grafiklar asosida taqqoslash natijasida aniqlash yotadi (yuz burchaklar va qirralarning individual joylashuvi bilan panjara sifatida tasvirlangan). Tanib olish tartibi quyidagicha - asosiy tanib olish belgisini tavsiflovchi mos yozuvlar grafigi tuziladi va antropometrik nuqtalarga nisbatan yuz tuzilishi ta'sirida deformatsiyalanadi: ko'zlar, quloqlar, burun chizig'i, lablar kengligi va boshqalar orasidagi masofalar muhim jihatlari e'tiborga olinadi [5]. Antropometrik nuqtalar qanchalik ko'p ishlatilsa, tanib olish tizimi shunchalik aniq bo'lib boraveradi, lekin bitta ob'ektni qayta ishlash vaqti ham sezilarli darajada oshib boradi.

Yashirin Markov modellari - bu usul shablonlar bazasi bilan ob'ektni statistik taqqoslashga asoslangan. Yashirin Markov modellari signallarning statistik xususiyatlaridan foydalanadi va ularning fazoviy xususiyatlarini ham hisobga oladi. Model elementlari: holatlarning dastlabki ehtimoli, kuzatilgan holatlar to'plami, yashirin holatlar to'plami, o'tish ehtimoli bo'lgan matritsasi yaratiladi. Matritsaning har bir elementi o'zining Markov modeliga ega. Shaxsni tanib olish jarayonida barcha holatlar to'plami yaratiladi [6]. Markov modellari

tekshirilishida va ob'ekt bo'yicha kuzatishlar ketma-ketligi mos keladigan model tomonidan yaratilishida eng yuqori kuzatilgan ehtimoli saralab topiladi

Asosiy komponentlar tahlili - Bu usulning maqsadi ma'lumotni sezilarli darajada yo'qotmaslik bo'lib va ko'plab yuzlarga tegishli «odatiy» tasvirlarning eng yaxshi tasvirlaydigan xususiyatlar maydonini hisobga olib qisqartirib borishdan iborat. Yuzni tanib olish muammosida u asosan yuzni past o'lchamli vektor sifatida ko'rsatish uchun ishlatiladi, keyin esa ma'lumotlar bazasidagi mos yozuvlar vektorlari bilan taqqoslanadi. O'quv namunasida bir marta olingan xos vektorlar to'plami, o'z vektorlarining salmoqli kombinatsiyasi bilan ifodalanishi mumkin bo'lgan yuz tasvirlari olinib, qolgan qismini kodlash uchun ishlatiladi, bu keyinchalik ma'lumotlar bazasida koefitsientlar vektori sifatida saqlanadi, bu esa bir vaqtning o'zida ma'lumotlar bazasida qidiruv kaliti bo'lib xizmat qiladi. Asosiy komponentalar usuli ilovalarida o'zining yaxshi tomoni isbotlagan. Biroq, yuzning tasvirida yuz ifodasi yoki yoritilishida sezilarli o'zgarishlar bo'lsa, usulning samaradorligi sezilarli darajada pasayadi [7].

Vektorli grafik usuli - bu o'xshash boshqariladigan o'rganish algoritmlari to'plami, vazifalari uchun ishlatiladi, regressiya tenglamasi tuzilib taxlil etiladi. Yordamchi vektorlar to'plamining mohiyati yuzlar tasvirlarida asosiy belgilar sinfini tanlanadi va tasvirlardan ajratib turuvchi xususiyat fazosining giperplanni topishdan iborat [8]. Ikkita sinfni ajratib turadigan, muhim bo'lgan giperplanlar orasidan har bir sinfdan masofa maksimal bo'lgan giperplanni tanlab olinadi.

Neyron tarmoq usullari- O'nga yaqin turli xil algoritmlarni o'z ichiga olgan juda keng ommalashgan usullar. Bu usulning asosiy xususiyati ularning ma'lumotlar bazasiga oldindan kiritilgan tayyor tasvirlar to'plamini o'rgatish tizimidir. Neyron tarmoqlarni o'qitish jarayonida, tarmoq avtomatik ravishda asosiy xususiyatlarni ajratib oladi va ular o'rtasidagi munosabatlarni o'rnatadi. Shundan so'ng, ilgari noma'lum bo'lgan ob'ektni tanib olishda o'qitilgan neyron tarmoq olingan tajribani qo'llaydi [9].

Tizim kadrda yuzni topib, boshning holatini, o'lchamini, miqdorni va uning asosiy xususiyatlarini aniqlagandan so'ng tizim ishlab ketadi. Normallashtirish: kodlangan, masshtablangan, ko'zlarning markazlarini bog'laydigan chiziqning gorizontol holatlari e'tiborga olinadi [10]. Shuningdek, yuzni oldindan qayta ishlashda shovqin darajasini pasaytirish uchun turli xil filtrlar qo'llaniladi (median, Gauss va boshqalar).

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JISMONIY TARBIYA DARSLARIDA VOLEYBOL SPORT TURINING AHAMIYATI

Annotatsiya. Jismoniy tarbiya har tomonlama rivojlangan o'quv dasturining ajralmas qismi bo'lib, jismoniy tarbiyaning asosiy tarkibiy qismlaridan biridir. Odatda jismoniy tarbiya darslarida o'qitiladigan turli xil sport turlari orasida voleybol talabalar o'rganishi va ishtirok etishi uchun eng muhim va foydali sport turlaridan biri sifatida ajralib turadi. Voleybol o'yini nafaqat ajoyib jismoniy mashqlarni ta'minlaydi, balki o'quvchilarga jamoaviy ish, muloqot va boshqalar kabi muhim hayotiy ko'nikmalarni o'rgatadi. Ushbu maqolada biz voleybol sport turiga va uning darslardagi ahamiyatiga e'tibor qaratamiz.

Kalit so'zlar: voleyboll sporti, xalqaro o'yinlar, jamoaviy o'yinlar, trening mashqlari, o'quv rejalari, malakali kadrlar.

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IMPORTANCE OF VOLLEYBALL SPORTS IN PHYSICAL EDUCATION LESSONS

Abstract. Physical education is an integral part of a well-rounded education curriculum, and one of the key components of physical education is sports. Among the various sports that are commonly taught in physical education classes, volleyball stands out as one of the most important and beneficial sports for students to learn and participate in. The game of volleyball not only provides a great physical workout, but also teaches students important life skills such as teamwork, communication, and sportsmanship. In this article we will give emphasis on the sport of volleyball and its importance in lessons.

Keywords: volleyball sports, international games, team games, training exercises, training plans, qualified personnel.

Kirish: Basketbol bilan birga voleybol sport turi paydo bo'lganiga yuz yildan oshdi. Voleybol-ajoyib, chiroyli va jozibali sport turi. Bu o'yin qoidalarining soddaligi va jozibadorligi voleybolni har qanday yoshdagi odamlar

o'ynashi mumkinligi bilan bog'liq. Voleybol barcha mushaklarni rivojlantiradi va tez fikrlashga o'rgatadi. Kuch, chaqqonlik, chidamlilik, yengil harakat fazilatlarini va bu fazilatlarni to'g'ri yo'naltirish qobiliyatini rivojlantiradi. Nafas olish yurak-qon tomir faoliyatini mustahkamlaydi, aqliy charchoqni ketkazadi. Voleybol tanaga ijobiy ta'sir ko'rsatadi, uni ortiqcha yukdan xalos qiladi. Bu bizni jamoa sifatida harakat qilishga, shaxsiy manfaatlarimizni jamiyat manfaatlaridan ustun qo'yishga, intizomli bo'lishga, sheriklarimizga yordam berishga o'rgatadi. Voleybolning inson tanasiga ijobiy ta'siri, uning ko'p qirraliligi va texnik soddaligi sog'liqni saqlash sohasida yaxshi natijalar berishini ko'rsatadi.

Voleybol-bu uyda ham, ochiq havoda ham o'ynash mumkin bo'lgan mashhur o'yin. Ushbu qiziqarli o'yinning oddiy inventarizatsiyasi va oddiy qoidalari ko'plab havaskor o'yinchilarning g'alaba qozonishini ta'minlaydi. Talaba uchun o'quv jarayonidan so'ng jismoniy va hissiy stressni yengillashirishi muhimdir. Bunga voleybol orqali sport zalda osongina erishish mumkin. Dastur talaba shaxsini rivojlantirish uchun sharoit yaratishga, o'qish va ijod uchun motivatsiyani rivojlantirishga, uning hissiy farovonligini ta'minlashga, antisotsial xatti-harakatlarning oldini olishga, bolalarning aqliy va jismoniy salomatligi jarayonining yaxlitligiga qaratilgan.

Voleybol mashqlari ishtirokchilarning asosiy jismoniy fazilatlarini rivojlantirishga yordam beradi ular chidamlilik, harakatlarni muvofiqlashtirish, tezlik, kuch, turli xil vosita qobiliyatlari, salomatlikni mustahkamlash, shuningdek talabaning shaxsiy fazilatlarini: muloqot qobiliyatlari, Iroda, do'stona tuyg'ulari.

Xususan, o'yinning raqobatbardoshligi, taktik individual va guruh harakatlarining mustaqilligi, vaziyatning doimiy o'zgarishi, muvaffaqiyat yoki muvaffaqiyatsizlik o'yinchilarni turli xil his-tuyg'ular va tajribalarni namoyon etishiga olib keladi. Yuqori hissiy ko'tarilish doimiy faollikni va o'yinga qiziqishni saqlaydi. Voleybolning bu xususiyatlari o'quvchilarni his-tuyg'ularini boshqarishga, xatti-harakatlarini nazorat qilishni yo'qotmaslikka, muvaffaqiyatga erishsa kurashni susaytirmaslikka va muvaffaqiyatsizlikka uchrasa o'zlarini yo'qotmaslikka o'rgatish uchun mo'ljallangan.

Yuqoridagilarga asoslanib, o'quvchilarda xulq-atvor munosabatlarini shakllantirish voleybol o'yini sifatida talabaning ichki dunyosini o'zining texnik va uslubiy vositalari bilan samarali boyitadi, sog'lig'ini yaxshilaydi va jismoniy rivojlanish sohasidagi ongini kengaytiradi. Zamonaviy oliy o'quv yurtlari sharoitida talabalar og'ir ish yuklari va uy vazifalari hajmi tufayli harakatsizlikni paydo qiladi. Muammoni hal qilish uchun uning harakatlanishi, tiklanishi va organizmning ishlashi ehtiyojlarini qondirishga qaratilgan "voleybol" qisman o'quv dasturi ishlab chiqilgan. O'yinning texnik va taktik texnikasini o'zlashtirishning ko'p qirraliligi voleybolni o'rgatish uchun asosdir. Dastlabki o'quv guruhlari jismoniy va texnik tayyorgarlikka qaratilgan. Bundan tashqari, o'qishning birinchi yilida ma'lum turdagi mashg'ulotlarning ulushi o'zgaradi: yil boshida jismoniy tarbiya uchun ko'proq soat beriladi va yilning ikkinchi yarmida

texnik tayyorgarlik uchun ko'proq soat bo'lishi kerak. Shuni ta'kidlash kerakki, jismoniy tarbiya tayyorgarlik va yetakchi texnik tayyorgarlik darslarida olib boriladi.

Dastlabki tayyorgarlik guruhlarini o'rganishning ikkinchi yilida talabalarning texnik, taktik arsenalini va jismoniy tayyorgarligini o'rganishning mantiqiy davomi mavjud. Asosiy e'tibor hali ham jismoniy va texnik tayyorgarlikka qaratilgan, ammo jismoniy tayyorgarlik soatlari kamayib, taktik tayyorgarlik soatlari ko'paymoqda. O'quv guruhlarida ishlashning asosiy vazifasi yosh voleybolchilarni qo'shimcha texnik va taktik tayyorgarlik bilan tanishtirish, shuningdek, o'yinchilarning funktsiyalari bo'yicha o'yinni ixtisoslashtirishdir.

Vazifalarni aniqlash, o'quv qo'llanmalari va usullarini tanlash barcha talabalar uchun bir xil bo'lib, individual yondashuv talablariga va har bir talabaning xususiyatlarini chuqur o'rganishga bog'liq. Kurs majburiy ravishda umumiy jismoniy tarbiya va maxsus jismoniy tayyorgarlikni o'z ichiga oladi. Yosh sportchilarni texnik, taktik va ma'naviy jihatdan tayyorlash bo'yicha ishlar olib borilmoqda. Umumiy rivojlanish va tayyorgarlik mashqlari birinchi navbatda organizmning funktsional xususiyatlarini rivojlantirishga qaratilgan bo'ladi.

Aqliy Foydalari:

Voleybol tezkor qaror qabul qilish, strategik fikrlash va muammolarni hal qilish ko'nikmalarini talab qiladi. Sportchilar to'pning trayektoriyasini tezda baholashlari, raqiblarning harakatlarini taxmin qilishlari va samarali javoblarni shakllantirishlari kerak. Bu bilim ish kontsentratsiyasini oshiradi.

Bundan tashqari, voleybol fazoviy ongini va qo'l-ko'zni muvofiqlashtirishni rivojlantiradi. O'yinning tezkor tabiati boshqa ilmiy va hayotiy ishlarda muvaffaqiyat qozonish uchun juda muhim bo'lgan aniq vaqt va fazoviy fikrlashni talab qiladi.

Ijtimoiy Nafaqalar:

Voleybol-bu hamkorlik, muloqot va ishonchni rivojlantiradigan jamoaviy sport turidir. O'yinchilar umumiy maqsadga erishish uchun birgalikda ishlashlari, jamoaviy ish, yetakchilik va sport mahoratining muhimligini o'rganishlari kerak. O'yin, shuningdek, ijtimoiy o'zaro ta'sir va shaxslararo munosabatlarni rivojlantirish uchun imkoniyatlar yaratadi.

Voleybolning raqobatbardosh tabiati muvaffaqiyat tuyg'usini kuchaytirishi mumkin. Sportda muvaffaqiyatga erishgan talabalar ijobiy imidjni rivojlantirishi va o'z qobiliyatlariga bo'lgan ishonchni oshirishi mumkin.

Voleybolni jismoniy tarbiya darslariga kiritish o'quvchilarning jismoniy, kognitiv va ijtimoiy rivojlanishi uchun juda muhimdir. Sport keng ko'lamli imtiyozlarni taklif etadi, jumladan, yurak-qon tomir salomatligini yaxshilash, muvofiqlashtirishni yaxshilash, kognitiv funktsiyani oshirish, ijtimoiy ko'nikmalarni rivojlantirish va qimmatli ta'lim tajribalari. Voleybolni jismoniy tarbiya o'quv dasturlarining ajralmas qismi sifatida qabul qilish orqali o'qituvchilar o'quvchilarga sog'lom va to'laqonli hayot uchun zarur bo'lgan ko'nikma va bilimlarni berishlari mumkin.

Sog'lom odatlarni rag'batlantiradi: voleybol jismoniy faoliyatni qadrlashga yordam beradi va voyaga yetishi mumkin bo'lgan sog'lom odatlarni targ'ib qiladi.

Kelajakdagi Sport turlari uchun asos yaratadi: voleybol ko'nikmalari basketbol, tennis va badminton kabi boshqa sport turlari uchun asos bo'lib xizmat qilishi mumkin.

Xulosa: Xulosa qilib aytganda, voleybol jismoniy tarbiya darslarida juda muhim sport turi hisoblanadi, chunki u o'quvchilarga ajoyib jismoniy mashqlar bilan ta'minlaydi, jamoaviy ish va muloqot kabi muhim hayotiy ko'nikmalarni o'rgatadi va sport mahorati va chidamlilik kabi qadriyatlarni singdiradi. Voleybolni jismoniy tarbiya darslariga qo'shib, talabalar jismoniy tayyorgarligini, ijtimoiy ko'nikmalarini va xarakterini rivojlantira oladilar, shu bilan birga qiziqarli va musobaqa hayajonidan zavqlanadilar. O'qituvchilar sifatida biz voleybolning jismoniy tarbiyadagi ahamiyatini anglashimiz va maktablarda ushbu qimmatli sport turini o'qitishni targ'ib qilish va qo'llab-quvvatlashda davom etishimiz juda muhimdir.

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THE PROBLEM OF THE VOICE AS GRAMMATICAL CATEGORY IN CONTEMPORARY ENGLISH

Abstract. This paper examines the problem of the voice as a grammatical category in contemporary English. The research was conducted through theoretical and bibliographic analysis, generalization of literature, comparison and synthesis.

Keywords: voice, grammatical category, the Active Voice, the Passive Voice, the Middle Voice.

Introduction. The question of determining the category of Voice is one of the most controversial in contemporary linguistics. It is to be noted that there is nothing more supremely distinguishing in modern English, especially in its later periods, than the fact of developing the use of passive formations. Linguists point out that the category of Voice has a peculiar place among other verbal categories. Unlike tense, aspect and mood, which are also characteristics of the verb, the Voice regulates the subject-object position in the sentence.

The object of the research is the Voice as grammatical category in contemporary English. The subject of the research is the characteristics of the Voice and the problems associated with the Voice as grammatical category. The following methods were used in the research: theoretical and bibliographic analysis and generalization of literature, comparison, synthesis. The structure of the research: the work consists of introduction, three sections, conclusion and list of references. The introduction is about the relevance of the research, setting goals and objectives, defining the subject and object. The first paragraph is about existence of possible definitions of the Voice as grammatical category. The second section is about the possible types of the Voice allocated in English. The third section is about the features, issues and difficulties of use of the Voice in contemporary English. The results presented in this research can be used in teaching English as a foreign language.

The Definition of the Voice as Grammatical Category. Interest in the category of Voice has noticeably revived since the beginning of the XIX century due to the presence of a number of complex issues. There are several approaches to the definition of the category of Voice. The difference appears in the way of how grammarians and linguists consider the nature and direction of relations between the action, its agent and the object. According to one of the approaches this category expresses the relation between the subject and the action or, in other words, the category of Voice expresses in the verbal form the relation of the action to its subject.

In English Grammar by M. Blokh the verbal category of voice shows the direction of the process as regards the participants of the situation, the relationship between the action expressed by the verb and the person or non-person denoted by the subject of the sentence [2, p. 176]. Being a grammatical category, the category of Voice presupposes a grammatical opposition in which different verb forms are associated with changes in the syntactic roles of units related to them. Of importance here is the linguists' understanding that voice shows the direction of the process, though this understanding does not find its verbal expression in the above-mentioned definition. This idea sounds clear in the definition of the category of Voice given in: the category of voice expresses the direction of the action towards its agent [1, p.145]. From the point of view of the form, the Voice is a morphological category, which is expressed by changing the forms of the verb and is formed on the basis of the relations of its main members – subject – predicate – object. From the point of view of content, this is a syntactic category, since it indicates certain relations between the members of the sentence – subject (or agent) – predicate – object. However, the Voice expresses not just syntactic relations between the members of the sentence, but the relation of the subject and the object with their semantic roles in a certain situation. The category of Voice can be represented lexically when the concept of Voice influences the semantic meaning of words (*to perform – to undergo*).

The Types of Voice Allocated in Contemporary English. Speaking about the problem of the number of Voices existing in the English language, linguists cannot come to a consensus. The vast majority of the authors of English Scientific Grammars seem to recognize only two Voices in English: the Active and the Passive. Nevertheless, not all the grammarians share this opinion. Thus the total number of Voices in different systems varies from 0 to 4, 5, or even 6. If A.I.Smirnitsky distinguishes only two Voices in English (the Active Voice and the Passive Voice), N.A.Kobrina distinguishes six Voices in contemporary English: the Active Voice, the Passive Voice, the Reflective Voice, the Reciprocal Voice, the Medical or Middle Voice and the Causative Voice.

In English, each transitive verb can take the form of The Active Voice and The Passive Voice. The Active Voice indicates that the action is directed from the subject or issues from the subject thus the subject denotes the agent of the action.

For example, *I go to school every day. My brother gave me a book.*

Active and Passive Voices are a reflection of the same described situation and are usually considered together. For example, *I heard the song. – The song was heard by me.* If the subject is the object of the action (the subject or the person to whom the action applies), the transitive verb is in the form of a passive voice.

In addition to the analytical forms of the passive voice with the auxiliary verb to be, the meaning of passivity in modern English can be conveyed by combinations of other copula verbs (*to get, to remain, to look, to stand, etc.*)

The Middle Voice occurs when the subject of a sentence is a noun or a noun phrase that is affected, but there are no attributes of the passive, such as the

auxiliary verb "to be" and a side phrase. As it was previously written, transitive verbs can move from the Active to the Passive Voice. There is a special kind of ergative verbs which conventionally take place in the Middle Voice.

The Reciprocal voice is usually expressed by the words «each other, one another» to show mutuality of action. This grammatical structure consists of verb and reciprocal pronoun. For example, *They met each other at the station.* We use The Causative Voice when we know that the subject did not do the action on their own. Actually, the subjects in causative sentences lead someone else to do the action. For example, *He made me mow the lawn.*

The problems are raised in connection with the second constituent, i.e. Participle II. The fact is that Participle II has a passive meaning not only when used with be, but also when used alone. Thus, Participle I seems to have 2 passive opposites: *writing, being written, written*. Participle II has also a perfective meaning. There is also the distinction between passive of action and passive of state. Analyzing the constructions under consideration M.Y. Blokh also points to the role of context that can have the “tantalizing” and “processual zing” effect.

For example, *I was mistaken. I was often mistaken for my friend Otto.*

Context also plays an important role in such cases. The predicate (the Voice form) has a verbal characteristic or it describes a certain state of the subject. It can also express an action or a qualitative characteristic of the object.

Conclusion. In general, as we can see, meanings of the Voice cannot be considered only within the framework of grammar, since similar relations of an action with its subject and object can be expressed using word-forming means and semantic definitions. However, the erroneous opinion is that the Voice forms in the English language, having passed a long and difficult way of formation, have finally stopped in their development. And at the present stage, in any living language, many linguistic phenomena are being controversial, which implies the search for new ways of expressing already seemingly formed concepts and categories. This is especially true for the English language as an international language with its significant dynamism. At the same time, the verb as the most «mobile» part of speech undergoes probably the most extensive changes: not only the content of verbal categories changes, but also the ways of its formal expression. In this regard, the category of the Voice in English is no exception — its formation is still in the process, and many issues and problems related to this, respectively, require detailed scientific consideration.

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TEACHING A FOREIGN LANGUAGE IN INTERNET RESOURCES IN TECHNICAL EDUCATIONAL INSTITUTIONS

Annotation. The article discusses the problems of teaching a foreign language in technical educational institutions using Internet resources.

Keywords. Technical universities, foreign languages, Internet resources.

In today's fast-growing technological society, there is a growing need for highly qualified and professionally qualified specialists. Uzbekistan has clearly defined the criteria for entering the global educational space and is modernizing the education system in accordance with international requirements. The driving force of the innovative processes taking place in technical higher education institutions is the desire to adapt to the domestic labor market and enter the world education system as a full member. We need to constantly adapt educational programs to the requirements of the labor market. The quality criterion determines the readiness for practical activities and the real competitiveness of the graduates.

Cyberphases for educational purposes is an entirely new field of general didactics and special methodology, as the changes that take place affect all aspects of the learning process, from the choice of technical and work methods to the changing requirements of students' academic degrees.

An important basis for the mass computerization of education is undoubtedly explained by the fact that the modern computer as a whole is an effective means of optimizing mental working conditions in all its manifestations.

One of the new requirements for teaching foreign languages using Internet resources is to create interactions in the classroom, which is commonly referred to as interactivity in methodology. This principle is not new, but so far there is no single definition of this approach.

Interactivity is “combining, coordinating, and complementing communicative goal and outcome efforts through speech”. From this we can conclude that a virtual interactive approach is one of the tools to achieve a communicative goal in the lesson. This is distinguished from the principle of communication by the presence of real cooperation, the lack of focus, where the main focus is on developing communication skills and working in a team, although this is not a mandatory goal for a communicative task.

The main goal of learning a foreign language is the formation of communicative competence, all other goals (learning, learning, development) are realized in the process of achieving this main goal [2].

Teaching a foreign language means teaching communication, data transmission and comprehension. There are three ways to take foreign language

teaching to a new level on the Internet: communication, information, and publishing. Communication is done via email, large layers of information are posted on the World Wide Web, publishing can be done by creating your own page on the Internet.

Communicating in a real language environment provided by the Internet, students face real life situations. Students involved in solving many important, real, interesting, and achievable problems learn to respond to them spontaneously and adequately, which encourages the creation of originals rather than manipulating the template of language formulas.

The internet is a great tool for getting information about the latest events in the world. With the help of the Internet, you can turn your audience into a news agency, your students into first-rate reporters. This type of activity is suitable for large courses as it involves great reading and interpreting skills, fluent speech.

You can invite students to work in two or three, offering scholarly articles covering all areas of life: sports, weather, culture. The advantage of this work is that in addition to differentiating the tasks, the whole audience is fully involved: strong students can learn more difficult articles, weak students can be reported on weather conditions or things in the field of culture.

In addition to working on reading and speaking skills, you can replenish your vocabulary. To do this, students should be invited to compile dictionary articles based on the information they have read. It is possible to acquire new grammar skills, examples of which are given in the articles. Here you should also provide links to sources. To develop intercultural competence, there are advantages to researching articles on a particular topic by only one news agency over a long period of time: by studying the problem in depth, students can not only determine a particular country's position on the problem being studied, but also learn the basics of such a view., will be able to predict the course of events. After the work is done, a discussion or teleconference is necessary, in which the work of each student or group becomes a separate branch of the common problem, i.e. students gain multifaceted things by sharing their results and putting them together.

In order to teach communication in a foreign language, you need to create real, real-life situations that encourage learning of the material and develop appropriate behavior, and this can be done with the help of new technologies, especially the Internet.

It is well known that what a person learns, he strives to use in his future activities. The use of students' knowledge, skills, and abilities is based on transmission, and transmission primarily depends on how appropriate the learning environment is for the conditions in which that knowledge, skills, and abilities need to be used. Therefore, it is necessary to prepare the student to participate in the process of learning a foreign language in the context of communication with foreign languages. This defines the essence of communicative learning, which consists in the fact that the learning process is a model of the communication process.

In addition to communicative needs, students need to learn how to use the Internet to be more responsible for themselves. They need to develop their ability to cope with a situation where their language resources are insufficient; have good exercise skills; the ability to evaluate one's own speech and development, as well as the ability to identify and solve learning problems.

Developing students' independence through the global network is a gradual process that needs to be constantly encouraged. Perhaps the most important task facing a language teacher is to find the best ways to lead students to gradually growing independence.

It takes time to communicate online. A supportive socio-psychological environment in which the student participates is needed. He is confident that he will be respected as a person with his own views, interests, strengths and weaknesses, and preferred style of learning. This atmosphere is characterized by a spirit of mutual assistance, learning a foreign language via the Internet is a socially defined experience.

Teaching in real language on the Internet helps to shape the student's speaking ability, as well as provides a sincere interest in teaching vocabulary and grammar and therefore efficiency. In addition, the Internet only develops skills that are important for a foreign language. It is primarily concerned with mental operations: analysis, synthesis, abstraction, identification, comparison, mukhtapaziya, verbal and semantic prediction, and so on.

With the power of Internet technology, it is possible to go beyond foreign powers, even in terms of "language". The Internet develops students' social and psychological qualities: their self-confidence and ability to work in a team; acting as an interactive approach tool, creating a conducive learning environment.

Today, there are many sites dedicated to learning English. Students majoring in "Surface Transport Systems" of technical universities use the website city.net in their classes, which allows you to travel to different countries, where you can find all the information about the selected country - from photos of monuments, natural resources and land. You can find detailed information about the transport system in the language you are studying. City.net is a great navigator. Once in any country, students can get acquainted with its features using hypertext or links (links). In the process of training students majoring in "Ground Transportation Systems" in technical higher education institutions, they show great interest in information and computer and Internet technologies, in which case the Internet is a good tool for developing their technical and creative abilities. development of independence; developing responsibility and perseverance, etc. The Internet allows students not only to get the information they need, but also to publish their work, which is a great incentive to learn. Therefore, the aim of our work is to increase the information culture and literacy of students; expansion of the didactic environment; is to develop students' creative abilities.

In short, the use of Internet technologies is important and relevant in the formation of information and communication competence of future electricians,

modernization of the educational process and updating the content of foreign language courses.

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CRITERIA FOR SELECTING SALES CHANNELS IN SMALL BUSINESS AND PRIVATE ENTREPRENEURSHIP

Abstract. In this article, the role of small business and private entrepreneurship in the economy of Uzbekistan, the analysis of the main indicators of small business and private entrepreneurship in economic sectors, the role of sales channels in small business and private entrepreneurship, selected by small business entities written about how sales channels influence marketing decisions.

Key words: sales channel, target customers, sales channel organizational structure, channel length, market coverage, direct sales channel, indirect sales channel, transaction costs.

INTRODUCTION. One of the main goals of establishing a socially oriented market economy in Uzbekistan is the priority development of small business and private entrepreneurship. To realize this goal, economic reforms are being implemented step by step. In the period of 2017-2022, large-scale institutional foundations were created to increase the role of small business. Legal and regulatory documents guaranteeing the organization of small business and private entrepreneurship activities, free operation, market infrastructure supporting small business have been formed. As a result, to date, small business and private business entities are active in all aspects of the economy of Uzbekistan, in the production of machinery, consumer goods, agricultural and food products, services and tourism. are operating in the fields.

MAIN PART. Small business and private entrepreneurship are distinguished by the fact that they provide the main indicators necessary for the economic development of the country in a short period of time. That is, small business is the most important sector that fills the country's domestic market with goods and services that are in short supply and determines the structural basis of the economy. It also serves as the most important factor and resource for the effective use of labor resources, increasing employment and income, and forming the class of owners. The importance of small business in economic development in general:

– ensures an increase in the content and quantity of the country's gross national product;

- creates a basis for effective use of labor resources;
- creates a basis for increasing the current income and savings of the population and raising the level of well-being;
- elimination of sectoral and regional monopolies;
- ensures that the state budget funds are at the same rate;
- actively participates in foreign economic activities;
- rational use of resources;
- introduction of new equipment and technology into production and increases labor productivity.

That is why small business is the foundation of national economy in all countries of the world. Today, even in developed foreign countries, the number of small enterprises is 70-80 percent of the total number of enterprises in them. For example, 71.7% of the population of Japan is engaged in small business and private entrepreneurship.

Since small business increases the economic potential of the country, and is a measure of the successful development and prosperity of the state, special attention is paid to the promotion of small business development in Uzbekistan. The development of small business and private entrepreneurship in our republic is the main priority today. Economic reasons for the focus on small business:

- filling the domestic market with local goods and services;
- increase the purchasing power of the population;
- increase the country's export potential;
- modernization of production;
- development of service provision;
- supply large enterprises with components and parts;
- creating a competitive environment;
- such as ensuring the circulation of capital within the country.

Small business not only increases the economic well-being of the country, but also plays an important role in solving social problems. Therefore, there are special social reasons for the development of small business in our Republic:

- ensuring the employment of the population by creating new jobs;
- formation of a class of owners serving as the backbone of the state;
- development of infrastructure in rural areas;
- to improve the material condition of the rural population and increase the culture of life;
- achieving scientific and technical progress through the use of advanced, compact technologies;
- strengthening the economic base of local authorities;
- sponsoring recreation, health restoration, disabled people and orphanages.

Another goal of small business development is to improve the spiritual, educational and cultural affairs of the country. Because small business contributes

to the development of spiritual, educational and cultural spheres. Moral, educational and cultural reasons for the development of small business in our republic:

- to support the revival of traditional folk arts and crafts;
- establishment of sports and health facilities;
- opening of private educational institutions;
- establishment of beautification, beautification and environmental education;
- organization of children, teenagers and youth camps.

In the next 3-4 years, as a result of deep structural changes and diversification in the country's economy, there was a radical change in the development of small business and private entrepreneurship. In particular, the share of small business in the country's gross domestic product has exceeded 50 percent.

Table 1

The volume of key indicators of small business and private entrepreneurship in sectors of the economy

Indicators	2018	2019	2020	2021	2022
Industry (billion soums)	87962,0	83344,2	103020,8	124907,9	143892,7
Construction (billion soums)	37451,7	53960,9	63866,6	77907,1	93554,5
Employment (thousand people)	10128,8	10318,9	9865,7	10080,6	10131,1
Export (million US dollars)	3810,8	4714,8	3100,9	3335,2	5712,9
Import (million US dollars)	10916,2	14972,2	10943,3	11533,5	15213,6
Trade (billion soums)	114896,4	138920,7	164106,1	186759,3	229166,7
Agriculture, forestry and fisheries (billion soums)	191759,2	219466,9	253238,2	304452,1	344134,5
Services (billion soums)	84433,4	103106,6	114052,7	147061,6	181245,0
Freight transportation (million tonns)	611,7	641,0	638,9	550,1	608,2
Freight turnover (million ton-km)	11657,7	12152,3	12304,6	13803,2	14843,8
Passenger transportation (million people)	5242,6	5345,0	4904,8	5485,2	5628,4
Passenger turnover (million people km)	115335,2	117412,7	107766,7	120964,7	124433,9

As can be seen from the table, agriculture, trade, services and imports occupy the main place. Also, the size of small business is increasing in the industry. The main issue is organizing the sale of products produced by small businesses and private entrepreneurs.

The main purpose of the sales system is to deliver goods to the right place and at the right time. One of the main tasks to be solved here is the formation of sales channels and the selection of the most suitable one. The sales channels chosen by small businesses and private entrepreneurs should bring them certain benefits, namely:

- saving financial resources spent on product distribution;
- attracting the saved funds to the main production;
- sell the product in a more efficient way;
- promoting the product more widely and ensuring its delivery to the target markets with high efficiency;
- reducing the volume of work on product distribution, etc.

The selected sales channels have a direct impact on the speed, time, efficiency and preservation of the product from small business and private business entities to the final consumer. Organizations and individuals forming sales channels perform a number of functions:

- conducting research to collect information necessary for planning the distribution of products;
- promoting sales by creating and distributing information about goods;
- establishing relations with potential buyers;
- adaptation of goods to customer requirements;
- conducting negotiations with potential consumers of the product;
- organization of goods movement system (goods stock, storage, transportation);
- financing activities on sales channels;
- assuming the risk associated with the existence of the channel.

Depending on the organizational structure of the selected sales channel, the length and level of the channel, performance of all or part of the above functions is related to the financial condition of small business and private business entities. Because small businesses and private entrepreneurs cannot cover all the expenses related to sales. The question of who should perform the various functions of the sales channel is a question of efficiency. The channel will be reshaped when there is an opportunity to perform functions more efficiently.

The choice of one or another method of distribution of goods depends on the market, specific conditions of sale, and the strategies of small businesses and private entrepreneurs. When forming a network of sales channels, small businesses and private entrepreneurs should take into account the following:

- characteristics of final consumers – their number, competition, average one-time purchase amount, income level, regularity of behavior in purchasing goods, scope of services, credit terms, etc.;

opportunities of small business and private business entities – their financial situation, competitiveness, main directions of market strategy, production volumes. It is better for small firms with a small product range and limited financial resources to work through independent sales intermediaries, and large firms are recommended to implement part of the distribution organizations through their own distribution network;

product description – appearance, average price, seasonality of demand, shelf life, etc.;

the level of competition, the distribution policy of competitors – their number, concentration, distribution strategy and tactics, their interactions in the distribution system;

description and characteristics of the market – current and future purchasing power, customs and sales practices, distribution density of buyers, average income per capita, etc.;

relative cost of distribution systems.

Selling the manufactured product through its own distribution network or using the services of intermediaries is a problem that is solved taking into account many factors related to the goods, as well as to consumers and intermediaries.

Sales channels are divided into direct and indirect forms according to the form of organization. It is advisable to carry out direct distribution of goods in the following cases:

when the amount of goods sold is not enough to cover the minimum costs of direct distribution;

when there are not many consumers and they are located in a relatively small area;

when the goods require highly specialized service;

when the size of the batch is sufficient for shipment in a wagon or container;

when small business entities have a sufficient network of their main warehouses in the market where they trade;

market vertical, that is, even if the product is available in several sectors, it is used by few consumers;

the product is narrowly specialized or developed depending on the characteristics of the buyer;

in conditions where the price of goods changes frequently.

Small businesses and private entrepreneurs using the direct sales method will have the following opportunities:

direct study of one's market;

maintain complete control over the conduct of trade;

saving money on paying fees for the services of intermediaries;

establishing close cooperation with the consumer.

The choice of sales channels is a responsible task, in solving this it is easier to ensure close contact with intermediaries when the number of intermediaries is small, thereby significantly influencing their work, having enough sales staff. it is

necessary to take into account the level of training and so on. At the same time, paying attention to the excessive number of intermediaries working in parallel in a particular market leads to the strong dependence of small business entities on them. Refusal of one of them to fulfill the concluded contract can cause serious commercial damage to a small business entity.

A number of factors affecting the decision to choose a sales channel can be distinguished:

1. Product feature;
2. Advantage of the product;
3. Convenience of transportation of goods;
4. Geographical location of the manufacturer;
5. Presence of competitors;
6. Level of competition;
7. Range coverage;
8. Storage conditions;
9. Storage periods;
10. Distance and proximity of consumers, etc.

It can be said that the higher the mass consumption of the product, the wider the assortment, the faster the distribution network. If consumers are highly concentrated in one area, and if there is a direct network of distribution, it is appropriate to sell using intermediaries.

When choosing one or another method of sales channels, it is necessary to take into account, first of all, the performance of all the functions of the commercialized process, secondly, better commercial work than competitors, and thirdly, much lower costs compared to other channels. At the same time, choosing a specific channel of product distribution is determined by a number of factors and the characteristics of the product itself, the nature of the purchase, the state of the market, etc. Therefore, a certain set of criteria is used when choosing sales channels. In the marketing system, there are various criteria for choosing sales channels, with the help of which it will be possible to correctly evaluate the behavior of the intermediary and choose him as a trading partner.

Solovev B.A. offers the following criteria for choosing sales channels:

1) financial reliability: sources of funding, ability to pay, having experience in running a business.

2) marketing policy: ability to make strategic decisions, competitive advantages, product production, pricing, communication policy.

3) places of sale of goods: to have the necessary material and technical base, sales dynamics, available stock of goods, market coverage.

4) to gain popularity and reputation: to have a brand image and trademark, to have skilled workers, to be members of various associations and societies.

In the economic literature, the nature, characteristics, and organization of small businesses, as well as their classification, are widely covered. The classification of the cited small businesses was carried out according to such

criteria as the number of employees, the field of activity, the balance sheet value of the main capital. However, the classification of small business entities according to logistic criteria has not found its expression in the economic literature. Taking into account the urgency of this problem, we decided to implement this classification as one of the directions of our scientific research. We have developed criteria for selecting sales channels for small businesses and private entrepreneurs.

Table 1

Criteria for choosing sales channels in small business and private entrepreneurship¹¹

<i>Criteria to be considered</i>	<i>Direct channel</i>	<i>Indirect channel</i>		<i>Features and conditions of selection</i>
		<i>available channel</i>	<i>independent channel</i>	
Description of target consumers				
Large scale of the segment	*	**	***	If the number of target consumers is large, the direct channel cannot make the required volume of sales. In this situation, an indirect channel is used. Using an intermediary controlled by a small business entity can gain the trust of the segment and fully capture the profits.
Small segment size	***	**	*	If the number of target consumers is not large enough, it is not appropriate for a small business entity to create an independent channel. Selling goods through a direct channel increases profits.
Territorial high concentration (concentration) of buyers	**	*	***	If the target consumers are concentrated in one place according to their location, it is effective for small business entities to form a vertical marketing system, that is, to use the service of a subordinate intermediary under their control.
Territorial dispersion of buyers	*	***	**	If the customers are scattered according to their location, it will not be effective for a small business entity to create its own independent channel. Because creating sales channels at several points maximizes costs. In this situation, it is recommended to use the services of independent researchers.
Regular shopping	**	*	***	If regular purchases are made by potential consumers, it is

¹¹ Mualliflar ishlanmasi.

				appropriate for small business entities to take advantage of this opportunity and form their own independent channel.
Irregular shopping	*	***	**	Irregular procurement process is an obstacle for small business to create an independent channel. It is necessary to use the services of independent mediators.
Description of manufactured goods				
Perishable goods	***	*	**	In case of perishable goods, it should be delivered quickly without storage. In this case, the direct channel works effectively.
Long shelf life	*	***	**	It is advisable to use the services of independent intermediaries due to the increased costs of small business entities related to the storage of long-term goods.
It was not technically difficult	**	*	***	In the case of a product that is not technically difficult, the lack of demand in the process of service provides an opportunity for small business entities to create an independent channel.
New product	***	*	**	It is desirable to strictly control the release of new goods to the market. In this case, it is possible to control the new product in the market directly through the channel.
To have a high value	***	*	**	The high value of the goods requires a quick recovery of the costs incurred for it. In this case, the direct channel allows for quick reimbursement of expenses.
Have a wide range	*	**	***	The wide range of manufactured products requires the creation of several independent channels.
Description of small business and private business entities				
Limited financial resources	**	***	*	If small business and private business entities do not have sufficient financial resources, they cannot find funds to create an independent channel. In this situation, it is obvious that small businesses and private entrepreneurs are forced to use independent intermediaries.

Adequacy of financial resources	**	*	***	If the financial resources are sufficient, it will be possible to create an independent channel, to control the sale of their goods by small business entities in the future, and to have full ownership of the profits.
Broad market coverage strategy	*	***	**	If small business and private business entities are operating with the goal of covering the market, they can achieve the goal by using the services of independent intermediaries.
High reputation of small business and private entrepreneur	**	*	***	Small businesses and sole proprietors can reach a high profile in the market through their own channel.
Availability of distribution infrastructures				
Ownership of a warehouse	*	**	***	Small business entities with a warehouse can form a stock of goods of the required volume.
Ownership of own transport	***	**	*	Most of the small business entities do not have their own transport for transporting goods.

***** - the recommended channel, that is, the most appropriate channel.**
**** - probable channel.**

CONCLUSION. It is inappropriate to describe the company's activity of selling goods as a difficult task. But this work should be done effectively. Therefore, now it is necessary to fight for each customer, by improving the activity of sales channels, the company can increase its position in the market.

Thus, the task of choosing sales channels is a very difficult decision for the management of the enterprise, because the activity of these selected sales channels directly affects the decisions made in the field of marketing.

When deciding on sales channels, its organizational form depends on the following aspects:

access to specific target markets, that is, it is required to establish various sales channels;

increase the opportunity to offer more goods to the market and expand the volume of sales;

the desire to establish cooperation with all layers involved in the sales process as much as possible;

to be able to transfer one's demand, that is, to become a captain of sales channels.

The objective need to improve sales channels in small business and private entrepreneurship is expressed in the following:

an increase in transaction costs (transportation, storage, loading, unloading, stockpiling) of business entities, ultimately, the volume of sales revenue cannot cover the costs incurred and provide the profit;

the desire of entrepreneurs to master new markets, to form a new market segment, to cover the market and to strengthen the position of their goods and enterprises;

in-depth study of the demand of consumers, customers, determining when and how much the order will be accepted and maintaining the necessary stock of goods;

maintaining the right of ownership of the goods, controlling and managing the competition of the goods in the market.

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PROBLEMS AND SOLUTIONS OF FORMING SALES CHANNELS IN THE ACTIVITY OF SMALL BUSINESS SUBJECTS

Abstract. At the current stage of the development of small business and private entrepreneurship in Uzbekistan, one of the important problems facing this sector is the formation of sales channels, which are important elements of marketing activities. Based on this, this article describes the problems and solutions of the formation of sales channels in the activities of small business entities.

Key words: small business, private entrepreneurship, competitive environment, market infrastructure, sales channel, marketing, traditional sales channel, vertical sales channel, horizontal sales channel, multi-level sales channel.

INTRODUCTION. In Uzbekistan, socio-economic stability is being ensured year by year, the welfare of the population, the level of consumption, employment and income are increasing, the domestic consumer market is filled with local goods, and the competitiveness of our national goods is ensured in foreign markets. It should be noted that business activity has a special place. As a result of gradual reforms over the years, today small business is becoming the backbone of Uzbekistan's economy.

On the initiative of the President of the Republic of Uzbekistan, Sh. Mirziyoyev, an open dialogue with small business entities and entrepreneurs is organized every year in August. Based on the problems presented by small business entities, a number of programs and strategies for further development of the industry are being developed. In particular, PQ-292 of the President of the Republic of Uzbekistan dated September 4, 2023 "On measures to implement the tasks set in the open dialogue of the President of the Republic of Uzbekistan with entrepreneurs in 2023" and dated September 14, 2023 Resolution No. 306 on "Measures of financial and institutional support for small business development" was adopted in September. Resolution No. 37 of the Cabinet of Ministers of the Republic of Uzbekistan dated January 20, 2024 "On measures to implement the comprehensive program of continuous support of small business" was adopted.

The state support of small business mainly consists of financial resources, land purchase, technology, and export incentives. However, the share of small

business in the production of consumer goods is also increasing. As a result, small business entities face a number of problems in selling their products. Small business entities cannot organize independent sales channels by themselves. And it cannot provide the existing sales channels with a regular and stable supply of goods. Therefore, one of the main issues is organizing the sale of products of small business entities.

MAIN PART. It is known that small business and private entrepreneurship has a strong place in the experience of the countries of the world with its high results and successes, and in most countries its share in the gross domestic product is 60-70 percent. The development of small business is aimed at creating favorable conditions for economic vitality and an effective competitive environment, stimulating demand by expanding the consumer sector, filling the consumer market with goods and services, protecting the environment, and expanding budget revenues. Accordingly, many developed countries strive to fully support small business activities.

As a result of the favorable business environment created in Uzbekistan, today more than 50 percent of the country's gross domestic product is accounted for by small business and entrepreneurship (Table 1).

Table 1

Share of small business and private entrepreneurship¹²

Indicators	2018	2019	2020	2021	2022
GDP	62,4	56,0	54,8	54,1	51,8
Industry	37,4	25,8	27,9	27,4	26,0
Construction	73,2	75,8	72,5	72,5	71,5
Employment	76,3	76,2	74,5	74,5	73,9
Export	27,2	27,0	20,5	20,0	29,6
Import	56,2	61,6	51,7	45,3	49,4

According to the data of 2022, 73.9 percent of the main employment of the population of Uzbekistan corresponds to small business and private entrepreneurship. Also, the share of this sector is increasing in construction and import.

Achieving these results is achieved due to state support of small business and private entrepreneurship, provision of economic freedom, creation of legal bases for activity, strengthening of financial and economic support. Market infrastructure is important for the effective operation of small businesses and private enterprises. That's why economic reforms today paid a lot of attention to the formation of market infrastructure. As a result, financial organizations (commercial banks, insurance, credit unions, pawnshops, etc.), intermediary and trade organizations (brokerage offices, counteragents, retail, wholesale trade enterprises, etc.), logistics service and transport organizations, information and

¹² <https://www.stat.uz/uz/rasmiy-statistika/small-business-and-entrepreneurship-2>

consulting firms. contributes to the efficient operation of small businesses and private enterprises.

Small business entities are considered the main source in the production of consumer goods, as in all sectors and industries. Small business entities independently sell their manufactured goods to domestic and foreign markets. In this case, small business entities face a number of problems in studying the domestic and foreign market conditions, the competitive environment, and the needs of consumers.

It can be seen that at the current stage of the economic reforms implemented in Uzbekistan, the problems encountered in the activities of small businesses and private business entities are related to the organization of sales, studying the market situation, that is, marketing activities. Therefore, the development of a solution to the problems related to the organization of the sales process facing the next small business and private business entities is considered one of the urgent issues.

One of the important elements of the marketing complex, the organization of the sale of goods (Place-place, placement) is also becoming important in the activities of small business entities. This element of the marketing complex is called sales channels, product distribution channels, and distribution channels in the scientific literature on marketing and includes the processes of organizing and managing the movement of goods from the producer to the consumer. Sales channels, regardless of their form, all involve costs related to transportation, storage, loading, unloading, delivery, and inventory creation. Therefore, the main task facing small business entities is to ensure the optimality of expenses.

There are two major forms of sales channel, direct and indirect sales channels.

A direct sales channel is a direct delivery of goods from the producer to the final consumer without the participation of an intermediary. Direct sales channel is convenient and beneficial for both producers and buyers of products. For example, a customer can purchase goods from the comfort of their own home using interactive sales services or by browsing mail order catalogs. On the other hand, the producer, using modern technologies (databases of new multimedia computers, modems, faxes, e-mail, etc.) can select one consumer or a certain group of them and make proposals for private means of communication according to their wishes. can be annoying.

Indirect sales channel is a sales channel based on the participation of intermediaries in the delivery of goods to the consumer. There are different forms of this sales channel, which are traditional, vertical, horizontal, multi-level sales channels.

A traditional sales channel includes an independent manufacturer, a wholesaler, and retailers. The actions of each are independent of each other. A small business entity that produces goods releases its goods to the market through independent intermediaries. The position of the product in the market,

competition with competitors' products, other marketing activities (advertising, sales promotion, etc.) are taken over by the intermediary.

The vertical sales channel unites the manufacturer, wholesaler and retailer into a single complex. One of the channel participants dominates the rest (using its ownership rights, or using its strengths, etc.). The principle of the structure of the vertical sales channel allows you to control the work of the full channel and manage the inconsistencies that occur. The effectiveness of the vertical sales channel is achieved by their original dimensions, compatibility of actions, and prevention of the return of functions. In Uzbekistan, this sales channel is mainly used by enterprises operating on the basis of foreign investments.

A horizontal sales channel is a partially integrated channel consisting of wholesalers and retailers that combine their efforts (capital, production capacity, marketing resources) to achieve greater efficiency by working together. A horizontal sales channel can be established with competing firms, as well as with non-competitors (for example, convenience store chains) on a permanent or temporary basis.

Multi-level sales channel - More and more companies are switching to multi-channel systems of distribution due to the diversification of production, setting more important market targets and making the best use of the opportunities of possible distribution channels. In such a system, a firm can create multiple channels of distribution in order to cover several segments of the market. With the increase in the possibilities of expanding the market, the total costs of maintaining the channels will also decrease, and the efficiency of trade will increase.

When choosing these sales channels, small businesses and private entrepreneurs can use the following criteria.

Table 2

Criteria for choosing sales channels

<i>Features to consider</i>	<i>Direct channel</i>	<i>Indirect channel</i>		<i>Explanation</i>
		short	long	
<i>Customer characteristics</i>				
a large number of buyers		**	***	Reducing the number of contacts plays a big role
great attention of buyers to the product	**	***		A very small amount of expenses that go to the conclusion of a contract
major purchases	***			Quick recovery of past expenses
unusual purchases		**	***	Increase in the cost of small and infrequent sales contracts
fast delivery of goods		**	***	Having a collection of goods available near the point of sale
<i>Characteristics of the goods</i>				
short term goods	***			Possibility of quick delivery of goods
large volume of trade	***	**		Reducing the costs of transportation
goods that are not technically difficult		**	***	Low demand for service

non-standard goods	***			Simplification of the product for special requirements
new goods	***	**		Strict control of new goods
high value goods	***			Quick recovery of past expenses
<i>Characteristics of the firm</i>				
limitation of financial resources		**	***	Costs of selling goods should be equal to the volume of goods sold
to have a diverse assortment	***	**		The firm may offer a variety of services
strict control of the process	***			Reducing the number of existing barriers between the firm and the market
the company has a great reputation		**	***	Receiving the goods with great respect in the sales system
wide coverage of the market		**	***	The volume of sales of goods should increase gradually

***** - the recommended channel, that is, the most appropriate channel.**

**** - probable channel.**

Our research shows that about 85-90 percent of family entrepreneurs, micro-firms, and small enterprises use the direct sales channel based on the size and characteristics of the goods they produce and the characteristics of consumers. Because small business entities of this form cannot provide indirect sales channels with goods in the right amount on time.

80-90% of small business entities with a large volume of products and a wide range of products, with a large scope of activity, use the indirect sales channel. Small business entities operating in this way regularly fill indirect sales channels with goods in the required volume and in the required assortment.

The purpose of the sales channel is to load the goods on time, to deliver the goods to the right place, in the right amount, and to have accurate information about the needs of consumers. Entrepreneurs who deliver goods to customers in the right assortment, on time, with high quality and with reliable information about consumers will definitely have an advantage in the competition.

CONCLUSION. In the formation of sales channels in small business and private entrepreneurship, it is necessary to pay attention to the following:

- study the criteria taken into account by small business entities when choosing sales channels;
- choosing the form of the sales channel with optimal sales costs based on the financial capabilities of small business entities;
- study consumer purchasing habits, consumer purchasing characteristics, purchasing level, purchasing speed;
- family entrepreneurs, micro-firms and small enterprises with a narrow and small range of products, organize modern forms of direct sales: interactive sales, sale of goods by catalog, etc.;

- enterprises producing a wide range of goods with a high volume of production, if they have financial opportunities, can form vertical sales channels, control the position of their goods in the market and competition with competing goods of a small business entity. It also covers the market by forming a wide network sales chain.

Therefore, the formation of sales channels in the activities of small business and private entrepreneurship is one of the responsible tasks, which is to ensure the effective sale of manufactured goods in the target market. The sales channels chosen by small business and private business entities should bring them certain benefits, i.e. save financial resources for the sale of goods, attract the saved funds to the main production, and sell the goods in a more efficient way., to promote the product more widely and to ensure the high efficiency of its delivery to the target markets, to reduce the volume of work on the sale of the product, etc. When choosing one or another method of sales channels, it is necessary to take into account, first of all, the performance of all the functions of the commercialized process, secondly, better commercial work than competitors, and thirdly, much lower costs compared to other channels. At the same time, the choice of a specific sales channel is determined by a number of factors and the characteristics of the product itself, the nature of the purchase, the state of the market, etc.

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THE SUN OF VALUES - STRUGGLE

Abstract. In this article, the opinion that wrestling is a sport is a value. Its history, greatness, antiquity, folk characteristics, its national spirit and reputation are discussed.

Key word: Wrestling, sport, specialist, club, process, wrestler, physical education, people, world, world.

Values are like the sun. The world is covered with light from his presence. The paths of those who seek him, who are confused by his iron will always be bright. After all, enjoying the spiritual blessings of our great grandfathers is an inexhaustible treasure, like the love of the sun. According to the sources, there were two types of fighting even 1000 years ago. In one of them, it was allowed to grab the opponent's waist and the wrestlers did not use their legs, and in the other, they moved with their legs, where they could grab it, but in both of them it was forbidden to grab the legs with their hands. If we compare these two types of wrestling with the types of wrestling developed in our republic, we can see that one of them corresponds to the Fergana method of national wrestling, and the other to the Bukhara method. Struggle is also a part of the history of our people, values inherited from our ancestors. September 6 - International Wrestling Day. Wrestling is recognized as a modern sport. By the relevant decision of the head of our state, Shavkat Mirziyoyev, the day of the establishment of the International Wrestling Association - September 6 - is set to be widely celebrated as the International Wrestling Day.

Wrestling, which has been celebrated as one of the most popular national games of our people for centuries, has a history of 3.5 - 4 thousand years. In ancient times, it existed only as a national game during traditional ceremonies and holidays, but was not recognized as a specific sport. After we gained independence, there was an opportunity to turn wrestling into a separate sport and develop it on the international stage. As a result of the analysis of single combat types, the essence of our national values, the study of the principles of formation, consultation with experts, Komil Yusupov, the international class master of sports in judo and sambo, the winner of international tournaments, developed the modern sports rules of wrestling that meet the requirements of international sports. Its dress, weight categories, competition organization system were created. These

rules were published in "Sport" newspaper on September 17, 1991 under the article "We have our own language, we have our own struggle".

During 1991-1998, its rules were promoted in order to turn wrestling into an international sport in a number of countries of Asia, Europe, America, and Africa. On September 6, 1998, the International Wrestling Association (IKA) was founded at the founding congress held in Tashkent with the participation of representatives of 28 countries of the world. Since 1999, championships and international tournaments have been held in hundreds of countries such as Uzbekistan, Turkey, Hungary, Armenia, Mongolia, France, England, Germany, Romania, Ukraine, Iran, Russia, Dominican Republic, and India. This serves the glorification of our Motherland and the appreciation of our national values in the world. The main thing is that through the struggle, the ideas of friendship, unity, and peace are promoted among peoples.

There is probably no nation or country that does not want to see its sport at the Olympic Games. Just as the Chinese dream of u-shu, the Thais of muay thai, the Japanese of karate, and the Russians of sambo at the top of the world sport, wrestling It is the great dream of our people to be included in the summer Olympic Games. Wrestling entered the stage of the Asian Games in 2002. In the same year, an exhibition performance was made at the Asian Summer Games in Busan. In 2003, Article 59 of the IOC Regulations was amended, and wrestling was recognized as an Asian sport. Asian Summer Games in Doha, Qatar in December 2006, 2nd Asian Indoor Games in Macau in November 2007, 3rd Asian Indoor Games in Hanoi, Vietnam in 2009 and Martial Arts in Thailand Wrestling competitions were organized at the Asian Games.

A number of decisions of the President of the Republic of Uzbekistan Sh. Mirziyoyev on the further development of the national sport of wrestling were announced. These historical documents and attention are an important factor in the further development of our national sport, which has been revered as a symbol of courage, tolerance, nobility and honesty. As a result of the direct support of our state, purely Uzbek words such as "Kurash", "Halal", "Bow", "Stop", "Yonbosh" have taken a place in the dictionary of international sports terms. On September 20, 2017, at the 36th General Assembly of the Olympic Council of Asia held in Ashgabat, the capital of Turkmenistan, wrestling was included in the program of the 18th Asian Summer Games.

In conclusion, we can say that with the independence of our beloved Uzbekistan, drastic changes took place in all areas. In particular, attention to physical education and sports has been increased at the state level. Particular attention was paid to national sports as an integral part of our national values. There has been an explosion in the development of wrestling, our national sport. In order to spread it more widely among the people, large-scale wrestling tournaments have been held in the regions of our republic. Wrestling, which is one of the popular types of sports, has a very ancient history. The issue of development of wrestling, which is one of the national sports of the people, is also

in the attention of our president. During the years of independence, many existing wrestling halls and arenas were renovated and new ones were built. Various meetings and tournaments are held dedicated to the birthday of great scholars. The fact that the youth of the world, who are participating in the competitions held in dozens of countries in the wrestling, which is our national pride, are becoming familiar with a healthy lifestyle is a proof that Uzbekistan has gifted a rare treasure to the world community. The fact that young people with different languages and beliefs are winning national, continental and world championships in sports uniforms decorated with the flag of Uzbekistan is a vivid example of this.

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A HETEROGENEOUS LEGACY: EXAMINING HEMINGWAY'S STYLE IN HIS LATER YEARS

Abstract. Ernest Hemingway's later works present a complex and multifaceted challenge in stylistic analysis. This article explores the heterogeneity of his writing during this period, highlighting the diverse critical reception of works like "The Old Man and the Sea" and "Across the River and into the Trees." It examines the influence of existentialist philosophy on his fragmented style and the shift away from his earlier "iceberg theory" approach. The article concludes by suggesting that Hemingway's late style, despite its inconsistencies, offers valuable insights into his evolving worldview and his enduring legacy as a literary innovator.

Keywords: Ernest Hemingway, late style, stylistic diversity, "The Old Man and the Sea," "Across the River and into the Trees," existentialism, fragmentation, "iceberg theory," emotional impact, critical reception.

1. Introduction

Ernest Hemingway, a titan of American literature, is renowned for his minimalist prose style, characterized by short, declarative sentences and an emphasis on subtext. His early and mid-career works, like "The Sun Also Rises" and "A Farewell to Arms," established him as a voice of a generation, capturing the disillusionment and stoicism of the post-war era. However, analyzing Hemingway's style in his later years presents a more complex and multifaceted challenge.

This article delves into the stylistic heterogeneity of Hemingway's later works, encompassing novels like the critically acclaimed "The Old Man and the Sea" and the more contentious "Across the River and into the Trees." We will explore the diverse critical reception of these works, highlighting the stylistic choices that both captivated and divided readers. Furthermore, we will examine the influence of existentialist philosophy on his fragmented style and the evolution away from his earlier, iceberg-like approach to narrative. By closely reading key

passages and considering the biographical and literary context, this analysis aims to illuminate the development of Hemingway's voice in his later years. Ultimately, we will argue that despite inconsistencies, Hemingway's late style offers valuable insights into his evolving worldview and his enduring legacy as a literary innovator.

2. Method part

Due to the nature of the article analyzing literary style, a traditional "methods" section wouldn't be entirely applicable. However, we can include a section outlining the approach to analyzing Hemingway's late style. Here's what you can add:

Examining Hemingway's Style: A Multifaceted Approach

This analysis of Hemingway's late style draws on various sources and methods to provide a comprehensive picture. Here's an overview of the approach taken:

- **Close Reading:** The primary focus lies on close reading of key passages from Hemingway's later works, particularly "The Old Man and the Sea," "A Moveable Feast," "Across the River and into the Trees," and "Islands in the Stream." This allows for a meticulous examination of sentence structure, word choice, and the overall effect of his stylistic choices.

- **Critical Reception:** The analysis considers critical responses to Hemingway's late works. By including excerpts from reviews and scholarly articles, the article demonstrates the range of interpretations and evaluations of his style during this period.

- **Biographical Context:** Briefly touching upon significant events in Hemingway's life during his later years can offer insights into the evolution of his style. This might include the Spanish Civil War, World War II, and his personal struggles.

- **Literary Influences:** Examining the influence of existentialist philosophy and other literary movements on Hemingway's writing style can illuminate his thematic choices and stylistic techniques.

By combining these approaches, the article aims to provide a nuanced understanding of Hemingway's stylistic legacy in his later years.

3. Results and Discussions

Discussing the style of E. Hemingway's later period as a whole is not feasible. The reason is that many of his works from this period, as is known, are unfinished. They can only be discussed in the context of the author's works published during his lifetime (an exception may be the memoir "A Moveable Feast," practically prepared by Hemingway for publication). However, even when referring to the completed works of the writer, it is necessary to note that they are all very uneven and stylistically diverse. Accordingly, the evaluations of these works are also diverse - ranging from sharply negative to enthusiastic.

From a stylistic point of view, the novella "The Old Man and the Sea" and the memoir "A Moveable Feast" are highly regarded. J. Meyers in his biography

of Hemingway cites a number of favorable press responses to this work: "The Parisian scenes are absolutely complete, the scenes and characters are far removed in time, and therefore presented in a kind of tranquil state, and even with amazing immediacy, making these episodes some of the best in his artistic work" (New York Herald Tribune Book Week). Meyers believes that the memoir may be the best thing Hemingway has written since the 1920s.

Conversely, the most negative evaluations are given to the style of the novel "Across the River and Into the Trees." "In the book," Anthony Burgess believes, "the balance is disturbed. The images do not work to their full potential... Passages on military topics are difficult to fit into love scenes, which, being gallant, as if from novels of the eighteenth century, are difficult to perceive. The characters do not simply perform simple actions, such as: closing the car door, choosing champagne, or enjoying the heat - they are forced to do this "perfectly" or "correctly," or both. There are too many unmotivated digressions in the book - against Sinclair Lewis, Martha Gellhorn, who appears on the pages of the work as Richard Cantwell's third wife - and this truly hinders readers' attempts to perceive Hemingway's persona as sympathetic." Hemingway's goal in this work was to create, above all, a truthful rather than an appealing image of an elderly person.

It is also impossible to speak of any unequivocal connections between the style of Hemingway's works from the 1940s and 1950s with his early work or the work of the 1930s. In those books where Hemingway refers to the 1920s, his style largely retains similarities with the style of literary works of that time ("A Moveable Feast," "The Garden of Eden"). The novels "Across the River and Into the Trees" and "Islands in the Stream," in turn, are stylistically continuous with the style of the novels "For Whom the Bell Tolls" or "To Have and Have Not."

In his early work, Hemingway's style was to some extent characterized by a style characterized by emphasized detachment of writing, fixation in the works only of the external impressions of the hero, their fragmentary nature and fragmentation. Such a style, arising at the intersection of artistic and philosophical worldviews, S. Finkelstein calls "alienated": "The process of narration in writing," he writes in the work "Existentialism and the problem of alienation in American literature," "is a tool of perception of life and reflection on it, the style of which is dictated by perception itself." In contrast to classical descriptions, the style of alienation, reflecting the fear, anxiety, and loneliness of the observer himself, paints the external world as cold, hostile, and impenetrable. Alienation can be expressed in a language devoid of any imagery, resorting to a deliberate emphasis on sound, depriving words of their inherent function as instruments of perception and giving them the appearance of concrete objects. This was the style of many works by G. Stein, who, as is known, acted as one of Hemingway's literary teachers. The frenzied rhythms, sound repetitions, and changing word order deprive the style of the ability to evoke a humanized response to the external world.

Such a style was characteristic of existentialist writers. For example, Sartre, analyzing Camus' "The Stranger," wrote: "The presence of death at the end of our journey has scattered our future, our life has no 'tomorrow,' it is a succession of present moments." This idea of life corresponds to Camus' phrase, which expresses only the present, it is separated from the next phrase by "non-being." Between each phrase, Sartre writes, "the world is destroyed and reborn; the word, as soon as it arises, is a creation from nothingness; the phrase of 'The Stranger' is an island. And we jump from phrase to phrase, from non-being to non-being." In the article "Explanation of 'The Stranger,' 1943, Sartre, stopping at such a narrative form, notes that Camus borrowed it from contemporary American fiction, and in particular from Hemingway. V. M. Tolmachev, in turn, agreeing with the author, writes that in Hemingway's books of the 1920s, "the brightness of colors, tangibility of form ('Apollonian') appear as the reverse side of 'nothingness' ('Dionysian'), which has no outlines - which can only be represented in a reflected form and forms a kind of black lining for the pattern of word-stones." It should be noted that in Hemingway's early work, the use of such a style was associated with the philosophy of existentialism, which was close to the writer's works. The abundance of material impressions, the sparsity in the perception of existence are the result of the absence of a unifying idea that could give the world integrity.

If we compare the novels "Islands in the Stream" and "Across the River and Into the Trees" with the novel "The Garden of Eden" or the memoir "A Moveable Feast," then we can note that in the latter, the principle of montage, which can be called "shooting with a moving camera," is more pronounced, conveying the "discreteness" of the world. In general, the alienated style, despite the proximity of the novels "Across the River and Into the Trees" and "Islands in the Stream" to the philosophy of existentialism, plays a lesser role in them than in Hemingway's early work. These works are characterized by fragmentariness, fragmentation in the description of the actions of the characters and events, which, like in the author's earlier works, convey the detachment of the hero from the world of people, the desire and impossibility to unite with them. But if in Hemingway's early works such a style played the role of a subtext, through which we recognized the state of the hero and the world, their relationship, then now its role in this capacity is diminished.

Thomas Hudson and Richard Cantwell receive less diverse external impressions, they are immersed in themselves, therefore descriptions of the external world are used much less frequently in these Hemingway's books. If the young heroes of "A Moveable Feast" and "The Garden of Eden" are only exploring the world, trying to get as many impressions from it as possible, then the heroes of "Islands in the Stream" and "Across the River and Into the Trees" are groping for connections between phenomena. Therefore, syntactically, the latter works differ from the novel "The Garden of Eden" and the memoir: they are characterized by longer, more dissected, complex sentences that convey internal

movement, development of thought, analysis and synthesis of impressions and sensations. And since the surrounding phenomena are not just described but are passed through the consciousness and soul of the characters, they are more emotionally colored.

The formal features of the alienated style are preserved in the memoir "A Moveable Feast" and the novel "The Garden of Eden." In them, Hemingway prefers not to describe, but to name; he recreates not so much reality as the conditions of its existence, as V. M. Tolmachev rightly believes. The abundance of nouns, identical remarks, repeated use of the conjunction "and" - thanks to this, "Hemingway creates a kind of perception scheme of elementary stimuli (heat of the sun, coldness of water, taste of wine, etc.), which only in the reader's mind become a full-fledged fact of sensory experience."

This writing style is characteristic of those pages of the novel "The Garden of Eden" where the joint life of David and Catherine, abundant with repetitions, is described. For instance, in just a few phrases, everything that fills the time of the spouses is listed: "A jetty ran out into the blue and pleasant sea and they fished from the jetty and swam on the beach and each day helped the fishermen haul in the long net that brought the fish up onto the long sloping beach. They drank aperitifs in the cafe on the corner facing the sea and watched the sails of the mackerel fishing boats out in the Gulf of Lions... They had made love when they were half awake with the light bright outside but the room still shadowed and then had lain together and been happy and tired and then made love again. Then they were so hungry that they did not think they would live until breakfast and now they were in the cafe eating and watching the sea and the sails and it was a new day again." However, in the novel, this style no longer carries the deep and overarching semantic load as before; it merely serves as a means of conveying the protagonist's personal dissatisfaction. Moreover, since the novel was not completed by Hemingway, in some places, there can be noted a mechanical fragmentation of the action, which has become not a necessity but a habit.

An example of such a style in Hemingway's later work is also found in the memoir. For instance, the protagonist of the work reminisces about one of the frosty days in Switzerland: "I remember the smell of the pines and sleeping on the mattresses of beech leaves in the woodcutter's huts and skiing through the forest following the tracks of hares and foxes. In the high mountains above the tree line, I remember following the track of a fox until I came in sight of him and watching him stand with his right forefoot raised and then go carefully to stop and then pounce, and the whiteness and the flutter of a ptarmigan bursting out of the snow and flying away and over the ridge." In this brief episode, devoid of descriptiveness, only a series of short impressions are listed, capturing the sensations experienced by the protagonist through all five senses. However, in this passage, Hemingway's style loses the detachment from the world, the impassivity that characterized the writer's early work and are the essential features of the alienated style. It presents the reader with something more than mere words

- the sensation of a frosty, sunny, and joyful day when all senses are open to the world.

In this work by Hemingway, possessing all the characteristics of the aforementioned writing style, we feel the author's and the protagonist's living, soulful, and deeply felt attitude towards the world, as seen, for example, in the description of the river with its incessant movement: "With the fishermen and the life of the river, the beautiful barges with their own life on board, the tugs with their smokestacks that folded back to pass under the bridges, pulling a tow of barges, the great elms of the stone banks of the river, the plane trees and the some places the poplars, I could never be lonely along the river... Part of you died each year when the leaves fell from the trees and their branches were bare against the wind and the cold, wintry light."

In another scene from the memoir, also constructed around conveying fragmented actions and impressions of the protagonist, nonetheless, a sense of fondness towards the world and the people around is conveyed: "It was a pleasant cafe, warm and clean and friendly, and I hung up my old waterproof on the coat rack to dry and put my worn and weathered felt hat on the rack above the bench and ordered a cafe au lait. The waiter brought it and I took out a notebook from the pocket of the coat and a pencil and started to write."

Overall, in the writer's works of these years (especially in the novel "Islands in the Stream"), starting from the novels "To Have and Have Not" and "For Whom the Bell Tolls", some form of pathos (G.N. Pospelov) becomes more pronounced: heroism, tragedy, romance - categories that Hemingway previously treated with skepticism, now become an important component of his creativity.

The rejection of the value system that led to the carnage of the First World War is reflected in the vocabulary of Frederick Henry and Jake Barnes, who seek to avoid lofty concepts and use deliberately primitive, simple language. Examples of such ironic attitudes towards "high words" and actions are preserved in Hemingway's later works as well, for instance, in the memoir "A Moveable Feast", where one can encounter two sentences differing in emotional tone. One appeals to a high style and poetic traditions, the other undermines them. For instance, speaking of his desire to crown Ezra Pound with laurels as a great poet, Hemingway, in the very next sentence, lowers the emotional register of the passage with a mundane remark: "...in my dreams I had pictured him as coming, perhaps, to live in a small Greek temple and that maybe I could go with Ezra when he would drop in to crown him with laurel. I knew where there was fine laurel that I could gather, riding out on my bicycle to get it..."

In "The Old Man and the Sea," "high" vocabulary is also used by both the author and the protagonist, but its role and the pathos of expression are entirely different. There is nothing ironic in the way the old man talks about "fate," "happiness." For example, during fishing, he thinks: "Her fate was to stay in the dark depth of the ocean, away from all traps, baits, and human cunning. My fate was to go after her alone and find her where no man had ever reached. No man on

earth. Now we are tied together since noon. And there is no one to help either her or me." Often the old man speaks about the strength of man, about his belief in victory: "Though it is unjust," he mentally added, "I will prove to her what man can do and what he can endure," about his love for fish and its superiority over man: "Man is not anything besides the wonderful beasts and birds. I wish I was that fish, swimming now in the sea depths." For him, all these things are worthy of lofty words, filled with deep meaning, in which the old man's life experience convinces him.

Santiago not only speaks of lofty concepts in a lofty style. In one line of the old man's inner monologue, the speech can be equally elevated about the fate of a person and about quite prosaic matters: "It's not good for a man to be alone in his old age," he thought. "But it's unavoidable. I must remember to eat the tuna, while it's still fresh, because I can't afford to lose strength. I must remember to eat it in the morning, even if I'm not hungry at all. Just don't forget," he repeated to himself. The story is characterized by the magnification of the simplest things, such as food, the sea, animals. Hemingway and the old man Santiago in this work have achieved harmony, which comes from understanding that it is precisely the simple and essential things that lie at the very foundation of life and that happiness, luck, and fate are just as simple things, once understood. Thanks to Santiago's approach to life, everything in "The Old Man and the Sea" acquires epic generalization and grandeur: the fish becomes an embodiment of the forces of nature, the boy, whose name is hardly mentioned in the pages of the work, becomes a kind protector of the old man, and the famous baseball player becomes "the great Di Maggio."

Hemingway's characters and the writer himself experienced much, learned lessons of mutual assistance and heroism during the Spanish Civil War and World War II, and they still believe in them, and now, if necessary, they resort to the help of high vocabulary, not considering it hypocrisy. When the writer refers to such facts of reality that he is not ashamed to poeticize, comparisons infused with expression and subjectivity appear in his work. Therefore, it is not surprising that in the speech of Thomas Hudson, especially in the third part of the novel "Islands in the Stream," words like "duty," "responsibility," and "friend" are encountered.

4. Conclusion

Ernest Hemingway's later works defy easy categorization when it comes to stylistic analysis. This article explored the heterogeneity of his prose in works like "The Old Man and the Sea" and "Across the River and into the Trees," highlighting the range of critical reception they received. We examined the influence of existentialist philosophy on his fragmented style and the shift away from his earlier "iceberg theory" approach.

The analysis revealed a fascinating inconsistency in Hemingway's later style. While some works, like "A Moveable Feast," retained the characteristic elements of his earlier minimalist style, others, like "Islands in the Stream," exhibited a shift towards longer, more complex sentences and a greater focus on

introspection. This stylistic evolution can be partly attributed to the influence of existentialist philosophy and the life experiences that shaped Hemingway's worldview in his later years.

Despite the inconsistencies, Hemingway's late style offers valuable insights into his evolving perspective. The fragmented narration in works like "Across the River and into the Trees" reflects the disillusionment and alienation that permeated his later life. Conversely, the emotionally resonant prose of "The Old Man and the Sea" reveals a newfound appreciation for simple things and the enduring human spirit.

In conclusion, Hemingway's late style, with all its contradictions, serves as a testament to his restless artistic spirit and his lifelong pursuit of innovation. Even in his later years, he continued to experiment with form and voice, leaving behind a rich and complex literary legacy that continues to inspire and challenge readers.

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EXPLORING METHODS OF ADJUSTING THE SPEED OF AN ASYNCHRONOUS MOTOR

Abstract. This article delves into the methods employed to adjust the speed of asynchronous motors. Asynchronous motors are widely used in various industrial applications due to their simplicity, reliability, and cost-effectiveness. However, controlling their speed is crucial in many scenarios to optimize performance and energy efficiency. Here, we discuss several techniques commonly used to adjust the speed of asynchronous motors, including voltage control, frequency control, and variable frequency drives (VFDs).

Introduction. Asynchronous motors, also known as induction motors, are ubiquitous in industrial settings, powering everything from conveyor belts to pumps and fans. Unlike synchronous motors, which operate at a fixed speed determined by the frequency of the power supply, asynchronous motors offer the advantage of variable speed operation. This flexibility in speed control is essential for optimizing processes, reducing energy consumption, and extending equipment lifespan. In this article, we explore the methods used to adjust the speed of asynchronous motors and their applications.

Methods:

The methods used to adjust the speed of asynchronous motors vary in complexity, precision, and applicability to different industrial scenarios. Here, we outline the key methods employed:

1. Voltage Control:

- **Principle:** Voltage control involves adjusting the voltage supplied to the motor windings, thereby altering the strength of the magnetic field and consequently the motor speed.

- **Implementation:** This method typically utilizes simple voltage regulators or autotransformers to vary the voltage supplied to the motor.

- **Limitations:** Lower torque at reduced speeds and potential overheating at higher voltages are limitations of this method.

2. Frequency Control:

- **Principle:** The speed of an asynchronous motor is directly proportional to the frequency of the power supply. Frequency control involves adjusting the frequency to achieve the desired speed.

- **Implementation:** Variable frequency drives (VFDs) are commonly used to control the frequency of the power supply to the motor. VFDs convert incoming AC power to DC and then back to AC at the desired frequency.

3. Variable Frequency Drives (VFDs):

- **Principle:** VFDs offer comprehensive control over both frequency and voltage supplied to the motor, allowing for seamless adjustment of motor speed to match load requirements.

- **Implementation:** VFDs consist of power electronics and control algorithms to regulate the frequency and voltage output. They often incorporate features such as soft starting and stopping, overload protection, and dynamic braking.

4. Pole Changing:

- **Principle:** Pole-changing asynchronous motors feature a unique design that allows for changing the number of poles in the motor windings, thereby altering the motor's synchronous speed.

- **Implementation:** This method involves mechanically or electronically switching between different pole configurations to adjust the motor's operating speed.

- **Advantages:** Suitable for applications requiring discrete speed adjustments without complex electronic controls.

- **Limitations:** Less common compared to voltage control, frequency control, and VFDs. Limited applicability in certain industrial settings.

These methods offer diverse approaches to adjusting the speed of asynchronous motors, catering to various industrial requirements and constraints.

Applications: The ability to adjust the speed of asynchronous motors has numerous applications across various industries. From HVAC systems and conveyor belts to pumps and compressors, precise speed control enhances efficiency, reduces wear and tear, and improves overall system performance. In industrial automation, asynchronous motors with VFDs are widely used for tasks requiring variable speed operation, such as material handling, machining, and packaging.

1. Industrial Automation:

- **Conveyor Systems:** Variable speed control allows conveyor belts to adjust their speed based on the production requirements, optimizing material flow and reducing energy consumption.

- **Material Handling:** Asynchronous motors with variable frequency drives (VFDs) are used in automated material handling systems to precisely control the speed of conveyors, cranes, and hoists.

- **Packaging Machinery:** Variable speed control enables packaging machines to adjust the speed of packaging materials, improving accuracy and reducing waste.

2. HVAC Systems:

- **Air Handling Units:** Variable speed control of asynchronous motors in air handling units allows for precise adjustment of airflow rates, maintaining optimal indoor air quality while minimizing energy consumption.

- **Chiller Plants:** Asynchronous motors with VFDs in chiller plants help modulate the speed of pumps and fans, matching the cooling demand and reducing energy consumption during part-load operation.

3. Pumping Applications:

- **Water Supply and Distribution:** Variable speed pumps driven by asynchronous motors are used in water supply and distribution systems to maintain consistent water pressure and flow rates while minimizing energy usage.

- **Wastewater Treatment:** Asynchronous motors with VFDs are employed in wastewater treatment plants to control the speed of pumps and blowers, optimizing treatment processes and reducing energy costs.

4. Industrial Processes:

- **Machine Tools:** Variable speed control allows machine tools such as lathes, milling machines, and grinders to adjust their cutting speeds according to the material and machining requirements, enhancing productivity and surface finish.

- **Extrusion and Injection Molding:** Asynchronous motors with VFDs enable precise control of extruder and injection molding machine speeds, improving product quality and reducing material waste.

5. Renewable Energy Systems:

- **Wind Turbines:** Asynchronous generators in wind turbines utilize variable speed control to optimize energy capture by adjusting rotor speed based on wind conditions, improving overall energy efficiency.

- **Solar Tracking Systems:** Asynchronous motors with variable speed control are used in solar tracking systems to adjust the orientation of solar panels, maximizing solar energy capture throughout the day.

6. Transportation:

- **Electric Vehicles (EVs):** Asynchronous motors with VFDs or other speed control methods are utilized in electric vehicles to regulate vehicle speed and improve energy efficiency.

- **Rail Transportation:** Variable speed control in traction motors of trains and light rail systems allows for efficient acceleration, deceleration, and regenerative braking, reducing energy consumption and wear on components.

Conclusion: In conclusion, the methods discussed above offer diverse approaches to adjusting the speed of asynchronous motors, each with its advantages and limitations. From simple voltage and frequency control to sophisticated variable frequency drives, the choice of speed adjustment method depends on factors such as application requirements, cost considerations, and energy efficiency goals.

In conclusion, each method offers distinct advantages and limitations, catering to a wide range of industrial applications:

• **Voltage Control:** Simple and cost-effective, suitable for basic speed adjustment needs, but with limitations on torque and potential overheating.

• **Frequency Control:** Provides precise speed control over a broad range, primarily achieved through VFDs, enabling constant torque across different speeds.

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SURXONDARYODA YETISHTIRILADGAN PAXTA TOLALARINING FIZIK XUSUSIYATLARI

Annatsiya. Mazkur ilmiy-texnik tadqiqot vazifalarning dolzarbligidan kelib chiqib, ushbu loyihaning asosiy maqsadi ingichka tolali paxtaning turli navlarini yetishtirishda sellyulozaning sintezi va molekulyar-massasi, tolalardagi ustmolekulyar tuzilishi va kimyoviy xossalarni innovatsion tarzda ingichka tolali paxta seleksiya markazlari va yetishtirish tarmoqlariga joriy etishdan iboratdir.

Tayanch so'zlar: polimer, sellyuloza, viskozimetriya, ultratsentrifuga, xromatografiya, seleksiya, kauchuk, selloid, galogenatsiya, sintetik, poliasetal.

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PHYSICAL CHARACTERISTICS OF COTTON FIBERS GROWN IN SURKHANDARYA

Annotation. Based on the relevance of this scientific and technical research tasks, the basic purpose of this project is identified with the synthesis and molecular mass of cellulose, supramolecular structure and chemical properties of fibers in the production of various types of thin fiber cotton and the conditions of the innovative path to selection centers and production networks of thin fiber cotton.

Key words: polymer, cellulose, viscometry, ultracentrifuge, chromatography, selection, rubber, colloid, halogenation, synthetic, polyacetal.

Chigit qobig'ida yetiladigan ingichka, uzun, silliq va pishiqtabiyy tola. Asosan, paxta sellyulozasidan iborat. Paxta tozalash korxonalarida chigitdan ajratib olinadi. Ip va to'qimachilik mahsulotlari tayyorlashda ishlatiladi. Paxta tolasidan, asosan, to'qimachilik sanoatida turli ip gazlama (satin, batist, zefir, to'r, poplin va h.k.), trikotaj va boshqa ishlab chiqariladi, yigirilgan ip tayyorlanadi. Chigit qobig'ida rivojlanib boradigan Paxta tolasida urug'kurtak po'stidagi bo'yiga juda o'sib ketgan hujayradir (hujay-ratola). G'o'zaning qaysi turiga mansubligiga, hujayralarning rivojlanish davri va funksiyalariga qarab, chigit qobig'i tarkibiga kiradigan hujayralarning tuzilishi, katta kichikligi har xil bo'ladi. Paxta tolasining ichki bo'shlig'i kanal shaklida bo'lib, hujay-ra shirasi va yupqa protoplazma qatlami bilan to'lib turadi. Paxta tolasining kanali xam, tolaning o'zi singari, rivojlanishning boshlang'ich fazalarida shaklan silindrga o'xshagan bo'ladi. Tola yetilib borgan sayin, uning devorlari kalinlashadi va bo'yiga cho'ziladi, kanali esa juda kisilib, yassilangan shaklga kirib qoladi. Tola kanalining kattakichikligi



g'o'zaning tur va nav xususiyatlariga, shuningdek, agrotexnika shart-sharoitlariga bog'liq, chunki g'o'za parvarishi sellyuloza to'planib borishiga ta'sir ko'rsatadi. Hozir ekiladigan g'o'za navlarida har bir chigitda hosil bo'ladigan tola soni 10-15 ming va undan ham ko'proq. G'o'zaning madaniy shakllarida tola diametri uning o'rta qismida 15-20 mk atrofida, yovvoyi shakllarida 8,3-10,4mk keladi tola uzunligi madaniy navlarda 42 mm

gacha, ay-rim turlarida, xatto, 60 mm ga boradi. G'o'za navlari va muhit sharoitlariga qarab ko'sakdagi tola 50-60-80 kunda pishib yetiladi. Paxta tolasida tarkibi (%): sellyuloza-90,35-94,6; suv -7; suvda eriydigan moddalar — 0,5; inkrustatsiya moddalar — 0,75; yog' va mum — 0,4; azot moddalar — 0,5; kul — 0,12. Tola devori bir necha katlamli tuzilishga ega (rasimga q.). Qalinligi 1 mk dan kichik bo'lgan tashki katlam birinchi devor yoki kutikula (1—3) deyiladi. Kutikula kimyoviy tarkibi va tuzilishi bo'yicha asosiy sellyuloza devoridan jiddiy farq qilib, tarkibida (% hisobida) sellyuloza —54, oqsil —14, pektin moddalar —9, mum —8, kul —3, kutin —4 bor. Turli sanoat navlarining kimyoviy tarkibi



ham turlicha. Tola tarkibida gidrofob xossali mum borligi uchun tola yaxshi ho'llanmaydi. Paxta tolasida, asosan, shaffof moddalar (sellyuloza, yog', mum) dan tashkil topsada xira bo'ladi, chunki tarkibida har xil mayda qo'shimchalar bor. Yorug'lik birinchi devor sirtidan notekis kaytishi tufayli tola oq bo'lib

ko‘rinadi. Tolaning birinchi navi oqroq, past navlari to‘qroqsariq yoki jigarrang bo‘ladi. Tola kuyidagi fizik-mexanik va texnologik (sellyuloza miqdori va tuzilishiga bog‘liq holda) xossalarga ega: chiziqli zichlik, yetilganlik, tolaning uzilish kuchi va h.k. Hozir qabul qilingan standartga ko‘ra tola yetilganligi hamda rangi va tashki ko‘rinishga ko‘ra 5 navga, tolaning shtapel massa-uzunligi yoki yuqori o‘rta uzunligi bo‘yicha 9 tipiga bo‘linadi. G‘o‘zaning uzun tolali navlaridan olinadigan tola 1a, 16, 1, 2 va 3 tiplarga, o‘rta tolali navlaridan olinadigan 4-7 tipiga kiradi. Paxtaga dastlabki ishlov berish jarayonida tola mexanik shikastlanishi mumkin. Bundan tashkari, tolaning o‘z nuqsonlari ham bo‘ladi. Paxta tozalash sanoati yengil sanoatning paxtaga dastlabki ishlov beradigan tarmog‘idir. Paxta tozalash sanoati xalq xo‘jaligi bilan sanoat sohalarini, avvalo, to‘qimachilik, yog. –moy, kimyo sanoati va boshqalarni bog‘lovchi zveno bo‘lib, paxtani qabul qilish, buntlash, chigitli paxtani standart namlik darajasigacha quritish va mayda xas-cho‘plardan tozalash, paxtani uzluksiz texnologik oqimda qo‘shimcha quritish, tolani chigitdan ajratish, tolalarni tozalash, chigitni ajratish, tolalarni tozalash, presslab toy qilish, chigitni tozalash, chigitni ikki-uch marotaba linterlash, lintni tozalash, presslash ishlari bajariladi.

Navning afzalligi: Suvsizlikka chidamli, ertapishar, serhosil va tolasining sifati bo‘yicha IV tip tola beradi. Garmselga chidamli, shona kam tashlaydi. Surxondaryo viloyati sharoitida navning maydonini kengaytirish maqsadga muvofiq Termiz-202 g‘o‘za navi 1993 yilda sobiq O‘zPITI Surxondaryo filialida (hozirgi PSUYEATI Surxondaryo ITSda) yaratilgan.

O‘sov davri	-	117-118 kun
Umumiy paxta hosili	-	50.8s/ga
Sentiyabr oyipaxta hosili	-	35.6s/ga
Bir dona kusakdagi vazni	-	3.4-3.5 gr
1000 dona chigit vazni	-	119-120gr
Tola chiqishi	-	36.2%
Shtapel uzunligi	-	1.34 dyuym
Mikroneyr (Mik)	-	4.2
Tola tipi	-	II
Nisbiy uzilish uzunligi	-	31.4 rk/teks

Nav agrotexnikasi: Termiz-202 navi chigitini ekishning qulay muddati 25-mart-10-aprel 1-2 ta chinbarg chiqarganda yagonalanadi. Ko‘chat qalinligi tuproq turi va unumdorlik darajasiga qarab gektariga 120.0-140.0 ming tupgacha o‘simlik qoldiriladi. Qatororasi 60 cm kenglikdagi egat bo‘lganda 60x15-1; 60x12-1; qator orasi 90 cm kenglikdagi egat bo‘lganda 90x10-1; 90x8-1. Sug‘orish rejimi engil tuproqlarda 1-4-2, o‘rtacha tuproqlarda 1- 3-2, og‘ir tuproqlarda 1-3-1. O‘g‘itlashning yillik maqbul me‘yori N-250, P-175, K-100 kg/ga, azotli o‘g‘itlar bilan oxirgi oziqlantirish 1-5 iyuldan kechikmas lozim. Tuproq namligi dala nam sig‘imiga nisbatan 70-75-65% ni tashkil qilganda sug‘orish tavsiya qilinadi. G‘o‘zani chilpishni tuproq unumdorligi o‘rtacha dalada

16-17 ta va unumdor tuproqlarda 17-18 ta hosil shoxi paydo bo'lganda o'tkazish maqsadga muvofiq. G'o'za defoliasiyasi hosilning 60-70 foizi pishib etilganda o'tkazish lozim. Paxta hosilini mashinada terishni hosilning 80 foizi ochilib, 85-90 foiz barglari to'kilganda otkazish lozim. Paxta hosilini mashinada terishni hosilning 80 foizi ochilib, 85-90 foiz barglari to'kilganda o'tkazish tavsiya qilinadi. Paxta tolasi sinflari Paxta tolasi nuqson va iflos aralashmalar miqdoriga qarab keltirilgan me'yorlarga va belgilangan tartibda tasdiqlangan tashqi ko'rinish namunalariga muvofiq ravishda Oliy, Yaxshi, O'rta, Oddiy va Iflos sinflarga bo'linadi. Paxta tolasida butun chigitlar, yog' dog'lari, begona jismlar va chirigan hid bo'lishiga yo'l qo'yilmaydi. Uzun va o'rta tolali paxta tolalarining aralashib ketishiga yo'l qo'yilmaydi. Paxta tolasidagi mavjud yopishqoqlik belgilangan tartibda tasdiqlangan tajriba usullarida ko'rsatilgan me'yorlardan oshmasligi kerak. Paxta tolasini o'rash va unga belgi qo'yish - O'z DSt 841 bo'yicha. Qabul qilish sharti Paxta tolasi to'dalar bo'yicha yetkazib berilishi va qabul qilib olinishi kerak. Sifat ko'rsatkichlari yagona hujjat bilan rasmiylashtirilgan bir xil tipdagi seleksiya va sanoat navli sifatga oid birga qo'shib yuboriladigan bitta hujjat bilan rasmiylashtirilgan toylar soni to'da deb hisoblanadi. To'daning eng ko'p miqdori bir temir yo'l vagonidan oshmasligi kerak. Konditsion massasini hisoblash uchun namlikning me'yoriga nisbat - 8,5 %. Namlikning eng kichik massaviy nisbati 5,0 %. Hisoblash o'nlik belgisigacha aniqlikda amalga oshiriladi va butun songacha yaxlitlantiriladi. Birga qo'shib yuborilgan hujjatda quyidagilar ko'rsatiladi: —paxta tozalash korxonasi nomi va manzili; —to'da nomeri; —to'dadagi toylar soni; —toylarning raqamlari; —har bir toyni brutto vazni; —to'daning konditsion massasi; —paxta tolasining seleksiya va sanoat navlari, tipi va sinfi; —tola ishlab chiqarilgan kun (sana). O'zbekiston Respublikasi hududida paxta tolasi albatta sertifikatlashtirilishi shart bo'lib, har bir to'daning 100 % toylari. Paxta tolasining belgi qo'yish va o'rash talablariga muvofiq kelishi toylarning 100 % da tekshirib ko'riladi. Ta'minlovchi bilan iste'molchi o'rtasida paxta tolasining miqdorini aniqlash xususida kelishmovchiliklar kelib chiqqan hollarda, tola miqdorining toyma-toy nazorati amalga oshiriladi.

Paxta yumshoq tola bo'lib, g'o'za (*Gossypium*) o'simligi urug'lari atrofida o'sadi. Paxta deyarli butunlay sellulozadan iborat.

Paxta asosan tropik va subtropik iqlimda yetishtiriladi. Yovvoyi paxta navlari xilma-xilligi ayniqsa Meksika, Avstraliya va Afrikada yuqori.

Paxta tolasidan ip eshiladi, gazlama tayyorlanadi. Paxta matolar qadimdan ma'lum: Meksika va Pokistonda eramizdan avvalgi 5000-yillarga oid paxta gazlamalar topilgan.

Bugungi kunda dunyo bo'ylab yiliga 25 million tonnagacha paxta yetishtiriladi, paxta uchun sug'oriladigan yerlarning 2,5%i ajratilgan. Xitoy paxta yetishtirish bo'yicha birinchi o'rinda turadi. O'zPITI surxondaryo filialida (hozirgi PSUEAITI surxondaryo ITda) yaratilgan. (T-24x(98714xT-24) 2001 yil.

O'suv davri	-	116 kun
Umumiy paxta hosili	-	50,52 s/ga
Sentabr oyi paxta hosili	-	35-36 s/ga
Bir dona kusakdagi paxta vazni	-	3.6-3.8 gr
1000 chigit vazni	-	121-131 gr
Tola chiqishi	-	34-35%
Shtabel uzunligi	-	1.34 dyuym
Mikroneyr (Mik)	-	3.9-4.0
Tola tipi	-	I
Nisbiy uzulish uzunligi	-	39.8rk/teks
STR	-	34.336.5
LEN	-	1.31-1.35

XULOSA

Xulosa qilib shuni aytishimiz mumkinki mamlakatimizda paxta xom ashyosiga bo'lgan talab juda yuqori. Shu jumladan chigitli paxta xom ashyosi juda kerali hom ashyodir. Respublikamiz paxta tolasi ishlab chiqarish bo'yicha dunyoda beshinchi, eksport qilishda ikkinchi o'rinni egallab turibdi. Prezidentimiz «O'zbekiston tashqi bozorda talab kata bo'lgan mahsulot – paxta tolasining asosiy ishlab chiqaruvchisi va etkazib beruvchisidir» deb aytganlari hozirga kelib o'z tasdig'ini topdi desak mubolag'a bo'lmaydi. Mato ishlab chiqarishda qo'llaniladigan tolaning 60-80 foizi Evropaning yetakchi davlatlariga diyorimizdan jo'natiladi. Paxta tolasini jahon bozorida sotish hisobiga Respublika xazinasiga kata miqdorda valyuta tushmoqda. Respublikamizda bir yilda etishtiriladigan paxtaning hajmi o'rtacha 3,5-3,9 mln. tonnani tashkil etadi. Bu hajmdagi paxtani qabul qilish, saqlash va qayta ishlash bilan bog'liq bo'lgan barcha ishlar majmuasini tashkil qilish, muvofiqlashtirish, sohada yagona ilmiy–texnik siyosatni amalga oshirish, jahon bozori standartlari talablariga javob beradigan mahsulot ishlab chiqarish va iste'molchilarga etkazib berish O'zbekiston paxtani qayta ishlash va paxta mahsulotlarini sotish aktsiyadorlik uyushmasining asosiy vazifasi hisoblanadi. Respublikamizda paxta tozalash sanoati tizimida 130 ta paxta tozalash korxonalari, 511 ta paxta tayyorlash maskanlari mavjud bo'lib, har bir aktsiyadorlik jamiyati hozirgi zamon texnikasi bilan jixozlangan ishlab chiqarish bazasiga ega. Respublikamizda etishtiriladigan paxtani qabul qilish, saqlash va qayta ishlash bilan bog'liq bo'lgan barcha ishlar majmuasini tashkil qilish, jahon bozori standartlari talablariga javob beradigan mahsulot ishlab chiqarish uchun paxta tozalash korxonalarini serunum va samarali ishlaydigan jihozlar bilan jihozlash, mavjud texnika va texnologiyalarni modernizatsilash hozirgi vaqtdagi dolzarb vazifalardan bo'lib hisoblanadi.

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INSON KAPITALI TUSHUNCHASIGA OID YONDASHUVLAR

Annotatsiya. Inson kapitali nazariyasi hozirgi kunda jahonning iqtisodiy taraqqiyoti va jamiyat farovonligini ta'minlovchi asosiy intellektual yo'nalishlardan biridir. Bugungi kunda inson kapitaliga yurtimizda o'ziga xos yondashilmoqda. Prezidentimizning 2023-yil 11-sentyabrdagi Farmoni bilan "O'zbekiston — 2030" strategiyasi tasdiqlandi. Ushbu dasturilamal hujjat xalqimizning erkin va farovon, qudratli Yangi O'zbekistonni barpo etish bo'yicha xohish-irodasini ro'yobga chiqarish, har bir fuqaroga o'z salohiyatini rivojlantirish uchun barcha imkoniyatlarni yaratish, sog'lom, bilimli va ma'naviy barkamol avlodni tarbiyalash, global ishlab chiqarishning muhim bo'g'iniga aylangan kuchli iqtisodiyotni shakllantirish, adolat, qonun ustuvorligi, xavfsizlik va barqarorlikni kafolatli ta'minlash maqsadida Yangi O'zbekiston taraqqiyot strategiyasini amalga oshirish jarayonida orttirilgan tajriba va jamoatchilik muhokamasi natijalari asosida ishlab chiqildi.

Kalit so'zlar: Inson kapitali, inson kapitali nazariyasi, antik davr allomalari, Sharq mutafakkirlari, zamonaviy dunyo olimlari, O'zbekistondagi tadqiqotlar.

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APPROACHES TO THE CONCEPT OF HUMAN CAPITAL

Abstract. The theory of human capital is currently one of the main intellectual trends that ensure the economic development of the world and the well-being of society. Today, human capital is treated in a unique way in our country. The "Uzbekistan - 2030" strategy was approved by the Decree of the President of September 11, 2023. This programmatic document is intended to realize the desire of our people to build a free and prosperous, powerful New Uzbekistan, to create all opportunities for every citizen to develop their potential, to create a healthy, educated and spiritually mature generation. education, formation of a strong economy that has become an important link of global production, justice, rule of law, security and stability, it was developed based on the experience gained during the implementation of the development strategy of New Uzbekistan and the results of public discussion.

Key words. Human capital, theory of human capital, scholars of antiquity, Eastern thinkers, scientists of the modern world, studies in Uzbekistan.

Jahonda XX asrning ikkinchi yarmidan boshlab, ilm-fan sohasida inson kapitali tushunchasining falsafiy-nazariy masalalari keng yoritila boshlandi. Shuningdek, inson kapitali global axborot makonida eng afzal va eng qimmat resursga aylandi. Natijada inson kapitali nazariyasini ishlab chiqish va taraqqiy ettirish, bu yo‘lda xizmat qiluvchi o‘ziga xos metod va yondashuvlarni yaratish zaruratini yuzaga chiqaradi.

Dunyoning ko‘plab mamlakatlarida bugunga qadar inson kapitalida ustuvorlik faqat yuksak texnologiyalarga egalik qilishda ekani e’tirof etib kelingan. Masalaga bunday yondashuv hozirda ham o‘z ahamiyatini yo‘qotmagan, biroq insoniyat taraqqiyotini aks ettiruvchi kashfiyotlar doimiy yangilanishga – o‘zgarishga yuz tutmoqda. Binobarin, ilg‘or taraqqiyot pog‘onasidan joy olgan jamiyatlar boshqa raqobatchilaridan oldinda bo‘lishlari uchun bu texnologiyalarni ishlab chiqarishga qodir bo‘lgan yuksak qobiliyatli inson kapitali zarur ekanligi ayon bo‘lmoqda.

“O‘zbekiston – 2030” strategiyasida barqaror iqtisodiy o‘sish orqali daromadi o‘rtachadan yuqori bo‘lgan davlatlar qatoridan o‘rin olish, aholi talablariga va xalqaro standartlarga to‘liq javob beradigan ta’lim, tibbiyot va ijtimoiy himoya tizimini tashkil qilish, aholi uchun qulay ekologik sharoitlarni yaratish, xalq xizmatidagi adolatli va zamonaviy davlatni barpo etish, mamlakatning suvereniteti va xavfsizligini kafolatli ta’minlash asosiy g‘oyalar sifatida belgilandi.

Ushbu ulug‘vor g‘oyalar mamlakatimizda inson qadri yanada ulug‘lanayotgani, uning salohiyatini yuksaltirish, orzu-umidlarini ro‘yobga chiqarish, tinch-osoyishta, baxtli va farovon hayotini ta’minlash bosh maqsadga aylangani ifodasidir.

O‘zbekiston Respublikasi Prezidenti Sh.M.Mirziyoyevning 2019-yil 29-maydagi “Asosiy maqsad – mamlakatimizda inson kapitalini rivojlantirish” mavzusida o‘tkazgan yig‘ilishida bildirgan fikrlari; O‘zbekiston Respublikasi Prezidentining “2019-2021-yillarda O‘zbekiston Respublikasini innovatsion rivojlantirish strategiyasini tasdiqlash to‘g‘risida” gi Farmonida “Mamlakatning xalqaro maydondagi raqobatbardoshlik darajasini va innovatsion jihatdan taraqqiy etganini belgilovchi asosiy omil *inson kapitalini rivojlantirish* – Strategiyaning bosh maqsadi” ekanini ta’kidlab, ushbu masalani muhim vazifa sifatida belgilab berilganligi; 2023-yil 11-sentabrda “O‘zbekiston - 2030” strategiyasining qabul qilinishi; 2022-2026-yillarga mo‘ljallangan Yangi O‘zbekiston taraqqiyot strategiyasi” ning “*Adolatli ijtimoiy siyosat yuritish, inson kapitalini rivojlantirish*” deb nomlangan 4-yo‘nalishidan o‘rin olgan 34 ta maqsad O‘zbekistonda inson kapitalini rivojlantirish nechog‘lik muhimligini ko‘rsatadi.

O‘zbekiston Respublikasi Prezidenti Sh.Mirziyoyevning “Yurtimizda yashayotgan har qaysi inson millati, tili va dinidan qat’iy nazar, erkin, tinch va badavlat umr kechirishi, bugun hayotdan rozi bo‘lib yashashi – bizning bosh maqsadimizdir”, “Inson manfaatlari hamma narsadan ustun”, degan fikrlari Yangi

O'zbekistondagi inson kapitali taraqqiyotida ilmiy-metodologik asos bo'lib xizmat qilmoqda.

Qadimgi Yunoniston faylasuf va mutafakkirlari inson va inson kapitali borasida o'z fikrlariga ega edilar. Jumladan, Suqrot va uning shogirdi Aflotun qarashlarida insonning ijtimoiy qirralari tadqiq etilgan.

Qadimgi Hind va Xitoy faylasuflari farovon turmushni yaratish zarurligini doimo ta'kidlab kelganlar. Jumladan, farovon turmush tarzini orzu qilganlar. Ana shunday turmush kechirishga insonning o'zi mas'ul ekanini ko'rsatishga uringanlar. Bu narsa Maxavira Vardxamana, Konfutsiy, Mo Di kabi donishmandlarning qarashlarida o'z tasdig'ini topgan.

Zardushtiylik dini ta'limotlarida inson kapitali elementlari to'g'risidagi fikrlar uchraydi. Xususan, odamni sog'-salomat voyaga yetishida me'yorida ovqatlanish lozimligi, ovqatlanish madaniyatiga rioya qilmagan jamiyat kuchli avlodlarga va baquvvat mehnatkashlarga ega bo'la olmasligi ta'kidlangan. Shuningdek, ochlik va to'yib ovqat yemaslik kishilarning ma'naviy hislatlariga ham putur yetkazadi, deb qaralgan. Shu boisdan ham inson kamoloti uchun dolzarb ahamiyat kasb etuvchi ozuqaning yetarliligiga e'tibor qaratilgan. Bu yo'lda jamiyat ziroatchilik, chorva boqish kabi sohalar rivojiga tayangan. Zardushtiyning bu qarashini non va donga boy bo'lgan yurt aholisining quloqlariga pand-nasihatlar, muqaddas bitiklar yetib boradi, degan tamoyillarni ham ko'rish mumkin.

O'rta asr O'rta Osiyo mutafakkirlari ham inson va uning ichki dunyosi borasida o'ziga xos fikr va yondashuvga ega bo'lganlar. Masalan, Abu Rayhon Beruniy "Inson hayotidagi zarurat, ehtiyojlar ularda ilmlarga bo'lgan talablarni keltirib chiqaradi" degan bo'lsa, Abu Nasr Forobiy "Insondagi shaxsiylikni vujudga kelishiga, insonni boshqa tirik mavjudotlardan farq qilishiga xizmat qiluvchi, asosiysi kishidagi ma'naviy sifatlarni taraqqiy ettiruvchi omil bu uning aqlidir", – deya ta'kidlaydi. J.Rumiy esa "Inson (qalb) ko'zlarini ochgan holda hayotning asl mazmun-mohiyatini anglashi lozim ekanini aytadi.

Inson kapitali haqida G'arbning G.Bekker, T.Shuls, A.Smit, U.Petti, A.Marshal, J.Merrifild, Sh.Rozen kabi mutafakkir olimlarining qarashlari ham o'rganilgan. Xususan, inson kapitali g'oyasi falsafiy-iqtisodiy tafakkur tarixida uzoq ildizlarga ega. Uning ilk ko'rinishlari U.Pettining "Siyosiy arifmetika" asarida uchraydi. Keyinchalik inson kapitali masalalari A.Smitning "Xalqlar boyligi", A.Marshallning "Tamoyillar" va boshqa ko'plab olimlarning asarlarida aks etgan.

Inson kapitali nazariyasi XX asr 50-60 yillariga kelibgina shakllandi. Taniqli amerikalik iqtisodchi, Nobel mukofoti sovrindori T.Shuls inson kapitalining asosiy nazariy modelni ishlab chiqqanini e'tirof etish zarur. Bundan tashqari, G.Bekkerning "Inson kapitali" kitobi sohaga oid tadqiqotlar uchun asos sanaladi va zamonaviy iqtisodiy fanning boshlang'ich asosi sifatida e'tirof etiladi. "Inson kapitali bu har bir odamdagi bilim, ko'nikma hamda motivatsiyalar yig'indisidir", – deya ta'kidlaydi G.Bekker.

Bugungi kunga qadar rus olimlaridan O.Yu.Poroshenko, E.A.Kamalov, V.V.Xominskaya, S.A.Kurganskiy, T.I.Volkova; Mustaqil davlatlar hamdo'stligi davlatlari doirasida T.Kilibayeva, Ali Rezo Mohammad Sargolzai va boshqalarning inson kapitali to'g'risidagi ijtimoiy-falsafiy qarashlari tadqiq etilgan. S.A.Kurganskiy ta'rifi bilan aytganda, "inson kapitali insonning hayoti davomida to'plangan shaxsiy hislatlar yig'indisidir. Bu mehnat unumdorligini oshirib, aholi daromadini ko'payishiga xizmat qiladi".

Mustaqil O'zbekistonda ham bir qator tadqiqotlar olib borildi. Xususan, iqtisodchilar (N. Rasulov, Sh.Akromova, S.Husenov, S.Toirov va boshqalar) hamda faylasuf olimlar (L.Qurbonova, F.Yuldasheva, A.Egamberdiyev, G.Yunusova, E.abdullayev va boshqalar)ning inson kapitalini o'ziga xos jihatlarini o'rganishga qaratilgan ilmiy izlanishlarini misol qilib aytish mumkin.

Xulosa qilib aytish mumkinki, inson kapitali uzoq tarixiy davrni bosib o'tgan bo'lishiga qaramay, jahon xalqlari tomonidan hozirda aktual ahamiyat kasb etayotgan iqtisodiy taraqqiyot yo'nalishi hamda ilmiy tadqiqot mavzularidan biri hisoblanadi.

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RAQAMLI TRANSFORMATSIYA SHAROITIDA TURISTIK TALABNI TAHLIL QILISH VA PROGNOZ QILISH

Annotatsiya. Raqamli platformalarining kuchayib borayotganligi sabab, sayohat ekotizimi qayta shakllantirilmoqda, yangi biznes modellarini hayotga moslashtirish va mijozlar fikrini taqsimlash uchun kurashish jadallashmoqda.

Kalit soʻzlar: sayohat, talab, Adam Smit, kompaniya, strategiya, hamkorlik.

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ANALYSIS AND FORECASTING OF TOURISM DEMAND IN DIGITAL TRANSFORMATION

Annotation. The growing number of digital platforms is due to the fact that the travel ecosystem is being reshaped, the struggle to adapt new business models to life and distribute customer opinions is gaining momentum.

Keywords: travel, demand, Adam Smith, company, strategy, collaboration.

Sayohat ekotizimidagi raqamli platformalarning jadallashishi ushbu tendentsiyani kuchaytirmoqda. Platforma iqtisodiyoti Adam Smitning "ko'rinmas qo'li" ni haqiqatga aylantirayotgan bo'lishi mumkin. Talab va taklifni mukammal uyg'unlikka olib keladi, lekin sanoatga g'olib bo'lgan barcha iqtisodiyotni joriy qilishi mumkin. Platforma iqtisodiyotining paydo bo'lishi iste'molchi uchun kurashni yanada shiddatli qilmoqda. Mijozlarning ehtiyojlari har xil bo'lgan segmentlarda bu jang turlicha bo'ladi, masalan, biznes va dam olish uchun tashrif buyuruvchi sayohatchilar, ekotizim ishtirokchilari o'rtasidagi hamkorlik ularning mijozlar ulushini yutib olish imkoniyatlarini oshiradi. Kompaniyalar o'zgartirilgan sayohat ekotizimida dolzarb bo'lib qolish uchun turli strategiyalarni qo'llashlari mumkin: ba'zilar qiymat zanjirida o'z qamrovini kengaytiradi, boshqalari esa mijozlarning bevosita faoliyatini cheklaydi va aktivlar yoki xizmatlarni yetkazib berishga e'tibor qaratadi. Ekotizim yangilanishi ilgari mehmonxonalarda eng yaxshi texnologiya deya tan olingan EHM lar qo'llanilgan bo'lsa, endi IT ma'lumotlar tahlili tobora ko'proq ortib bormoqda. Agar mehmon

o'z uyida to'liq integratsiyalangan raqamli "Nest" yoki boshqa joylarda birinchi darajali mobil ilovaga ega bo'lishni boshdan kechirgan bo'lsa, ular, albatta, mehmonxonada raqamli imkoniyatlarning bunday darajasini kutishadi. Sanoat ishtirokchilari mehmonxona va aviatsiya sanoatining an'anaviy chegaralari ichida ham, tashqarisida ham yangi hamkorlikni yo'lga qo'yimoqda va mavjudlarini kengaytirmoqda. Sayohat ekotizimining chetida yoki tashqarisida joylashgan kompaniyalar jalb qilingani sayin, an'anaviy turizm sanoati rollari xiralashadi va ahamiyatsiz bo'lib qoladi. Ushbu hodisa ekotizimlarning yaqinlashishi, yangi mahsulot va xizmatlarni keltirib chiqaradi. Birlashgan ekotizimning barcha imkoniyatlarini ishga solish uchun hamkorlik zarur. Ushbu hamkorlik oddiy bo'lmasligi shart, aks xolda ba'zi kompaniyalar mijozlarni qiymat zanjirida boshqalarga yo'qotishi mumkin. Bu hamkor tashkilotlarning raqobatchilarga aylanishi ehtimolini ham oshiradi. Bu, sanoat ishtirokchilari o'z faoliyatlarini kengaytirganda sodir bo'lishi mumkin bo'lgan vertikal va gorizontol integratsiyadan kelib chiqishi mumkin. Masalan, aviakompaniya mehmonxonalarni sotib oladi va shu bilan birga qiymat zanjirining boshqa qismiga kiradi. Raqamli transformatsiya sharoitida turistik talabni tahlil qilish va prognoz qilish uchun turli texnologiyalar qo'llaniladi, jumladan: Katta ma'lumotlarni tahlil qilish: turistik imtiyozlar, iste'molchilarning xatti-harakatlari, iqtisodiy va siyosiy tendentsiyalar, ob-havo sharoiti va turizm xizmatlariga bo'lgan talabga ta'sir qiluvchi boshqa omillar to'g'risida katta hajmdagi ma'lumotlarni to'plash va tahlil qilish. Sun'iy intellekt (AI): AIdan ma'lumotlar tahlili asosida turizm talabini bashorat qilish va tendentsiyalarni aniqlash, shuningdek takliflarni shaxsiylashtirish va narxlarni boshqarish uchun foydalaniladi, kelajakdagi tendentsiyalarni bashorat qilish va biznes jarayonlarini optimallashtirish uchun tarixiy sayohat talabi ma'lumotlariga asoslangan modellarni o'qitadi.

Analytics va BI (biznes razvedkasi): ma'lumotlarni vizualizatsiya qilish, hisobotlar va boshqaruv panellarini yaratish, asosiy ishlash ko'rsatkichlarini tahlil qilish va boshqaruv qarorlarini qabul qilish uchun maxsus vositalardan foydalanadi. Mahsulotlar interneti (IoT): sayyohlar harakati, turistik ob'yektlar va xizmatlardan foydalanish to'g'risidagi ma'lumotlarni to'plash hamda turizm resurslarini boshqarishni takomillashtirish uchun sensorlar va qurilmalardan foydalanish.

Ushbu texnologiyalar sayyohlik kompaniyalari va tashkilotlariga talabni samarali tahlil qilish va prognoz qilish, taklif va xizmatlar sifatini oshirish, raqamli transformatsiya sharoitida biznes jarayonlarini optimallashtirish imkonini beradi.

Raqamli vositalar sayyohlik tajribasini yaxshilashga va quyidagi yo'llar bilan shaxsiy sayohat takliflarini yaratishga yordam beradi: Mehmonxonalarni boshqarish va bron qilish tizimlari xonalarni bron qilish, mehmonxona xizmatlarini boshqarish va to'lovlarni qayta ishlash jarayonlarini avtomatlashtirish imkonini beradi, bu esa turistlarga xizmat ko'rsatish jarayonini

soddalashtiradi va tezlashtiradi. Sayyohlar uchun mo'ljallangan mobil ilovalar, attraksionlar, dam olish maskanlari, restoranlar va do'konlar haqida ma'lumot beradi, shuningdek, ekskursiyalar va transportni onlayn bron qilish imkonini beradi. Ma'lumotlar tahlili turistlarning xohish-istaklari, ehtiyojlari va xatti-harakatlarini kuzatish imkonini beradi, bu esa shaxsiy sayohat takliflarini yaratish va xizmat sifatini yaxshilashga yordam beradi. "Aqlli shahar" va "Internet of Things" (IoT) tizimlari shaharlar infratuzilmasini yaxshilaydi, sayyohlar uchun qulaylik va xavfsizlikni ta'minlaydi, shuningdek, transport va aloqa boshqaruvini optimallashtiradi. Virtual va kengaytirilgan voqelik sayyohlarga joyning tarixi va madaniyatiga sho'ng'ishga yordam beradigan interaktiv turistik ekskursiyalarni yaratishga imkon beradi. Shunday qilib, raqamli vositalar sayyohlik tajribasini yaxshilash va shaxsiy sayohat takliflarini yaratishda muhim rol o'ynaydi, sayohatni yanada qulay va esda qolarli qiladi.

O'zbekistonda turizm sohasida raqamlashtirishning imkoniyatlari va to'siqlari ko'pdir. Turizm sohasida raqamlashtirishning imkoniyatlari quyidagilar:

1. Statistik ma'lumotlar: Turizm sohasida raqamlashtirish uchun turistlar tomonidan qilingan xarajatlarni va turistlar sonini hisoblash uchun statistik ma'lumotlar kiritish zarur.
2. Turizm ma'lumotlari bazasini yaratish: Turizm sohasida raqamlashtirish uchun ma'lumotlar bazasini yaratish va uni yaxshi saqlash kerak. Bu ma'lumotlar turizm sohasidagi yangiliklarni kuzatish va turizmni rivojlantirishda yordam beradi.
3. Monitoring va evalyutsiya: Turizm sohasidagi faoliyatni monitoring qilish va evalyutsiya qilish imkoniyatlarini yaratish uchun turizm sohasidagi muvofiqlikni o'lchash uchun indikatorlar belgilash zarur.
4. Turizm statistikasi: Turizm sohasidagi statistik ma'lumotlarni to'plash va ularni tahlil qilish imkoniyatlari yaratish uchun turizm statistikasi bo'yicha xizmatlarni rivojlantirish kerak.

Turizm sohasida raqamlashtirishning to'siqlari quyidagilardir:

1. Qo'llaniladigan ma'lumotlar: Turizm sohasida raqamlashtirish uchun to'g'ri, to'liq va yaxshi ma'lumotlarga ega bo'lish zarur. Bu ma'lumotlar turizm sohasidagi faoliyatni tahlil qilish va rivojlantirish uchun juda muhimdir.

2. Xodimlarni tayyorlash: Turizm sohasida raqamlashtirishni amalga oshirish uchun xodimlarni tayyorlash va ularni turizm sohasidagi raqamlashtirish usullari va texnologiyalari bilan tanishtirish zarur.

3. Texnologiyalarni rivojlantirish: Turizm sohasidagi raqamlashtirishni yaxshilash uchun yangi texnologiyalardan foydalanish va ularni turizm sohasiga moslashtirish zarur.

4. Hamkorlik: Turizm sohasidagi raqamlashtirishni rivojlantirish uchun turizm sohasidagi barcha tashkilotlar va shaxslar o'rtasida hamkorlikni kuchaytirish zarur. Bu hamkorlik turizm sohasidagi raqamlashtirishning samaradorligini oshiradi.

Turizm sohasida raqamli transformatsiya sharoitida turistik talabni tahlil qilish va prognoz qilish juda muhimdir. Bu, turizm sohasidagi yangiliklarni va

o'zgarishlarni tushuntirish, turistik talablarni aniqlash va ularni qondirishga yordam beradi. Turistik talabni tahlil qilish uchun, statistik ma'lumotlar, anketalardan olingan ma'lumotlar, onlayn platformalardagi fikrlar va sharhlar kabi ma'lumotlardan foydalanish mumkin. Bu ma'lumotlar asosida, turistik joylarga qaysi davlatlardan, shahardan yoki ob-havo sharoitlaridan qanchalik ko'p sonli sayohlar keldi, qanday turistik tadbirlar va yutuqlar ommalashtirildi, qanday turistik xizmatlar va mexanizmlar talab qilinadi, shularni aniqlash mumkin. Prognoz qilish uchun esa, turistik talabning o'zgarishlarini va tendentsiyalarini tushuntirish, turizm sohasidagi yangiliklarni va o'zgarishlarni ko'rib chiqish, boshqa sohalardagi o'zgarishlarni hisobga olish va ularni turizm sohasiga ta'sirini o'rganish kerak. Bu, turizm sohasidagi tashqi va ichki faktorlarni tushuntirish, turistik talabni oshirish va uning qanday rivojlanishini bashorat qilishga yordam beradi.

XULOSA: Sayohat ekotizimidagi raqamli platformalarning jadallashishi, sayohatchilarning sayohatlarini qulayroq va samaraliroq rejalashtirish uchun katta ahamiyatga ega. Bu platformalar, sayohatchilar uchun eng arzon va eng qulay sayohatlarini topishiga va ularning jadallashishi, sayohatchilar uchun eng yaxshi vaqt va pul tejashini ta'minlashiga, sayohatchilar uchun eng yaxshi narxlarni tanlash va sayohatlarini to'liq tashkil etishga, sayohatchilar uchun samarali va qulay sayohat tajribasini ta'minlashga yordam beradi.

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QUDUQLARNI ANOMAL PAST BOSIMLI QATLAM SHAROITIDA BURG'ILASH TEXNOLOGIYASINING TAHLILI

Annatsiya. Anomal past bosimli qatlam sharoitida qatlamga repressiya yuqori normada tanlanganda QTZning mahsuldor tavsifiga salbiy ta'sir etgan. Suv asosidagi hamda karbonsuvchil asosdagi burg'ilash eritmaları qo'llanilganda kuchli o'tkazuvchan qatlamlarning sifatli ochish muammolari yechilmaydi.

Kalit so'z. Anomal past bosimli qatlam, gilli eritmalar, tubi zonasidagi tog' jinslarining tabiiy o'tkazuvchanligi, yutilish, flyuid paydo bo'lishi, nurash, avariya va murakkabliklarni bartaraf qilish, repressiya, depressiya.

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ANALYSIS OF WELL DRILLING TECHNOLOGY IN CONDITIONS OF ABNORMALLY LOW FORMATION PRESSURE

Annotation. In the case of anomalous low-pressure formations, formation repression had a negative impact on the productive characteristics of the KTZ when selected for high flow rates. When using water- and hydrocarbon-based drilling fluids, the problems of high-quality penetration of highly conductive formations are not solved.

Keywords. Anomalous low-pressure layer, clay solutions, natural permeability of bottom zone rocks, absorption, fluid generation, weathering, emergency and complex liquidation, repression, depression.

Anomal past bosimli qatlam sharoitda mahsuldor qatlamlarni burg'ilib ochishda gilli eritmalar va boshqa suyuqliklar bilan yuvish kuchaytirilgan repressiyada amalga oshirilganda ko'pincha quyidagi holatlar sodir bo'lgan:

-qatlam quduq tubi zonasidagi tog' jinslarining tabiiy o'tkazuvchanligini qaytarib bo'lmas (tiklab bo'lmas) darajada pasayishi;

-mahsuldor qatlamdan yuqorida joylashgan qatlamlar oralig'idan flyuidlarni paydo bo'lishi evaziga yuvuvchi suyuqlikning sirkulyatsiyasini yo'qolishi;

-yutilish, flyuid paydo bo'lishi, nurash va boshqa holatlar avariya holatlarini keltirib chiqaradi, natijada burg'ilash jarayoni murakkab-lashadi va to'xtab qoladi;

-avariya va murakkabliklarni bartaraf qilishda hamda quduqlarni o'zlashtirishda qo'shimcha vaqt, energiya, kimyoviy reagentlar, material va xom-ashyolar sarflanadi. [1]

Anomal past bosimli qatlam sharoitida quduqlarni burg'ilashda, mahsuldor qatlamni ochishda ko'p holatlarda suv asosli yuvuvchi suyuqliklardan (zichligi 1000 kg/m³ katta emas) foydalanilgan, burg'ilab o'tilgan yuqorida joylashgan oraliq birdaniga yuvilgan. Burg'ilash eritmaları polimerlar bilan ishlangan, to'ldiruvchilar qo'shib ularni sifati yaxshilangan va ochiladigan mahsuldor qatlamning QTZsidagi tog' jinslarining kollektorlik va sig'imdorlik xossalari salbiy ta'sirlardan himoyalangan.

Gaz va gazkondensat konlarida qatlamlarni 0,70 anomallik koeffitsiyentida ochilganda faqat jadal yutilishlar sodir bo'lmasdan QQTZ (qatlam quduq tubi zonasida) tog' jinslarining tiklab bo'lmas holda tabiiy o'tkazuvchanligi pasayib ketadi.

Anomal past bosimli qatlam sharoitida neft va gaz quduqlaridagi mahsuldor qatlamlar gilli eritmalar qo'llab ochilgan. Quduqlarning debiti karbonsuvchil va biopolimerli asosli eritmalar qo'llanilib ochilgan quduqlarning debitiga nisbatan past ekanligi ma'lumdir. Shu bilan birgalikda debitlarni mutloq qiymatlariga qarab yo'nalish olish yetarli emas. Mahsuldor qatlamni samarali ochilishini bir metriga to'g'ri keladigan solishtirma debitini baholash kerak.

Katostrofik yutilishlar paydo bo'ladigan mahsuldor qatlamlarni samarali ochishda gazsimon yuvuvchi agentlardan va ko'pikli tizimlardan foydalanish maqsadga muvofiqdir:

- tabiiy gaz, azot, ichki dvigatelda yoqilgan gazlardan foydalanish;
- gaz va tomchili suyuqlikdan, SFMlardan va ingibitorlardan foydalanish;
- ko'pik, aeratsiyali suyuqliklardan foydalanish. [2,3]

Neft va gaz quduqlarini burg'ilash jarayonida mahsuldor qatlamlar har xil sharoitlarda qatlam va g'ovaklik bosimlarining anomalligi, kuchli yoriqli va o'tkazuvchan, kuchsiz mustahkamlikka ega bo'lgan qatlamlarda, flyuidlarning tarkibiga yemiruvchi kamponentlarning mavjudligi sharoitida ochiladi. Mahsuldor qatlamli anomal yuqori bosim sharoitida ochishda qatlamga repressiya qo'llanilganda qatlamdagi tabiiy kollektorlarga salbiy ta'sir etish holatlarini keltirib chiqaradi va quduqning debit ko'rsatgichiga salbiy holatda ta'sir ko'rsatadi.

Mahsuldor qatlam anomal past bosim sharoitida ochilganda qatlamga depressiya qo'llaniladi, burg'ilash jarayonidagi va mahsuldor qatlamni ochishga ko'pikli va aeratsiyali tizimlardan samarali foydalanishga to'g'ri keladi hamda qatlamda murakkabliklarni sodir bo'lishiga yo'l qo'yilmaslik talab qilinadi. Mahsuldor qatlamni ochish xususiyatini va tugallashni takomillashtirish, fizik – kimyoviy, gaz – kislotali, termodinamik usullarni qo'llash, quduq tubi zonasini tabiiyligini saqlab qolish keng tadqiqot qilinadigan masaladir.

Anomal past qatlam bosim sharoitida mahsuldor qatlamni ochishda asosiy ko'rib chiqadigan dolzarb holatlariga qatlamdagi tabiiy kollektorlikni saqlab

qolish uchun burg'ilash va mahsuldor qatlamni ochishda qatlamning tarkibi va xossalari geologik sharoitdan kelib chiqib tanlash depressiya bosimining qiymatini qattiq rejimda o'rnatish, flyuidlarni paydo bo'lmasligiga yo'l qo'yimaslik, burg'ilash eritmasini ortiqcha yo'qotilishini chegaralash, arzon agentlardan, tabiiy gaz, azot, ichki yonuv dvigatelining gazidan samarali foydalanish, polimerli, ko'pikli, ikki fazali va uch fazali agentlardan foydalanish texnologiyasini ishlab chiqish va asoslash ishlarini olib borish belgilangan.

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BO'LAJAK MUHANDISLARDA MUHANDIS – KONSTRUKTORLIK KOMPETENTLIGINI RIVOJLANTIRISHDA QO'YILADIGAN MALAKA TALABLARI

Annotatsiya: ushbu maqolada bo'lajak muhandislarda muhandis – konstruktorlik kompetentligini rivojlantirishda qo'yiladigan malaka talablari haqida ma'lumotlar berilgan.

Kalit so'zlar: muhandis-konstruktorlik qobiliyati, kompetensiya, motivatsion komponentini.

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QUALIFICATION REQUIREMENTS FOR THE DEVELOPMENT OF ENGINEERING - CONSTRUCTION COMPETENCE IN FUTURE ENGINEERS

Annotation. This article provides information about the qualification requirements for developing engineering competence in future engineers.

Keywords: engineering ability, competence, motivational component.

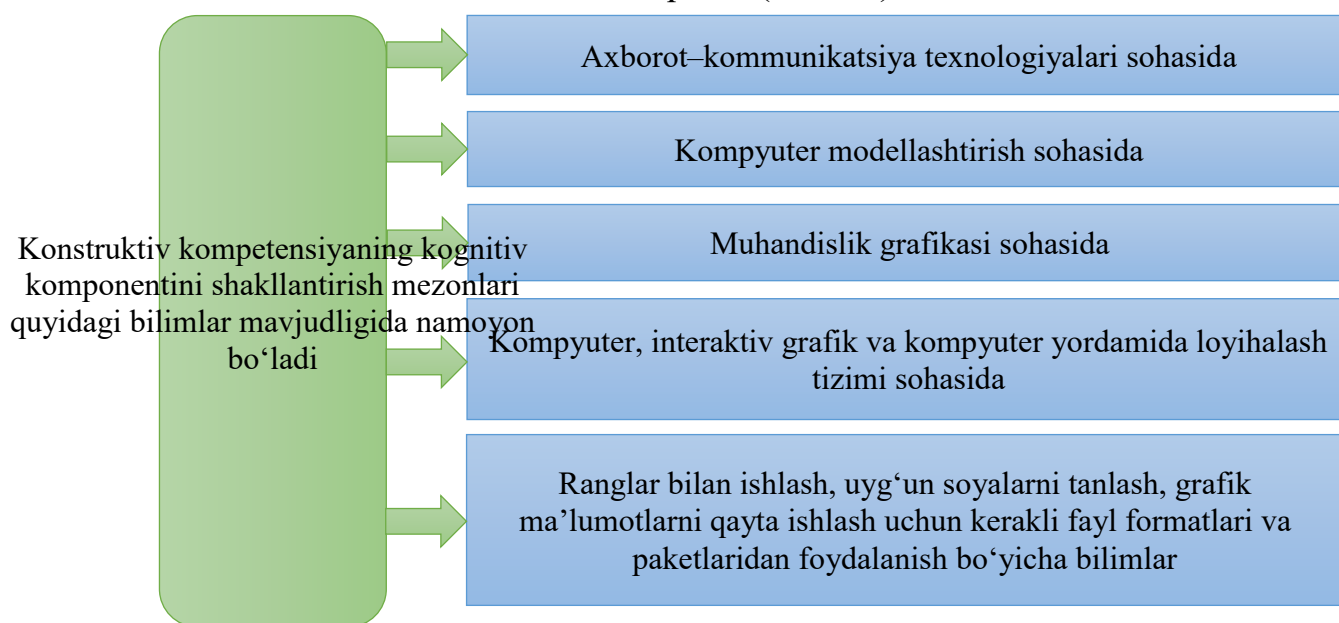
Hozirgi zamon ta'limining bosh va asosiy vazifasi talabalarning – intellektuallik darajasini, yaratuvchanligini, izlanuvchanligini, muhandis-konstruktorlik qobiliyatini rivojlantirish orqali yangi bilimlar olishga, yaratishga, ruhlantirishga qaratilmog'i lozim.

Talabalarda axborot–kommunikatsiya texnologiyalaridan foydalanib kreativ yondoshuv asosida muhandis – konstruktorlik kompetentligini rivojlantirish zamonaviy texnologiyalardan foydalanib konstruktorlik xujjatlarini yarata olishi bilan baholanadi.

Shuni ta'kidlash kerakki, kompetensiyaga asoslangan yondashuv sharoitida bilim shaxsiy xususiyatga ega. Mavjud bilimlarni o'zlashtirib, bo'lajak muhandis shaxsiy xususiyatlarini o'zining kasbiy mahoratining asosini tashkil etuvchi subyektiv qobiliyatiga o'zgartiradi.

Tadqiqot nuqtai nazaridan shuni ta'kidlaymizki, muhandis-konstruktorlik kompetensiya umumiy texnika fanlari bo'yicha bilimlarni rivojlantirishga asoslangan: "Kompyuterli loyihalash CAD, CAM, CAE", "Muhandislik va kompyuter grafikasi", "Avtomobil va traktorlarni avtomatlashtirilgan loyihalash tizimlari", "Avtomobil va traktorlarni loyihalash, ularning geoinformatsion tizimlari" va boshqalar.

Muhandis-konstruktorlik kompetensiyalarning kognitiv komponentining shakllanish mezonlarini ko'rib chiqamiz (1-rasm).



1-rasm. Talabalarda muhandis-konstruktorlik kompetensiyalarning kognitiv komponentini shakllantirish mezonlari

Bo'lajak muhandislarning kasbiy faoliyati zarur bo'lgan quyidagi bilimlarini asosiylari sifatida ajratib ko'rsatish mumkin: axborot tizimlarini tahlil qilish va loyihalash, avtomobilsozlik va traktorsozlikda foydalaniladigan loyihalash dasturlari, loyihalarni boshqarish, internet saytlari va kompyuter texnologiyalari va boshqalar.

Bunga shuni kiritish kerakki, bo'lajak muhandisning bilimlari, muhandis-konstruktorlik kompetensiyalarning barcha jihatlarini aks ettirib, ichki va tashqi tuzilishi, hajmi va mazmuni oldindan belgilangan tizimga aylanishi kerak.

Hozirgi vaqtda bo'lajak muhandis kompyuter grafikasini bilishi va ishlata olishi lozim. Kompyuter grafikasini bilish muhandislar uchun zarurdir, chunki u muhandislarni loyihalash va ishlab chiqish faoliyatining yetakchi texnologik komponenti hisoblanadi.

Компьютер графика информатиканын бир бо'лаги сифатида бо'лажак муhandиснинг технологик фаолиятини асоси еканлигини та'кидлаш жоиз. Бо'лажак муhandис компьютер графикасининг асосий тushunchalarини о'zlashtirishi керак: компьютер графикасини қо'llаш соhалари, компьютер графика тurlari ва бoshqalar.

Бо'лажак муhandиснинг муhandис-конструкторлик компетенсиялари фаолият компоненти компьютер технологияларидан фойдаланган holda муhandислик фаолияти соhasida оlingan bilimlar асосида professional muammolarni hal qilish qobiliyatини aks ettiradi. Zamonaviy pedagogik ilmiy manbalarda malakalar компетенсиянинг eng muhim komponentlari hisoblanadi. Agar taxmin qilinadigan bilim o'ziga xos xususiyat bo'lsa, unda bajarilgan harakat bilan bog'liq ko'nikmalar kognitiv асосида shakllanadi. Nazariy bilimlar асосида shakllangan ko'nikmalar bo'лажак муhandislarga kasbiy qobiliyat darajasini oshirishga imkon beradi.

Shunday qilib, muhandis-konstruktorlik kompetensiyalarni bo'лажак муhandis shaxsining (qobiliyat, motiv, bilim, ko'nikma) yaxlit xarakteristikasi sifatiда taqdim etilishini hisobga olib, компьютер технологияларидан фойдаланган holda kelajakda professional фаолиятни muvaffaqiyatli amalga oshirishni ta'minlaydi. Belgilangan kompetensiyaning quyidagi tarkibiy qismlari ajratiladi: motivatsion, kognitiv, faollik.

Muhandis-konstruktiv kompetensiyalarning motivatsion komponentiga quyidagilar kiradi: muhandislik фаолиятини amalga oshirish motivatsiyasi; фаолиятида axborot технологияларидан foydalanish motivatsiyasi; kasbiy bilim va ko'nikmalarning аhamiyatини tushunishga undash; yutuqlar uchun doimiy motivatsiya, professional muvaffaqiyatga ehtiyoj; o'z-o'zini anglashga bo'lgan aniq ehtiyoj va axborot технологияларидан foydalanish motivatsiyasi mavjudligi; ma'lum bir axborot технологияlari professional muhitining bir qismi sifatiда o'zini anglash motivlari.

Kognitiv komponent talabalarning bilim olish va uni qayta ishlash qobiliyati bilan bog'liq. Фаолият komponenti kasbiy ko'nikmalarni o'z ichiga oladi, ularning shakllanish darajasi bo'лажак муhandislarning kasbiy фаолиятида axborot технологияларидан foydalanishga amaliy tayyorligini aks ettiradi.

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KREATIVLIK MUHANDISLIK FAOLIYATINI RIVOJLANTIRISHNING ASOSIY OMILI SIFATIDA

Annotatsiya: ushbu maqolada kreativlik tushunchasi hamda muhandislik faoliyatini rivojlantirishning asosiy omili haqida ma'lumotlar keltirilgan.

Kalit so'zlar: kreativlik, muhandislik, pedagog, faoliyat, zamon, rivojlanish.

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CREATIVITY IS THE MAIN FACTOR OF ENGINEERING ACTIVITY DEVELOPMENT

Annotation. This article presents information about the concept of creativity as well as the main factor in the development of engineering activities.

Keywords: creativity, engineering, educator, activity, time, development.

Hozirgi paytda jamiyatning maktab oldiga qo'yayotgan talablari kun sayin ortib bormoqda va bu talablarga to'g'ri yondashgan holda ularni amalda bajarish o'qituvchining vazifasidir. Pedagogik faoliyat inson mehnatining eng murakkab sohalaridan biridir. Hozirgi jamiyatimizda o'qituvchi eng faol pozitsiyadagi shaxs sifatida zamonaviy bilimlarini egallab borishi, tinimsiz izlanuvchan va fidoiy bo'lishi lozim chunki, u kechiktirib bo'lmas jarayon shaxsni intellektual hamda ma'naviy qashshoqlikdan qutqarib qoladi. Hozirgi zamon standartlarini amalga tadbiq etish o'qituvchidan nafaqat yuqori malakani va doimiy kasbiy rivojlanishni, balki o'z ishiga ijodiy yondashishni talab etadi. O'qituvchining kreativligi o'z tajribasini qayta ko'rib chiqishi va yaxshilashi hammaga ma'lum narsalarni o'zgartira olishi va ijodiy foydalana olishi, sifat jihatdan yangiliklarni yaratishi juda katta ahamiyatga ega bo'lib bormoqda.

Kreativlik tushunchasi (lot, ing. "create"-yaratish, "creative" yaratuvchi, ijodkor) ingliz tilidan tarjima qilinganda ijod ma'nosini anglatadi.

Kreativlikni: ijodga intilish, hayotga ijodiy yondashish, o'ziga doimiy tanqidiy nazar solish va tahlil etish deyish mumkun. Hozirgi zamon psixologiya va pedagogika lug'atlariga asoslanib o'qituvchining kreativligi deb uning fikrlaridagi sezgilaridagi, muloqotdagi, alohida faoliyat turidagi, ijodiy yondashish, bilish darajasi deb ta'riflash mumkun. Kreativlik insonda mavjud ma'lumotlarni qayta ishlab chiqarish va ularni cheksiz yangi modelini yaratishga javob beradi.

"Kreativlik otasi" nomi bilan mashhur Pol Torrans to'rtta kreativlik konikmasini aniqlagan. Uning olib borgan tadqiqotlari shundan dalolat beradiki, mazkur kreativ ko'nikmalarni shakllantirish va ularni baholash mumkun:

1. Ravonlik. Ko'plab g'oyalarni o'ylab topish ko'nikmasi ko'p degan so'zga asoslanadi.

2. Moslashuvchanlik. Turli g'oyalarni o'ylab topish ko'nikmasi o'zgartirish degan so'zga asoslanadi.

3. O'ziga xoslik. Boshqalarga o'xshamagan, ajralib turuvchi g'oyani o'ylab topish ko'nikmasi noyob degan so'zga asoslanadi.

4. Yaratuvchanlik. G'oyalarni kengaytirish ko'nikmasi qo'shish degan so'zga asoslanadi.

Kreativlik darslarida pedagoglardan ajoyib g'oyalarni o'ylab topish (o'ziga xoslik); ularni kengaytirish (ishlab chiqish); yoki boshqa g'oyalar bilan solishtirish va ulardagi bog'liqlikni topish (moslashuvchanlik) talab etilganda, mazkur ko'nikmalar bir-biri bilan kesishadi.

Patti Drepeau tomonidan ham shaxsda kreativlik sifatlari ni muvaffaqiyatli rivojlantirishning to'rtta yo'li ko'rsatilgan:

- Kreativ fikirlash ko'nikmasini shakllantirish;
- Amaliy kreativ harakat ko'nikmalarini rivojlantirish
- Kreativ faoliyat jarayonlarni tashkil etish;
- Kreativ mahsulot (ishlanma) lardan foydalanish.

Xorijiy pedagoglar, xususan, Patti Drapeauning fikricha, bir shaxsning ayniqsa o'qituvchining kreativligi boshqalarni ijodiy jarayonini tashkil etishga ruhlantiradi.

"Kreativlik yuqumli xususiyatga egadir; kreativ bo'lish uchun kishi ko'proq kreativ insonlar bilan muloqot qilishi va hamisha izlanishda bo'lishi lozim. Har qanday ko'nikmani shakllantirish mumkun bo'lganiday, kreativ fikirlash qobiliyati yoki ko'nikmasini ham rivojlantirish mumkin. Bu bo'lajak pedagoglarga ham taalluqli bo'lib, kreativlik ustida ishlash bo'lajak pedagoglarga noodatiy tarzda fikirlashga yordam beradi. Biroq, bo'lajak pedagoglarni ruhlantirish va kreativ bo'lishga undash o'qituvchining qay darajada malakali ekanligiga bo'liq. Kreativlik bo'yicha olib borilgan tadqiqotlar va kreativlik ko'nikmasini shakllantirishda qo'llanma sifatida xizmat qiladi. Bu auditoriyadagi

muhit, bo‘lajak pedagoglarda fikirlash tarzining shakllanishi, o‘qituvchining yondashuv va strategiyalari elementlarini o‘z ichiga oladi”.

Bo‘lajak muhandislarda kreativlikni shakllantirish

Bo‘lajak muhandislarni...	<ul style="list-style-type: none"> - qiziqarli; - murakkab vazifalar; - aniq maqsad va vaqt bilan ta‘minlash
Bo‘lajak muhandislarga...	<ul style="list-style-type: none"> - kreativlik muvozanatsizlik xissini yuzaga keltirishini anglatish; - bezovtalik va qo‘rquv hissidan xalos bo‘lishga yordam berish; - kreativ fikirlash ko‘nikmalarini boshqa ko‘nikmalar bilan rivojlantirishga yordam berish; - “qutqarib” qolish emas, balki yo‘l yo‘riq ko‘rsatish
Bo‘lajak muhandislarni...	<ul style="list-style-type: none"> - suhbatlar orqali rag‘batlantirish; - konstruktiv sharhlar bilan ta‘minlash; - yangi ko‘rsatmalar bilan tanishtirib borish
Bo‘lajak muhandislar...	<ul style="list-style-type: none"> - o‘zlarida kreativlikning boshqa turlarini ham rivojlantira olishlari; - guruhda ishlay olishlari; - hissiy jihatdan erkin va ijobiy fikirlarga ega bo‘lishlari uchun poydevor bo‘ladigan muhitni yaratish

Haligacha ta‘lim tizimida ko‘plab yondashuv va metodlar ijodiy fikirlash emas, talqin va tahlilga, ya‘ni berilgan ma‘lumotni tushunib, to‘g‘ri yetkazishga, nari borsa, bir necha axborotni umumiyLashtirib, xulosa chiqara olishga yo‘naltirilgan.

Salmoqli amaliy ishlar olib borilayotganiga qaramay, ko‘pchilik o‘qituvchilar hali hanuz shaxs o‘zlarida hamda bo‘lajak pedagoglarda kreativlik sifatlarini qanday qilib samarali shakllantirish tajribasini o‘zlashtira olmayptilar.

Balki darslarni avvaldan o‘ylab, rejalashtirib o‘tilishi bo‘lajak pedagoglar uchun qiziq bo‘lmayotgandir, balki ta‘lim mazmunining muayyan qolipga solinganligi bo‘lajak pedagoglar uchun hech qanday stimuly bermayotgandir, rag‘bat bildirmayotgandir

Pedagog ijodiy faoliyatni tashkil etishda muammoli masalalarni yechish, muammoli vaziyatlarni tahlil qilish, shuningdek, pedagogik xarakterdagi ijod mahsulotlarini yaratishga alohida e‘tibor qaratish zarur.

O‘quv mashg‘ulotlarining avvaldan rejalashtirilishidan voz kechish, bo‘lajak pedagoglarda tanqidiy, kreativ tafakkurni shakllantirish va rivojlantirish, ularni ijodiy fikirlash, yangi g‘oyalarni o‘ylab topishga majbur qilish ta‘lim olishga bo‘lgan munosabatni o‘zgartirish, ularni yutuqlarga erishishga rag‘batlantirishda asosiy omil bo‘ladi. O‘qituvchining ijodkor va kreativ bo‘lishi yoki bo‘lmasligi emas, balki darslarni ijodkorlik, kreativlik ruhida tashkil etish, yangi g‘oyalarni ta‘lim jarayonida sinab ko‘rishga intilishi zarur.

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XORAZM VILOYATI TOPONIMLARINING TURLARI VA ULARNI HOSIL QILGAN TABIIY GEOGRAFIK TERMINLAR

Annotatsiya. Ushbu maqolada Xorazm viloyati toponimlarining vujudga kelishiga ko'ra turlari yoritilgan. Shu bilan birga maqolada Xorazm viloyatidagi ayrim oronimlar hamda gidronilarning manosi haqida ham so'z boradi.

Kalit so'zlar: toponimlar, terminlar, tabiiy geografiya, fitonimlar, zoonimlar, geomorfonimlar, gidronimlar, foydali qazilmalarni bildiruvchi toponimlar.

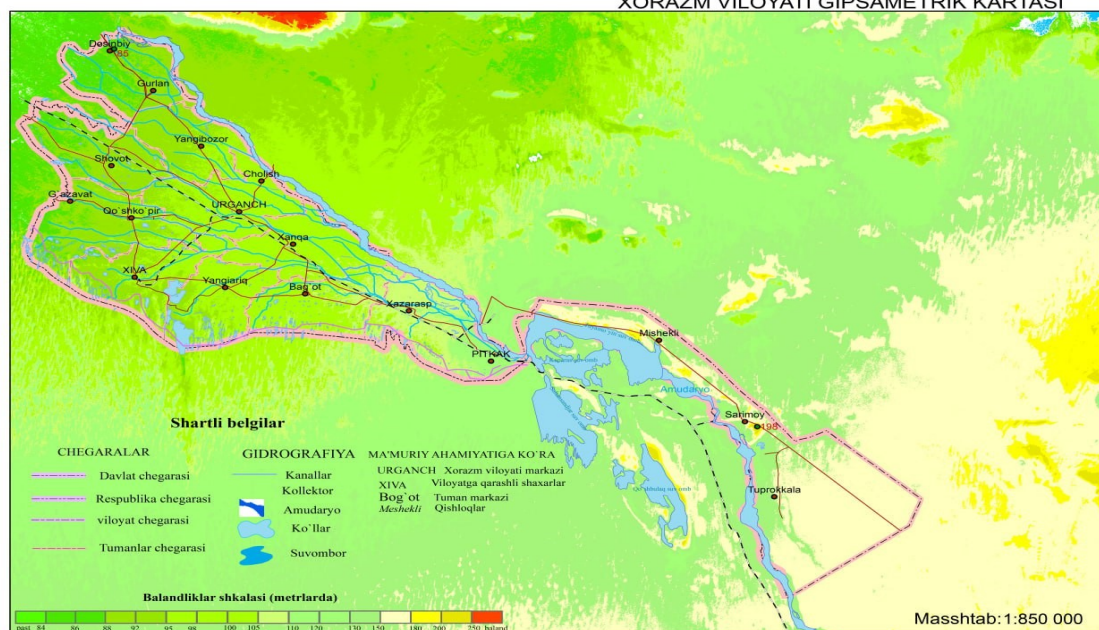
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TYPES OF NAMES OF THE KHORAZM REGION AND NATURAL GEOGRAPHICAL TERMS THAT FORM THEM

Abstract. This article discusses the types of toponyms of the Khorezm region by origin. At the same time, the article also mentions some toponyms and hydronyms of the Khorezm region.

Keywords: toponyms, terms, physical geography, phytonyms, zoonyms, geomorphonyms, hydronyms, toponyms denoting minerals.

Kirish. Xorazm viloyati O'zbekistonning shimoliy-g'arbiy qismidagi qadimiy Xorazm vohasining bir qismini egallaydi. Umumiy yer maydoni 6,1 ming km² ni tashkil etib, viloyat maydonning 74% Amudaryoning chap qirg'og'ida (4,5 ming km²), o'ng qirg'oqda 26% (1.6 ming km²) qismi joylashgan. Viloyat respublika umumiy maydonining 1,4 % tashkil etadi. Viloyatning geografik o'rnini 40° 35'-42° 00' shimoliy kenglik va 60° 03'-62° 28' sharqiy uzoqlik oralig'ida, Turon pasttekisligida joylashgan. Viloyatning eng shimoliy chekka nuqtasi Gurlan tumani hududidagi Olchin qishlog'i yaqinidagi Nuranbobo to'qayiga to'g'ri kelsa, janubiy chekka nuqtasi esa Tuproqal'adan bir muncha janubda joylashgan. Viloyat shimoli-g'arbdan janubi-sharqqa 280 km ga cho'zilgan. Viloyatning Urganch shahri joylashgan kenglikdagi g'arbdan sharqqa uzunligi 80 km atrofida. Viloyatning relyefi janubiy g'arbdan (85m) shimoliy sharqqa (198m) tomon ko'tarilib boradi.



1-rasm. Xorazm viloyatining rel'yef kartasi (SRTM malumotlari asosida muallif tamonidan ishlangan)

Joyning geografik o'rniga bog'liq holatda shaklangan nomlar.

Yer yuzasi relyefi, tuzilishi bilan bog'liq nomlar geomorfologik topoterminlar yordamida yuzaga keladi. Yer yuzasining turli shakllari joy nomlarining shakllanishiga sababchi bo'ladi. "Vaqt o'tishi bilan relyef o'zgarishi mumkin, lekin shu relyefni bildiruvchi nom qolaveradi." [1-13 b]

Viloyat toponimlari orasida *-obod, -qal'a* topoformatini ko'p uchratishimiz mumkin: Bekobod, Shohobod, G'ozobod, Bekobod, Yangiobod, Paxtaobod, Chinobod, Cho'lobod, Xayrobod, Xonobod, Qulobod, Mehnatobod, Ashaqqal'a, Bo'zqal'a, Doshqal'a, Ko'naqal'a, Chig'atoyqal'a, Shag'alqal'a, Sho'rqal'a, Yuqoriqal'a, Qoramanqal'a, Katqal'a, Ichanqal'a, Dishanqal'a va boshqalar.

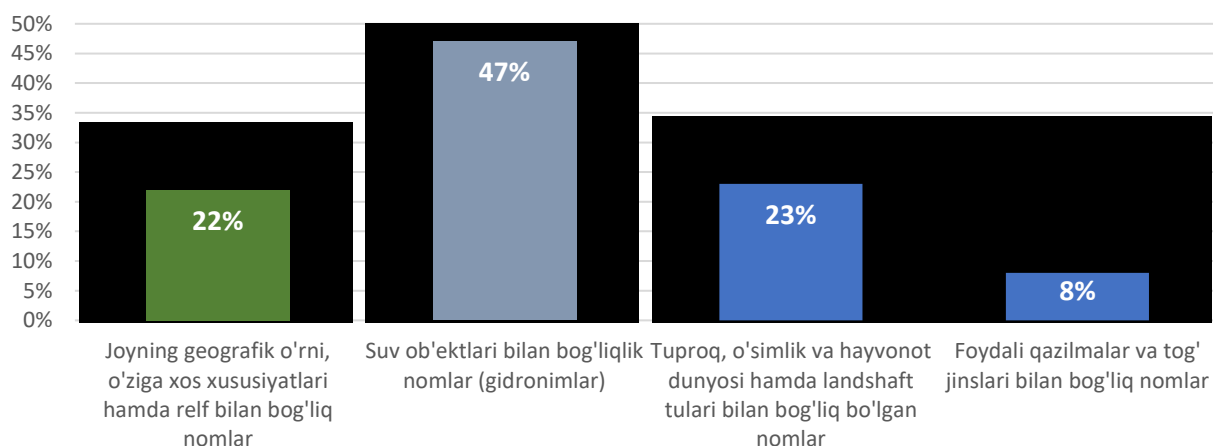
Viloyat yer yuzasi tuzilishining asosiy qismi tekisliklardan iborat bo'lganligi uchun oronimlar nisbatan kam uchraydi. Xorazm viloyatida oronimik indikatorlar qatoriga "jar", "tepa", "qum", "qir", "to'bjak", tumpak(dumpak)(kichik tepa) kabi so'zlarni kiritish mumkin. Shuningdek viloyatda o'y (oy) so'zi bilan chuqurlik va pastlik joylar ifodalanadi, hamda mahalliy shevalarida bu terminning o'ydik, o'y-handaq, chuqalaq kabi turlari ham uchraydi. Ba'zi geomorfologik topoterminlar yordamida yasalgan toponimlarni keltirib o'tamiz: "jar" topotermini yordamida: Qiziljar, Echkijarko'l, Echkijar, Jarqishloq, Jarchilar va boshqalar; "tepa" termini yordamida: Hazorasp tumanidagi Qumtepa, Qoratepa, Oqtepa, Mingtepa, Oltintepa, Ko'ktepa(Go'ktepa), Qoraultepa va boshqalar; "qum" termini yordamida: Oltinqum, Yuqoriqum, O'rtaqum, Qumbadoq, Oqqum, Amirqum, Qumrabot, Vopqum, Qumyop, Qumoloqli, Oshoqqum, Chuqurqum, Qumonchilar va boshqalar; "qir" termini yordamida: Chingizniqiri, Ulli yoki Kichchi chingizni qiri, To'vshanqir va boshqalar; "to'ba" yoki "dapa" termini yordamida:

Qo'shato'ba, Ullito'ba, Aqto'ba, To'bajiq, shuningdek "rosh", "chel" va boshqa shu kabi relyefning kichik ko'rinishiga oid mikroterminlar yordamida hosil bo'lgan joy nomlarni ham uchratish mumkin.

Viloyatning Xazorasp va Bog'ot tumanlarida Sharqiy Sho'rko'l, Xiva tumanida esa Shimoliy Arbuzko'l, Qo'shko'pir tumanidagi Shimoliy Ko'rpko'l kabilar biror geografik obyektga nisbatan joylashgan o'rnini bildiradi. Urganch va Xonqa tumanlaridagi Chuqurko'l toponomi atrofdagi boshqa ko'llarga nisbatan chuqur bo'lgani bois shunday nomlangan. Xazorasp tumanidagi Chap sohil magistral kanali, Yangibozor tumanidagi O'ng sohil va Qo'shko'pir tumanidagi O'ng tarmoq kanallari ham obyektning joylashgan o'rnini bildiradi.

Bundan tashqari, professor Z.Do'simov Xorazm viloyati toponimlarini tarkibidagi belgi-xususiyati, tomon, o'rin va hajmi bildiruvchi indikatorlar mavjud ekanligini aytib o'tadi. Belgi-xususiyatni bildiruvchi so'zlarga "avat"(obod) termini orqali Gazavat(Gozobod), Shovot, Xiziravat, Amiravat, Qulavat nomlar shakllangan; tomonni bildiruvchi nomlarga, Xorazmda ufq tomonlari mahalliy shevadagi so'zlar orqali ifoda etiladi. Misol uchun *shimol* tomon *arqa-orqa* so'zi bilan(Orqaovul, Orqasolma, Orqaatiz, Arqali, Arqajam, Arqa), *janub esa qibla* so'zi orqali (Qiblaqayir, Qiblaovil, Qibla Tozabog'(Xiva shahri), hamda *g'arb va sharq* tomonlarni ifodalash uchun esa *kunchiqar va kunbotar* so'zlari ishlatiladi.

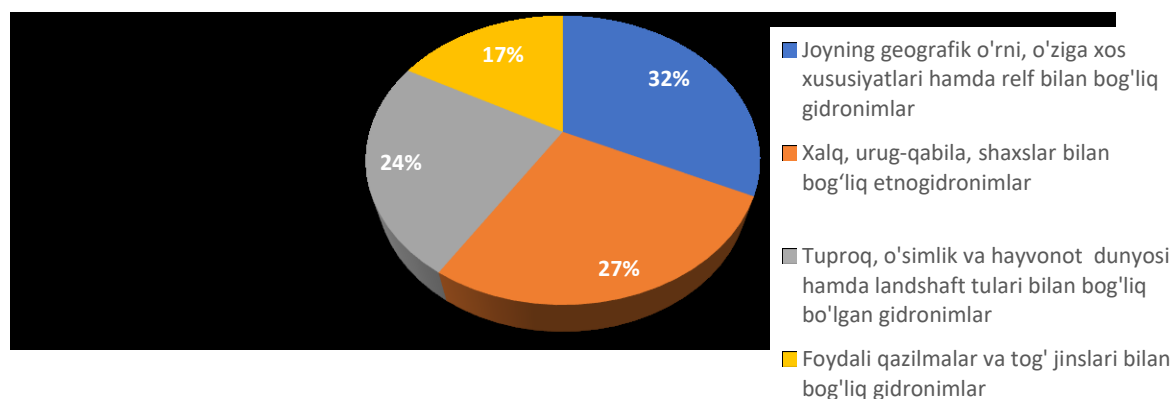
Viloyatning relyefi janubiy g'arbdan shimoliy sharqqa tomon ko'tarilib borishini mahalliy aholi balan(baland) va pas(past) so'zlarini, quyoshning chiqishi va botishi bilan bog'lab, yuqori yoki baland-"kun chiqishi, ya'ni-sharq", past yoki to'man kunbotish, ya'ni-g'arb" tomonini ifoda etishi va yoplarda suvning oqishi ma'nosida ham keng qo'llaydilar. Shuning uchun viloyatda joyning o'rinni bildiruvchi nomlarga Balandovil, Balandko'pir, Passalma(Pastsolma), Tomanovil, Yuqoriovil kabilarni, hajmi bildiruvchi Ulliqala (Kattaqal'a), Ulliatiz (Kattadala), Ulli (Katta), Kichchiko'l (Kichkko'l), Kichchiqala (Kichikqal'a), Kichchiatiz (Kichikdala) kabi nomlarni ham uchratish mumkin. Xorazmda quyi yoxud past sozlari *ashaq* yoki *oyoq* shaklida uchratamiz. Ашакқалъа, Ойоққишлоқ, Ойоқ(Qo'shko'pir tumani), O'yilma(Gurlan tumani) va boshqa shu kabi nomlarni ham uchratamiz. Tumaloq ko'l, Uzunkol, Qiyshiqyap kabi gidronimlar obyektning shakli va tuzilishiga ko'ra nomlangan.[3, 75-b]. Xorazm viloyatining tabiiy turlari bilan bog'liqlik ba'zi toponimlarini quyidagicha tasvirlashimiz mumkin.



Xorazm viloyatining tabiiy turlari bilan bog'liqlik toponimlari 1-rasm
(Diagramma muallif tamonidan tuzilgan)

Suv obyektlari bilan bog'liq nomlar (Gidronimlar)

Xorazm viloyati Amudaryoning quyi qismida joylashganligi sababli gidronimlar nisbatan ko'proqni tashkil etadi. Viloyatda uchraydigan gidronimlarni quyidagi xususiyatlariga qarab guruhlariga ajratishimiz mumkin:

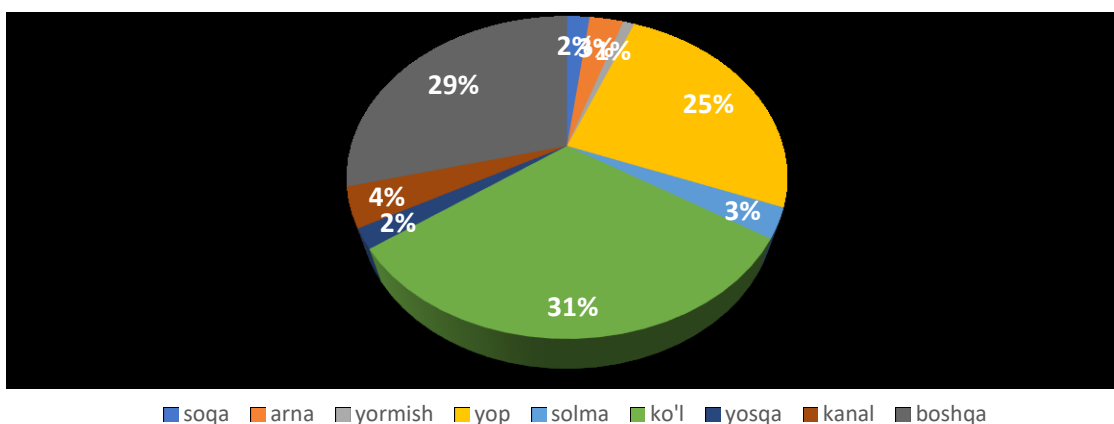


Xorazm viloyatidagi gidronimlarning xususiyatiga qarab guruhlari 2-rasm
(Diagramma muallif tamonidan tuzilgan)

Shu bilan birga Xorazm viloyati toponimlarini o'rganish jarayonida faqat shu viloyatda uchradigan ba'zi geografik terminlarni uchratishimiz mumkin. Xorazm viloyati gidronimlari tarkibida "ko'l" topotermini yordamida hosil bo'lgan joy nomlari ko'p: Achchiqko'l, Xalpako'l, Sho'rko'l, Ashshaqko'l, Chuqurko'l (Urganch tumani), Aqdayko'l, Boriyataqko'l, Obilko'l, Ulug'sho'rko'l (Yangiariq tumani), Gavkko'l, Dinakko'l, Eshonko'l (Xiva tumani), Dovutko'l, Sho'rko'l, Toshliko'l, Tuzloqko'l (Qo'shko'pir tumani), Jarmishko'l (Xiva va Yangiariq tumanlari), Oqko'l (Xiva, Shovot, Yangiariq tumanlari), Suzaliko'l (Xiva tumani), Tuzko'l, Uzunko'l (Xazorasp tumani) va boshqalar.

Akademik V.V.Bartold arna, yap (yop) soʻzlarini xorazmcha deb hisoblagan va “oʻta, obdon yaxshi” maʼnosidagi qadimgi *arta (arda)* sifatida Xorazmning geografik nomenklaturasida tez-tez uchrab turadi deb yozgan [2,122-b]. Z.Doʻsimovning fikricha, *arna* soʻzi *ar*-eroniy tillarda suv oʻzagi orqali yasalgan [3,69-b]. Shuningdek koʻpgina gidronomik terminlarni jumladan: Amudaryodan suv *saqa* orqali *arnalarga* va undan *yoplarga* undan *badoq* deb atalgan oʻrtacha *ariqlar* orqali ajralib chiqishida uchratishimiz mumkin. Xorazmdagi baʼzi mahalliy shevalarda koʻpincha *badoqni* "solma" termini bilan ham yuritadilar. *Solma* Xorazmning sugʻorish tarmoqlari tizimida eng kichik suv yoʻli hisoblanadi. Solma ikki xildir: *oyoq solma* va *chigir solma*. Umuman Xorazmda oʻzi oqar tarmoq “oyoqsu”, yoki suv oyogʻi, etagiga yaʼni suv solmaning nishabligidan kelib chiqib oʻzi oqadigan degan maʼnoda. Chigʻir solma faqat chigʻir yordami bilan vjudga keltirilgan. Hozirda Chigʻirning nomi qoldi xolos, oʻrnida elektr va yoqilgʻi evaziga ishlaydigan nasoʻslar yordamida suv chiqariladi va nasoʻs solma iborasi ishlatiladi.

Viloyat toponimlari tarkibida gidronimlar nisbatan koʻp uchraydi (1:200 000 masshtabli xaritasida *saqa, arna, yormish, yop, solma, koʻl va yosqa* terminlarning umumiy soni 212 dan oshadi). Bu nomlarning 31 % koʻl, 25 % yop, 4% kanal, 3 % arna, 3% solma topotermini yordamida hosil boʻlgan.



Xorazm viloyatida shakillangan gidronimlarni hosil qilgan terminlarning ulishi 3-rasm
(Diagramma muallif tamonidan tuzilgan)

Viloyat hududi oʻsimlik turlari boʻyicha juda kambagʻal hisoblanadi. Shunday boʻlsa ham viloyatda asosan, aholi hayoti uchun zarur boʻlgan, umuman ishlab chiqarish, hayot kechirish jarayoni bilan aloqador oʻsimliklar turlarini va ular bilan bogʻliq nomlarni uchratishimiz mumkin. Daraxt turlari bilan atalgan nomlarga Gujum yoki Narvon, Erikbogʻ (Oʻrikbogʻ), Yakkatut, Tutbagʻi(Tutbogʻi), Goʻjatal (Goʻjatol), Qoratal(Qoratol), Beshgujum, Aqterak (Oqdarak), Koʻkterak (Goʻkdarak), Goʻja, Qiyshiqjiyda, Aqtut (Oqtut), Danatut; ekin turlari bilan bogʻliq fitonimlarga Arpabadiyan, Gʻavusher (joʻxori ekiladigan maydon), Yongʻirchqaatiz (beda ekiladigan maydon), Kandirli (kanop),

Mashtaxta (Moshtaxta) (mosh ekilgan maydon) va hako زالarni aytish mumkin. Amudaryo daryosi va viloyatdagi mavjud ko'llar atrofida yovvoyi o'simliklar bilan bo'g'liq nomlar vujudga kelgan. [3,52-b]

Viloyatda o'simlik bilan bo'g'liq nomlarni quyidagi guruhga ajratamiz:1-

жадвал

Manzarali daraxt	Mevali daraxt	Butalar	O't o'simliklar	Poliz va sabzavotlar
Beshgujum	Erik(O'rik)bog'	Qoratal	Arpabadiyan	Qovun
Narvon(Gujum)	Angarik	Sazaq(Saksavul)	G'avusher	Gurvak
Qaramon	Anjirbog'	Yulg'in	Yong'irchqa	Bo'rikalla
Darak(terak)	Aq(Oq) tut	Janggal	Aqvash	Xarmiz(Tarvuz)
Oqdarak(terak)	Danatut		Aqjugan	Gashiratiz
Go'k(ko'k) terak	Qoratut		Kandirli	Zamchaqariq (handalak)
Baqaterak	Shol(Shom) tut		Mashtaxta	
Yakkatut				

Amudaryo viloyatning shimoliy va shimoli-sharqiy tomonidan oqib o'tadi va buyerda o'ziga xos bolgan tabiat kompleksi-to'g'aylarni(to'qay) vujudga keltirgan. Xorazmda to'qayni to'g'ay deyishadi, Z.Do'simov fikriga ko'ra, to'g'ay asli turkiycha termin bo'lib, o'rmon, o'tli dala, daryo bo'yidagi o'rmon, o'tloq ma'nolariga ega [3,64-b]. Viloyat fitotoponimlari tarkibida turli yovvoyi o'simliklar, daraxtlar, poliz ekinlari nomlarini uchratish mumkin. Ularga Arpabodiyon, Kandirli, Mashtaxta, Yilg'inli, Qamishliq, va boshqa shu kabilar misol bo'ladi.[4, 211-b]

Xulosa. Yuqoridagi ma'lumotlardan shuni bilish mumkinki, Xorazm viloyati toponimlarining turlari orasida tabiiy sharoitni o'zida aks etuvchi toponimlar ko'pchilikni tashkil etadi. Viloyatda juda ko'plab toponimlar faqat shu hududa uchraydigan va o'ziga xos bo'lgan "saqa", "arna", "yormish", "yop", "solma", "ko'l", "yosqa", "jar", "tepa", "qum", "qir", "atiz" va boshqa topoterminlar asosida shakllangan.

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SPECIFIC CHARACTERISTICS OF SOCIO-ECONOMIC DEVELOPMENT OF PAYARIK DISTRICT

Annotation. This article describes the natural conditions of Payarik district, its territorial division, population, demographic situation, economic sectors and their role at the regional scale.

Key words: Natural conditions, territorial division, population, land fund, agriculture, industry.

Payarik district - Uzbekistan District in the Samarkand region of the Republic of Kazakhstan. Established on September 29, 1926 done (center Bucket village was). 1953 Payariq of the district one from the part Narimonov district Created. Narimonov in 1959 district Payarik district added (center Narimonov village). Payariq in 1991 from the district Bucket district separate released [1]. Again in 2001 Payarik district with Bucket districts combined, they basically Payarik district organize done (center Payariq sh.). Payarik district at an average height of 610 m. Shim. – from the west of the region Koshrabot, from the west Ishtikhan, from the south Akdarya and Jomboy districts, from the north Jizzakh of the region Farish, from the northeast Gallaorol districts with borderline The area is 1.29 thousand km². The population is 182.9 thousand person (2003). There are 2 cities (Payariq, Chelak), 6 villages in the district citizens There is a collection (Guliston, Kokdala, Koltosin, Sanoat, Choshtepa, Karasuv). District center - Payariq city.

The population is mainly Uzbeks, as well as representatives of Turkmen, Kazakh, Tajik, Russian, Tatar and other nationalities. The average population density is 142 people per 1 km². Economy. Along with cotton growing, grain growing and animal husbandry are important industries in the district. In the district " Baltimore " Russian-American joint in the enterprise canned food, juice, tomato products work is issued. Construction food industry enterprises there is. Cotton cleaning, brick have factories. Small, private enterprises activity shows. In the district company, farmer farms there is. Village in the farm used to the lands cotton, grain, potatoes, vegetables and fodder, fodder crops is planted. Orchard, vineyard and traps have. Today in the day Payarik in the district total population 251,808 people, of which 129,865 (0-30 years old) are 51% young people category (of which 31,595 people aged 0-6 years, 49,022 people aged 7-17 years, 49,248 people aged 18-30 years) organize does In the district there are 49,248 people (18-30 years old). Young people between letter works take went and 45,442 (92%) young people between questionnaire questionnaires filled in.

3,902 of the youth in this category were included in the “Youth Register” based on their problems and suggestions.

In Payariq district, the state of implementation of the tasks set for ensuring employment of the population during 2017-2022 and 2023 was analyzed. In particular, 2017-2022 work resources to the balance according to in the district unemployment level as follows was Including:

- In 2017, the economically active population was 98.9 thousand, of which 91.0 thousand were employed and 7.0 thousand were unemployed, and the unemployment rate was 7.1% (regional indicator 6.5%)

- In 2018, the economically active population was 103.4 thousand, of which 93.3 thousand were employed and 10.0 thousand were unemployed, and the unemployment rate was 9.7% (provincial indicator 9.7%)

- In 2019, the economically active population was 103.8 thousand, of which 94.2 thousand were employed and 9.6 thousand were unemployed, and the unemployment rate was 9.3% (provincial indicator 9.3%)

- In 2020, the economically active population is 99.6 thousand, of which 88.5 thousand are employed and 11.1 thousand are unemployed, and the unemployment rate is 11.2% (provincial indicator 11.0%)

- In 2021, the economically active population is 97.5 thousand, of which 87.6 thousand are employed and 9.9 thousand are unemployed in need of employment, and the unemployment rate is 10.1%.

Also, according to the balance of labor resources of January-December 2022, the average permanent population of the district is 263,629 people, of which 131,321 are labor resources, 97,890 are economically active, and 88,352 are employed (including, 35,000 people were employed in the official sector, 37,796 people were employed in the informal sector, and 15,556 people were displaced). Based on this, there were 9,538 unemployed people in need of employment, and the unemployment rate was 9.7%.

Payarik As of 2023 (initial), the district produced 1866.1 billion sum. It is within the districts of Samarkand region in terms of the volume of its products Koshrobot district (546.8 billion sum) Kattakorgan district (1503.1 billion sum), Nurabad district (1316.0 billion Soum) districts previous ranks first [4].

2023 year January - September in Samarkand region work release industry in the composition Payarik of the district share, in %.

Table 1
Payariq in the industry of Samarkand region district's share (percentage).

T/R	Products	Samarkand region	Payarik district
1	Work emits industry	100	2.3
2	Food products work release	100	1.8
3	Drinks work release	100	0.0
4	Tobacco products work release	100	0.0
5	Textiles products work release	100	7.0
6	Clothes work release	100	8.9
7	Skin and to him belongs to products work release	100	0.1

8	Wood and pokak items (from furniture except), pohl and knitting for of materials items work release	100	0.6
9	Paper and paper products work release	100	0.0
10	Written materials publication to do and reflection carry on	100	0.0
11	Cox and oil again work products work release	100	0.0
12	Chemistry products work release	100	0.0
13	Main pharmaceuticals products and preparations work release	100	0.0
14	Rubber and plastic items work release	100	0.0
15	Other mirror mineral products work release	100	0.4
16	Metallurgy industry	100	0.0
17	Car and of equipment except ready metal items work release	100	0.3
18	Computers, electronics and optical products work release	100	0.0
19	electricity equipment work release	100	0.0
20	Other into categories not included car and equipment work release	100	0.4
21	Motor transport vehicles, trailers and half trailers work release	100	0.0
22	Other transport equipment work release	100	0.0
23	Furniture work release	100	15.5
24	Other ready items work release	100	1.6
25	Car and equipment repair and installation	100	0.0

This is it table Samarkand region statistics department information based on prepared.

Payarik in the district village of the farm all networks developed Cotton is the leader network. There are 18 companies and 456 farmers in the district farm there is. In district farms cattle, sheep and a goat is fed Farms account for the majority of agricultural products. 2021 harvest for in the province a total of 17 thousand 928 hectares on the field potatoes planted Therefore, 8 thousand 122 hectares main area, 9 thousand 806 hectares from grain free to the field repeated plant as will be placed. Samarkand region Payarik in the district is located a total of 66.7 ha of land 8 industries in the area zones, of which 6 are small industry zone, 1 free economic zone and 1 youth industry and entrepreneurship zone organize done.

In conclusion, it should be noted that the territory of Payariq district is small, but the terrain is made up of mountains and plains. This, in turn, has different populations and locations. It has led to uneven distribution of population in the region. The district is one of the leaders in the region in terms of the volume of industrial products. In agriculture, mainly grain crops and cotton are cultivated.

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OPPORTUNITIES AND CHALLENGES OF CREATING A COMPREHENSIVE SOCIAL SECURITY SYSTEM IN UZBEKISTAN

Abstract. The purpose of this research study is to examine the prospects and difficulties associated with creating a thorough social security system in Uzbekistan. It looks at how the nation's social security programs are currently doing, outlines the main challenges to creating an integrated system, and points out areas that could use improvement. The significance of a thorough social security system in lowering poverty, addressing vulnerabilities, and fostering inclusive growth is also covered in this study. This research study offers insights and recommendations for policymakers and stakeholders in Uzbekistan's social security sector by assessing the gaps that currently exist and suggesting potential remedies.

Introduction:

In order to combat poverty, encourage equitable economic growth, and alleviate social vulnerabilities, social security is essential. The creation of a robust and efficient social security system is essential as Uzbekistan proceeds with its economic and social changes. The objective of this study is to investigate the obstacles and prospects linked to the development of a strong social security framework in Uzbekistan, considering the distinct socio-economic circumstances of the nation.

Uzbekistan's social protection programs—which include social assistance, contributory social insurance, labor market initiatives, and social care services—have improved significantly during the last ten years. These initiatives have improved the general well-being of citizens and reduced poverty by giving vulnerable populations vital support. But a number of issues, such as disarray, insufficient funding, and insufficient coordination, impede the efficacy and long-term viability of the current social security system.

One key challenge is the absence of a centralized entity responsible for coordinating and integrating social security interventions, monitoring and evaluation, data analysis, and policy formulation. Currently, different ministries and agencies oversee specific programs, leading to varying interpretations and inconsistent implementation across the system. This lack of coordination poses obstacles to program evaluation, data integration, and the formulation of holistic social security policies.

Another challenge lies in the financial sustainability of the social security system. The pension system, in particular, has faced significant shocks, such as

the tax reform in 2019, which resulted in a reduction in funding sources and a decline in revenues for the Pension Fund. This has raised concerns about the adequacy and long-term viability of pension benefits in relation to the growth of the working population's incomes.

Notwithstanding these obstacles, Uzbekistan offers noteworthy prospects for the advancement of an all-encompassing social security framework. With 71% of the population under 40, the nation's youthful population emphasizes the possibility of focused measures to reduce unemployment and improve labor market results. Reducing informality, increasing productivity, and generating new work possibilities can be achieved through the extension of active labor market programs and the effective use of available resources.

In addition, recent projects like the Labor Market Information System and the Single Registry show Uzbekistan's dedication to boosting the general efficacy of social protection measures, streamlining program management, and expanding data gathering. These initiatives seek to make social security funding more clearly defined, to make data integration easier, and to make evidence-based policy decisions possible.

In light of these challenges and opportunities, this research paper will delve into the various dimensions of developing a comprehensive social security system in Uzbekistan. It will analyze the current state of social protection programs, examine the financial sustainability of the system, explore best practices from international experiences, and propose recommendations for policy reforms. By doing so, this study aims to contribute to the ongoing discourse on strengthening social security in Uzbekistan and promoting inclusive and sustainable development for all its citizens.

Results and discussion

Comprehensive analyses of household survey data, impact evaluations, and performance indicators within the social protection (SP) system can be carried out with the use of centralized data collection. These studies allow us to address critical concerns that administrative data alone would not be able to answer, such as figuring out which demographic groups are covered by certain programs or finding potential exclusions from the system.

Indicators from household surveys are essential for assessing whether the program design successfully reaches the targeted target population throughout the entire nation. Understanding the beneficiaries' and benefits' distribution across the welfare spectrum is aided by incidence indicators. Assessing the impacts of SP programs on poverty and inequality provides insights into the overall effectiveness of different programs, as well as the combined effects of multiple programs.

Periodic impact evaluations must also be conducted in order to supplement the study of household survey indicators. Even though these assessments might not happen often, they provide insightful information about particular results attained by SP initiatives, like shifts in the labor supply or levels of consumption.

Tracking metrics including coverage, beneficiary incidence, benefit amounts, and the program's impact on inequality and poverty is necessary to monitor the success of the SP program. These metrics ought to offer a comprehensive picture of the SP system as a whole in addition to concentrating on specific applications. For example, in Uzbekistan, in addition to social assistance cash transfer programs, it is critical to keep an eye on the scope and effectiveness of the public works program, which acts as a major safety net.

By systematically monitoring these indicators derived from household surveys, a more comprehensive understanding of SP program performance can be achieved, contributing to the continuous improvement of the SP system as a whole.

Table-1

**Uzbekistan: Trends in Spending on Social Protection, Percent of GDP,
2016–21**

Spending	2016	2017	2018	2019	2020	2021
Contributory pensions	5.90	5.40	5.00	5.10	5.30	5.00
Social safety nets	0.87	0.83	0.92	0.96	1.30	1.40
Social care services	0.02	0.03	0.03	0.04	0.04	0.05
Labor market programs	0.00	0.00	0.01	0.01	0.05	0.06
Social protection, total	6.79	6.26	5.97	6.11	6.70	6.50

Source: World Bank staff calculations using MoF, MELR, and Extra-Budgetary Pension Fund administrative data on SP program expenditures using ASPIRE WB methodology.

Social protection programs play a vital role in reducing poverty and addressing vulnerability, encompassing various components such as contributory pensions, social safety nets, social care services, and labor market programs. In Uzbekistan, where the majority of the population is relatively young (with 71 percent below the age of 40), unemployment stands out as a significant concern. Active labor market programs serve as a crucial mechanism for reducing labor market informality, increasing productivity, integrating individuals into the evolving labor market, and creating new job opportunities.

But denying some people access to social assistance reduces the efficacy of the social security program as a whole. Prior to the epidemic, Uzbekistan spent comparatively less on active labor market activities and social aid when compared to other countries. Conversely, in comparison with comparable nations, spending for public works initiatives was increased. The current problem is to ensure sustainable funding for social assistance and to further expand active labor market activities, even if the pandemic led to a major growth of social protection funds. To achieve this, it is necessary to make sure that spending is well-targeted and that social safety programs are operating effectively.

In 2021, consolidated spending on social protection in Uzbekistan is estimated to be around 5 percent of GDP, with contributory pensions accounting for approximately 75 percent of total social protection expenditures.

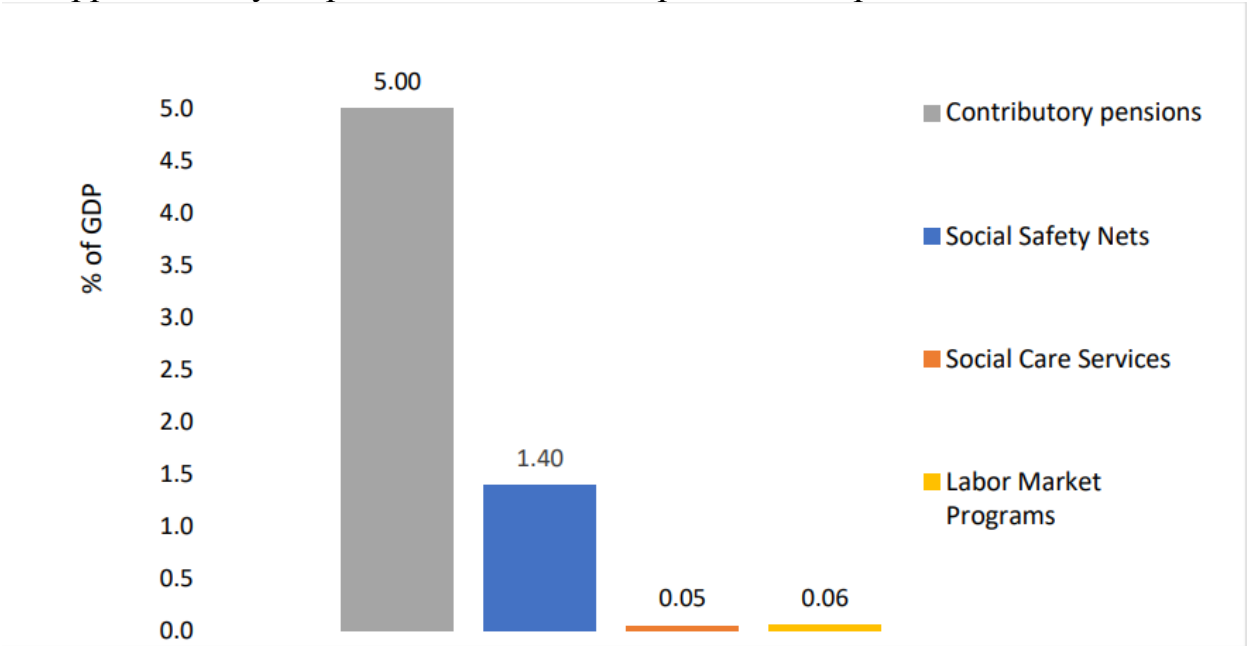


Figure-1. Spending on Social Protection in Uzbekistan, 2021

Source: World Bank staff calculations based on the MoF, MELR, and Extra-Budgetary Pension Fund administrative data on SP program expenditures using ASPIRE WB methodology.

While spending on social assistance remained relatively stable between 2016 and 2019, there has been a decline in spending on contributory pensions. Both the share of GDP and the proportion of total social protection spending allocated to contributory pensions have decreased in recent years. In 2019, social safety nets accounted for approximately 0.97 percent of GDP, social care services for 0.04 percent of GDP, and labor market programs for 0.013 percent of GDP.

Spending on social assistance experienced a significant decline from 1.9 percent of GDP in 2012 but has since maintained relative stability, fluctuating around 0.95 percent of GDP, except for a decrease to 0.86 percent of GDP in 2017¹³. Spending on social care services has shown an increase, rising from 0.02 percent of GDP in 2016 to a stable level of 0.04 percent of GDP from 2017 to 2019. Labor market program spending comprises both active (0.01 percent of GDP in 2019)¹⁴ and passive (unemployment benefits at 0.003 percent of GDP in 2019) components. Active labor market programs are relatively new in Uzbekistan, and prior to 2018, overall spending on these programs was negligible.

¹³ “An Assessment of the Social Protection System in Uzbekistan” (2020), a joint report by ILO, UNICEF, and the World Bank, based on the Core Diagnostic Instrument (CODI).

¹⁴ World Bank staff estimates using administrative data from the MoF of Uzbekistan

Conclusion

In conclusion, the development of a comprehensive social security system in Uzbekistan presents both challenges and opportunities. While the country boasts a range of social protection programs, including social assistance, contributory pensions, labor market programs, and social care services, there are significant issues related to fragmentation and coordination. The absence of a designated entity responsible for integrating interventions, monitoring and evaluation, data analysis, and centralized policy formulation hinders the effectiveness and efficiency of the system.

Efforts have been made to address these challenges, such as the implementation of the Single Registry and the development of the Labor Market Information System. These initiatives aim to streamline program management, improve data collection and analysis, and enhance coordination between different institutions. However, there is still a need for formal definitions and a national strategy for social protection to ensure consistent interpretation and implementation across agencies.

The pension system in Uzbekistan has also faced challenges, particularly due to tax reform and a reduction in funding sources. This has resulted in a decline in Pension Fund revenues as a percentage of GDP, highlighting the need for sustainable financing mechanisms. Balancing benefit adequacy and fiscal sustainability is crucial to avoid negative social and political consequences.

The importance of centralized data collection and analysis cannot be overstated. By systematically analyzing performance indicators, household survey data, and impact evaluations, policymakers can gain valuable insights into program coverage, inclusivity, distribution of benefits, and overall impact on poverty and inequality. Monitoring and evaluating the effectiveness of social protection programs, including their combination with active labor market policies, is essential for informed decision-making and continuous improvement.

As Uzbekistan moves forward, it is imperative to allocate sufficient and efficient financing for social assistance and labor market programs, ensuring that the needs of vulnerable populations are met. The expansion of active labor market programs, reducing informality, raising productivity, and creating new job opportunities, is crucial given the country's young population and the challenges posed by unemployment.

Overall, developing a comprehensive social security system in Uzbekistan requires a coordinated and integrated approach, with clear definitions, strategic planning, and sustainable financing mechanisms. By addressing the existing challenges and capitalizing on the opportunities, Uzbekistan can strive towards a more inclusive, equitable, and effective social protection system that effectively reduces poverty, protects vulnerable populations, and promotes socio-economic development.

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EXAMINING THE PATTERNS OF LABOR MIGRATION WITHIN UZBEKISTAN AND TO OTHER COUNTRIES

Abstract. Labor migration has emerged as a significant socioeconomic phenomenon in Uzbekistan, impacting both the sending regions within the country and the receiving countries abroad. This research paper aims to analyze the patterns of labor migration within Uzbekistan and to other countries, while also assessing its socioeconomic implications. The study utilizes a mixed-methods approach, combining quantitative analysis of labor migration data and qualitative interviews with migrants and relevant stakeholders. By understanding the drivers and consequences of labor migration, this research provides valuable insights for policymakers to design effective strategies that maximize the benefits and minimize the challenges associated with labor mobility.

Keywords: Labor migration, higher qualifications, population, paid work.

Introduction:

In 2017, a change in government leadership brought about significant economic reforms and a shift in national strategy in Uzbekistan. Notable changes included the unification of official and unofficial currency exchange rates, efforts to eliminate forced labor in agriculture, reduction of trade restrictions, and relaxation of strict visa requirements. As part of this reform effort, the government reevaluated its approach to international migration.

Despite historically sending a substantial number of labor migrants to countries like the Russian Federation, Turkey, and the Republic of Korea, the previous government discouraged international migration through official policies and critical messaging. The implementation of an exit visa system and complex registration procedures created bureaucratic hurdles for potential migrants. Failure to comply with these procedures carried severe risks, including the possibility of losing citizenship. Furthermore, public statements from senior government officials often disparaged migrants.

However, in line with the broader reform agenda initiated by the new President in 2017, a decree was issued, stating that migrants would no longer need government permission to travel abroad, starting on January 1, 2019. Subsequently, negotiations with the Russian Federation were initiated to establish a joint migration processing center in Uzbekistan. Several other notable reforms were also introduced, such as empowering a new Agency for External Labor Migration, granting rights to private organizations to employ Uzbekistan citizens abroad, providing preferential fees and subsidized loans for travel tickets for

temporary labor migration, establishing a fund to support and protect the rights of citizens working abroad, and introducing a voluntary registration system in place of work permits for overseas employment.

These reforms have the potential to expand migration opportunities, presenting an important opportunity for Uzbekistan as it adopts market-oriented reforms and aims for robust economic growth. Migration plays a crucial role in balancing labor demand and supply, leading to improved economic outcomes in both sending and receiving regions. The gains from migration primarily manifest through enhanced labor market efficiency, which, in turn, impacts measures of poverty and subjective well-being, ultimately contributing to people's overall welfare.

When significant barriers impede people's movement, it can lead to divergent developments in local labor markets, resulting in costly and detrimental imbalances. For example, in a local market where there is intense competition for a limited number of workers possessing specific qualifications, combined with restrictive entry policies, wages tend to rise, and the cost of doing business escalates. If left unchecked, this situation could potentially hinder economic growth.

On the other hand, in areas with an abundance of workers possessing similar skills, coupled with low labor demand and obstacles to workforce mobility, wages may stagnate or even decline when set at competitive levels. Consequently, local rates of unemployment have the potential to rise significantly. This issue becomes particularly critical during economic downturns, as the pace of recovery can vary across regions and sectors. A labor force that is more adaptable to geographic changes can expedite the recovery process and mitigate the adverse effects of unemployment spells.

Literature review

The classical and neoclassical models of migration are built on the assumption that migration is an individual choice. However, the new economics of migration challenges this perspective and considers labor movement as a household decision (Massey, 1993). Proponents of the new economics of migration, such as Stark (1984), Stark and Bloom (1985), and Taylor (1986), argue that income maximization is not the sole reason for migration. Households also seek to diversify their sources of income to reduce financial risks. Additionally, migrants may pursue opportunities that are unavailable in their home country due to non-labor market factors.

Empirical analysis by Stark and Bloom (1985) supports the idea that income incentives play a role in migration decisions, but migration can still occur even in the absence of wage differentials. Stark and Taylor (1989) conducted research on US-Mexico migration and found evidence for their hypothesis of relative deprivation. This hypothesis suggests that households' decisions to send migrants abroad are influenced by their perceived deprivation within their reference group. Workers in a favorable position in the Mexican labor market

were less likely to migrate to the United States, even if the expected income gain was the same. This demonstrates that households with different initial income distributions may respond differently to similar income opportunities (Massey et al., 1993).

The new economics of migration has significant political implications. Changes in income distribution can alter incentives for migration. Therefore, policies aimed at influencing migration patterns should not only focus on labor market dynamics but also consider capital and other factors that impact household income and wellbeing. Understanding migration as a household decision provides a more nuanced approach to addressing migration challenges and designing effective policies that consider the complexities of household dynamics and aspirations.

The aforementioned theories discussed are all micro-level decision models. Piore (1979), known as the founder of the dual labor market model, posited that international labor migration is demand-based and driven by the economic structure of developed nations. Doeringer and Piore (1971) applied this model to the American labor market, dividing it into two segments - the primary and secondary sectors. The primary sector offers secure jobs with higher salaries and advancement opportunities, while the secondary sector comprises workplaces with lower returns and limited or no potential for internal promotion, featuring short-term employment relationships.

According to Piore (1979), migration is primarily motivated by pull factors in the developed countries that continuously require foreign workers for their secondary sector. Native employees are generally unwilling to work in these sectors and prefer seeking jobs in the more stable and rewarding primary sector (Maresova, 1999). Piore (1981) further argues that migrants take into account the entire social, economic, and political structure of advanced societies when making migration decisions (cited in Alonso, 1981, p.527). However, wage differentials alone do not always determine migration. Employers in the secondary sector often keep wages low to prevent salary growth in the primary sector. This is due to social and institutional mechanisms, causing wages to be unresponsive to changes in labor demand and supply (Massey et al, 1993).

Regarding political implications, the dual labor market model suggests that government intervention through changes in wage rates or employment is ineffective in influencing migration. Instead, significant transformations in economic organization are necessary. However, Ashton and Maguire (2007) questioned the practical utility of this model based on their research in three local markets in Britain. They found that clear separation of labor markets into two distinct sectors was challenging to establish, as relatively few organizations exclusively belonged to one or the other segment.

In conclusion, the dual labor market model proposed by Piore offers valuable insights into the dynamics of international labor migration, highlighting the role of pull factors in developed countries. Nevertheless, practical application

and clear segmentation of labor markets have been subject to scrutiny, suggesting the need for further examination and contextual considerations in understanding migration patterns.

Results and discussions

The Central Bank of RU has reported a consistent increase in cross-border transfers in recent years. Specifically, the amounts in billions of US dollars were 4.8 in 2017, 5.1 in 2018, 6.0 in 2019, and 6.0 in 2020. Notably, approximately 85% of these remittances originated from EAEU countries.

One potential solution to address labor migration challenges for Uzbekistan is to establish closer ties with the EAEU. By becoming a member of the union, Uzbek citizens would gain access to the benefits and opportunities offered by the common labor market within the EAEU. Moreover, if they secure an employment contract, they would be allowed to reside in Russia indefinitely.

In 2020 December, Uzbekistan was granted observer status in the EAEU, making it crucial to examine the current state and future prospects of labor migration within the association. Embracing the EAEU could present a viable avenue to alleviate pressure on Uzbekistan's labor market and create better prospects for its citizens seeking opportunities abroad.

The EAEU holds significant importance for labor migration processes in Uzbekistan, as a large portion of Uzbek citizens seek employment in EAEU member states. In 2019, approximately 1.6 million Uzbek citizens were reported to be working in the Russian Federation, while over 300 thousand were employed in Kazakhstan, according to the Agency for Labor Migration.

Data from the Ministry of Internal Affairs of the Russian Federation reveals that between 2017 and 2019, citizens of Uzbekistan made around 13 million visits to Russia. Almost all of them (99 percent) obtained registration at their place of residence, with only about 1 percent receiving a permit for temporary residence.

The primary reasons for Uzbek citizens visiting Russia were work-related, accounting for over 80% of the visits, with more than half being first-time visitors. Other purposes included personal visits (13%), educational pursuits (2%), tourism (1%), and other reasons.

In terms of employment sectors, Uzbek labor migrants in Russia are mainly engaged in construction, housing and communal services, transport and logistics, retail and wholesale trade, and public catering. In Kazakhstan, the majority work in construction and agriculture.

The average monthly wages for these industries range from \$300 to \$700, depending on factors such as geographic location, technical skills, and other considerations. For instance, in Russia, the construction sector offers wages between \$485 and \$625, while the housing sector pays around \$485 to \$555. In the textile sector, wages typically start at \$485.

In Kazakhstan, the average monthly salary in the construction industry starts from \$500, while in agriculture, it begins at \$270. It should be noted that these figures can fluctuate based on specific job locations and skill levels.

Additionally, approximately 20% of Uzbek labor migrants work in industries requiring higher qualifications. These sectors include economics, banking, and finance (7%), education (5%), medicine (3%), engineering and technology (3%), law, and other fields (2%).

Based on information provided by the Ministry of Employment and Labour Relations of the Republic of Uzbekistan, a social survey conducted in 108 cities and regions of the country during January to September 2021 revealed that the unemployment rate stood at 9.4 percent. This figure represents a decrease of 1.7 percent compared to the same period in the previous year. The total number of labor resources in the first nine months of 2021 was 19.3 million people, showing an increase of 1.1 percent (equivalent to 201.4 thousand more individuals) compared to the same period in the previous year. Of this total, 6.1 million people were officially employed, indicating a growth rate of 7.9 percent (corresponding to 450.5 thousand people) compared to 2020. Additionally, 5.9 million workers were informally employed, marking a decrease of 4.1 percent (or 254 thousand people) compared to the previous year. The survey also highlighted that 1.4 million people are seeking employment. Among the economically active segment of the population (4.3 million people, 9.4 percent), the unemployment rate was 14.9 percent for individuals aged 16 to 30 and 12.8 percent among women.

To stimulate economic development and employment opportunities, Uzbekistan creates up to 350,000 new jobs annually. Despite these efforts, the government recognizes the need to generate additional employment opportunities for the population. To address this, measures have been taken to facilitate the employment of Uzbek citizens in foreign countries. Presently, around 1.5 million citizens of Uzbekistan are engaged in labor migration and are working abroad.

An analysis of previous years has identified several main reasons for irregular migration, including an insufficient legal framework for regulating external labor migration, the lack of intergovernmental agreements to protect the rights and interests of labor migrants, monopolies in the employment market for citizens seeking work abroad, and the absence of institutionalized state reintegration programs for returning labor migrants from overseas.

In recent years, Uzbekistan has made significant efforts to optimize external labor migration processes and establish a robust support system for migrant workers and their families. The country has adopted approximately 15 normative legal acts to regulate external labor migration, aimed at providing comprehensive care, social and legal protection, both within the country and abroad.

To ensure guaranteed paid work for migrant workers and compliance with labor standards in host countries, the President of Uzbekistan issued legislative frameworks titled “On additional measures to further improve the system of external labor migration of the Republic of Uzbekistan”¹⁵ and “On measures to further improve and fundamentally review the system of organized employment

¹⁵Presidential decree ‘On additional measures to further improve the system of external labour migration of the Republic of Uzbekistan’, available online at <https://www.lex.uz/ru/docs/3811333>

of citizens of the Republic of Uzbekistan abroad”¹⁶. Additionally, a decree by the President titled “On measures to further strengthen guarantees of protection of citizens of the Republic of Uzbekistan engaged in temporary work abroad, and members of their families”¹⁷ established a Department for the protection of rights and support of citizens of Uzbekistan and formed a Republican Commission on External Labor Migration. Their main activities include analyzing labor migration trends, developing and implementing annual plans and programs for organized employment abroad, expanding international cooperation in external labor activity, addressing appeals of migrant workers, and enhancing the income and standard of living of migrant workers' families in Uzbekistan through comprehensive measures.

To ensure widespread involvement, the President's decree 'On measures to introduce a system of safe, orderly, and legal labor migration' expanded the duties and responsibilities of ministries, departments, and local authorities. The establishment of the Agency of External Labor Migration under the Ministry of Employment and Labor Relations played a vital role in managing and monitoring organized recruitment processes, with branches operating across all regions of the country. The regional offices of the Agency also serve as assistants to governors, addressing external labor migration issues. Furthermore, each employment promotion center under the Ministry of Employment and Labor Relations has more than 200 inspectors responsible for reintegrating returning migrant workers into society. These collective efforts aim to ensure a safe, orderly, and legal labor migration system in Uzbekistan, offering support and protection to migrant workers and their families both at home and abroad.

Conclusion

In conclusion, the data and analysis presented in this report shed light on the significant role of labor migration in Uzbekistan, particularly within the context of the EAEU member states. The consistent increase in cross-border transfers, with approximately 85% of remittances originating from EAEU countries, highlights the importance of this economic relationship.

To address labor migration challenges, one potential solution is for Uzbekistan to establish closer ties with the EAEU and become a member of the union. This would grant Uzbek citizens access to the benefits and opportunities offered by the common labor market within the EAEU, and those with employment contracts would be allowed to reside in Russia indefinitely.

With Uzbekistan being granted observer status in the EAEU in 2020 December, there is an opportunity to examine the current state and future prospects of labor migration within the association. Embracing the EAEU can

¹⁶ Cabinet of Ministers' Resolution 'On measures to further improve and fundamentally review the system of organized employment of citizens of the Republic of Uzbekistan abroad, available online at <https://www.lex.uz/ru/docs/3903309>

¹⁷ Presidential decree 'On measures to further strengthen guarantees of protection of citizens of the Republic of Uzbekistan engaged in temporary work abroad, and members of their families', available online at <https://www.lex.uz/docs/4482657>

alleviate pressure on the labor market in Uzbekistan and offer better prospects for its citizens seeking opportunities abroad.

The significant number of Uzbek labor migrants in EAEU member states, such as Russia and Kazakhstan, underscores the importance of this region for employment opportunities. Understanding the sectors in which Uzbek labor migrants are employed, along with the average wages in those industries, provides valuable insights into the economic impact of labor migration.

Despite progress in addressing labor migration challenges, there are still issues to be tackled, including the need for a robust legal framework and intergovernmental agreements to protect the rights and interests of labor migrants. The establishment of the Agency of External Labor Migration and its regional branches demonstrates Uzbekistan's efforts to support and protect its migrant workers and their families.

The social survey on unemployment and labor resources in Uzbekistan reveals the significance of creating new jobs and ensuring adequate employment opportunities for the population. With around 1.5 million Uzbek citizens engaged in labor migration and working abroad, fostering a supportive and organized labor migration system is crucial.

In conclusion, the comprehensive approach adopted by Uzbekistan to regulate and support labor migration demonstrates its commitment to improving the welfare of its citizens and addressing the challenges posed by migration. As Uzbekistan continues its journey towards economic growth and development, leveraging the opportunities within the EAEU and enhancing protections for its migrant workers will play a vital role in shaping its future trajectory.

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IMPROVING INVESTMENT PROPERTY ACCOUNTING IN UZBEKISTAN: A FOCUS ON INTERNATIONAL FINANCIAL REPORTING STANDARDS (IFRS)

Abstract. This research paper investigates the challenges and opportunities associated with improving investment property accounting in Uzbekistan, with a specific focus on aligning practices with IAS-40. Key areas of focus include determining fair values, measuring investment properties at subsequent reporting dates, accounting for lease agreements, and disclosing relevant information in financial statements. In this article it was proposed to include accounts 0191 "Investment real estate: land", 0192 "Investment real estate: building", 9391 "Income from increase in value of IP" in the chart of accounts. The essence of the similar (analogous) sales method, income capitalization method, and cost method was revealed for the application of the fair value valuation model. By adopting IFRS principles and best practices, Uzbekistan can strengthen its financial reporting framework, promote investor confidence, and support sustainable economic growth and development in the real estate sector.

Keywords. Investment property, initial value, IFRS, fair value, depreciation, impairment, financial reporting, chart of accounts.

INTRODUCTION. The accounting landscape in Uzbekistan has been undergoing significant transformation in recent years, driven by the country's efforts to align its financial reporting practices with international standards. As Uzbekistan seeks to attract foreign investment and enhance transparency in its business environment, the adoption and implementation of International Financial Reporting Standards (IFRS) have become a focal point for companies operating in the country.

One crucial area of accounting that requires attention is investment property accounting. Investment properties play a vital role in the economy, serving as a source of rental income and potential capital appreciation. Accounting for investment properties in accordance with IFRS is essential for providing accurate and reliable financial information to stakeholders, including investors, lenders, and regulatory authorities.

This research paper aims to explore the challenges and opportunities associated with improving investment property accounting in Uzbekistan, with a specific focus on aligning practices with IFRS. By examining the current state of investment property accounting in Uzbekistan and identifying areas for

improvement, this study seeks to contribute to the ongoing efforts to enhance financial reporting practices and promote investor confidence in the country's real estate sector.

The objectives of this research paper are as follows:

To assess the existing investment property accounting practices in Uzbekistan and identify areas where they deviate from IFRS requirements.

To analyze the specific challenges faced by companies in Uzbekistan when adopting and implementing IFRS for investment property accounting.

To propose strategies and recommendations for improving investment property accounting practices in line with IFRS in the Uzbekistan context.

To highlight the potential benefits of enhanced investment property accounting, including improved transparency, comparability, and investor confidence.

To achieve these objectives, a comprehensive review of relevant literature, accounting regulations, and international best practices will be conducted. Additionally, interviews and surveys with accounting professionals, auditors, and representatives from regulatory authorities will be conducted to gather insights and opinions on the current state of investment property accounting in Uzbekistan.

LITERATURE REVIEW. The study of investment property performance has garnered significant attention in both academic and professional realms, as investors seek to maximize returns and mitigate risks in the real estate market. The issues of recognition and evaluation of investment property have been studied by foreign and Uzbek scientists.

Gaidarov K.A. made some research in his article on investment property recognition and accounting in complex situations. Lesnova Y.V. explains IAS 40 and IAS 28 application in her research papers. Siddikova D.D. discuss current issues of accounting and impairment of investment property in connection with the COVID-19 pandemic. Differences between IFRS and US GAAP on property, plant and equipment is investigated by Zemskova E.V.

Popov A.Y. discusses the features of recognition and reflection in accounting of investment real estate acquired by an economic entity for the purpose of accumulating capital from the standpoint of domestic legislation and international practice in his article "Investment property: Russian and international concepts of valuation and accounting".

The article by Polishchuk I.R. Suprunova I.V. "Accounting for transactions with investment real estate in Ukraine: development prospects" discusses approaches to accounting for transactions with investment property in the context of elements of the accounting method, suggested directions for improving the accounting of transactions with investment property.

Ignatova N.V. discusses the need for separation in accounting for investment real estate. The approach to accounting for investment property and the corresponding requirements for disclosing information about it in accordance with IFRS 40 are disclosed.

Lukashova I.A. and Golovashchenko E.M. explores the controversial issues of determining the essence, recognition criteria and characteristic classification characteristics of investment objects.

The Galdikas family give the definitions of “investment property” for comparison. In their research methods for transferring fixed assets to investment real estate and returning them to fixed assets are presented.

Kulikova L.I. provides criteria for the recognition of investment property in accordance with International Financial Reporting Standards (IFRS). Investment real estate objects are discussed using specific examples. Particular attention is paid to assessment issues during recognition investment property, shows how investment property is presented in individual and consolidated financial statements.

In their article, Hamdamov and Obidkhanov covered the issues of harmonization of the accounting system of investment properties based on national standards to international standards.

Soldatkina described the requirements for initial and continuous evaluation of investment real estate in accordance with the IAS 40 in an illustrative manner in his articles on improving the accounting procedure of investment property according to IAS 40.

The works of these scientists are of great scientific and practical importance. However, in our country, there are few works that have considered the issues of IKM assessment in a complex and related manner. Methodological procedures for the application of models of valuation of IPs at initial and fair value have not been developed.

METHODOLOGY. In the course of the research, scientific articles and practical materials were studied using analysis and synthesis, SWOT analysis, comparison and grouping, as well as accounting and economic analysis methods, and conclusions and proposals were developed.

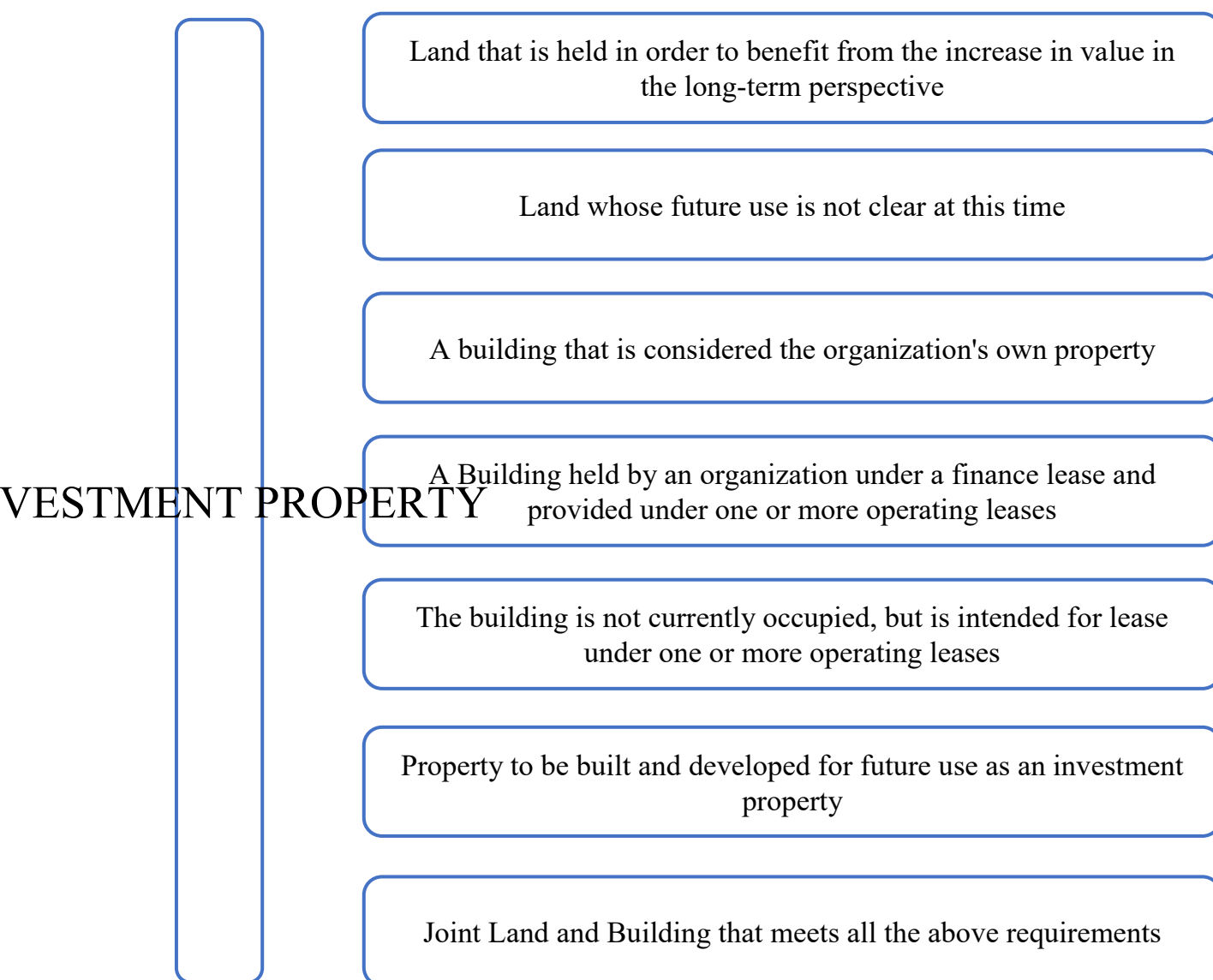
ANALYSIS AND RESULTS. International financial reporting standards have been recognized by the world community as a certain standard for the formation and presentation of financial statements of organizations. Today, their use is an element of prestige for large corporations and individual states. With economic development, New Uzbekistan is also becoming an attractive, open and transparent country for foreign companies and investors, which leads to the internationalization of the accounting system. The application of international reporting rules by an organization in its activities not only contributes to openness and greater information content of reporting data, but also provides the company with a higher rating and strengthens its competitiveness. The main positive aspect of reporting according to IFRS is the ability to attract foreign capital. In addition, financial reporting according to IFRS allows you to interact with foreign partners; increases the competitiveness of an economic entity; an understanding of the economic meaning of the processes reflected in the reporting is achieved, both for users and for its compilers; the necessary basis for making management decisions

will be formed. It also makes it possible to avoid problems with unreliability, transparency and information content of reporting. In this regard, the Resolution of the President of the Republic of Uzbekistan “On additional measures for the transition to international financial reporting standards” PP-4611 dated February 24, 2020 was adopted, which provides for the improvement of NAS and their harmonization with IFRS.

Investment property means land, building or a part of it, combined land and building objects, which are intended to receive income due to operational rent or increase in value over time, which are:

- (a) not used for production, supply, sale and administrative purposes; and
- (b) and must not be intended for sale as a going concern.

We can see the composition of investment property in organizations in detail in the following picture.



Picture-1. Composition of investment property in organizations¹⁸

¹⁸ Prepared by the author

In research work, we consider the issues of initial valuation of IP, ongoing costs, and application of methodological rules of ongoing valuation.

Initial assessment. Investment property, which is the property of the organization, is initially valued at its initial cost. Transaction costs are included in this initial estimate. The initial cost of the purchased IP includes its purchase price and all costs associated with its direct purchase. Directly applicable costs include, for example, fees for professional legal services, costs related to the transfer of real estate, and other transaction costs.

When we investigated the composition of the fixed assets of the “Posco International Textile” LLC, which was the object of our research, it was found that the accounting of investment properties was not kept correctly. Firstly, initial valuation was incorrect and it was presented according to IAS 16. Education center building cost as of February 1, 2023 was calculated without adding building project and exploitation expenses.

Table-1¹⁹

Calculations for determining the initial value of building

Cost elements for initial costing	Amount (UZS)
Construction contract-1	5 668 977 000
Construction contract-2	30 765 000
AS-IS	5 699 742 000
<i>Add Back based on IFRS:</i>	
Building project cost	121 700 000
City building inspection permit	17 566 000
Cost of fire safety permit	6 180 000
Other Professional fees	12 000 000
Revised cost	5 857 188 000

Actually, this education center building is not used for production, supply, sale and administrative purposes. So, this asset should be accounted and presented according to requirements of IAS 40. In order to account for investment property in the accounting of these processes, it is necessary to include additional accounts in the current chart of accounts. As we know, in the current composition, investment property is considered as part of fixed assets. Investment property is different from fixed assets. Their definition is different from each other. The first criterion for the recognition of investment properties is that they meet the definition. In the current chart of accounts, 0190 is “Other fixed assets” and we suggest to adjust this name to “Investment property”. Then for the types it is a good way to open two accounts: 0191-“Investment Property land”, 0192-“Investment Property building”. On the other hand, it is possible to keep account of capital investments on investment property in accounts 0890.

In accordance with the requirements of the international standard, the cost of an investment property object does not include:

¹⁹ Prepared by the author based on financial reports of Posco International Textile

- expenditures for putting the object into operation, except for the costs necessary to bring it into working condition;
- initial operating losses, for example, to reach the planned level of leasing of office space;
- excessive consumption of materials, labor and other resources in the equipment and reconstruction of property objects.

In accordance with the requirements of international standards, if it is required to replace parts of the IP during its useful life, then if the relevant costs are met, the replacement costs are capitalized, they are taken to the value of the IP.

Subsequent assessment. In accordance with the standard No. 40 “Investment property”, it is envisaged that investment property objects will be evaluated on the basis of the following two models:

- accounting model based on initial cost;
- fair value accounting model.

In accordance with the rules of international standards, companies that have chosen the accounting model based on the initial cost, after initial recognition, all objects related to investment property are accounted for at the initial cost after deducting accumulated depreciation and impairment losses of assets. This can be expressed by the following formula:

$$CA \text{ of IP} = IC \text{ of IP} - Acc.D - I$$

CA of IP = Carrying amount of Investment property

IC of IP = Initial cost of Investment property

Acc.D = Accumulated depreciation

I = Impairment loss

Profits and losses obtained as a result of an increase in the value of IP at a fair value are carried to the financial results of this period, unlike those of fixed assets. In the case of fixed assets, the increase in value obtained as a result of the fair value measurement is reflected in other comprehensive income and then in reserve capital. Usually, IP is revalued at the end of each reporting period. Depreciation is not calculated in case of fair value model.

If we take the building built by Posco as an example, by the end of 2023 year, the fair value of this type of building is estimated at 6 billion UZS. If the accounting policy is carried out according to the fair value model, a double entry can be made as follows:

Dr0192-“Investment Property building”0.1 billion

Cr9391-“Gain on IP value increase”0.1 billion

$$\text{Gain} = 6 \text{ bln} - 5.9 \text{ bln} = 0.1 \text{ bln}$$

Here we used in charter of account new account 9391 for value increase of investment properties.

As a result of valuation in the fair value model, investment property may be impaired compared to its previous value. In such cases, this is recognized as a

impairment loss. In the period in which the loss occurred, it is carried to the profit and loss of this period.

It is natural to ask how to determine the fair value if we use fair value model for investment properties. In practice, there are several methodological recommendations for determining the market price: analogous sales method; income capitalization method; cost method. Analogous sales method is a widely used method, and this method is effective if there is a database of market data. Based on this method, the sale price of exactly similar (analogous) or interchangeable real estate is found in the market. In the income capitalization method, the market value is determined based on the expected future income in the form of cash flows arising during the use of this property. In the cost method, the fair value of the real estate object is determined by the cost of the resources used for the new construction of this object. Regardless of the method used, the market value of the investment property must be financially based, truthful, objective, reliable and probable.

The transfer of the object to the investment property or its exclusion is carried out in cases where the direction of its use has changed:

- when the owner starts using the property - transferring the object from the composition of investment property to the composition of the property used for its own purposes;

- when preparation for sale begins - transfer to inventory;

- at the end of the owner's use - transfer from the composition of the property used for its purposes to the composition of investment property

- upon completion of construction or reconstruction - transfer from the structure of the property in the process of construction or reconstruction to investment property

If an asset is transferred from property, plant and equipment to investment property and the fair value model for investment property is used the asset must first be revalued per IAS 16 and then transferred into investment property at fair value. If the cost model is used for investment properties the asset is transferred into investment properties at the current carrying amount and continues to be depreciated.

For example, Posco International Textile company is planning to transfer owner occupied building to investment property at carrying amount of 500 mln and fair value is 520 mln UZS. If accounting policy for IP is fair value, then:

Dr0120-“Building”20 mln

Cr8510-“Gain on revaluation”20 mln

Dr0192-“Investment Property building”520 mln

Cr0120-“Building”520 mln

If accounting policy for IP is initial cost model, then:

Dr0192-“Investment Property building”500 mln

Cr0120-“Building”500 mln

If an asset is transferred from investment property to property, plant and equipment and the fair value model for investment property is used revalue the property first per IAS 40, taking the gain or loss to the statement of profit or loss, and then transfer to property, plant and equipment at fair value. If the cost model is used for investment properties the asset is transferred into property, plant and equipment at the current carrying amount and continues to be depreciated.

CONCLUSIONS. As can be seen from the above opinions, investment property is not maintained as a separate accounting object in national standards, since the procedure for reflecting this object in accounting has not been established. We believe that the further development of national standards will have a clear tendency to increase convergence with IFRS regulations, since timely and correct accounting of investment property in accounting, assessment based on the requirements of international standards ensures the reliability of the prepared financial statements. We believe that the implementation of the above proposals in practice will lead to the correct organization of accounting for investment property and will play an important role in improving the work of accounting in modern conditions of economic development.

The use of the above-mentioned new accounting schemes and double entries serves to increase the weight of foreign direct investments as a result of increasing the reliability of the information in the reports and the accounting of investment property according to IFRS in the Posco International Textile enterprise and in all enterprises.

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STUDYING THE EFFICIENCY OF SOLAR ELEMENTS DEPENDING ON THE ANGLE OF LIGHT INCIDENCE

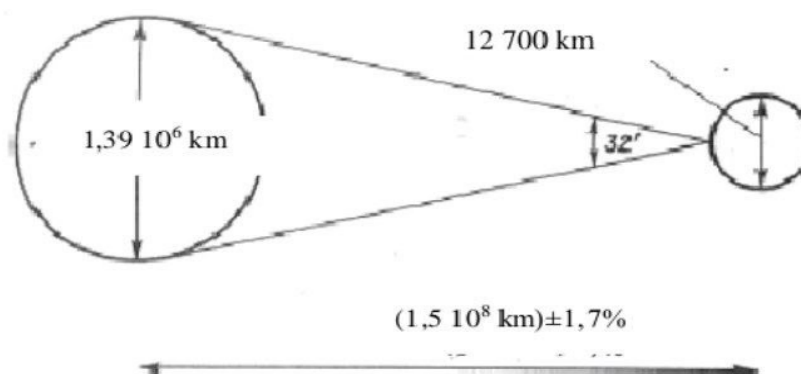
Abstract. In this thesis, in order to increase the efficiency of solar panels and ensure the production of more electricity, the change of photoelectric parameters of solar panels depending on the angle of incidence of light is studied. The obtained results show that the sun sets at a lower angle to the horizon in winter compared to other seasons, and due to this, solar panels produce less electricity. In order to solve this problem and to change the angle of installation of solar panels in winter, the dependence of the efficiency of solar panels on the angle of incidence of light was studied.

Keywords: solar cell, sunset angle, useful work coefficient, volt-ampere characteristic.

The study of solar elements and its research necessarily begins with the measurement of the main photoelectric parameters. We also tried to measure the volt-ampere characteristics of the solar cell and panel during our research. We determine the angle of incidence of the light falling on the solar element and panel as follows. First, the location of the sun is found based on time and coordinates [1]. Second, the angle of descent is determined depending on the location of the sun [2].

In the sky, the Sun appears to us as a circular arc at an angle of about half a degree. The edges of the Sun's halo have a sharp boundary, and its radius can be measured with a high enough precision (one arcsecond). Such measurements show that the angular diameter of the Sun varies slightly throughout the year (31'31" at aphelion (early July), 32'35" at perihelion (early January)). These changes are related to the slightly lengthening and shortening of the distance between the Sun and the Earth due to the ellipticity of the orbit.

Figure 1 shows the Earth and the Sun in relation to each other. The eccentricity of the Earth's orbit is that the distance between the Sun and the Earth varies by 1.7%. In one astronomical unit, equal to the average distance between the Sun and the Earth, the Sun is visible to an observer on Earth at an angle of 32'. Outside the Earth's atmosphere, the intensity of the Sun's rays is constant.



For the theoretical analysis of the physical phenomena occurring in the elements of the sun, we can approach classically. The transmission and return coefficients of the surface can be determined by the angle of incidence and refraction of the light falling on the surface, the refractive indices of the media. Fresnel coefficients (formula 1) are mainly used in this.

$$\begin{aligned} r_1 &= \frac{n_1 \cos \beta - n_2 \cos \gamma}{n_1 \cos \beta + n_2 \cos \gamma} \\ t_1 &= \frac{2n_1 \cos \beta}{n_1 \cos \beta + n_2 \cos \gamma} \\ r &= \frac{n_1 \cos \gamma - n_2 \cos \beta}{n_1 \cos \gamma + n_2 \cos \beta} \\ t &= \frac{2n_1 \cos \beta}{n_1 \cos \gamma - n_2 \cos \beta} \quad (1) \end{aligned}$$

Here: n_1 is the refractive index of the first medium, n_2 is the refractive index of the second medium, β is the angle of incidence of light, γ is the angle of refraction of light.

Using the Fresnel coefficients, we can determine the parts of the light that return and pass through the surface (Formula 2).

$$\begin{aligned} R &= \frac{r_0^2 + r_1^2}{2} \\ T &= \frac{n_1 \cos \gamma}{n_0 \cos \beta} \cdot \frac{1}{t} \quad (2) \end{aligned}$$

Here: R is the return coefficient, T is the transmission coefficient. To determine the absorption in the layers, the Burger-Lambert law is used (Formula 3).

$$I = I_0 e^{-\alpha d} \quad (3)$$

Here: d is the layer thickness, α is the absorption coefficient of the material, I_0 is the initial light intensity, I is the light intensity after the d layer.

An experiment was carried out under natural sunlight with a solar intensity of 0.7 solar cells with a size of 1 cm². The base of the solar cell is p-type

monocrystalline silicon and its surface is covered with 100 nm thick SiNx. Coordinates where this experiment was conducted: 40°44'04.717", 72°22'21.717" time: 17.03.2020 13:00. That is, all these and subsequent experiments were conducted at Andijan State University in Uzbekistan.

The angle of incidence of light changes depending on the position of the sun. Therefore, in this paper, the dependence of the main photoelectric parameters of silicon solar cells on the angle of incidence is studied.

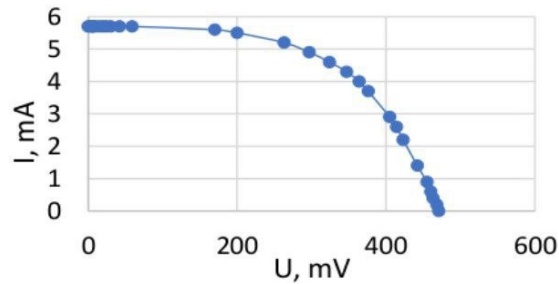


Figure 1. I-V characteristic measured in normal sunlight at 0.7 solar intensity of a Sinx-coated silicon-based solar cell with p-type base size of 1 cm²

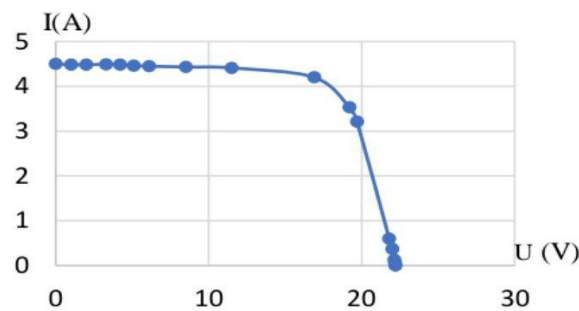
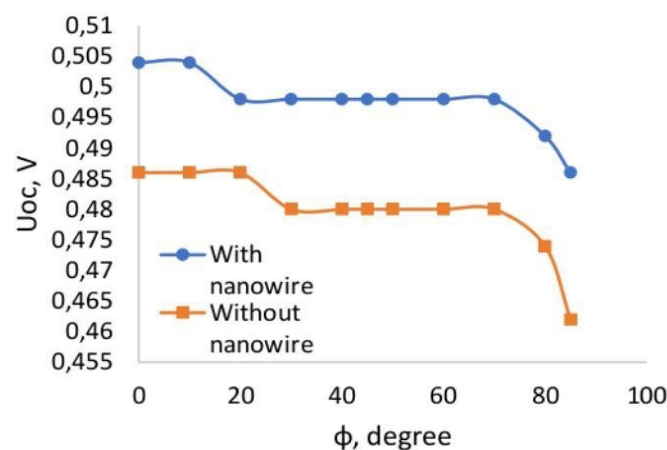
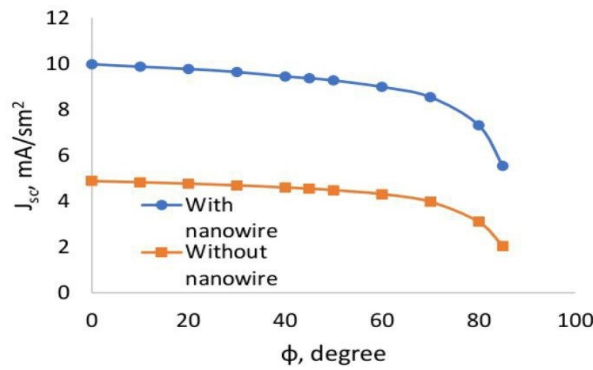


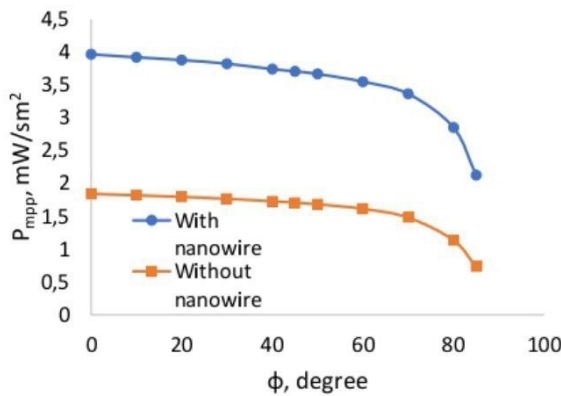
Figure 2. I-V characteristic of a solar panel made of 36 monocrystalline silicon photovoltaic cells



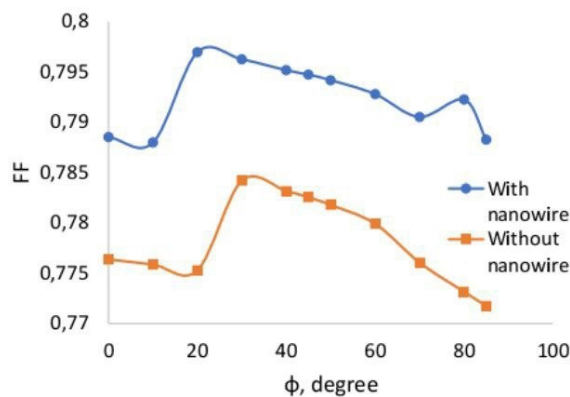
Rasm 3. The graph of the dependence of the operating voltage of a nanoparticle-incorporated and a simple silicon-based solar cell on the angle of incidence of light



Rasm 4. Graph of dependence of short-circuit current density on light incidence angle of nanoparticle-incorporated and simple silicon-based solar cell



Rasm 5. Graph of the maximum power of a nanoparticle-incorporated and simple silicon-based solar cell versus the angle of incidence of light



Rasm 6. The graph of the filling factor of a nanoparticle-incorporated and a simple silicon-based solar cell as a function of the angle of incidence of light

The dependence of the short-circuit current, the maximum power and the filling factor on the angle of incidence of light is similar to the dependence of the operating voltage on the angle of incidence of gravity. The results obtained above show that all the photoelectric parameters of nanoparticle-incorporated solar cells are better than those of a normal solar cell. However, the change of photoelectric parameters depending on the angle of light incidence is approximately the same.

In summary, the angle of incidence (AM) refers to the amount of light reaching the solar panel. This angle measures the amount of light falling on the bottom of the solar panel. The AM angle is determined by the angle of the solar panel and determines the amount of light that can be transmitted to the efficiency of the solar panel.

Learning the right ratio between the angle of incidence of light and the efficiency of the solar panel makes it easier to convert light energy into electricity. If the angle of incidence of light increases, the efficiency of the solar panel increases. This increases the ability of the solar panel to use solar energy in an efficient way.

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INGLIZ TILIDAGI “YOSHLIK” KONSEPTIGA OID FRAZEOLOGIK BIRLIKLARNING LINGVOMADANIY VA SEMANTIK XUSUSIYATI

Annotatsiya. Maqolada ingliz xalqi madaniyatida keng qo'llaniluvchi ba'zi bir iboralar va ularning ma'noviy xarakterlari haqida to'xtalib o'tilgan. Hamda shu kabi frazeologik birliklarning xususiyatlari “Yoshlik” konsepti ishtirokidagi iboralar misolida yoritilgan, bir biriga ma'noviy yaqin, o'xshash iboralarning semantik tahlili amalga oshirilgan. Bundan tashqari, frazeologiya bo'limining asosini tashkil etuvchi frazeologik birliklar inson omili bilan bog'liq bo'lgan zamonaviy tilshunoslikning turli sohalarida tadqiqot obyekti sifatida xizmat qiladi va turli konseptlarni ifodalashda frazeologik birliklar uni ravshan, tushunarli va ta'sirchan usulda ifodalaydi. Hamda frazeologizmlar boshqa tillardagi kabi ingliz tilida ham ushbu xalqning o'ziga xos fikrlash tarzini ko'rsatuvchi stereotip sifatida ifodalanadi.

Kalit so'zlar: ibora, semantik tahlil, “Yoshlik” konsepti, frazeologik ibora, kognitiv lingvistika, turg'un birikma, lingvomadaniy birlik, stereotip.

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LINGUISTIC AND SEMANTIC CHARACTERISTICS OF PHRASEOLOGICAL UNITS REGARDING THE CONCEPT OF "YOUTH" IN ENGLISH

Abstract. The article discusses some expressions widely used in the culture of the English people and their spiritual characteristics. Also, the characteristics of such phraseological units are highlighted on the example of expressions involving the concept of "Youth", which are close to each other in meaning., the semantic analysis of similar expressions was carried out. In addition, the phraseological units that form the basis of the department of phraseology serve as objects of research in various fields of modern linguistics related to the human factor, and phraseological units in expressing various concepts make it clear and understandable. and expresses it in an impressive way. Phraseologisms are expressed in English as well as in other languages as a stereotype that shows the specific way of thinking of this people.

Key words: phrase, semantic analysis, concept of "Youth", phraseological expression, cognitive linguistics, stable combination, linguistic and cultural unit, stereotype.

Kirish. Bugungi kunga kelib frazeologiya sohasi tilshunoslikda olib borilayotgan ko‘plab izlanishlarning tadqiqot vositasi sifatida fanda mustahkam o‘rin egallab, uning taraqqiyoti yangi bosqichga ko‘tarildi. Frazeologiya tilning lug‘at tarkibini tashkil etuvchi turg‘un birikmalar, ya‘ni, frazeologizmlarni o‘rganuvchi sohasi bo‘lib, u qadimgi yunon tilidan olingan va “frasis”-ibora, “logos”-tushuncha, ta‘limot demakdir. Frazeologiya fan sifatida shakllangandan beri ko‘p vaqt o‘tgani yo‘q. Dunyo tilshunosligida olimlar XVIII asrdan boshlab frazeologik birliklarni ilmiy asosda o‘rgana boshlashgan.²⁰ “Frazeologiya atmasini esa, fanga ilk bor fransuz-shveysar tadqiqotchisi Sharl Balli(1865-1947) olib kirgan. Balli o‘zining “Stilistika ocherki”(1905) va “Fransuz stilistikasi”(1909) asarlarida frazeologizmlarni o‘rganib chiqqan. Rus tilshunosi Polivanov ilk bor frazeologiyani alohida fan sifatida o‘rganish fikri bilan chiqqan. Sh.Balli semantika frazeologizmlarning mutloq belgisi ekanligini asoslab, quyidagi fikrni ham bildiradi: “Tashqi belgi ichki belgiga nisbatan ahamiyatli va keng qimmatlidir”²¹. Semantik xususiyati Sh. Balli asarlarida mutloq bosh belgi sifatida qaralishi, tarixiy-semantik asoslarining inkor etilishi kabi munozaralariga sabab bo‘ldi. Ammo bu qarashlar frazeologiya masalalarini yanada kengroq tadqiq etish, o‘rganish va uning alohida fan sifatida shakllanishiga ta’sir o‘tkazdi. Sh. Ballining frazeologik tadqiqotlaridan ancha vaqt o‘tgandan so‘ng frazeologiya tilshunoslikning alohida sohasi sifatida shakllana boshladi va uning turli qirralariga bag‘ishlangan frazeologik lug‘atlar, ilmiy maqolalar, dissertatsion ishlar, monografik kuzatishlar yuzaga keldi.

Adabiyotlar tahlili va metodlar. Tadqiqotchilarning frazeologiya sohasi bilan shug‘ullanganiga endi bir necha yuz yil bo‘lgan bo‘lsada, frazeologik birliklarning yaralishi insoniyat tarixichalik qadimiyydir. Bir tilning frazeologiyasini o‘rganish orqali ushbu tilda so‘zlashuvchi xalqning madaniyati, tarixi, urf-odatlar, fe‘l-atvori, yurish-turishi to‘g‘risida ma‘lumotga ega bo‘lish mumkin. Darhaqiqat, bir tilning frazeologik olami uning madaniyati haqidagi qimmatbaho manbadir. Ingliz tadqiqotchisi Raymond.V.Gibbsning ta’kidlashicha, insonlar kundalik turmush tarzida bir-biri bilan kamdan-kam hollarda badiiy tilda suhbat quradi va ushbu holatda fikrni, ayniqsa, mavhum g‘oyalarni ifoda etishda turli ibora va maqollar yordamga keladi.²² Shunday ekan, turli frazeologik birliklar so‘zlovchining nutq uslubini bezovchi lingvistik bezaklargina bo‘lib qolmasdan, balki, tilning ajralmas qismi bo‘lib, ijtimoiy o‘zaro munosabatni yengillashtiradi, Shunday ekan, turli frazeologik birliklar so‘zlovchining nutq uslubini bezovchi lingvistik bezaklar emas, balki, tilning ajralmas qismi bo‘lib, ijtimoiy o‘zaro munosabatni yengillashtiradi, matn uyg‘unligini kuchaytiradi, va eng asosiysi, insonning anglatmoqchi bo‘lgan fikrini ifoda etishni osonlashtirishga yordam beradi.

²⁰ <https://audiobook.uz/blogs/news/frazeologik-iboralar-va-ularga-misollar>

²¹ Yoldoshev B. "Fundamentals of Phraseological Methodology" Samarkand State University; 1999.P-86

²² D.Geeraerts and H.Cuykens. The Oxford Handbook of Cogniyive Linguistics. Oxford University Press, 2007.

Ilk ingliz frazeologizmlarini tahlil qilgan tadqiqotchilaridan biri ingliz rassomi, leksikografi va qadmiy buyumlar hamda xalq og‘zaki namunalari to‘plovchisi Frensis Gros bo‘lib, u butun Angliya hududi bo‘ylab kezib, xalq orasida ishlatiladigan, rasman biror hujjatda keltirilmagan ko‘plab iboralarni to‘playdi va 1785-yilda ular asosida “Dictionary of the vulgar tongue” izohli lug‘atini chop ettiradi. Gris xalq orasida kundalik hayotda ko‘p qo‘llaniladigan bunday iboralarning kelib chiqish tarixi, ishlatilish holatlarini izohlashga harakat qiladi., ishlatilish holatlari ham keltirilgan. Misol uchun, biz bugungi kunda *oddiygina “to die- vafot etmoq”* ma‘nosida ishlatadigan, rasman ingliz tili lug‘at boyligi tarkibiga kiritilgan “*kick the bucket*” iborasi o‘sha davrda noadabiy til qatlamiga kirgan, og‘zaki til vositasi sifatida qo‘llanilgan “*kick the bucket*” iborasini quyidagicha ifodalaydi: bu ibora 16-asrda paydo bo‘lgan bo‘lib, uning kelib chiqishi bucket- kushxonada bo‘ladigan, hayvonlarni, (odatda cho‘chqalarni) so‘yish uchun oyog‘idan osid qo‘yiladigan yog‘och buyumga borib taqaladi, ma‘nosi- o‘lmoq.²³ Bu iboraning kelib chiqish sababi kundalik xalq turmush tarzi bilan bog‘liq bo‘lib, xalqning yashash tarzini ifodalaydi.

Muhokama va natijalar. Frazeologik iboralar turmushdagi turli voqea-hodisalarga guvoh bo‘lish, kishilarning xilma-xil harakat-holatlariga baho berish, tajribalarini umumlashtirish asosida xalq chiqargan aniq-tiniq xulosalarning o‘ziga xos obrazli ifodalaridir. Frazeologizmlar, so‘zlar kabi, yaxlit bir ma‘no ifodalasada, lekin frazeologik ma‘no jihatdan leksik ma‘nodan farq qiladi. Frazeologik ma‘no qo‘shimcha attsenkalardan iborat bo‘ladi. Belgi, harakat kabilar haqida frazeologizm ifodalaydigan ma‘lumot frazeologik ma‘no deyiladi. Masalan: *Endi to‘rtinchi rotani ham ratsiya bilan ta‘min qilsak, oshiq olchi bo‘lardi. Bu yerda ekanizni eshitib, hech narsa ko‘zimga ko‘rinmadi, uchib bora qolsam dedim*²⁴. Birinchi misoldagi frazeologizm belgi, ikkinchi misoldagisi esa harakatni bildiradi. Shu sababli, frazeologizmlar so‘zlarga sinonim bo‘lgan hollarda ham frazeologik ma‘no bir-biriga teng bo‘lmaydi. Frazeologizmlar semantik jihatdan so‘zlardan farqli belgi xususiyatlarga ega bo‘lgani uchun ham, tilda paydo bo‘lgan va yashab kelmoqda. O‘zaro bog‘langan bu so‘zlar mohiyatiga ko‘ra birikmaga yoki gapga teng bo‘ladi. Bunday birikma yoki gapdan yaxlitligicha anglashiladigan frazeologik ma‘no uni sintaktik birlik deb emas, balki semantik birlik deb qarashga olib keladi. Shu jihatdan quyida ana shunday “Yoshlik” konseptiga oid frazeologik iboralarning semantic hamda lingvomadaniy tahlilini ko‘rib chiqamiz:

*1. bloom of youth*²⁵

The most enjoyable or successful time of one's youth, likened to the bloom of a flower being its most prominent and beautiful moment. Ushbu ibora o‘zbek tilidagi yoshlik –oltin davr iborasiga ekvivalent bo‘lib, yoshlikning eng

²³ Francis Grose, Classical Dictionary of the Vulgar Tongue, London, No 212, High Holborn, 1785.

²⁴ Sh. Rahmatullayev's monograph entitled "Some issues of Uzbek phraseology". Tashkent-1966. 264 pages.

²⁵ UZBEKISTAN STATE UNIVERSITY OF WORLD LANGUAGES. A.L. YUSUPOV DICTIONARY OF ENGLISH-UZBEK IDIOMS. TASHKENT, 2014

quvnoq davr ekanligiga urg'u beradi hamda ushbu ibora, asosan, yoshi ulug' insonlarning tilida ko'p foydalaniladi.

2. *fountain of youth* (Anything reputed or promising to restore one's youth, vitality, or health, or at least the appearance there of.) iborasi hech narsa bu dunyoda boshqa qaytib kelmaydi sog'liq ham, go'zallik ham shu o'rinda yoshlik ham degan ma'noni anglatadi va aksariyat hollarda tanbeh berish ma'nosida qo'llaniladi. Buni quyidagi misoldan ham anglash mumkin.

At the age of 60, your grandmother looks fantastic! She must have discovered the fountain of youth. The way they advertise these skincare products makes you think each one is the fountain of youth or something.

Berilgan ibora fountain of youth iborasi bilan ma'noviy bir xil bo'lsada, ular orasida graduonimik munosabat borligi bilan farqlanadi. Ya'ni har ikki ibora ham ma'noviy o'xshashlikni kasb etadi ammo nutq jarayonidagi bo'yoqdorlik jihatdan darajalanadi.

Growing youth has a wolf in his belly (Young people who are growing seem to be hungry all the time) iborasi–yoshlar serg'ayrat, ildam, harakatchan, jismoniy faolligi yuqori bo'lganligi sababli ochlik hissini tezroq sezishadi degan ma'noda qo'llaniladi. Masalan: *My teenage son has eaten very last bit of food in the house. I guess it is true that a growing youth has a wolf in his belly.*

Youth is wasted on the young iborasi – yoshlikning qadrini keksayganda bilasan degan ma'noda ishlatiladi. Masalan: *all the time and energy these kids have at their disposal, and they would rather sit around all day watching TV instead of exploring the world around them. Youth is wasted on the young.*²⁶

Old head on young shoulders iborasi esa aqlli, tengdoshlariga nisbatan ziyrak bo'lgan yoshlarga qarata ishlatiladi va bu ibora, asosan, yoshlar orasida keng tarqalgan.

Xulosa. Xulosa qilib aytganda, ingliz tilshunosligida frazeologiya sohasi ko'p yillardan beri jahon tadqiqotchilarning turli ilmiy ishlarida har jihatdan yoritilayotgan bo'lishiga qaramay, bu soha hali to'liqliligicha o'rganilib bo'lingan emas. Nafaqat tilshunoslik, balki lingvomadaniyatshunoslik sohasi uchun ham yangi bo'lgan "Yoshlik" konsepti tushunchasi doirasida frazeologik birliklarni, ingliz tilida talqin etish, ular yuzasidan olib borilgan ilmiy ish, nazariyalarni tahlil etish, ularga tayangan holda, bu xalqning til va madaniyat bog'liqliklarini ochib berish tilshunoslik uchun ahamiyat kasb etadi.

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²⁶ <https://idioms.thefreedictionary.com/youth>

3. UZBEKISTAN STATE UNIVERSITY OF WORLD LANGUAGES. A.L. YUSUPOV DICTIONARY OF ENGLISH-UZBEK IDIOMS. TASHKENT, 2014
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O'RTA-MAXSUS VA PROFESSIONAL TA'LIM MUASSASALARIDA UMUMTA'LIM FANLARINI O'QITILISHINI TAKOMILLASHTIRISH GEOGRAFIYA FANI MISOLIDA

Annotatsiya. Ushbu maqolada akademik litsey va kasb hunar maktablarida umumta'lim fanlari, jumladan geografiya fanining o'qitilishi hamda akademik litseylarning ta'lim yo'nalishlarining o'ziga xos xususiyatlarini inobatga olgan holda geografiya darslarining tashkil etilishining ahamiyati haqida fikrlar bayon etilgan. Maqolada xorijiy tillarga ixtisoslashgan guruhlar uchun geografiya fanidan tayanch iboralarning mavzulashtirilgan ingliz tilidagi tarjimasi jadval ko'rinishida taqdim qilingan.

Kalit so'zlar: Akademik litsey, o'quv reja, atrof muhitni muhofaza qilish konsepsiyasi, fanlararo bog'liqlik, geografiya, kimyo, biologiya, matematika, fizika, xorijiy til, kasbga moslashtirish.

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IMPROVING THE TEACHING OF GENERAL SCIENCES IN SECONDARY SPECIAL AND PROFESSIONAL EDUCATIONAL INSTITUTIONS AS AN EXAMPLE OF GEOGRAPHY

Abstract. This article describes the importance of teaching general education subjects, including geography, in academic lyceums and vocational schools, as well as the importance of organizing geography classes taking into account the specifics of academic lyceums. The article presents in table form thematic translations into English of basic phrases from geography for groups specializing in foreign languages.

Key words: Academic lyceum, curriculum, concept of environmental protection, interdisciplinarity, geography, chemistry, biology, mathematics, physics, foreign language, professional adaptation.

Mamlakatimizdagi ta'lim tizimidagi muhim ta'lim shakllaridan biri o'rta maxsus va professional ta'lim tizimi bo'lib, ushbu tizim akademik litsey hamda kasb-hunar maktabi, kollej va texnikumlarni o'z ichiga oladi. Jumaladan akademik litsey va kasb hunar maktablarida umumta'lim fanlari o'quv rejalarga taqsimlangan soatlar hajmidan kelib chiqib umumta'lim yoki chuqurlashtirilgan fanlar sifatida o'qitiladi. Boshlang'ich professional ta'lim muassasalari ya'ni, kasb-hunar maktablarida umumta'lim fanlariga ajratilgan soatlar hajmi o'quv rejasining 45-50 foizini yoki 1500 soat auditoriya yuklamasini tashkil etadi va qolgan qismi kasbga yo'naltirilgan fanlar yoki amaliyotlardan iborat. Akademik litseylarda umumta'lim fanlar o'quv rejasidagi soatlar hajmining o'rtacha 90 foizini egallaydi, bu esa 2500 soatdan ortiq auditoriya yuklamasini tashkil etadi, qolgan qismi kasbiy fanlar va imtihonlarga ajratilgan soatlarga to'g'ri keladi. Bundan ko'rinib turibdiki, nafaqat umumiy o'rta ta'lim maktablarida balki, kasb-hunar maktablari va akademik litseylarda ham umumta'lim fanlarini o'qitilayotganligini inobatga olib, ushbu sohaga ham alohida e'tibor berishni taqoza qiladi.

Bugungi kunga kelib ta'lim sohasida olib borilayotgan islohotlar mamlakatimizda yetuk yosh avlodni tarbiyalashga qaratilgan. Ta'lim to'g'risidagi qonunning yangi tahririnig qabul qilishi ushbu sohaning muhim tub burilish nuqtasi bo'ldi. Yurtimizda joriy etilgan uzluksiz ta'lim tizimining tarkibiy qismlaridan hisoblangan kasb-hunar maktablari va akademik litseylarda barcha umumta'lim fanlari kabi geografiya fani ham o'qitiladi.

Geografiya o'quv predmetlari o'quvchilarda tabiiy va ijtimoiy-iqtisodiy ob'yekt, jarayon va hodisalar, Vatanimiz tabiiy sharoiti va boyliklari, aholisi va iqtisodiyoti, jamiyat va tabiatning o'zaro aloqadorligi, tabiatdan oqilona foydalanish va ishlab chiqarishni oqilona tashkil etishning global va hududiy muammolari haqida ilmiy-amaliy tushunchalarni shakllantiradi. Shuningdek, mustaqil fikr-mulohaza yuritishni, geografik bilimlarni amalda qo'llashni o'rgatadi. Geografiya fani o'quvchilarda tabiat, aholi va xo'jalik haqida tushunchalarni shakllantirish jarayonida fizika, astronomiya, kimyo va biologiya fanlariga oid ma'lumotlardan foydalanadi, turdosh fanlar sohasidagi bilimlarni o'z maqsad va vazifalaridan kelib chiqib mazmun-mohiyatiga singdiradi. Shu bilan birga, geografiya fanini o'qitish natijasida shakllantiriladigan tushuncha va kompetensiyalar boshqa tabiiy fanlarda o'rganiladigan ob'yekt, hodisa va jarayonlar haqida kompleks tasavvurni tarkib toptirishga xizmat qiladi.

Bugungi kunda geografiya fani O'zbekiston Respublikasi xalq ta'limi tizimida Geografiya fanini o'qitishni rivojlantirish Konsepsiyasi O'zbekiston Respublikasi Prezidentining 2019- yil 29-apreldagi PF-5712-sonli Farmoni bilan tasdiqlangan "O'zbekiston Respublikasi Xalq ta'limi tizimini 2030 yilgacha

rivojlantirish konsepsiyasini” va 2019 yil 30 oktyabrdagi PF-5863-sonli Farmoni bilan tasdiqlangan “2030 yilgacha bo‘lgan davrda O‘zbekiston Respublikasining Atrof muhitni muhofaza qilish konsepsiyasi”da belgilangan vazifalar ijrosi yuzasidan ishlab chiqilgan dasturlar asosida o‘qitilmoqda. Geografiya fanini o‘rganish ob‘yektini bo‘yicha qismlarga ajratilishining ahamiyati katta. Tabiat va jamiyat o‘rtasidagi munosabatlarning yildan-yilga keskinlashib borishi insonning tabiat qonuniyatlarini chuqur bilishini, shuningdek, tabiatdan hamda uning resurslaridan tejamkorona, oqilona foydalanishni talab etadi. Bu esa geografik bilimlarni chuqur bilishni, tabiatdan foydalanishda ularga amal qilishni taqozo etadi.

Shu maqsadda geografiya fani o‘qituvchilari kasb-hunar maktablari va akademik litseylarda geografiya fanini o‘qitish jaroyonida guruhlarining ta‘lim yo‘nalishlarini inobatga olishlari juda muhimdir. Chunki, o‘qituvchilarni egallaydigan kasblarining mazmuni va o‘ziga xos xususiyatlarini geografiya fani bilan bog‘langan holda o‘qituvchilarga o‘rgatish ular uchun qiziq va egallaydigan kasblari uchun foydali bo‘lishi shubhasizdir.

Jumladan, akademik litseylarda o‘qitilayotgan 36 soatli geografiya fanini o‘qitishda, o‘qituvchi akademik litseylarda eng ko‘b o‘qitiladigan aniq fanlarga, tabiiy fanlarga va xorijiy tillarga ixtisoslashgan guruhlariga turli xil ko‘rinishda darslarni olib borilishi samarali bo‘lishi mumkin. Masalan, matematika va fizikaga ixtisoslashgan guruhlar uchun geografik masalalar yechish, geografiyaning fizika bilan aloqador jihatlariga ko‘broq e‘tibor berilsa maqsadga muvofiq bo‘ladi. Kimyo va biologiyaga ixtisoslashgan guruhlar uchun yerning ichki tuzilishi va uning kimyoviy tarkibi, foydali qazilmalari, atmosferaning tuzilishi va uning kimyoviy tarkibi, o‘simlik va hayvonlar geografiyasi kabi mavzular o‘qitilsa yanada o‘qituvchilar uchun qiziqroq bo‘ladi. Xorijiy tillarga ixtisoslashgan guruhlariga esa har bir mavzu uchun tayanch iboralarning ingliz tilidagi tarjimasini bilan qo‘llash yanada o‘qituvchilarga foydali va qiziqarli bo‘lishi tayin.

Yuqoridagi kabi o‘qitish tizimini joriy qilishda pedagoglardan ham katta mehnatni amalga oshirish talab qilinadi. Jumladan, geografiya o‘qituvchisi nafaqat o‘z fanini chuqur bilishi, balki geografiya fanining boshqa fanlar bilan aloqador jihatlarini hamda xorijiy tillarni talab darajasida bilishi zarurdir. Buning uchun o‘qituvchi o‘z ustida ishlashi, zamonaviy ta‘lim texnologiyalarni darslarda qo‘llay olishi, o‘qituvchilar uchun qiziqarli va kelajagi uchun foydali bilimlarni bera olishi hamda xorijiy tillardan birortasini mukammal darajada bilishi zamon talabidir.

Quyida akademik litseylarning ingliz tilida ixtisoslashtirilgan ta‘lim yo‘nalishidagi guruhlariga o‘qitiladigan geografiya fanining taqvim-mavzu rejasidagi 1-7 mavzulari uchun tayanch iboralarning inglizcha tarjimasini jadval ko‘rinishiga keltirilgan.

**Akademik litseylarning ingliz tiliga ixtisoslashtirilgan guruhleri uchun
geografiya fanidan 1-7 mavzular tayanch iboralarning ingliz tilidagi
tarjimasi**

1. Jahon siyosiy xaritasi		
1	<i>Jahon siyosiy xaritasi</i>	World political map
2	<i>Jahon hamjamiyati</i>	World community
3	<i>Birlashgan Millatlar Tashkiloti</i>	United Nations
4	<i>A'zo davlatlar</i>	Member states
5	<i>Mustaqil davlat</i>	Independent state
6	<i>Davlatlar geografik o'rne</i>	Geographical position of states
7	<i>Dengizbo'yi davlatlari</i>	Maritime states
8	<i>Kontinental davlatlar</i>	Continental states
9	<i>Dunyo okeani</i>	World Ocean
10	<i>Ijtimoiy-iqtisodiy rivojlanish darajasi</i>	Level of socio-economic development
11	<i>Yalpi ichki mahsulot</i>	Gross domestic product
12	<i>Milliy iqtisodiyot</i>	National economy
13	<i>Tovar</i>	Brand
14	<i>Aholining turmush sifati</i>	Quality of life of the population
15	<i>Rivojlangan mamlakatlar</i>	Developed countries
16	<i>Rivojlanayotgan mamlakatlar</i>	Developing countries
17	<i>O'tish iqtisodiyotidagi mamlakatlar</i>	Countries in transition economics
18	<i>"Katta yettilik"</i>	The Big Seven
19	<i>Tayanch rivojlanayotgan mamlakatlar</i>	Base developing countries
20	<i>Neft eksport qiluvchi mamlakatlar</i>	Oil exporting countries
21	<i>Yirik industrial-agrarmamlakatlar</i>	Major industrial-agrarian countries
2. Mamlakatlarning boshqaruv shakli va davlat tuzilishi		
1	<i>Boshqaruv shakli</i>	Form of government
2	<i>Respublika</i>	Republic
3	<i>Monarxiya</i>	Monarchy
4	<i>Mutlaq monarxiya</i>	Absolute monarchy
5	<i>Ma'muriy-hududiy tizimi</i>	Administrative-territorial system
6	<i>Davlat tuzilishi shakli</i>	Form of state structure
3. Mineral resurslar geografiyasi		
1	<i>Mineral resurslar</i>	Mineral resources
2	<i>Tabiiy resurslar</i>	Natural resources
3	<i>Biologic resurslar</i>	Biological resources
4	<i>Iqlimiy resurslar</i>	Climatic resources
5	<i>Yoqilg'i-energetika resurslari</i>	Fuel and energy resources
6	<i>Rudali mineral resurslar</i>	Ore mineral resources
7	<i>Noruda mineral resurslar</i>	Ore-free mineral resources
8	<i>Tugaydigan tabiiy resurs</i>	Natural resource that ends
9	<i>Tiklanmaydigan tabiiy resurs</i>	Non-renewable natural resource
10	<i>Neft</i>	Oil
11	<i>Tabiiy gaz</i>	Natural gas
12	<i>Ko'mir</i>	Coal
13	<i>Temir rudalari</i>	Iron ore
14	<i>Qurilish materiallari</i>	Building materials

15	<i>Geologik tuzilishi</i>	Geological structure
16	<i>Uran</i>	Uranus
17	<i>Shimoliy yarimshar</i>	Northern hemisphere
18	<i>Osh tuzi</i>	Table salt
19	<i>Kaliy tuzlari</i>	Potassium salts
20	<i>Fosforit</i>	Phosphorite
21	<i>Oltingugurt</i>	Sulfur
22	<i>Olmos</i>	Diamond
23	<i>Resurslarning zaxiralari</i>	Reserves of resources
24	<i>Tejamkorlik</i>	Thrift
4.Global ekologik muammolar		
1	<i>“Issiqxona effekti” muammosi</i>	The problem of the “ greenhouse effect”
2	<i>Atmosfera</i>	Atmosphere
3	<i>Karbonat angidrid</i>	carbon dioxide
4	<i>Oltingugurt oksidlari</i>	Sulfur oxides
5	<i>Azot (II) oksidi</i>	Nitrogen (II) oxide
6	<i>“Issiqxona” gazlari</i>	"Greenhouse" gases
7	<i>Ko‘p yillik muzliklar</i>	Perennial glaciers
8	<i>Ozon qatlamining yemirilishi muammosi</i>	Ozone layer decay problem
9	<i>. “Ozon tuynugi”</i>	"Ozone hole”
10	<i>Janubiy Amerika</i>	South America
11	<i>Freon gazlari</i>	Freon gas
12	<i>Cho‘llashish muammosi</i>	Desertification problem
13	<i>Daraxt va butalarning kesilishi</i>	Pruning of trees and shrubs
14	<i>Chorva mollari</i>	Cattle
15	<i>Butunjahon cho‘llashish va qurg‘oqchilikka qarshi kurashish kuni</i>	World Day to combat desertification and drought
16	<i>O‘rmonsizlanish muammosi.</i>	The problem of deforestation.
17	<i>Ekvatorial o‘rmonlar</i>	Equatorial forests
18	<i>Tog‘ o‘rmonlari</i>	Mountain forest
19	<i>Tabiiy muvozanat</i>	Natural balance
20	<i>Orol dengizi</i>	Aral Sea
21	<i>Chuchuk suv tanqisligi muammosi</i>	Freshwater scarcity problem
22	<i>Baland tog‘lardagi muzliklar</i>	Glaciers in the high mountains
23	<i>Insoniyat</i>	Humanity
5.Dunyo aholisi		
1	<i>Jahon aholisi</i>	World population
2	<i>Arxeologik tadqiqotlar</i>	Archaeological research
3	<i>Migratsion harakatlar</i>	Migratory movements
4	<i>Demografik portlash</i>	Demographic explosion
5	<i>Buyuk geografik kashfiyotlar</i>	Great geographical discoveries
6	<i>Ocharchilik</i>	Famine
7	<i>Yuqumli kasalliklar epidemiyalari</i>	Infectious disease epidemics
8	<i>Aholining tabiiy ko‘payish darajasi</i>	Natural population reproduction rate
9	<i>Sanoat inqilobi</i>	Industrial Revolution
10	<i>O‘rtacha umr ko‘rish</i>	Average life expectancy
11	<i>Ikkinchi jahon urushi</i>	World War II

12	<i>Lotin Amerikasi davlatlari</i>	Latin American countries
13	<i>Insonparvarlik yordamlari</i>	Humanitarian aid
14	<i>Davlatlarning ijtimoiy-iqtisodiy taraqqiyoti</i>	Socio-economic development of states
15	<i>Urbanizatsiya jarayoni</i>	Urbanization process
16	<i>O'lim ko'rsatkichi</i>	Death toll
17	<i>Tug'ilish va o'lim koeffitsiyenti</i>	Birth and death coefficients
18	<i>Demografik inqiroz</i>	Demographic crisis
19	<i>Diniy va milliy omillar</i>	Religious and national factors
20	<i>Aholining turmush darajasi</i>	Living standards of the population
21	<i>An'anaviy turmush tarzi</i>	Traditional lifestyle
22	<i>Hududiy taqsimlanish</i>	Regional distribution
23	<i>Tabiiy geografik</i>	Natural geography
24	<i>Mo'tadil va subtropik iqlim</i>	Temperate and subtropical climate
25	<i>Daryo vodiysi va daltalari</i>	River Valley and deltas
26	<i>Dengizbo'yi hududlar</i>	Seacoast
27	<i>Aholi zichligi</i>	Population density
28	<i>O'rta dengiz</i>	Mediterranean Sea
29	<i>Statistik ma'lumotlar</i>	Stats
30	<i>"Mitti" davlatlar</i>	"Dwarf" States
31	<i>Aholining yosh tarkibi</i>	Age composition of the population
32	<i>Mehnatga layoqatli yoshdagilar</i>	Working age
33	<i>Keksalar</i>	Seniors
34	<i>Aholining jinsiy tarkibi</i>	Sexual composition of the population
35	<i>Yosh-jins piramidalari</i>	Age-gender pyramids
36	<i>Rivojlangan davlatlar</i>	Developed countries
37	<i>Rivojlanayotgan davlatlar</i>	Developing nations
38	<i>Aholining irqiy tarkibi</i>	Racial makeup of the population
39	<i>Irqlar</i>	Races
40	<i>Aholining milliy va diniy tarkibi</i>	National and religious composition of the population
41	<i>Qulay geografik o'rin</i>	Convenient geographical location
42	<i>Sanoat korxonalarim</i>	Industrial enterprises
43	<i>Transport yo'llarining</i>	Transport routes

Umuman olganda, ushbu yo'llar orqali boshqa umumta'lim fanlarini ham kasb-hunar maktablari va akademik litsey o'quvchilari uchun qiziqarli va foydali tarzda tashkil etish samarali bo'ladi. Yuqoridagi kabi yondashuvlar o'quvchilar o'zlarining o'rganayotgan kasb yoki yo'nalishlaridagi asosiy fanlar bilan bir qatorda, boshqa umumta'lim fanlarini ham katta ishtiyoq bilan o'rganishlariga sababchi bo'lishiga umid qilamiz.

Foydalanilgan adabiyotlar:

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2. Geografiya. Umumiy o'rta ta'lim maktablarining 10-sinfi uchun darslik. Yangi nashr. – Toshkent, Respublika ta'lim markazi. 2022.

3. Oliy va oʻrta maxsus taʼlim vazirligi huzuridagi Oliy va oʻrta maxsus, kasb-hunar taʼlimi yoʻnalishlari boʻyicha oʻquv-uslubiy birlashmalar faoliyatini Muvofiqlashtiruvchi kengashning 2022-yil 29-avgustdagi 5-son yigʻilishida maʼqullangan va Vazirning 2022-yil 30-avgustdagi 295-son buyrugʻi bilan tasdiqlangan Geografiya fani dasturi.

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UMUMTA’LIM MUASSASALARIDA ZAMONAVIY KIMYO DARSLARINI TASHKILLASH METODIKASI

Annotatsiya. Ushbu maqolada umumta’lim muassasalari 8-sinf kimyo darslari uchun “Ftor, brom, yod” mavzusini o‘qitish metodikasi zamonaviy pedagogik texnologiyalarni qo‘llagan holda ishlab chiqilgan dars loyihasi misolida keltiriladi.

Kalit so‘zlar: zamonaviy dars, zamonaviy pedagogik texnologiyalar, tushunchalar tahlili, jadval, Veer metodlari, kimyoviy topishmoqlar.

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METHODS OF ORGANIZING MODERN CHEMISTRY LESSONS IN GENERAL EDUCATION INSTITUTIONS

Annotation. In this article, using the example of a lesson project developed using modern pedagogical technologies, the methodology of teaching the topic "Fluorine, bromine, iodine" for chemistry lessons of grade 8 in general education institutions is presented.

Keywords: modern lesson, modern pedagogical technologies, methods of concept analysis, table, Fans, chemical riddles.

Ta’lim jarayonini tashkil etishning asosiy shakli darsdir. Hozirgi paytda darsning xilma-xil noan’anaviy shakllari joriy etilmoqda. Bunday darslar o‘quvchining ijodiy qobiliyatini o‘stirish, aqliy salohiyatini kuchaytirish, ilmiy dunyoqarashini kengaytirish va har bir yangilikni tez va to‘la qabul qila olish ko‘nikma va malakalarini tarkib toptiradi.

Dars jarayonida zamonaviy texnologiyalarni qo‘llash o‘quvchilarda ilmiy izlanishga qiziqishni uyg‘otadi, ijodkorlik va bunyodkorlik qobiliyatini

rivojlantiradi. Natijada egallangan bilim, ko'nikma va malakalar amaliy faoliyatda tatbiq etiladi, o'zlashtirish sifati oshadi.

Buning uchun o'qituvchi mahoratli bo'lishi va mavzularning mazmuniga qarab darsni to'g'ri rejalashtirishi, mashg'ulot davomida barcha o'quvchilarni faol va ongli ishlashlariga erishmog'i lozim.

Shunday ekan, barcha fan o'qituvchilari singari kimyo o'qituvchilari ham darslarda zamonaviy pedagogik texnologiyalar va interfaol usullarni doimiy ravishda qo'llab borishlari ta'lim samaradorligini oshirishga yordam beradi. Buning uchun fanning xususiyatidan kelib chiqib, zamonaviy pedagogik texnologiyalarning mavzuga mosini tanlash va darslarda muvaffaqiyatli foydalanish bo'lajak kimyo o'qituvchisining mahoratiga bog'liq bo'ladi.

Maktabda faoliyat olib borayotgan amaliyotchi talabalar ham kimyoni o'qitish jarayonida turli zamonaviy pedagogik texnologiyalardan samarali foydalanib kelishmoqda. Quyida maktab kimyo kursining 8-sinfi uchun tayyorlangan va sinovdan o'tkazilgan dars loyihasi metodik tavsiya tariqasida havola etiladi:

Mavzu Ftor, brom, yod.

Dars maqsadi: Ta'limiy: O'quvchilarga ftor, xlor, brom, yodning tabiatda tarqalishi, xossalari, biologik ahamiyati, eng muhim birikmalari va ularning xossalari haqida umumiy ma'lumot berish, galogenlarga xos sifat reaksiyalari bilan tanishtirish

Tarbiyaviy: O'quvchilarni kasbga yo'naltirish, kimyo faniga bo'lgan qiziqishlarini yanada mustahkamlash va o'z sog'ligiga e'tiborli bo'lishga o'rgatish

Rivojlantiruvchi: o'quvchilarning mustaqil fikrlash qobiliyatini, o'z fikrini ifoda eta olish, guruhlarda ishlash ko'nikma va malakalarini rivojlantirish, fanga bo'lgan qiziqishlarini oshirish

Dars turi: Aralash dars

Dars uslubi: kichik guruhlarda ishlash, tushunchalar tahlili, Veer metodi, topishmoqlar

Dars jihozlari: galogenlar birikmalaridan namunalar, jadvallar, Tushunchalar tahlili, Veer metodiga oid tarqatma

Darsning borishi:

I. Tashkiliy qism. Salomlashish, davomatni aniqlash. Kunga oid yangiliklar bilan tanishtirish. Mazkur sana bilan bog'liq muhim voqea va hodisalarni so'rash.

II. O'tilgan mavzuni so'rash va mustahkamlash

O'tilgan mavzuni so'rashda o'qituvchi o'quvchilar bilan tushunchalar tahlili o'tkazadi. O'quvchilar xlorning kislorodli birikmalariga tegishli asosiy tushunchalarni jadvalning o'ziga tegishli qismiga yozadilar. Buning uchun o'quvchilarga quyidagi jadval havola etiladi.

HClO -	HClO ₃ -
<div style="border: 1px solid black; border-radius: 15px; padding: 5px; display: inline-block;"> Xlorniin g kislородl </div>	
HClO ₂ -	HClO ₄ -

III. Yangi mavzu bayoni. Ftor, brom va yod elementlari galogenlar oilasining vakillari bo'lib, tabiatda turli birikmalar holida keng tarqalgan.

Ftor — flyuorit (plavik shpat) CaF₂, kriolit Na₃[AlF₆], ftorapatit 3Ca₃(PO₄)₂ · CaF₂ yoki Ca₅(PO₄)₃F minerallari tarzida tabiatda uchraydi.

Brom — xlor tutuvchi barcha tabiiy birikmalarga yondosh tarzda minerallar holida va dengiz suvida, yer osti suvlarida uchraydi.

Yod — dengiz o'tlari (laminariya) va dengiz bulutlarida, organik birikmalar, yer osti suvlarida, Chili selitrasiga yondosh tarzda yodatlar (NaJO₃, KJO₃) holida keng tabiatda uchraydi.

Galogenlarning barchasi o'tkir hidga ega, zaharli. F₂, Br₂, I₂ molekulari ikki atomli, tartib raqami ortishi bilan atom radi us lari ortib borganligi sababli molekular qutblanuvchanligi ortib boradi. Natijada molekulararo dispersion ta'sirlashuv kuchayib bromning suyuq, yodning qattiq holda bo'lishiga olib keladi. Bu esa o'z-o'zidan yuqori suyuqlanish va qaynash haroratiga ega bo'lishiga sabab bo'ladi

Ftor, brom, yod, elementlarining inson organizmidagi ahamiyatini tushuntirishda quyidagi rasmlardan foydalaniladi



Organizmida galogenlarning miqdori kamayib ketishi, oqibatlar haqida batafsil bayon etib beriladi.

Insonlarda uchraydigan aksariyat kasalliklar organizmida yod yetishmovchiligi kelib chiqishi bilan bog'liq holda ro'y berishi shifokor davosi esa shu buzilgan biokimyoviy jarayonni normal izga solish bilan bog'liq. Chunki

tiriklik-notarial holda kehadigan, uzviy bog‘langan, muntazam tarzda sodir bo‘lib turuvchi murakkab biokimyoviy jarayon.

Dars jarayonida guruhlarga quyidagicha sheriylar topishmoqlar berish orqali ularni faollashtiriladi.

- 1.Yod yetmasa tanada, ro‘y berar qanday holat?
Tanadagi qay a‘zo- kattalashar ba‘g‘oyat.
- 2.Qaysi mahsulotlarda, yod miqdori ko‘p bo‘lar?
Qancha miqdor yeyilsa- sog‘liq uchun “xo‘p” bo‘lar?
3. “Elementlar jadvalida” har moddalar o‘rni bor
Aytingchi ‘galogenlar.’ qaysi o‘rinda nomdor?
- 4.Bolalarga bir kunda qancha yod zarur erur ?
Qancha xurmo yeyilsa –yod miqdori soz bo‘lur?
- 5.Bolada yod miqdori gar kam bo‘lsa normadan.
Qanday kasalliklarni – topish mumkin boladan?
- 6.Yod miqdorin tanada- meyorda ushlash uchun,
Ayting, qandayin dori- ko‘rsatadi o‘z kuchin?

Berilgan javoblariga qarab guruhlarga ballar beriladi va darsni o‘quvchilarni fikr mulohazalaridan kelib chiqqan holatda davom ettiriladi.

So‘ngra Galogenidlar uchun sifat reaksiyalari quyidagi jadval yordamida tushuntirib beriladi.

Galogenidlar uchun sifat reaksiyalari

Galogenidlar	AgNO ₃ eritmasini ta‘sir	Hosil bo‘lgan cho‘kma	Pb ⁺²
Cl-	AgNO ₃ + NaCl = AgCl↓ + NaNO ₃	AgCl↓ oq pag‘a	PbCl ₂ ↓ oq rangli
Br -	AgNO ₃ + NaBr = AgBr↓ + NaNO ₃	AgBr↓ sarg‘ish	PbBr ₂ ↓ oq rangli
I -	AgNO ₃ + NaI = AgI↓ + NaNO ₃	AgI↓ Sariq	PbI ₂ ↓ Sariq

Qo‘rg‘oshin tuzlari (PbCl₂) bilan boradigan reaksiya tenglamalarini mustaqil yozish uyga vazifa qilib beriladi.

IV. Mustahkamlash. Yangi mavzu Veer metodi orqali mavzu mustahkamlanadi va o‘quvchilar baholanadi. Buning uchun o‘quvchilar 4 ta guruhga bo‘linadi. Har bir guruhga quyidagi tarqatma material tarqatiladi va topshiriq beriladi. Topshiriqni bajarish uchun 5 munut vaqt ajratiladi. Guruhdagi o‘quvchilar birgalashib topshiriqni bajaradilar. Berilgan vaqt tugagach har bir guruh o‘z ishini taqdimot qiladi

Guruhlarga topshiriq. Berilgan galogenlarning biologik ahamiyatini ijobiy va salbiy tomonlarini ayting.

Galogenlarning biologik ahamiyati							
Ftor		Xlor		Brom		Yod	
Ijobiy	Salbiy	Ijobiy	Salbiy	Ijobiy	Salbiy	Ijobiy	Salbiy
XULOSA:							

Soʻngra guruhlarga bittadan galogen nomi aytiladi va uyga vazifa sifatida sinkveyn tuzish topshirigʻi beriladi.

1-guruh - ftor 3-guruh - brom

2-guruh - xlor 4-guruh – yod uchun sinkveyn tuzadi.

V. Yakunlash. Oʻqituvchi darsga yakun yasaydi, darsda faol qatnashgan guruh oʻquvchilarini ragʻbatlantiradi, baholaydi va uyga vazifa beradi.

VI. Uyga vazifa. Mavzuni oʻqish, 134- betdagi 1-2 mashqlarni bajarish, sinkveyn tuzish

Xulosa oʻrnida shuni aytish mumkinki, dars davomida zamonaviy pedagogik texnologiyalarni oʻrinli qoʻllash oʻqitish samaradorligiga olib kelib, oʻquvchilarning bilim olishga qiziqishining ortishiga, darsga nisbatan diqqatini jamlashga, fikrlash doirasini kengaytirishga, ogʻzaki nutqini oʻstirishga xizmat qiladi.

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SHOFIRKON TUMANINING TABIIY RESURSLARDAN OQILONA FOYDALANISH MASALALARI

Annotatsiya. Ushbu maqolada Shofirkon tumanining yer-suv resurslari va tuproqlarning meliorativ holatiga doir ma'lumotlar keltirilgan va ularga bog'liq ravishda shakllangan muammolar ko'rib chiqilgan. Shuningdek, mazkur muammolarga taklif va tavsiyalar ishlab chiqilgan.

Kalit so'zlar: Iqlim, tuproq, sug'oriladigan yerlar, irrigatsiya, melioratsiya.

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ISSUES OF REASONABLE USE OF NATURAL RESOURCES OF SHOFIRKON DISTRICT

Annotation. This article presents information on the state of land and water resources and soil reclamation of Shafirkon district and considers the problems that have arisen in connection with them. Proposals and recommendations for these problems have also been developed.

Key words: Climate, soil, irrigated lands, irrigation, reclamation.

Mavzuning dolzarbligi: Respublikamizda 2023-yil 27-fevralda qabul qilingan 2998-IV-sonli "Tuproqni muhofaza qilish va uning unumdorligini oshirish to'g'risida"gi qarorida, mamlakatimizda qishloq xo'jaligida yer va suv resurslaridan samarali foydalanish, ularni asrash borasida keng ko'lamli ishlar amalga oshirilishi nazarda tutilgan [1.]. Ayni vaqtda har bir tuman fermer xo'jaliklari ko'lamida qishloq xo'jaligiga moslashgan sug'oriladigan maydonlarning unumdorligini oshirish, meliorativ holati va suv ta'minotini yaxshilashga alohida e'tibor qaratilgan. Shu nuqtayi nazardan Buxoro viloyatining Shofirkon tumanida amalga oshirilayotgan qishloq xo'jaligida yer resurslaridan oqilona foydalanish, tabiiy tizimlarda ekologik muvozanatni saqlashga qaratilgan chora tadbirlar tahlili amaliy ahamiyatga ega hisoblanadi.

Asosiy qism. Shofirkon tumani – Buxoro viloyatining eng qadimgi tumanlaridan biri hisoblanib, 1926-yilda tashkil etilgan, uning maydoni 3,72 km² ni tashkil etadi. Shundan sug'oriladigan yerlar 28400 g, asosiy ekinlari paxta

(9577 ga) hamda g'alla (6154 ga) hisoblanadi. Shuningdek, tuman hududida o'rmon xo'jaligi ham mavjud [2.].

Tuman hududi Zarafshon daryosi quyi oqimining o'ng qirg'og'ida joylashgan. Ma'lumki, joyning geologik tuzilishi, geomorfologik shakllanishi tuproqning hosil bo'lishida asosiy o'rin tutadi. Umuman olganda, Zarafshon vodiysi olimlar tomonidan to'rtta geomorfologik rayonga bo'lingan bo'lib, ular relyef tuzilishi va to'rtlamchi davr yotqiziqlari tabiatiga ko'ra bir-biridan sezilarli darajada farqlanadi. Ushbu geomorfologik rayonlar quyidagilar hisoblanadi: 1) Samarqand havzasi; 2) Buxoro subareal deltasi; 3) Qorako'l subareal deltasi; 4) Navoiy-Konimex vohasidan iborat [2.]. Shunga ko'ra, Shofirkon tumani Zarafshon vodiysining quyi qismida shakllangan Buxoro subareal deltasida joylashgan.

Buxoro subareal deltasi – Zarafshon daryosini Hazar darasidan chiqish joyidan boshlangan bo'lib uchburchak shaklga ega. Uning eng keng qismi 60 km bo'lib, Buxoro shahri meridianiga to'g'ri keladi. Deltaning umumiy maydoni (delta oralig'idagi qumliklar, sho'rxoklar bilan birgalikda) 287 ming gektardan iborat. Yer yuzasi asosan qadimgi Zarafshon daryosining shag'alli, qumli, qumoq va gilli alluvial yotqiziqlari bilan qoplangan. Ular qadimdan sug'oriladigan maydonlar bo'lganligi sababli, tuproqlar 2-3 m qalinlikdagi *agro-irrigatsion yotqiziqlar* bilan qoplangan.

Shofirkon tumani ham Buxoro viloyatining eng shimoliy qismida joylashgan tuman sanalib, hududining asosiy qismi cho'l mintaqasida joylashgan. Shofirkon tuman hududi shimoli-g'arbdan, janubi-sharqqa, ya'ni, Zarafshon daryosi tomon biroz nishab sanaladi. Tumanning eng baland qismi uning shimoli-sharqiy qismida 250 metrni, eng past nuqtasi 208 metrga to'g'ri keladi. Tuman hududining eng tekis qismining nishabligi hammasi bo'lib 8-10 km da atigi 80-90 smga pasayadi. Bu o'z o'rnida tuproqlarning meliorativ holatiga ta'sir ko'rsatuvchi omillardan biri hisoblanadi.

Iqlimi keskin kontinental bo'lib quyoshli kunlarning ko'pligi, haroratning yozda juda issiq, qishda esa nisbatan sovuq bo'lishi uning keskin kontinental iqlimli o'lka ekanligining yaqqol misolidir. Tumanda yillik o'rtacha harorat +14,2 °C ni tashkil etib, qishda eng sovuq harorat -29 gradusda, yozda eng issiq harorat esa +46 gradusni tashkil etadi. Shofirkon tumanida iyul oyining o'rtacha harorati +29,4 gradus, qish oylarida o'rtacha harorat esa -1.5 gradusni tashkil etadi. Buxoro viloyati tumanlari ichida Shofirkon iqlimi nisbatan salqin. Bunga sabab tuman viloyatning shimoliy darvozasi vazifasini bajaradi [5; 344 -b.].

Tumanda vegetatsiya davri 150 kunni tashkil etadi. Vegetatsiya davridagi ijobiy haroratlar yig'indisi esa 4700-5000 gradusni tashkil etadi. Quyoshning yalpi radiatsiya miqdori har santimetr kvadratga 150-160 kkal ga teng. Tumanda yil davomida shimoldan shamollar oqimi kirib keladi. Shofirkon tumanida yillik yog'in miqdori 200 mm ni tashkil etib, mumkin bo'lgan bug'lanish yillik yog'inga nisbatan 5-6 barobar ko'p.

Shofirkon tumanida oqar suvlar deyarli uchramaydi. Hududda qishloq xo'jaligi yerlari ham asosan su'niy kanallar olingan suvlar yordamida sug'oriladi. Tumandagi ekin maydonlari Amu -Buxoro mashina kanali, Katta Jilvon, Kichik Jilvon, Sultonobod, Ko'hnarud va Shohrud kanallari bilan sug'oriladi. Bular orasida Shohrud kanali eng qadimiysi hisoblanib 6-7 asrlarda barpo etilgan. Bundan xulosa qilish mumkinki, Shofirkon tumanida qadimdan sug'oriladigan maydonlar bo'lganligini bilish mumkin.

Tuman hududi asosan cho'l zonasiga to'g'ri kelganligi bois, tumandagi tuproq qatlami, flora va fauna ham cho'l sharoitiga mos holatda tarkib topgan. Shofirkon tumani tuproqlari bir xil emas cho'l mintaqasida turli mexanik tarkibdagi och tusli bo'z tuproqlar, qumoqli tuproqlar ba'zi joylarda sho'rxoqsimon tuproqlar ham qum shag'al tuproqlar uchraydi.

Tumanning shimoliy qismida sho'rxok, sho'rtob, qumloq, toshli cho'l, turli och bo'z tuproqlar, Shofirkon tumanining janubiy qismlarida o'tloq, botqoq-o'tloq va qayir-alluvial tuproqlar keng tarqalgan. Jongeldi massivi atroflarida asosan qumli-cho'l tuproqlari katta maydonni egallagan.

Iskogare massivi atrofida sur qo'ng'ir-o'tloqi tuproqlar tarkib topgan. Tuman hududida Zarafshon daryosining qayiri va terassalarida o'tloq- botqoq, o'tloq, och bo'z, oddiy bo'z tuproqlari tarqalgan. Sug'oriladigan maydonlarning Qizilqum cho'lga tutashib ketganligi bu yerda shamol eroziyasi, sho'rlanishga moyilligi, chirindi va boshqa ozuqa moddalarning kamligi, tuproqlar mexanik tarkibiga ko'ra asosan o'rtacha va yengil qumoq tuproqlardan iborat ekanini ko'rishimiz mumkin.

Tuproqlardagi gumus miqdori 0,80-1,10 % atrofida. Olingan ma'lumotlarga qaraganda, bu tuproqlar eng hosildor tuproqlar hisoblanib, Shofirkon tumanining asosiy tabiiy resurslaridan biridir. Bu resurslardan samarali foydalanish hududni meliorativ holati bilan bog'liq. Tuproqlarning meliorativ holati grunt suvlarning sathi bilan bog'liq. Tumanning shimoliy cho'l hududiga tutash yerlarda yer osti suvlarining sathi 3-4 m; tekislik qismida 1,5-2 m ni tashkil etadi. Qishloq xo'jaligi ekinlarni sug'orish davrida esa ularning balandligi 1-2 m gacha ko'tarilishi kuzatiladi. Tuman hududida gurunt suvlarining minerilizatsiyalashgan darajasi 1,5-2 g/l ni tashkil etadi. Ulardan keng miqyosda sug'orish maqsadlarda foydalanish tuproqlarni meliorativ holatiga salbiy ta'sir ko'rsatadi va bu masalani hal etish asosiy muammolardan biridir. Bundan tashqari, tumanda tarqalgan tuproqlarning 2,3% i og'ir qumoqli va loyli, 25,8% i o'rta qumoqli, 45,5% i yengil qumoqli, 26,4% i qumoqli-qumli tuproqlaridan iborat [3; 20-b.].

Bundan ko'rinib turibiki tuman hududining asosiy qismini o'rta-yengil qumoqli tuproqlar egallagan bo'lib, bu tuproqlar unumdor tuproq hisoblanib tuproqning agrofizikaviy ijobiy ta'sir ko'rsatadi. Tuproqlarning sho'rlanganlik darajasiga ko'ra 7,4% sho'rxoklar bilan kuchli sho'rlangan, 3,3% i kuchli sho'rlangan, 30,3% i o'rtacha sho'rlangan, 59% i kuchsiz sho'rlangan [3; 20-b.]. Tumandagi tuproqlarning asosiy qismi kuchsiz sho'rlangan. Bu ko'rsatkichlar

Shofirkon tumanining tuproqlarining meliorativ holati viloyat tumanlari orasida ancha yuqori ekanligini ko'rsatadi. Umuman olganda, Shofirkon tumani tabiiy sharoitiga ko'ra biroz noqulay hisoblanadi. Tuman hududi cho'l landshaft xususiyatlarni shakllantirgan bo'lib, suv resurslari bilan yetarli darajada taminlanmagan. Bu o'z navbatida hududda qishloq xo'jaligi tarmoqlarining rivojlanishiga to'sqinlik qiladi. Shuning uchun tuman miqyosida yer -suv resurslardan oqilon foydalanishni ilmiy asoslangan chora tadbirlarini ishlab chiqish va ularni amaliyotga tadbiq etish muhim masalalardan biri hisoblanadi.

Xulosa. Xulosa o'rnida shuni aytish mumkinki, Shofirkon tumani tabiiy jihatdan biroz noqulay tabiiy geografik sharoitga ega. Bu o'z navbatida mazkur hududda qishloq xo'jaligi tarmoqlarining rivojlanishiga to'sqinlik qiladi. Ya'ni bu hududda suv ko'p talab qiladigan o'simliklarni yetishtirish uchun qulay sharoitga ega emas. Quyi Zarafshon okrugida joylashgan hududlar Zarafshon daryosiga yaqinligi tufayli, qadimdan sug'orma dehqonchilikda foydalanib kelinmoqda.

Shuni alohida ta'kidlash kerakki, tabiiy resurslar ichida yer o'ziga xos huquqiy maqomga ega bo'lib, undan ilmiy va amaliy jihatdan oqilona foydalanishni tashkil etish, qishloq xo'jaligiga mo'ljallangan yerlarning tuproq unumdorligini oshirish hamda unumdor tuprog'i bo'lgan yerlardan alohida muhofazasini ta'minlash lozimligini taqozo etadi.

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GEOECOLOGICAL ASPECTS OF INCREASING THE EFFICIENCY OF USING THE LANDSCAPE AUTHORITY OF KARSHI DESERT

Annotation. In this article, the uniqueness of the natural conditions of the landscapes of the Karshi desert and the scientific importance of using them from an economic point of view are studied. The characteristics of agrolandscapes belonging to the category of anthropogenic landscapes of the desert were analyzed.

Key words: landscape, anthropogenic landscape, agrolandscape, natural anthropogenic landscape, pasture landscape, man-made landscape, sacred landscape.

The analysis of the features of landscape change under the influence of anthropogenic factors in the Karshi desert area shows that the change of natural complexes here is not only the result of the change of one or another component, but also between the components and morphological parts. is also related to the exchange of matter and energy between them. In other words, the change of vertical and horizontal relationship in the landscapes causes the change of the landscapes.

The level, scale and speed of landscape change under the influence of anthropogenic factors in the Kary desert are different. Here, the degree of change of landscapes is related to their natural features, on the one hand, and to the level of human influence on landscapes, on the other hand. The natural characteristics of landscapes, such as self-management and regulation, strength or weakness of regenerative features, resistance or resistance to external forces, including human activities, have occurred differently in different landscapes. At the same time, the forms of human activity are also very diverse. In the conditions of agriculture, pastoralism, mining, and water management, various modified categories are created.

It is known that at present, landscapes whose structure has been fundamentally changed due to human activity are called anthropogenic landscapes in geography. The influence of human activity in the Kary desert has caused the change of landscapes to different degrees and led to the spread of colorful landscapes according to the level of anthropogenic change. However, it would not be correct to include all the landscapes that are currently distributed in the Karshi desert into the group of anthropogenic landscapes. For this reason, we consider it appropriate to divide the Karshi desert landscapes classified by S. Abdullayev into a) natural, b) natural anthropogenic and c) anthropogenic

landscapes. As a result of the classification of the current landscapes into such groups, the development of measures to optimize and protect the natural potential of landscapes from the point of view of economic activity is one of the important factors.

In our opinion, the methods recommended by F.N. Milkov (1972) and A.M. Ryabchikov (1972) for the classification and mapping of anthropogenic landscapes can be used to change the landscapes of the Karshi desert under the influence of anthropogenic factors and the formation of anthropogenic landscapes. can be used for learning.

F.N. Milkov and A.M. Based on Ryabchikov's classification of anthropogenic landscapes, we divide the current landscapes of the Karshi Desert into the following classes and groups:

- A. Natural landscapes
- B. Pasture-anthropogenic landscapes
- I. Pasture landscapes
- V. Anthropogenic landscapes
- I. Agricultural landscapes (agro-landscapes)
 - a) Landscapes of irrigated lands (agro-irrigation landscapes)
- 2. Landscapes of dry lands (with the landscapes of dry lands).
- 3. Seliteb landscapes (village settlements).
- 4. Man-made landscapes.

In the Karshi desert, the largest area is made up of landscapes related to agricultural production, and they are called agro-landscapes in geographical literature. Among the agro-landscapes, the largest area is occupied by the landscapes of irrigated lands, which are called agro-irrigation landscapes due to the radical change of the structure.

A.M. Ryabchikov (1962) distinguishes the types of anthropogenic landscapes based on the forms of production activities. Based on this classification, the following types of anthropogenic landscapes can be distinguished in the Karshi desert: I. Related to construction and mineral production: a) Cities and industrial-energy nodes

b) Villages
c) Surface communications
g) Artificial reservoirs and canals
d) Quarries related to the extraction of mineral raw materials, oil and gas rigs, etc.

II. Related to land reclamation:

a) Irrigated lands-fields, gardens, vineyards, meadows, fields:

III. Lalmikor is related to agriculture:

a) Fields

b) Gardens and plantations of perennial crops

c) c) patrov and dry lands;

IV. Related to animal husbandry;

a) phytomeliorated grasslands and hayfields

When mapping anthropogenic landscapes, it is appropriate to divide them into the following classes:

1. Agricultural landscapes - agro-landscapes.
2. Man-made landscapes
3. Selected landscapes
4. Sacred landscapes

The agro-landscapes associated with agriculture are the most widely spread anthropogenic landscapes in the Karshi desert. Therefore, we describe in more detail the geoecological activities aimed at increasing the productivity and protection of landscapes belonging to this group.

The creation of agrolandscapes is directly related to the agricultural activities of people. Therefore, anthropogenicization of natural landscapes based on irrigation in arid climatic conditions is the most effective activity from an economic and ecological point of view.

Irrigated agriculture has a long history in the Karshi desert. Not only the local water resources, but also the water basins of the neighboring river basins were used for irrigation here even before our era. In the aerial photographs of the Karshi desert, traces of ditches built for irrigation in the past, contours of fields can be distinguished. However, large-scale irrigation works began in the 60s of the 20th century, in connection with the creation of the energy base in the country. During this period, 200,000 new lands were acquired in the Karshi desert and started to be used for agriculture.

The expansion of agro-irrigation landscapes in the Karshi desert led to a change in the dynamic balance embodied in nature. Hydrotechnical and agrotechnical measures related to irrigation have positive effects from an economic point of view, as well as an increase in undesirable processes that harm production from an ecological point of view, destruction of soil structure and humus removal, changes in biological and physico-chemical properties, and this also caused development. The intensification of such processes naturally leads to a decrease in the yield of agricultural crops, and in some cases, studies have shown the beneficial effect (amount that can be absorbed by plants) of mineral fertilizers that are produced under current technological conditions and are widely used in agricultural practice. shows that it is not very big.

The gradual development of the processes that cause a decrease in the productivity of agro-irrigated landscapes requires the rational organization of their use in agricultural production on a scientific basis and the establishment of a set of measures that are both ecologically and economically effective for the purposes of effective use of their resources. Therefore, the production of geological maps based on the study of the natural characteristics of agro-irrigated landscapes and their conditions of change under the influence of anthropogenic factors is of great practical importance. To do this, first of all, using various methods, monitoring the conditions of changes in anthropogenic landscapes and

their components (especially changes in the level of groundwater, soil changes, etc.) would be appropriate.

The following are the main factors that negatively affect the productivity of agroirrigated landscapes.

a) Changes in soil-forming factors, increased irrigation erosion;

b) Reshaping of the hydrological regime of irrigated lands and their immediate surroundings, rivers, reservoirs, and underground waters are widely used in the fields of mineral fertilizers, protection of agricultural crops, and against weeds. contamination with sewage containing harmful chemicals due to the washing of chemicals;

g) Change of microclimate conditions;

Thus, agro-irrigation, created by irrigation on irrigated lands, is aimed at increasing the productivity of landscapes, first of all, by identifying and mapping landscapes (or morphological units) undergoing processes unsuitable for agricultural production, and then at slowing down or completely eliminating them. reclamation measures should be carried out. These activities must be carried out based on the features of the landscape.

The formation of certain types of agrolandscapes in the Kary desert is related to the use of seasonal moisture resources in arid climatic conditions. The anthropogenic landscapes that are formed in dryland cultivated lands are also close to the agroirrigated landscapes of irrigated lands due to the change in their structure. relatively "lighter" under anthropogenic influence (during a certain season). Therefore, there will be no fundamental changes in the relief and microclimate.

In Kashkadarya region, about 280,000 hectares of land (24,000 of which are semi-arid lands) are cultivated. Because the yield of agricultural crops in dry lands depends on the amount of atmospheric precipitation that falls in the spring months. That is why it is impossible to grow agricultural crops on dry lands in dry spring years. In the Karshi desert, the main massifs of dry lands are located on the sloping plains before the mountains, in the areas where light gray soils are scattered. Depending on the climatic conditions, dryland farming is not carried out in Kasbi, Nishon and Mirishkor districts.

Grain crops are mainly grown in dry lands. Also, there are opportunities to improve livestock feed base in dry lands. The location of dry lands mainly on sloping plains increases the tendency of the soils in these lands to erosion processes. Therefore, anti-erosion measures should be determined when using dry land landscapes. Especially in the summer months, the air is dry and it causes destruction of the fertile surface layer of the soil.

Ikhotozors are very important in preventing or slowing erosion processes in dry lands. Ikhotozors provide an opportunity for better soil moistening due to reduced evaporation, moisture accumulation in winter and spring, and reduction of the tendency to fly away (deflation) of soil particles as a result of slowing down the speed of winds.

Large areas in the Karshi desert have been used since ancient times as pastures for grazing cattle and hayfields for preparing winter fodder. Due to the climatic conditions and the long duration of the vegetation period, it is possible to graze cattle in these fields almost throughout the year. For this reason, the structure of the landscapes in the areas used as pastures has been slightly changed, but since these changes do not belong to fundamental changes, pasture landscapes can be included in the category of natural-anthropogenic landscapes of the current landscapes.

As noted above, the productivity of pasture landscapes in the Karshi desert is not very high. Therefore, it is necessary to develop a system of measures to increase their productivity. According to the natural conditions, the experiments conducted in the regions close to the Karshi desert showed that it is possible to increase the productivity of pastures by 3-4 times by planting fodder crops adapted to local conditions. Artificial pastures with higher productivity should also be established on irrigated and dry lands.

The area of pastures here has been shrinking since the years when the complex development of the Karshi desert began. But at the same time, due to bringing water to the desert, water was released to all pastures, and as a result, conditions were created for the improvement of their water supply. Development and use of pastures should be carried out taking into account the characteristics of natural conditions and resources (climate, soil and plants). For example, seasonality of grasses and types of plants should be organized on the basis of their use in pastures, taking into account the number of hooves of cattle, it is necessary to properly organize livestock grazing in pastures throughout the year.

Serious attention should be paid to increasing the productivity of the landscapes of the Karshi desert that can be used as pastures and their protection. Because all types of pasture soils are under the influence of erosion processes expressed to different degrees, depending on the features of the relief, as mentioned above. Also, the use of pastures without taking into account the bioecological conditions of the plants in the vegetation cover makes it difficult for the regeneration of plant resources and leads to the thinning of the vegetation cover.

In the western regions of the Karshi desert, the excess of the number of hooves compared to the feed "capacity" of the pastures led to the complete appearance of the plant cover in many areas, and to the illumination of the possibilities of regeneration, it is obvious that the open plots and launch pits were created. is thrown into z. This is especially evident around wells. It is especially evident around wells.

In the use of landscapes as pastures, it is necessary to increase biological productivity of plant cover and bioecological conditions of plants, and to increase pastures with reduced productivity by planting nutritious crops.

Summary. The change of landscapes and the current state of the natural environment in the Karshi desert is also related to the strong man-made effects on

them. The construction of Mubarak gas processing, Shurtan gas extraction, Shurtan gas-chemical complex, Mubarak gas compressor station and other huge industrial facilities in this area, the ongoing geological and prospecting work have led to fundamental changes in the landscape. was also the basis for the creation of the technical structure.

It is necessary to take into account the influence of man-made factors in the rational use of the natural potential of the desert landscape and the organization of environmental protection. Especially the stability of the delicate desert ecosystems and their resistance to external anthropogenic influence are important for the construction of industrial facilities and their development. requires comprehensive environmentalization of the impact of man-made factors in organizing the production process. Therefore, the influence of man-made factors should not be ignored in the organization of effective and reasonable use of the natural potential of Karshi desert landscapes.

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ATMOSFERA HAVOSINI MUHOFAZA QILISHNI HUQUQIY ASOSLARI

Annotatsiya: ushbu maqolada atmosfera havosi tushunchasining yuridik tavsifi, atmosfera havosini muhofaza qilishning ekologik-huquqiy talablari, atmosfera havosini muhofaza qilishga oid xalqaro hujjatlar va milliy qonunchilikga doir ma‘lumotlar keltirilib o‘tilgan.

Kalit so‘zlar: atmosfera, qonunlar, ma‘muriy javobgarlik, jinoiy-huquqiy javobgarlik, xalqaro hujjatlar, protokollar, kelishuvlar.

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LEGAL BASIS OF ATMOSPHERIC AIR PROTECTION

Annotation. this article provides a legal description of the concept of atmospheric air, environmental and legal requirements for the protection of atmospheric air, international documents and national legislation for the protection of atmospheric air.

Key words: atmosphere, laws, administrative responsibility, criminal-legal responsibility, international documents, protocols, agreements.

Kirish so‘z: Hozirgi vaqtga kelib, atmosfera havosi va u bilan bog‘liq bo‘lgan bir qancha muammolar nafaqat O‘zbekistonda balki butun dunyoda eng global muammolardan biri hisoblanadi. Shuningdek, uni muhofaza qilish ham dolzarbligicha qolmoqda. Aslida, atmosfera Yer yuzini samodan keladigan meteor jismlardan, quyoshning tirik jonlar uchun zararli bo‘lgan ultrabinafsha nurlaridan saqlaydi. Havо qobig‘i Yer yuzini shaffof ko‘rpa kabi asrab turadi. Umuman olganda, atmosfera havosi - yer sharini o‘rab olgan bir necha xil gazlardan iborat bo‘lgan havо qatlami, tirik mavjudot hamda boshqa tabiat boyliklarining mutanosibligini ta‘minlovchi manba.

Atmosfera havosini muhofaza qilishga doir qonun va qonun osti hujjatlari qabul qilingan bo‘lib, atmosfera havosini muhofaza qilishning asosiy manbai bo‘lib **"Atmosfera havosini muhofaza qilish to‘g‘risida"**gi qonun hisoblanadi. Mazkur qonunning 3-moddasiga muvofiq, atmosfera havosini muhofaza qilish to‘g‘risidagi qonun hujjatlarining asosiy vazifalari quyidagilardan iborat:

- atmosfera havosining tabiiy tarkibini saqlash;
- atmosfera havosiga zararli kimyoviy, fizikaviy, biologik va boshqa xil ta'sir ko'rsatilishining oldini olish hamda kamaytirish;
- davlat organlari, korxonalar, muassasalar, tashkilotlar, jamoat birlashmalari va fuqarolarning atmosfera havosini muhofaza qilish sohasidagi faoliyatini huquqiy jihatdan tartibga solish nazarda tutiladi.

Ushbu qonunning 4-moddasiga ko'ra, fuqarolar hayot va sog'lik uchun qulay atmosfera havosiga ega bo'lish, atmosfera havosining holati hamda uni muhofaza qilish yuzasidan ko'rilayotgan chora-tadbirlar to'g'risida o'z vaqtida va ishonchli axborot olish, atmosfera havosiga ifloslantiruvchi moddalar va biologik organizmlar chiqarilishi hamda fizikaviy omillarning atmosferaga zararli ta'sir ko'rsatishi orqali o'zlarining salomatligi hamda mulkiga ziyon yetkazilgan hollarda zararni undirib olish huquqiga egadirlar.

Atmosfera havosidan foydalanuvchi barcha yuridik va jismoniy shaxslar o'z vaqtida atmosfera havosini muhofaza qilishi va davlat standarti talabi asosida foydalanishlari shart va zarur.

Fuqarolar atmosfera havosini avaylashlari, uning ifloslanishiga, kamayishiga va unga fizikaviy omillar zararli ta'sir etishiga olib keluvchi harakatlarni qilmasliklari shart.

Atmosfera havosining holatini kuzatish, u haqdagi axborotni to'plash, umumlashtirish, tahlil etish va istiqbolni belgilash atrof tabiiy muhitning davlat monitoringi yagona tizimi bo'yicha qonun hujjatlarida belgilangan tartibda amalga oshiriladi. Shuning uchun ham "**Atmosfera havosini muhofaza qilish to'g'risida**"gi qonunning 24-moddasiga asosan, barcha korxonalar, muassasalar va tashkilotlarning atmosfera havosini muhofaza qilish sohasidagi majburiyatlari quyidagilardan iboratdir. Unga ko'ra:

- faoliyati atmosfera havosiga ifloslantiruvchi moddalar, biologik organizmlar, issiqxona gazlari va ozonni buzuvchi moddalar chiqarish;
- atmosferaga chiqarilgan chiqindilarni tozalash va zararli fizikaviy ta'sirni kamaytirish uchun inshootlar, asbob-uskunalar va apparaturalardan, Shuningdek, ular ustidan nazorat qilish vositalaridan foydalanish qoidalariga rioya qilish;
- xo'jalik obyektlari tevaragida sanitariya-muhofaza zonalari barpo etish;
- chiqindilar chiqarishni hamda zararli fizikaviy ta'sirni kamaytirish chora-tadbirlarini ko'rish;
- chiqariladigan chiqindilar hamda fizikaviy omillar zararli ta'sirining yo'l qo'yiladigan doiradagi normativlariga rioya qilish ustidan nazorat o'rnatish, ularning hisobini yuritish va belgilangan tartibda statistika hisobotini taqdim etish;
- energiyani tejaydigan texnologiyalarni joriy etish, yoqilg'i -energetika resurslarini tejash, ekologik jihatdan toza energiya manbalaridan foydalanish chora-tadbirlarini ko'rish;

- meteorologiya sharoitlari noqulay kelishi kutilayotganligi munosabati bilan atmosfera havosiga ifloslantiruvchi moddalar va biologik organizmlar chiqarishni kamaytirish yuzasidan O'zbekiston Respublikasi Ekologiya va atrof-muhitni muhofaza qilish davlat qo'mitasi bilan kelishilgan holda chora-tadbirlar ko'rish;

- korxonalar va transport kommunikatsiyalarining ta'sir doirasida atrof-muhitga hamda aholi salomatligiga zararli ta'sir ko'rsatilishini baholash;

- kuchli ta'sir etuvchi zaharli moddalar hamda bug lanuvchi birikmalarni saqlash, foydalanish va ulardan bo'shagan idishlarni zararsizlantirish shartlariga rioya qilish;

- chiqindilarni yo'q qilishni ta'minlash hamda ular to'planib qolganida va qayta ishlanayotganida atmosfera havosini ifloslanishining oldini olish chora-tadbirlarini ko'rish.

Atmosfera havosini muhofaza qilish chora-tadbirlarini bajarish tuproq, suv va atrof tabiiy muhitning bosha obyektlari ifloslanishiga olib kelmasligi lozim.

Mazkur qonunning 25-moddasiga asosan, atmosfera havosiga zararli ta'sir ko'rsatganlik uchun to'lovlar korxonalar, muassasa va tashkilotlardan qonun hujjatlarida belgilab quyilgan tartib va miqdorda undirib olinadi.

Atmosfera havosini muhofaza qilish sohasidagi davlat boshqaruvi va nazorat etish tartibi, O'zbekiston Respublikasining 1996-yil 27-dekabrda qabul qilingan "**Atmosfera havosini muhofaza qilish to'g'risida**" gi qonunining 5-moddasida o'z aksini topgan. Unga ko'ra, atmosfera havosini muhofaza qilish sohasida davlat boshqaruvini O'zbekiston Respublikasi Vazirlar Mahkamasi, O'zbekiston Respublikasi Ekologiya va atrof-muhitni muhofaza qilish davlat qo'mitasi, mahalliy davlat hokimiyati organlari amalga oshiradilar.

Shuningdek, mazkur qonunning 28-moddasiga asosan, atmosfera havosini muhofaza qilish ustidan davlat nazorati mahalliy davlat hokimiyati organlari tomonidan, shuningdek maxsus vakolat berilgan davlat organlari tomonidan qonun hujjatlarida belgilangan tartibda amalga oshiriladi.

O'zbekiston Respublikasi Ekologiya va atrof-muhitni muhofaza qilish davlat qo'mitasi, O'zbekiston Respublikasi sog'liqni saqlash vazirligi, O'zbekiston Respublikasi Ichki ishlar vazirligi atmosfera havosini muhofaza qilish ustidan nazorat qilish bo'yicha maxsus vakolat berilgan davlat organlaridir.

"**Atmosfera havosini muhofaza qilish to'g'risida**" gi qonunning 6-moddasiga ko'ra, atmosfera havosini muhofaza qilish sohasidagi standartlar atmosfera havosini muhofaza qilish tartibini, uning holati ustidan nazorat usullarini aniqlab beradi, atmosfera havosini muhofaza qilish bo'yicha o'zga talablarni belgilaydi.

Inson uchun atmosfera havosini muhofaza qilish sohasidagi standartlar (sanitariya normalari) O'zbekiston Respublikasi sog'liqni saqlash vazirligi tomonidan tasdiqlanadi.

Atrof tabiiy muhit obektlari uchun atmosfera havosini muhofaza qilish, iqlimni va ozon qatlamini saqlash sohasidagi standartlar O'zbekiston Respublikasi

Ekologiya va atrof-muhitni muhofaza qilish davlat qo'mitasi tomonidan tasdiqlanadi.

"Atmosfera havosini muhofaza qilish to'g'risida" gi 1996-yil 27-dekabrda qabul qilingan qonunning 29-moddasiga asosan, bo'ladilar. Korxonalar, muassasalar, tashkilotlar va fuqarolar atmosfera havosini muhofaza qilish to'g'risidagi qonun hujjatlarini buzish oqibatida yetkazilgan zarar o'rnini qonun hujjatlarida belgilangan tartibda javobgar bo'ladilar.

O'zbekiston Respublikasi **"Ma'muriy javobgarlik to'g'risida"** gi kodeksning 85-moddasiga binoan: Ifloslantiruvchi moddalar va biologik organizmlarni atmosfera havosiga chiqarib tashlash, unga zararli fizikaviy ta'sir ko'rsatish yoki atmosfera havosidan belgilangan talablarni buzgan holda foydalanish; 86-moddasida atmosferaga chiqariladigan zararli moddalarni tozalash inshootidan foydalanish qoidalarini buzish, shuningdek undan foydalanmaslik; 87-moddasida chiqindilarda ifloslantiruvchi moddalar normativdan ortiq bo'lgan transport va boshqa harakatlanuvchi vositalar va qurilmalarni tayyorlash hamda foydalanishga chiqarish; 88-moddasida atmosfera havosini muhofaza qilish talablariga rioya qilmaslik uchun ham javobgarliklar ko'rsatilgan.

Yuqorida ko'rsatilgan talablarni buzganlik uchun fuqarolarga eng kam ish haqining uch baravaridan besh baravarigacha, mansabdor shaxslarga esa -besh baravaridan o'n baravarigacha miqdorda jarima solishga sabab bo'ladi.

Jinoiy huquqiy javobgarlik. O'zbekiston Respublikasi Jinoyat Kodeksining 194-196-moddalarida atmosfera havosini muhofaza qilish bilan bog'liq sodir etilgan jinoiy huquabuzarlik uchun jazo tizimi ko'rsatilgan.

Shu nuqtaii nazardan atmosfera havosining ifloslanishi yer yuzidagi boshqa tabiiy resurslar va tirik organizmlarga juda katta ta'sir ko'rsatadi. Atmosfera havosining ifloslanishi o'simliklar va qishloq xo'jalik ekinlarini rivojlanishiga va mahsulot sifatiga katta salbiy ta'sir ko'rsatmoqda. Aluminiy ishlab chiqarish zavodlaridan atmosfera havosiga me' yoridan ortiq chiqarilayotgan zaharli ftor birikmalari qishloq xo'jaligi mahsulotlariga va ularning sifatiga salbiy ta'sir qilayapti. Sanoati rivojlangan shaharlarda o'simliklarning rivojlanishi susayib, ba'zi daraxtlarning yashash muddati keskin kamayib bormoqda. Ma'lumotlarga qaraganda, qayrag'och daraxti tabiiy sharoitda 350-400 yil umr ko'rsa, shahar xiyobonlarida 120-220 yil, serqatnov avtomagistral yo'llar atrofida esa, 40-50 yil umr ko'rar ekan. Atmosfera havosining ifloslanishi hayvonot olamiga ham salbiy ta'sir etib, ularning tez-tez zaharlanishiga, ba'zan umuman nobud bo'lishiga sabab bo'lmoqda. Atmosfera havosining turli zaharli gaz va changlar bilan ifloslanishi oqibatida asalarining qirilib ketish xavfi tug'ilmoqda. Ekolog olimlarning orasida qaysi mintaqaning ob-havosi toza bo'lsa, laylaklar va asalari o'sha yerda bo'ladi! degan g'oyalar mavjud. Yirtqich qushlar zaharlangan o'ljalari bilan ovqatlanib, bepustlik dardiga muhtalo bo'lganlari olimlar tomonidan kuzatilgan.

Atmosfera havosini muhofaza qilish va iqlim o'zgarishlarining oldini olish maqsadida xalqaro miqyosda quyidagi xalqaro hujjatlar qabul qilingan:

- BMT ning Iqlim o'zgarishi to'g'risidagi Konvensiyasi
- Iqlim o'zgarishi haqidagi BMT ning Doiraviy konvensiyasi;
- Monreal protokoli;
- Kioto protokoli;
- Ozon qatlami yemirilishining oldini olish to'g'risidagi konvensiya.

Birlashgan Millatlar Tashkilotining Iqlim o'zgarishi bo'yicha doiraviy konvensiyasi:

Sayyoramizni qutqarishda BMT tizimidagi tashkilotlar eng faolidir. 1992-yilda Birlashgan Millatlar Tashkilotining Iqlim o'zgarishi bo'yicha doiraviy konvensiyasi Yer sammitida iqlim o'zgarishiga qarshi kurash yo'lidagi birinchi qadam bo'ldi. Hozirgi vaqtda Konvensiyaga a'zo davlatlarning tarkibi deyarli universaldir - 197 davlat Konvensiyani ratifikatsiya qilgan va uning ishtirokchilari hisoblanadi. Konvensiyaning asosiy maqsadi **"iqlim tizimiga xavfli antropogen ta'sir"** ning oldini olishdir.

Kioto protokoli:

1995 yilda mamlakatlar iqlim o'zgarishiga global javob choralarini kuchaytirish bo'yicha muzokaralarni boshladilar. Ikki yil o'tgach, Kioto protokoli qabul qilindi. Ushbu hujjat Protokol ishtirokchilari bo'lgan rivojlangan mamlakatlarni issiqxona gazlari chiqindilarini kamaytirish majburiyatini oladi. Birinchi majburiyat muddati 2008- yilda boshlangan va 2012- yilda yakunlangan. Ikkinchi davr 2013- yil 1-yanvarda boshlanib va 2020- yilda tugagan. Kioto protokoli ishtirokchisi bo'lgan 192 ta davlat mavjud.

Parij kelishuvi:

Birlashgan Millatlar Tashkilotining Iqlim o'zgarishi bo'yicha doiraviy konvensiyasi ishtirokchilari konferensiyasining 21-sessiyasida iqlim o'zgarishiga qarshi kurashish va barqaror past uglerodli rivojlanishga erishish uchun zarur bo'lgan harakatlarni kuchaytirish bo'yicha muhim kelishuvga erishildi. Parij kelishuvi Konvensiya mandatiga asoslanadi va tarixda birinchi marta barcha xalqlarni iqlim o'zgarishiga qarshi kurashish va yumshatish uchun qat'iy qadamlar qo'yish va rivojlanayotgan mamlakatlarga yordam berish uchun birlashtiradi. Parij kelishuvining asosiy maqsadi - bu asrda global haroratning o'sishini 2 ° C darajasida ushlab turish va hatto uni 1,5 ° S gacha tushirishga harakat qilish uchun iqlim o'zgarishiga global javobni kuchaytirish.

Xulosa qilib shuni aytishimiz mumkinki, atmosfera havosi tabiiy resurslarning tarkibiy qismi bo'lib, u umummilliy boylik hisoblanadi va davlat tomonidan muhofaza qilinadi. Atmosfera havosini muhofaza qilish to'g'risida qonunchiligimizda bir qancha qonunlar, qonunosti hujjatlari va qarorlar mavjuddir. Jumladan, "Atmosfera havosini muhofaza qilish to'g'risida"gi O'zbekiston Respublikasi Qonunidir. Undan tashqari xalqaro protokollar va kelishuvlar ham bor, yuqorida aytib o'tilganlarning ba'zilariga bizning vatanimiz

ya'ni O'zbekiston ham a'zo davlatlardan biri hisoblanadi. Biz ya'ni fuqarolarning qonunchilik bilan belgilab qo'yilgan bir qancha huquqlarimiz ham bor. Masalan, hayotimiz va sog'lig'imiz uchun qulay atmosfera havosidan foydalanishimiz, atmosfera havosining holati hamda uni muhofaza qilish bo'yicha ko'rilayotgan chora-tadbirlar to'g'risida tegishli davlat organlaridan o'z vaqtida va ishonchli axborot olishimiz, atmosfera havosiga ifloslantiruvchi moddalar va biologik organizmlar chiqarilishi hamda unga fizikaviy omillarning zararli ta'sir ko'rsatishi tufayli o'z sog'lig'imizga va mol-mulkimizga ziyon yetkazilgan hollarda zararning o'rni qoplanilishini talab qilishimiz, atmosfera havosini muhofaza qilish masalalari bo'yicha jamoatchilik fikrini o'rganishimiz va jamoatchilik ekologik ekspertizasini amalga oshirishda ishtirok etish kabi huquqlarga egamiz. Biz, atmosfera havosini muhofaza qilish to'g'risidagi qonunchilik talablariga rioya etishimiz, atmosfera havosining ifloslanishiga, kamayishiga va unga fizikaviy omillarning zararli ta'sir ko'rsatishiga olib keluvchi harakatlarni sodir etmasligimiz shart.

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TIJORAT BANKLARIDA RAQAMLASHTIRILGAN MOLIYAVIY XIZMATLARNI RIVOJLANTIRISH ISTIQBOLLARI

Annotatsiya. Tijorat banklarida raqamlashtirilgan bank mahsulotlarini yaratish, bank mijozlariga zamonaviy bank mahsulotlari takliflarini shakllantirish, mahsulot va xizmatlarga bo'lgan ehtiyojini to'liq qondirishni ta'minlash, bankning moliya bozorida raqobatbardoshligini ta'minlash, daromadligi va rentabelligini oshirish bo'yicha ilmiy asoslangan nazariy va uslubiy qoidalar va amaliy tavsiyalarni ishlab chiqishdan iborat.

Tayanch so'zlar: Bank, moliya bozori, Internet, IT-texnologiyalar, SWOT tahlil, moliyaviy tahlil.

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PROSPECTS FOR THE DEVELOPMENT OF DIGITALIZED FINANCIAL SERVICES IN COMMERCIAL BANKS

Abstract. Scientifically based theoretical and methodological methods for creating digitized banking products in commercial banks, formulating modern banking product offers to bank customers, ensuring full satisfaction of their needs for products and services, ensuring the bank's competitiveness in the financial market, increasing profitability and profitability consists of developing rules and practical recommendations.

Key words: Bank, financial market, Internet, IT technologies, SWOT analysis, financial analysis.

Globalashuv va internetlashuv jarayonlari biznes yuritishning odatiy tamoyillarini qayta shakllantirmoqda. IT-texnologiyalari jamiyatning barcha jabhalariga kirib bordi, bundan bank tizimi ham mustasno emas. Bilamizki, 2020 yilda karantin cheklovlari bo'lganligi tufayli masofadan turib masofaviy ishlashga to'g'ri keldi. Bunda biznes jarayonlarining yangi turlari ya'ni an'anaviy usuldan kechib IT-texnologiyalarni qo'llagan holda masofaviy usulga o'tish orqali shakllandi. Masofaviy xizmat ko'rsatish formati Internet texnologiyalari va IT-dasturlashga asoslangan. Bozor ishtirokchilarining o'sishi bilan bank sektorida

raqobat darajasi oshadi, bu moliyaviy barqarorlikni shakllantiradi. O'z navbatida, yangi turdagi bank mahsulotlari va xizmatlarining mavjudligi bank sektori ishtirokchilarining raqobatdosh ustunliklarini shakllantiradi. Masofaviy xizmat ko'rsatish bank ofis markazining hududiy joylashuvidan qat'i nazar, masofadan turib aholiga xizmat ko'rsatish imkoniyatini yaratadi, shuningdek iste'molchi va bank o'rtasidagi chegaralarning shafofligini ta'minlaydi. Onlayn banking tendentsiyasi 2020-yildagi pandemiyadan ancha oldin shakllangan, ammo undan faol amaliy foydalanish COVID-19 pandemiyasi davrida boshlandi desak xato bo'lmaydi. Hozirgi vaqtda bank sektorining innovatsion rivojlanishi yuqori darajadagi internet texnologiyalari, raqamli mahsulotlar va masofaviy xizmatlar ko'lami bilan ajralib turadi. Banklar o'rtasidagi raqobatbardoshlikni ta'minlashi uchun zamonaviy bank xizmatlarini joriy etishga, yangi texnologiyalardan foydalanishga yanada ko'proq ehtiyoj sezmoqdalar.

Xususan, bu bo'yicha O'zbekiston Respublikasi Prezidenti Sh.Mirziyoev 2020- yil 29-dekabrda Oliy Majlisga qilgan Murojaatnomasida "Afsuski, bank tizimi raqamli texnologiyalarni qo'llash, yangi bank mahsulotlarini joriy etish va dasturiy ta'minotlar bo'yicha zamon talablaridan 10-15 yil orqada qolmoqda. Shuning uchun, bank tizimini rivojlantirish uchun 2021 - yil keskin choralar ko'rishimiz lozim. 2021 yildan boshlab har bir bankda keng ko'lamlı transformatsiya dasturi amalga oshiriladi. Bu borada banklarimizning kapital, resurs bazasi va daromadlarini oshirish alohida e'tiborimiz markazida bo'ladi"²⁷ deya, so'zlagan edilar. Shuningdek, davlatimiz rahbari tomonidan 2020-yil 12-mayda imzolangan "2020-2025-yillarda O'zbekiston Respublikasining bank tizimini isloh qilish bo'yicha Harakatlar strategiyasi"da ham tijorat banklarining biznes jarayonlari va masofaviy bank xizmatlarini kengaytirish maqsadida, banklar tizimida zamonaviy axborot – kommunikatsiya texnologiyalarini keng joriy etish va bank tizimini avtomatlashtirish kabi ustuvor vazifalar belgilab berildi. Ayni paytda banklarning mobil ilovalariga jismoniy shaxslar uchun barcha asosiy bank xizmatlari joriy etilgan, jumladan, to'lovlarni amalga oshirish, bank kartasini blokirovka qilish (blokdan chiqarish), mikrocredit (kredit) olish, onlayn depozit operatsiyalari, onlayn konversiya. 2022-yil 19-yanvar holatiga ko'ra masofaviy xizmat ko'rsatish tizimlaridan foydalanuvchilar soni 20 203 384 kishini, 2020-yilda esa 10 153 000 kishini tashkil etgan. Ikki yil ichida foydalanuvchilar soni 50 foizga ortgan. Mobil aloqalardan foydalanuvchilar soni ortganligi va internet xizmatlarining o'sishi tufayli an'anaviy bank tizimlarining faoliyati hozirgi zamon talablariga javob bermay qoldi desak mubolag'a bo'lmaydi. Chunki innovatsion mahsulotlarni joriy etishda internet texnologiyalarining o'rni katta ahamiyatga ega. Shu tufayli, hozirgi vaqtda tijorat banklari o'z faoliyati chegaralarini kengaytirishga va uni samaradorligini oshirishga intilmoqda. Bunda, masofaviy amalga oshiruvchi raqamli banklarni tashkil etish, uni jadal rivojlanishi uchun infokommunikatsiya texnologiyalaridan

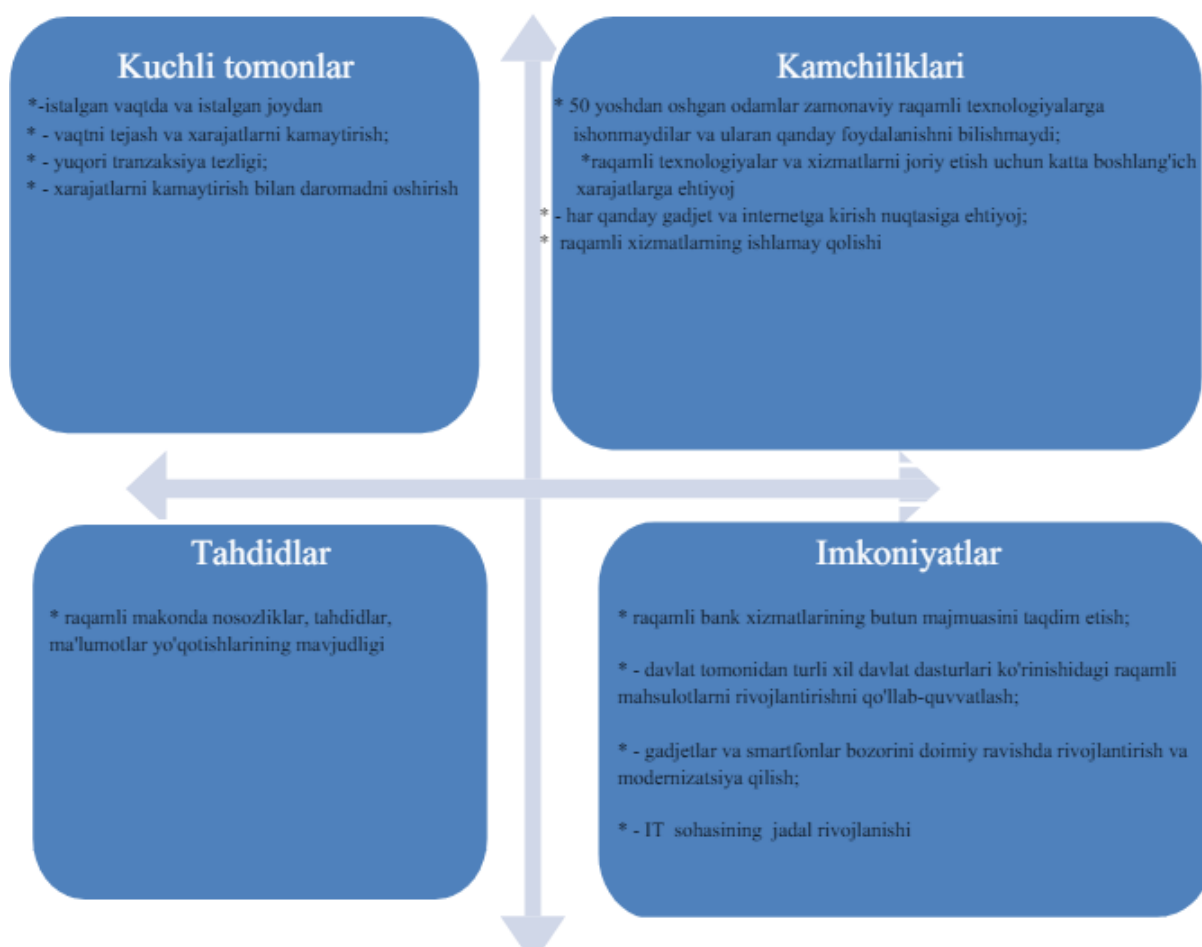
²⁷ O'zbekiston Respublikasi Prezidenti Sh.Mirziyoev 2020- yil 29-dekabrda Oliy Majlisga qilgan Murojaatnomasi

foydalanish asosida xizmat ko'rsatish usullarini soddalashtirish, raqobatbardosh integratsiyalashgan bank mahsulotlarini kengaytishni talab etadi.

Raqamli bankingda Internet bank hisob raqamini ochish, pul mablag'larini o'tkazish, to'g'ridan-to'g'ri debetlarni tashkil etish, masofaviy to'lovlarni amalga oshirish, pul o'tkazmalarini jo'natish va boshqa bank operatsiyalarini amalga oshirish uchun asosiy vositadir. Barcha raqamli bank operatsiyalari darhol amalga oshiriladi va foydalanuvchi uchun yuqori darajadagi moliyaviy boshqaruv, xavfsizlik va moslashuvchanlikni taklif qiladi. Raqamli bank xizmatlaridan foydalanish uchun sizga Internetga ulangan har qanday raqamli qurilma kerak bo'ladi. Raqamli banking bilan bank filiali kuniga 24 soat, haftada etti kun ishlaydi. Raqamli xizmatlar barcha foydalanuvchilar uchun tushunarli va ulardan foydalanish oson bo'lishi uchun ishlab chiqilishi kerak. Raqamli bank mahsuloti - bu axborot-kommunikatsiya muhiti talablariga javob beradigan moliyaviy texnologiyalar va xizmatlardan foydalangan holda mijozlarning ehtiyojlarini qondirishga qaratilgan yagona, tartibga solinadigan va standartlashtirilgan bank takliflari to'plami, ularning asosiylari:

- mavjudlik va soddalik;
- mijozning texnologik kutishlariga muvofiqligi;
- ijtimoiy tarmoqlarning xususiyatlari bilan integratsiya.

Shunday qilib, raqamlashtirish – bu bankdagi biznes-jarayonlarni tashkil etishning klassik modelini biznes modelini infokommunikatsiya modifikatsiyasi (shartnomalardan mijozlarga xizmat ko'rsatish senariylariga qadar), tariflarning o'zgarishi, xizmatlarning mazmuni va mijozlar kutganlariga muvofiq foydalanish imkoniyati orqali texnologik yangilanish tomon o'zgartirish. Shuni ta'kidlash kerakki, zamonaviy iste'molchi endi kreditlarni, depozitlarni, hisob-kitoblarni, kartalarni alohida bank mahsulotlari sifatida qabul qilmaydi, uning uchun bu keng qamrovli mahsulot-iste'molchiga bank xizmatlarining to'liq spektrini, yaqin moliyaviy xizmatlarni, masofadan turib kirish va 24/7 qo'llab-quvvatlashni, ijtimoiy tarmoqlarning qulayligi va xususiyatlarini taklif qiluvchi raqamli bank. **(1-rasm).**



1-rasm. Raqamli bankning SWOT tahlili

Bank mahsulotlarini raqamli taqsimlashda biz quyidagi maqsadlarni belgilaymiz: mijozning ehtiyojlariga ko'ra (raqamli bank mahsulotlari bank taklifiga ko'ra emas, balki iste'molchining xohishiga ko'ra shakllantiriladi); tranzaksiyalarning harakatchanligi va tezligi bo'yicha ("bu erda va hozir" tamoyilini amalga oshirish, istalgan qurilma yoki aloqa kanalidan kirish); katta ma'lumotlar tahlili va ma'lumotlarga asoslangan xizmatlar bo'yicha. Bir qator bank xizmatlarini Internet orqali masofadan turib amalga oshirish mumkinligi, bankning moddiy ob'ekt (bino va boshqalar) sifatida mavjud bo'lmasligiga sabab bo'ldi. Jismoniy maydonning etishmasligi operatsion va texnik xizmat ko'rsatish xarajatlarning pasayishiga va bankning o'z foydasining oshishiga olib keladi. Ushbu omillar 1995 yildan 2000 yilgacha AQSh va Evropada virtual banklar ochilishiga olib keldi, ularda bitta ofis yo'q edi, hisobni ochish va boshqarish, shuningdek kredit olish faqat Internet orqali amalga oshirildi.

An'anaviy bank va raqamli tizimning qiyosiy tahlili ularning o'xshashliklari va farqlarini ajratib ko'rsatish, bank raqamli tizimlarini tashkil etish tizimlarini, shuningdek zamonaviy raqamli texnologiyalardan foydalangan holda milliy bank tizimini o'zgartirish yo'nalishlarini ajratib ko'rsatish imkonini berdi. Ish shuni ko'rsatadiki, eng oson amalga oshiriladigan va talab qilinadigan tizim

Marketplace printsipli asosida raqamli tizimni yaratish deb tan olinishi kerak. Bank raqamli tizimini yaratish strategiyasi tubdan o'zgarishlarni talab qiladi, bu xizmatlar majmuasi faqat iste'molchilarning moliyaviy ehtiyojlarini qondirishga qaratilgan an'anaviy ierarxik kredit tizimini gorizontol ravishda tuzilgan tizimga aylantirishni o'z ichiga oladi, bu erda mijozlar ma'lumotlari atrofida bank takliflari to'plami shakllanadi.

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O'ZBEKISTONDA SUG'URTA BOZORINI SAMARADORLIGINI OSHIRISH MASALALARI

Annotatsiya. Mazkur maqolada O'zbekistonda moliya bozorini yanada rivojlantirish, aholini sifatli moliyaviy xizmatlar bilan qamrab olish ko'lamini kengaytirish, sug'urta tashkilotlari faoliyatini qo'llab-quvvatlash masalalari atroflicha o'rganilgan. Sug'urta xizmatlari bozorining samaradorligini ifodalovchi ko'rsatkichlar tahlili ko'rib chiqilgan.

Kalit so'zlar: Sug'urta bozori, sug'urta mukofoti, sug'urta to'lovi, ixtiyoriy va majburiy sug'urta, sug'urta brokeri, adjaster, syurveyer, aktuariy, sug'urta agenti.

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ISSUES OF INCREASING THE EFFICIENCY OF THE INSURANCE MARKET IN UZBEKISTAN

Abstract. This article discusses in detail the issues of further development of the financial market of Uzbekistan, expanding the coverage of the population with high-quality financial services, and support for insurance companies. Insurance is mentioned as an effective means of protecting the property interests of individuals and legal entities at all stages of human development.

Keywords: Insurance market, insurance premium, insurance payments, voluntary and compulsory insurance, insurance broker, adjaster, surveyor, actuary, insurance agent.

Kirish.

O'zbekistonda sug'urta xizmatlari bozorining samaradorligini oshirish yurtimizning makroiqtisodiy barqarorligi va iqtisodiy salohiyatini yuksaltirishdagi eng muhim tamoqlardan biri hisoblanadi.

O'zbekiston Respublikasi Prezidentining 2019 yil 10 iyuldagi "Sug'urta bozorini rivojlantirish masalalari muhokamaciga" bag'ishlangan yig'ilishida "Sohaga nazoratchi emas, ilg'or va zamonaviy standartlarni joriy etadigan, barcha ishtirokchilar o'rtasida chinakam raqobat muhitini yaratib, sug'urta bozorini rivojlantiradigan tuzilma kerak"ligi ta'kidlab o'tilgan[1].

Shundan kelib chiqib “sug‘urta sohasini o‘rta va uzoq muddatli rivojlantirish strategiyasini ishlab chiqish, 2022 yilgacha aholi jon boshiga to‘g‘ri keladigan sug‘urta mukofoti hajmini 3 baravar, sohaning yalpi ichki mahsulotdagi ulushini esa 2 baravar oshirish” sohaning ustuvor vazifasi sifatida belgilab berildi. Ushbu ustuvor vazifalarni amalga oshirilishini ta‘minlashda sug‘urta kompaniyalarining xalqaro va xorij bozorlariga chiqishini ta‘minlash hamda ijobiy korporativ boshqaruv tizimini amaliyotga tadbiiq etish muhim hisoblanadi. O‘zbekiston Respublikasi Prezidentining 2017 yil 7 fevraldagi «O‘zbekiston Respublikasini yanada rivojlantirish bo‘yicha Harakatlar strategiyasi to‘g‘risida»gi PF-4947-sonli Farmoni, 2019 yil 17 yanvardagi “2017-2021 yillarda O‘zbekiston Respublikasini rivojlantirishning beshta ustuvor yo‘nalishi bo‘yicha Harakatlar strategiyasini «Faol investitsiyalar va ijtimoiy rivojlanish yili»da amalga oshirishga oid Davlat dasturi to‘g‘risida”gi PF-5635-sonli, 2019 yil 2 avgustdagi “O‘zbekiston Respublikasining sug‘urta bozorini isloh qilish va uning jadal rivojlanishini ta‘minlash chora-tadbirlari to‘g‘risida”gi PQ-4412-sonli Qarorlari qabul qilingan[2]. Bundan tashqari “Sug‘urta faoliyati to‘g‘risida”gi qonun O‘zbekiston Respublikasi Prezidenti tomonidan 2021 yil 25 noyabrda imzolanib, 2022 yil 25 fevraldan boshlab kuchga kirdi. Mamlakatimizda amalga oshirilayotgan iqtisodiy islohotlarga salbiy ta‘sir ko‘rsatayotgan sabablarni aniqlash va vaqtida ularni bartaraf etish Prezident Sh.Mirziyoyev o‘zlarining iqtisodiy sohaga bag‘ishlangan xar bir ma‘ruzalarida ta‘kidlashlari asnosida mamlakat iqtisodiyoti tarmoqlarini yanada rivojlantirish va xalqaro reytinglarni qo‘lga kiritish ustuvor ekanligini ifodalaydi.

O‘zbekiston Respublikasi Moliya vazirligi huzuridagi Sug‘urta bozorini rivojlantirish agentligining ma‘lumotlariga ko‘ra, 2022 yil IV chorak yakuni holatiga O‘zbekiston sug‘urta tashkilotlarining umumiy soni 42 tani tashkil etdi, ularning ustav jamg‘armalari so‘mdagi miqdori 1545784 mln. so‘mni tashkil yetdi. Ustav kapitalining so‘mdagi qiymati o‘tgan moliya yilining xuddi shu davriga nisbatan 109 foizga o‘sgan. Shuningdek, O‘zbekiston Respublikasining sug‘urta bozorida ravishda sug‘urta mukofotlar umumiy tushumi yig‘indisi o‘sib borishi bilan birga, uning YAIMdagi ulushi hamda sug‘urta to‘lovlarining hajmi ham ortib bormoqda. Mamlakatimizda 2009 yildan boshlab sug‘urta bozorida aktuar tashkilotlar faoliyati tashkil etildi. Ohirgi yillar davomida aholining sug‘urtaga bo‘lgan munosabatlari tobora yaxshilanib, fuqarolarning sug‘urtalovchilarga bo‘lgan ishonchi ortib, sug‘urta ishiga jiddiy yondoshilmoqda. Respublikamizdagi sug‘urta kompaniyalari xodimlari professionalliklari ham sezilarli darajada oshdi.

1-jadval

O‘zbekiston sug‘urta bozorining tuzilishi

Sug‘urta bozori tuzilishi	31.12.2020	31.12.2022	O‘zgarish +/-
Sug‘urta tashkilotining soni	40	42	+2
shu jumladan hayot sug‘urtasi bo‘yicha	8	8	0
Sug‘urta tashkilotlarda umumiy ustav kapitali(mln so‘mda)	1 439 193	1 545 784	+106591

Sug'urta brokerlar soni	5	5	0
Aktuariylar soni	5	5	0
Sug'urta agentlar soni	8900	9536	+636
shu jumladan yuridik shaxslar uchun	2639	2774	+135
To'lovlarni kafolatlash jamg'armasi azolari sug'urta tashkilotlari	19	23	+4

O'zR Moliya vazirligining www.mf.uz internet sahifasi ma'lumotlari asosida muallif tomonidan tayyorlandi.

Mamlakatimiz milliy sug'urta bozorida faoliyat ko'rsatayotgan sug'urta kompaniyalari sug'urta faoliyatining ma'lum tarmog'iga ixtisoslashish bilan bir vaqtning o'zida universal faoliyatni ham olib bormoqdalar. Yildan yilga sug'urta tashkilotlarining faoliyat doiralarini yanada kengaytirish hamda barqaror faoliyat yuritishlari uchun davlat tomonidan ularning ustav kapitallari tegishli meyoriy-huquqiy hujjatlar asosida oshirilib borilmokda. Bu kabi islohotlarni amalga oshirishdan asosiy maqsad, mamlakatimizda rivojlanayotgan sug'urta bozorining sug'urta maxsulotlarini assortimentini ko'paytirish, barqarorligi ta'minlash bilan mutanosib ravishda aholda sug'urta mahsulotlariga nisbatan madaniyatni oshirishdan iboratdir. Hozirgi kunda mamlakat sug'urta bozorida faoliyat ko'rsatayotgan sug'urta kompaniyalarining aktivlari ham turlicha. Davlat sug'urta kompaniyalarining ustav kapitallari va jami aktivlari boshqa sug'urta kompaniyalarinikidan sezilarli darajada ko'p, hamda ularning ta'sisчилari davlat idoralari va tashkilotlari bo'lganligi uchun ularga bo'lgan sug'urtalanuvchilar ishonchi yuqoridir, ular tomonidan 2022 yilda yig'ib olingan sug'urta mukofotlari jami sug'urta mukofotlarining 42,3foizini tashkil etdi. Sug'urta tizimi sug'urta bozorining professional ishtirokchilari bo'lgan tijorat tashkilotlaridan iborat hisoblanadi. Sug'urta bozori hayotni sug'urta qilish va umumiy sug'urta qilish tarmoqlarini o'z ichiga qamrab oladi. Sug'urta xizmatlarining umumiy tendensiyalari va rivojlanishning ustuvor yo'nalishlari, sug'urta bozorining rivojlanishi, uning tuzilishi, bizga mamlakatimizda sug'urta xizmatlari samaradorligini baholash imkoniniberadi. Shu bilan birga sug'urta bozorining rivojlanishi miqdoriy va sifat ko'rsatkichlarini tahlil qilish, sug'urta munosabatlarini iqtisodiy hamda huquqiy tartibga solish darajasini baholash, sug'urta xizmatlarining umumiy rivojlanishiga ta'siri darajasini baholash muhim hisoblanadi. Ayni paytda sug'urta bozorida 42 ta sug'urta tashkiloti (shu jumladan: 34 ta umumiy sug'urta, 8 ta hayotni sug'urta qilish tarmog'ida), 5 ta sug'urta va qayta sug'urta brokeri, 22 ta assistans, adjaster va syurveyer, 5 ta aktuariy, 9 mingdan ortiq sug'urta agenti faoliyat ko'rsatab kelmoqda[10].Dunyoda sug'urta bozorining rivojlanganligini ko'rsatuvchi asosiy ko'rsatkich bu sug'urta tushumlarining yalpi ichki mahsulotdagi ulushi hisoblanadi. Bizning mamlakatimizda YAIMning 0,4 foizini sug'urta tushumlari tashkil etadi xolos. Aholi jon boshiga to'g'ri keladigan sug'urta mukofotlari 28 ming so'mni tashkil etmoqda va bu juda past ko'rsatkich hisoblanadi. Sug'urta munosabatlaridagi barcha tomonlarning huquqlari bir xil emasligi, sug'urta

shartnomalarida sug'urta to'lovlari bo'yicha aniq meyor va shartlar mavjud emasligini yuridik va jismoniy shaxslarning sug'urtaga ishonchini oshirishga to'sqinlik qilmoqda.

O'zbekistonda sug'urta bozorining tadrijiy taraqqiyotini ilmiy - nazariy jihatdan o'rganish natijasida quyidagi xulosalarga keldik:

1. Sug'urta faoliyatini davlat tomonidan tartibga solishning yagona siyosatini belgilash:

- sug'urta munosabatlarini tartibga soluvchi yangi qonun hujjatlari ishlab chiqish va mavjudlarini takomillashtirish;

- davlat, tashkilot va fuqarolarning majburiy sug'urta sohasidagi manfaatlari sug'urta yo'li bilan himoyalanihini ta'minlovchi meyoriy huquqiy asosni takomillashtirish.

2. Sug'urtaga aholining keng qatlami va mulkchilik shakllaridan qat'iy nazar, korxonalar jalb qilinishini rag'batlantiruvchi shart sharoitni yuzaga keltirish:

- tibbiy sug'urta, uzoq muddatli hayot sug'urtasi, pensiya sug'urtasini rivojlantirish uchun huquqiy meyoriy asos yaratish;

- sug'urta tashkilotlarining to'plagan mablag'larini investitsiyalashning samarali shakllarini ishlab chiqish orqali ularni joylashtirish, amalga oshiriladigan sug'urta operatsiyalarining foyda keltirishini oshirish uchun qo'shimcha kafolat yaratish.

3. Sug'urta bozorining infratuzilmasini takomillashtirish va rivojlantirish - fuqarolar va mulkchilikning turli shakllaridagi yuridik shaxslarning manfaatlari yo'lida sug'urta munosabatlari jarayoniga hamroh bo'luvchi hamda davlatning sug'urta siyosatini amalga oshirishga yordam beruvchi sug'urta tashkilotlari rivojlanishida ko'maklashish.

4. Sug'urta sohasidagi xalqaro hamkorlikni tartibga solish:

- xorijiy sug'urtalovchilarning O'zbekiston Respublikasi hududidagi faoliyatini tartibga solish chora tadbirlarini ishlab chiqish;

- xalqaro sug'urta munosabatlarini (avalambor qayta sug'urta sohasida) kengaytiruvchi meyoriy xuquqiy asosning rivojlanishini ta'minlash.

Foydalanilgan adabiyotlar ro'yxati:

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INVESTMENT SUPPORT IN THE INNOVATIVE DEVELOPMENT OF THE NATIONAL ECONOMY IN THE REPUBLIC OF UZBEKISTAN

Abstract. The article discusses the problems of investing innovative processes in the national economy of Uzbekistan. In particular, the author analyzed the current state of investment in the innovative development of the national economy, assessed the practice of stimulating innovation and investment activity in Uzbekistan, developed scientific recommendations to increase investment and innovation activity in the sectors of the economy.

Keywords: investment, innovation, investment process, sources of innovation, R&D, financing, government, private entrepreneurship.

Introduction. In the context of increasing competition and the growing scale of globalization, special attention in increasing the competitiveness of countries is paid to innovation, the results of scientific research and development. Both at the level of individual states and at the global level, there is an annual increase in investment in innovation. During the period 2010-2020, the volume of investment in research and development (R&D) increased in China by 3.8 times, the Republic of Korea - by 2.3 times, in countries such as Germany, France, Israel - more than 1.5 times.¹ According to the Lisbon strategy of the European Union for the transformation of the European economy into the most competitive and dynamically developing economy based on knowledge, it is justified that the EU countries should invest at least 3% of GDP in the innovation sphere.

It should be noted that in recent years, Uzbekistan has also paid great attention to the development of innovative activities. "Innovation means the future. If we begin to build our great future today, we must do this primarily on the basis of innovative ideas and an innovative approach" innovative development of the Republic of Uzbekistan. This ministry has implemented a number of measures to form the institutional and regulatory framework for the transition to an innovative path of development and the direction of research results for further commercialization. However, to date, the volume and growth rates of investments to support innovation in the national economy are insufficient. That is why one of the priority areas of the Strategy for the

Innovative Development of the Republic of Uzbekistan for 2019-2021 is defined as “increasing government spending on research and development work and bringing this indicator to 0.8 percent of the GDP of our republic by 2021”.³ The search and study of new methods and directions for investing in innovative processes, tools for stimulating and activating innovative processes, identifying global trends in this area is an urgent task of modern economic theory.

A number of foreign and domestic scientists have been studying the issues of investing in the innovative development of the economy. Among them, one can especially highlight the studies of such foreign scientists-economists as B. Lundwall, G. Mensch, M. Porter, R. Solow, E. Toffler, K. Freeman, J. Schumpeter and others.

Also, studies of the role of various factors in the innovative development of the economy were devoted to the work of scientists from the CIS countries, such as Virolainen A.O., Ignatushchenko E.I., Melnikova I.A., Nechaev A.S., Rodionov I.I., Ryumina Yu. A.A., Tumina T.A., Fatkhutdinov R.A. other.

Research methodology. Systematic approach, abstract-logical thinking, grouping, comparison, factor analysis, selective observation methods were used in the research process.

Analysis and results. Despite the work of the above economists, today there is no comprehensive study of the problems of investment support for innovative processes in the national economy, as the main factor in increasing the volume of innovative products. All of the above proves the need for a separate study of the theoretical foundations of investing in the innovative development of the national economy.

National innovation systems differ from each other in a variety of forms, methods, sources and volumes of investment support for innovation. In recent years, large-scale work has been carried out in Uzbekistan aimed at increasing the efficiency of research activities, strengthening the role of science in social and economic development. Work is underway on state scientific and technical programs, the commercialization of the results of scientific research aimed at solving the most important scientific and technological problems of the development of modern industrial production, energy, agriculture and other sectors of the economy.

At the same time, various sources are involved in ensuring the innovation and investment development of the national economy: state budget funds, developers' own funds and savings, foreign investments, customer funds, etc.

As world experience has shown, in economically developed countries, private and corporate resources and funds prevail among the sources of investment support for innovation, in developing countries scientific research is carried out at the expense of investments of large corporations and foreign partners, in transition economies, as a rule, the main source of support and development of innovation activities are the state budget funds.

To determine the main sources of investment support for research and development in the national economy, we determined the share of each source in Uzbekistan for the period 2015-2022 (see Table 1).

Table 1.

Structure of sources of investment in R&D carried out on their own by organizations in Uzbekistan, %⁴

	2015	2016	2017	2018	2019	2020	2022
Total investment, including:	100	100	100	100	100	100	100
budget resources	56.9	58.8	57.8	58.7	57.3	56.1	55.1
extrabudgetary funds	2,3	1.4	3.9	4.3	3.8	2.7	2.9
own funds organizations	16.8	19.8	21.6	22.9	24.5	29.4	35.6
customer funds	23.4	19.1	15.9	13	13.7	11.2	6.1
funds of foreign investors	0.6	0.9	0.8	1,2	0.7	0.6	0.3

As can be seen from the data in the table, the main source of investment support for research and development for the analyzed period is budget funds, the share of which in recent years has been about 50-60

% of the total investment. The share of off-budget funds and foreign investors in support of R&D is insignificant and in aggregate amounts to no more than 5% in the total volume of investments. It should be especially emphasized that if in 2014 customer funds accounted for 23.4%, then in 2020 this figure dropped to 6.1%. With the expansion of the scale of modernization of the economy, the need for innovative products grew, and the decrease in the share of customers' funds is explained by the fact that customers satisfied their needs mainly through the import of innovative or high-tech products. A significant increase in the share of enterprises' own funds from 16.8% to 35.6% of the total volume.

To support innovative activities, budgetary funds are allocated from the republican budget by Section 202 "Science". These funds are directed to investment support of state and international scientific and technical programs (programs of fundamental, applied research and innovative developments), to the maintenance of unique scientific objects, individual research institutes, archives, salaries of experts and salaries of senior research workers-applicants.

Until 2018, the main government body making centralized investments in the implementation of scientific and technical programs for fundamental, applied research and innovative development was the Agency for Science and Technology of the Republic of Uzbekistan. By the Decree of the President of our country UE No. 5264 dated November 29, 2017, this Agency was abolished and the Ministry of Innovative Development of the Republic of Uzbekistan was established, which is designed to pursue a unified state policy in the field of

innovative and scientific and technological development of our republic. So, these state bodies "for the period 2015 - 2022 from the republican budget allocated about 800 million soums for the implementation of scientific, applied and innovative projects and developments,

It should be noted that during the activities of the Agency for Science and Technology, there was "an insufficient level of commercialization, amounting to 0.5 percent per year of the number of inventions patented over the past 5 years, financed from the State budget of the Republic of Uzbekistan; and the main criteria for assessing the effectiveness of research and higher educational institutions was the number of published scientific articles and created intellectual property objects without taking into account the results of their implementation." ⁶ Therefore, the Ministry of Innovative Development of the Republic of Uzbekistan pays great attention to the commercialization of the results of scientific and scientific and technical activities after completion state scientific and technical projects financed from the state budget on a grant basis.

To provide investment support for the implementation of scientific and technical programs on a competitive basis, under the Ministry of Innovative Development of the Republic of Uzbekistan, a Fund for Supporting Innovative Development and Innovative Ideas has been organized. The funds of this Fund are formed from:

- 90 percent of foreign exchange funds received by the Agency for Intellectual Property of the Republic of Uzbekistan at the expense of patent fees, fees and other non-tax payments;
- grants and loans from international financial organizations and institutions;
- charitable donations from legal entities and individuals, including foreign ones;
- other receipts not prohibited by law. ⁷

In addition, the Presidential Fund for the Commercialization of the Results of Scientific and Scientific and Technical Activities, which supports projects with a high degree of commercialization, functions on a permanent basis under the Ministry of Innovative Development. This fund is formed at the expense of "state budget funds, grants and loans from international financial institutions and other foreign donors; income from the placement of temporarily free funds of the Fund on deposits of commercial banks and other sources not prohibited by law." ⁸ The funds of this fund ensure the implementation of innovative projects with a high degree of investment attractiveness throughout the year.

The volume of centralized investment in innovation has a steady growth trend. The growth in the share of innovative developments in research is consistent with the long-term goals of innovative development of the national economy. The volume of foreign investment in the field of innovation is insignificant; accordingly, in order to accelerate the pace of innovative development, it is necessary to rely on internal sources of investment and growth

reserves. The share of investments of domestic customers in the total volume of investment support tends to decrease, which suggests the need to revitalize the activities of scientific organizations and institutions through indirect methods of regulation, the creation of favorable conditions for innovation, so that the innovative products of domestic developers are competitive and meet the requirements of customers.

The dynamics of the growth of scientific and technical developments is a necessary element of the innovative development of the economy, since they are used to increase the technological level and competitiveness of production, to ensure the output of innovative products to the sales markets.

Also, the structure of sources of investment in innovation activity differs depending on the industry in which research and development work is carried out. The distribution of investments by industry in the national economy for 2022 can be analyzed using the data in Table 2.

Table 2.

Share of sources of investment in R&D in the context of industries carried out by organizations' own resources in 2022, %⁹

	Total investment		Industry	Agriculture and forestry	Building	Health, physical	Education culture, science, art	other non-production industries
	million soums	Ud. weight, %						
In total, of which:	354510.2	100	11.4	0.36	0.3	1.8	85.1	0.97
Budget funds	207995.6	58.7	0.1	0.35	0	1.8	55.5	0.97
Funds extrabudgetary funds	15148.7	4.3	0	0.01	0	0	4.3	0
Own funds	81088.1	22.9	11.3	0	0.3	0	11.3	0
Funds customers	45929.7	12.9	0	0	0	0	12.9	0
Foreign investments	4348.0	1,2	0	0	0	0	1,2	0

The data in the table indicate that the costs of research and development work carried out by organizations' own forces in 2022, in the sectoral context, mostly accounted for the spheres of education, culture, art, science and scientific services (85.1%), on industry (11.4%) and healthcare (1.8%).

Most of the research in the field of education, culture, art, science and scientific services was invested from the republican budget (55.5%) and customer funds (12.9%), as well as own funds of enterprises (11.3%). The smallest share of investment in R&D by industry is observed in the construction industry (0.3%) and other non-manufacturing industries.

Conclusions.

1. Analysis of the current state of innovation and investment development of the national economy showed that in Uzbekistan the main source of investment support is budgetary funds. In addition, enterprises use their own funds in the investment support of R&D. The share of customers' investments in recent years has decreased, and this can be explained by the fact that the needs for new and improved products were satisfied by them through the import of innovative products. The share of funds of foreign investors and off-budget funds is insignificant and amounts to less than 5% of the total volume of investment support for innovative activities.

2. The study of the Tax Code of the Republic of Uzbekistan gives grounds to conclude that the available tax incentives for enhancing scientific, scientific, technical and innovative activities are clearly not enough in the context of the economy's transition to an innovative path of development. Tax preferences provided in separate regulatory and legal documents (Decrees, Resolutions of the

President and Governments) have time limits, which makes them less attractive to strategic investors.

3. In addition, the huge potential of the financial market, which transforms the savings of the population into investments necessary for the purposes of innovative development, is not sufficiently used in the national economy.

4. Despite the variety of forms, methods, sources of investment support for innovation in world practice, one can notice a number of general patterns of innovation and investment development of the economy of a number of countries and combine them into four models. The state's ongoing innovation policy, the distribution of investment resources by research areas and stages of the innovation process, depend on the features of each model.

5. When implementing an innovation policy in Uzbekistan, identifying and taking into account modern global trends that characterize the latest changes in the global innovation system will increase the efficiency and timeliness of ongoing reforms in the innovation and investment development of the national economy.

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Si NING ELEKTR VA OPTIK XUSUSIYATLARI

Annotatsiya. Ushbu maqolada aralashma blokli quyma materialning elektr va luminesans xususiyatlari EBIC va PL tomonidan o'rganildi..

Kalit so'zlar: (LIN), OI, LD, Pockels, magnit-optik Faraday, GGb/s, VOM, radiatsiya, multivibratorlar.

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ELECTRICAL AND OPTICAL PROPERTIES OF Si

Abstract. In this paper, the electrical and luminescence properties of mixed block casting material were investigated by EBIC and PL.

Key words: (LIN), OI, LD, Pockels, magneto-optical Faraday, GHz/s, VOM, radiation, multivibrators.

Kirish. Silikon (Si) o'zining noyob elektr va optik xususiyatlari tufayli elektronika va fotonika sohasidagi asosiy materialdir. Yarimo'tkazgich sifatida kremniy integral mikrosxemalar rivojlanishida inqilob qildi va zamonaviy elektron qurilmalarning asosiga aylandi. Kremniyning elektr va optik xususiyatlarini tushunish turli xil ilovalar uchun qurilmalarni loyihalash va optimallashtirish uchun juda muhimdir.

Elektr xususiyatlari: Silikon qiziqarli elektr xususiyatlarini namoyish etadi, bu esa uni elektron qurilmalar uchun ideal material qiladi. Kremniyning ba'zi asosiy elektr xususiyatlariga qarshilik, tashuvchining harakatchanligi, tarmoqli kengligi energiyasi va o'tkazuvchanlik kiradi [1].

Qarshilik: Silikon xona haroratida $10^3 \text{ } \bar{\text{O}} \text{ sm}$ ga teng o'ziga xos qarshilikka ega. Kremniyning qarshiligini elektr o'tkazuvchanligini nazorat qilish imkonini beruvchi doping deb ataladigan jarayon orqali aralashmalarni kiritish orqali o'zgartirish mumkin.

Tashuvchining harakatchanligi: Silikon yuqori tashuvchining harakatchanligini namoyish etadi, bu material ichida samarali zaryad tashish imkonini beradi. Ichki kremniy taxminan $1500 \text{ sm}^2/\text{Vs}$ tashuvchining harakatchanligiga ega, doplangan kremniy esa dopantlarning turi va kontsentratsiyasiga qarab yuqori yoki past harakatchanlikka ega bo'lishi mumkin.

Bandgap energiyasi: Kremniyning tarmoqli kengligi taxminan 1,1 eV bo'lib, u bilvosita tarmoqli yarim o'tkazgich ekanligini ko'rsatadi. Bu energiya darajasi elektronni valentlik zonasidan o'tkazuvchanlik zonasiga o'tkazish uchun zarur bo'lgan minimal energiyani aniqlaydi.

O'tkazuvchanlik: Kremniyning elektr o'tkazuvchanligini maxsus aralashmalar bilan doping orqali o'zgartirish mumkin [2-3]. Bor yoki fosfor kabi elementlar bilan doping mos ravishda p-tipli yoki n-tipli kremniyni hosil qiladi, bu esa nazorat qilinadigan o'tkazuvchanlik darajasiga olib keladi.

Optik xususiyatlar: Kremniy shuningdek, fotonik va optoelektronikadagi turli ilovalar uchun juda muhim bo'lgan qiziqarli optik xususiyatlarga ega.

Kremniyning elektr va optik xususiyatlarini tushunish loyihalash uchun juda muhimdir.

Olingan natijalar

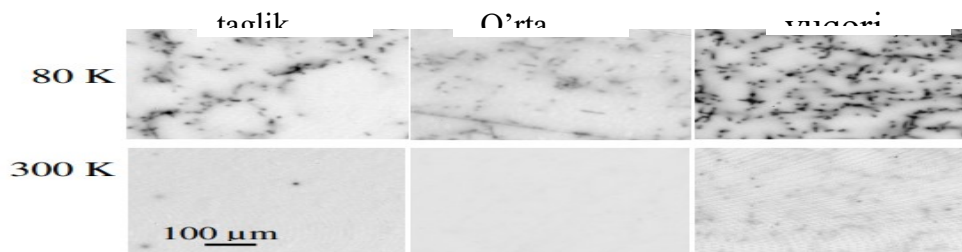
Quyma blokli materialning yuqori, o'rta va pastki qismidan kesilgan namunalar quyosh kremniyining yetkazib beruvchisi tomonidan taqdim etilgan. O'sib chiqqan gofretlar va quyosh elementlarining xususiyatlarini solishtirish uchun ba'zi namunalar ingotning turli qismlaridan qo'shni gofretlar bo'lishi uchun tanlangan.

Arallash jarayonidan kelib chiqqan shikastlangan qatlamni olib tashlash uchun o'stirilgan kremniy gofretning namuna yuzasidan bir necha mkm o'yilgan. Eritma HNO_3 : HF : CH_3COOH = 2: 1: 1 (hajm bo'yicha) ning standart jilo bilan qirqish eritmasidir.

Qarshi qatlam olib tashlangandan so'ng, eritmadan chiqariladi. Keyin barcha namunalar 15 daqiqada 80°C da Piranha tozalash (H_2SO_4 : H_2O_2 = 1: 1 hajm) protsedurasidan o'tkazildi [4]. Namunalarni deionizatsiyalangan suv bilan yuvib bo'lgach, o'stirilgan gofretdan olingan namunalar Schottky kontaktlari uchun nozik Al qatlami bilan bug'langan. Keyin quyosh batareyasi namunalari n-tipli Si emmitr qatlamida omik kontaktni tayyorlash uchun Al bilan bug'langan.

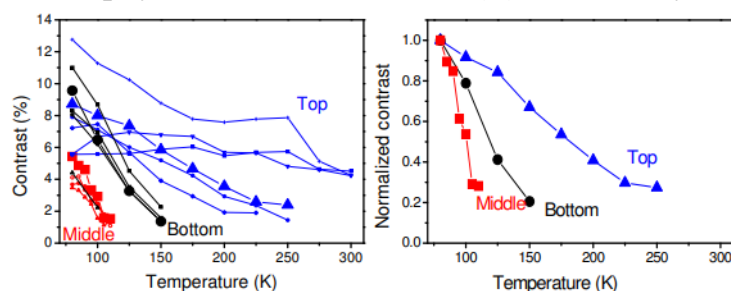
Dislokatsiyalar atrofida uzoq masofali kuchlanish maydoni tufayli dislokatsiyalar aralashmalarni ajratish uchun joylarni ta'minlaydi, ya'ni. Kottrell atmosferasining taniqli shakllanishi [5] va dislokatsiyalarda ajratilgan aralashmalar keyinchalik cho'kma hosil qilishi mumkin.

Kveder va boshqalarga ko'ra. [Kved2001], dislokatsiya EBIC C(T) qaramligi dislokatsiyaning ifloslanish darajasining ko'rsatilgan. 1-rasmda 80 va 300 K da EBIC tasvirlari ko'rsatilgan.



1-rasm: Quyma quyma blokning pastki, o'rta va yuqori qismidagi namunalar uchun 80 va 300 K da EBIC tasvirlari.

Quyma blokning pastki, o'rta va yuqori qismidan namunalar. Dislokatsiyalar barcha namunalar uchun 80 K da rekombinatsiya faoldir. 300 K da namunalarda farqlar kuzatildi [6]. Pastki mintaqadagi namunadagi dislokatsiyalarning aksariyati 300 K da faol emas, rekombinatsiya faolligi dislokatsiyalar 80 K da kuchli kontrastni ko'rsatadigan bir nechta joylarda ko'rsatilgan. Quymaning o'rta qismidagi dislokatsiyalarning rekombinatsiya faolligi yo'qoladi. 300 K da. Quymaning yuqori qismidagi namunalardagi dislokatsiyalarning aksariyati kontrastni kamaytirgan holda rekombinatsiya faolligini RT gacha saqlaydi. 2-rasmda EBIC C(T) dislokatsiyasi ko'rsatilgan.



2-rasm: Quyma blokli quyma ingotning pastki, o'rta va yuqori qismidagi namunalar uchun EBIC C(T) dislokatsiyalarning bog'liqligi (chapda) va tipik dislokatsiyalarning normallashtirilgan C (T) bog'liqliklari (chiziqlar) chap rasmda kattaroq belgilar bilan) ingotning har bir qismidan.

2-rasmda quyma quyma blokning pastki, o'rta va yuqori qismidagi namunalar uchun EBIC C(T) dislokatsiyasiga bog'liqligi ko'rsatilgan. Chapdagi rasmdagi belgilar bilan har bir chiziq ingotning yuqori (ko'k), o'rta (qizil) va pastki (qora) qismidagi namunalardagi individual dislokatsiyaga mos keladi va o'ngdagi rasm odatdagi dislokatsiyalar uchun normallashtirilgan kontrast va haroratni ko'rsatadi. ingotning turli qismlari [7]. Normallashtirilgan kontrast haroratga bog'liqliklarning yonbag'irlaridan Kveder nazariyasiga ko'ra namunalardagi ifloslanish darajasi haqida ma'lumot olish mumkin (4.6.1-bo'limga qarang).

Kontaminatsiya darajasi ketma-ketlikda o'zgaradi: yuqori > pastki > o'rta. Bu deyarli barcha metall aralashmalarning ajratish koeffitsientlari 1 dan ancha kichik ekanligiga mos keladi.

Xulosa

Bu shuni anglatadiki, metall aralashmalari kontsentratsiyasi ingotning yuqori qismida ancha yuqori bo'lib, u erda kristal nihoyat qotib qoladi.

Quymaning pastki qismida metall aralashmalar yuqori haroratli jarayonda tigeldan ingotga tarqalishi mumkin. Shunday qilib, odatdagi blokli quyma ingot yuqori va pastki qismida yuqori ifloslanish darajasiga ega (qaysi qism yuqoriroq bo'lishi namunaning kesilgan joyiga bog'liq), aralashmaning o'rta qismidagi material juda toza.

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ASINXRON DVIGATELLAR UCHUN MIKROKONTROLLERLI CHASTOTA O'ZGARTGICH QURILMASINI LOYIHALASH

Annotatsiya. Ushbu maqolada Proteus dasturida asinxron dvigatellar uchun chastota o'zgartgich qurilmasining atMega-328 mikrokontrolleri asosida bosqaruv sxemasi loyihalangan. Proteus dasturida chastota o'zgartgich qurilmasini sxematik loyihalash, sxemani bosma plataga o'tkazish usullari keltirilgan.

Kalit so'zlar: atMega-328 mikrokontrolleri, bosma plata, chastota o'zgartgich, drayver sxemalar.

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DESIGN OF FREQUENCY CONVERTER DEVICE WITH MICROCONTROLLER FOR ASYNCHRONOUS MOTORS

Annotation. In this article, a control circuit of a frequency converter device for asynchronous motors is designed in the Proteus program based on the atMega-328 microcontroller. The Proteus program provides schematic design of a frequency converter device, methods of transferring the circuit to a printed circuit board.

Keywords: atMega-328 microcontroller, driver circuits, frequency converter, printed circuit board.

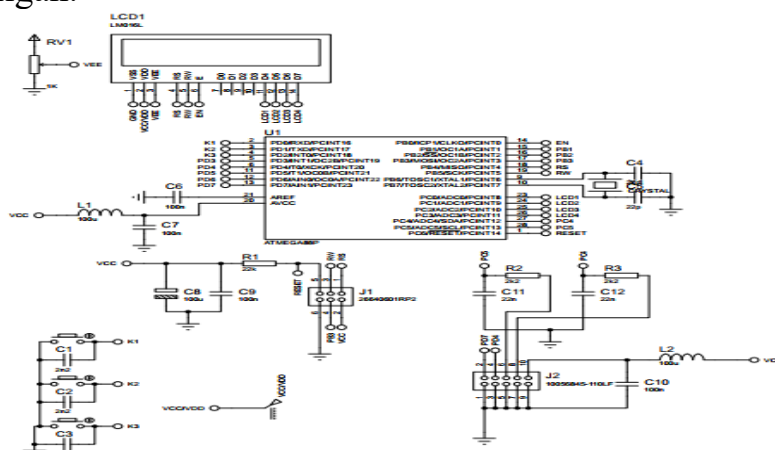
Kirish. Hozirgi kunda ishlab chiqarish korxonalarida elektr energiyani mexanik energiyaga aylantirib beruvchi qurilmalar sifatida asinxron o'zgaruvchan tok elektr dvigatellaridan foydalaniladi. Asinxron dvigatellar konstruktsiyasining soddaligi va ularda harakatlanadigan elektrik kontaktlarning mavjud emasligi ularning ishonchliligini oshiradi. Asinxron dvigatellar quvvati va foydali ish koeffitsiyenti jihatidan juda samarali bo'lgani uchun hozirda ham

keng ko‘lamda qo‘llanadi. Shunga qaramasdan, asinxron dvigatellarni ishga tushirish jarayonida (kommutatsiya jarayonida) bir qancha parametrik buzilishlarni ko‘rish mumkin [1].

Kommutatsiya jarayonida asinxron dvigatellarda qisqa vaqt ichida tokning bir necha barobar oshishini kuzatish mumkin. Bunga sabab dvigatelga berilgan EYuK ta‘sirida keskin qo‘zg‘alganda, ma‘lum vaqtda dvigatel rotorining inertsiyal va ekekr qarshilik ko‘rsatishidir. Dvigatellarning sanoat va ishlab chiqarishga qo‘llanish davrining dastlabki paytlarida ushbu muammolar bilan kurashish uchun reostatlardan yoki faza rortorli boshqaruv sxemalaridan foydalanilar edi. Bunday ishga tushirish sxemalarining qo‘llanilishi quvvat isrofining ortishiga va dvigatel foydali ish koeffitsiyentining kamayishiga olib keladi [2-6].

Elektrotexnika sanoatining rivojlanishi va elektronika sohasining paydo bo‘lishi natijasida asinxron dviagatellarning “mayin” qo‘zg‘alishi va aylanish chastotasini boshqarishning yangi qurilmalari va usullari paydo bo‘ldiki, bu usullar elektrotexnikada ancha murakkab muammolarning optimal yechimlarini yaratilishiga sabab bo‘ldi. Dastlabki chastota o‘zgartgich qurilmalar analog elementlar asosida yaratilgan bo‘lsa, keyinchalik dasturlanuvchi integral sxemalar va mikrokontrollerli chastota o‘zgartgich qurilmalari paydo bo‘la boshladi. Ushbu maqola mikrokontroller asosida bir fazali asinxron dvigatellar uchun chastota o‘zgartgich qurilmasini sxematik loyihalashga bag‘ishlangan [7-8].

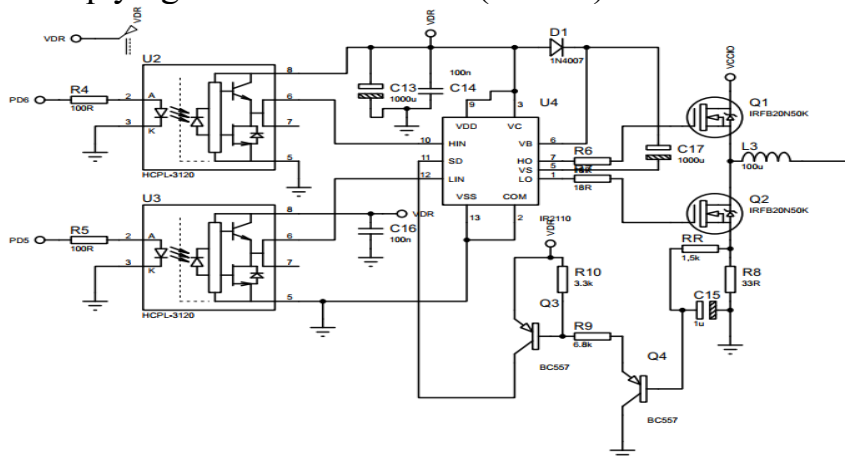
Chastota o‘zgartgich qurilmasi uchun atMega-328 mikrokontrolleri asosida Proteus dasturida bosqaruv sxemasi loyihalangan. Bunda kuchli kalit sxemasiga mikrokontrollerdan PWM sinusoidal signal beriladi. Qurilmaning sxemasi 1-rasmda ko‘rsatilgan.



1-rasm. Chastota o‘zgartgich uchun mikrokontrollerli boshqaruv sxemasi.

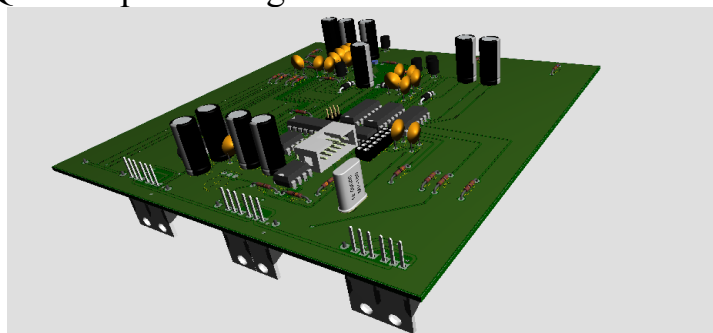
Mikrokontrollerlarga buyruqlar 3 ta boshqaruv tugmasi orqali beriladi. Chastotaning qiymati LCD displey orqali ko‘riladi. Bunda chiqishdagi PWM signallar kalitlarga beriladi. Kalitlarga esa elektr dvigateli to‘g‘ridan-to‘g‘ri ulanadi. Kalitlar mikrokontrollerlarga drayver optoparali sxemalar orqali ulanadi. Drayver sxemalar kalit elementlarining kirish qismidagi elektr shovqinlar va xalaqitlarni kamaytiradi. Kontrollerga dastur C dasturlash tilida yozilgan.

Mikrokontrollerni dasturlash uchun AVR studio, Atmel studio dasturlaridan foydalanish mumkin. Drayverli oraliq sxemalar kuch tranzistorlari yordamida bitta faza uchun quyidagicha sxema tuziladi (2-rasm).



2-rasm. Drayver va yuqori quvvatli sxema.

Yarim ko‘prik sxemalari ishlash uchun qisqa vaqtdan foydalanish talab qilinadi, shuning uchun yarim ko‘prikning yuqori yoki pastki kalitlari bir vaqtning o‘zida ochilmaydi. Ushbu “pauza” bo‘lmasa, qisqa tutashuv sodir bo‘ladi, bu hech qanday sharoitda sodir bo‘lishiga yo‘l qo‘yilmaydi. «Uyqu» rejimi juda ko‘p ishlatiladigan drayverlarga bog‘liq bo‘lgani uchun “pauza” sozlanishi mumkin. Insert Deadband dasturi KIM qiymatlarini yozishdan oldin har bir taymer uchun kerakli “uyqu” vaqtini hisoblab chiqadi. “Uyqu” rejimi EEPROM da saqlanadi [9]. Qurilmaning parametrlari ham maxsus energiyaga bog‘liq bo‘lmagan xotira sxemalarda foydalaniladi. Sinusoidal signal esa massiv shaklida xotirada saqlanadi. Sinusoidal signal 10 bitli raqamli PWM shaklida chiqadi. Bunda signal impuls kengligi modulyatsiyasi orqali filtrlardan past chastotali tashkil etuvchisi ajratib olinadi. Qurilma platasining 3D ko‘rinishi 3-rasmda ko‘rsatilgan.



3-rasm. Qurilma platasining 3D ko‘rinishi.

Xulosa qilib aytish mumkinki, asinxron dvigatellar uchun turli darajadagi analog elementlar asosida yaratilgan chastota o‘zgartgich qurilmalaridan dasturlanuvchi integral sxemalar yoki mikrokontrollerli dasturlar asosida ishlaydigan chastota o‘zgartgich qurilmalariga o‘tishi hozirgi davrda elektrotexnika muhandislari oldida raqamli elektron sxemalarni modellashtirish

orqali qurilmalarni loyihalash va uni amaliyotda qo‘llay olish ko‘nikmasiga ega bo‘lish kabi vazifalarni kun tartibiga qo‘yadi.

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ILK YOSHDAGI BOLALAR BILAN ISHLASH

Annotatsiya. Ushbu maqolada kichik maktab yoshidagi bolalar bilan ishlashning o'ziga xos xususiyatlari va bu jarayonda faoliyatlarning, axloqning va tarbiya shaklining roli haqida ma'lumot berilgan.

Kalit so'zlar: insonparvarlik, vatanparvarlik, bolalardagi xarakter, baynalmilal tarbiya, faoliyat.

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WORKING WITH CHILDREN OF PRIMARY AGE

Abstract. This article provides information about the specific features of working with children of primary school age and the role of training, ethics and the form of education in this process. information is provided.

Key words: humanitarianism, patriotism, children's character, international education, training.

Bugungi kunda maktabgacha ta'lim yoshidagi bolalar bilan ishlash jarayonida asosiy e'tibor ularning axloqi va ular bilab o'tkaziladigan turli xildagi faoliyatlarga qaratilmoqda. Maktabgacha yoshdagi bolalar tarbiyalanadigan axloqiy xususiyatlar, xulq-atvor qoidalari orasida insonparvarlik muhim o'rin tutadi.

Faoliyat - ta'lim muassasida bolalarga ta'iim berishning asosiy shaklidir. Faoliyat - pedagogning bolalarni kerakli bilim va malakalardan frontal holda xabardor qilishidir. Tarbiyachi bolalarga ta'lim berishni kun davomida amalga oshiradi: ularning bilimlarini boyitadi, madaniy gigenik, xulq madani-yati, gaplashish nutqi, sanoq-hisob harakatlari kabi turli-tuman malaka va ko'nikmalarini shakllantirib boradi. Ammo ta'lim berishda bosh rolni faoliyat egallaydi. Faoliyatlar maktabgacha ta'lim muassasasida ta'limni tashkil etish shaklidir.

Faoliyatni olib borishda bolalarni maktabga tayyorlashda katta ahamiyatga ega. Faoliyat orqali bolalar o'quv malakasini egallab oladilar. Ularda barqaror diqqat, irodani, diqqatni jalb eta olish kabi qobiliyatlar rivojlanadi. Izchillik bilan ta'lim berish natijasida bilimga qiziqishlar rivojlana boradi. Bolalarga bilim berishning jamoa usulida olib borish katta ahamiyatga ega: birgalikdagi faoliyatda

bolalar bir-birlariga faol ta'sir etishadi, o'z tashabbusi, topog'onligini namoyon qilish imkoniyati tug'iladi. Bolalar oldiga umumiy zo'r berishning talab etuvchi vazifa qo'yilganda birgalikda qayg'urishadi, jamoatchilik hissi shakllanadi. Ekskursiyalar, rasm qirqib yopishtirish, qurish yasash ishlarini birgalikda bajarish, umumiy raqs-o'yinlarini ijro etish, badiiy asarlarni eshitish, o'qishda paydo bo'lgan birgalikdagi kechinmalar bolalarning biriashgan do'stona jamoasini yaratishga yordam beradi. Faoliyatda ta'lim berish orqali bolalarda maktabdagi o'qishga qiziqish tarbiyalanadi, javobgarlik hissi, o'zini tuta olish, mehnat qilishga intilish odati, topshirilgan ishni bajarish kabi to'g'ri sifatlar hosil qilinadi.

Bolalarni maktab ta'limiga ruhiy jihatdan tayyorlashni ularning boshlang'ich sinflarda dastur materialni yaxshi o'zlashtirib olishlarini ta'minlovchi bilim va malakalar faoliyatlar jarayonida hosil qilinadi.²⁸Faoliyatlarda bolalarda mustaqil fikr yuritish malakasi tarkib toptiriladi, tarbiyachilarga quloq solish, ularning fikriga ergashish, hikoya qilinayotgan hikoyalardan voqeadagi asosiy g'oyalarni ajrata olish, qisqacha umumlashtirish kabi malakalarni rivojlantirishga katta e'tibor beriladi.

Faoliyatda tarbiya vazifalari hal etiladi. Faoliyat bolalarning yosh va o'ziga xos xususiyatlarini e'tiborga olib ma'lum izchilikda olib boriladi. Maktabgacha ta'lim muassasasi ta'lim-tarbiya dasturida har bir yosh guruhda hafta davomida o'tkaziladigan faoliyatlar soni va vaqti belgilab qo'yilgan. Tayyorlov guruhlarida faoliyatlar orqali bolalarda tashabbuskorlik va mustaqillik, bilimga qiziquvchanlik, faol ta-fakkur qilish, taqqoslash, umumlashtirish, xulosalar chiqarish kabi malakalar tarbiyalab boriladi. Bolalarda kuzatuvchanlik, javobgarlik, xissi takomillashtirilib boriladi, ularda mehnat qilish malakasi va xohishi tarbiyalanadi.

Faoliyat quyidagi turlarga bo'linadi:

1. Bolalarga yangi bilim beruvchi faoliyatlarni o'tkazishdan maqsad - ularni yangi bilimlardan xabardor qilish, tevarak-atrofdagi narsa va buyumlar, voqealar to'g'risidagi bilimlarini aniqlash va kengaytirishdir. Bunday faoliyatlarga yangi obyektни kuzatish, hikoya qilib so'zlab berish va boshqalar kiradi. Mazkur faoliyatlar hamma yosh guruhlarida o'tkaziladi.

2. Bolalarning to'plagan bilim va tajribalarini mustahkamlovchi va sistemaga soluvchi faoliyatlar. Undan ko'zlangan asosiy maqsad idrok etilgan narsalarning anglab olish va dastlabki umumlashtirishga o'rgatishdir. Buning uchun tanish obyekt kuzatiladi, ikki narsa, solishtiriladi (xona o'simliklari, daraxtlar, hayvonlar), didaktik o'yinlar, suhbatlar o'tkaziladi. Bunday faoliyatni o'tkazish orqali tarbiyachi bolalar nimani yaxshi o'zlashtirib olgan-u, nima yaxshi o'zlashtirilmaganini bilib oladi. Tarbiyachi faoliyat jarayonida bolalarning bilimini yangi narsalar - detallar bilan boyitib boradi.

3. Bolalarning bilimini sinovchi faoliyatlar. Bunday faoliyatlardan maqsad tarbiyachi bolalar dastur bo'yicha o'zlashtirilishi lozim bo'lgan bilim va

²⁸ .Sodiqova Sh.A. "Maktabgacha pedagogika" Fan va texnologiya. T.2017-yil

malakalarni o'zlashtirib oladilarmi-yo'qmi, shuni bilib oladi va o'zining bo'lajak ish mazmuni, metodini belgilaydi. Faoliyatning tarbiyachi o'z xohishi bilan kvartal, yarim yil va yilning oxirida, shuningdek mudira va metodistning iltimosiga binoan o'tkazishi mumkin.

4. Kompleks mujassam faoliyatlar bolalar bog'chasi tajribasida keng tarqalgan bo'lib, bunday faoliyatlarda bolalarga yangi bilim beriladi, egallangan bilimlar mustahkamlanadi va takrorlanadi, sistemaga solinadi, olgan bilim va malakalarni amalda qo'llashga o'rgatiladi.

Tarbiyachi MTTda asosiy shaxs hisoblanadi. Butun g'oyaviy-tarbiyaviy ishlarning sifati va qolaversa, kelajak avlodni tarbiyalanganlik va bilish darajasi tarbiyachining g'oyaviy-siyosiy va ilmiy-pedagogik tayyorgarligiga, javobgarlik hissiga, pedagogik mahoratiga va ishga bo'lgan ijodiy munosabatiga bog'liq. Bolaning o'quv faoliyatiga bo'lgan munosabati ko'proq uning tarbiyachi shaxsiga munosabati bilan belgilanadi.

Tarbiyachining o'ziga xos xususiyati - uning yuksak kasb mahoratidir. Eng muhimi - bolaning ruhiyatini, yosh va o'ziga xos ruhiy-fiziologik xususiyatlarini bilishdir, Bolalar bog'chasi dasturi bolalarning yoshini, jismoniy va ruhiy xususiyatlarini hisobga olib tuzilgani bilan har bir boladagi alohida ruhiy xususiyatning qay vaqtda va qanday namoyon bo'lishini oldindan ko'ra olmaydi, bu ish dasturda yaxshi tayyorlangan tarbiyachining zimmasiga yuklanadi. Tarbiyachi o'z guruhidagi har bir bolaning jismoniy tomondan yaxshi rivojlanishi, uning oliy nerv faoliyati yaxshi ishlashi, shuningdek aqliy axloqiy, mehnat, estetik tomondan normal tarbiyalanishi uchun yaxshi shart-sharoit yaratadi. Tarbiyachi har bir boladagi o'ziga xos xususiyatlarni yaxshi bilgan holda undagi o'ziga xos xususiyatlarni (zararli bo'lsa] yo'qota borib, bolaga nisbatan qulay talab qo'yadi.

Tarbiyachi har bir bolaning kelajakda haqiqiy inson bo'lishiga yordam beradigan sifatlarini va imkoniyatini rivojlantirishi lozim. Maktabgacha ta'lim yoshi davrida tarbiyachining bolaga shaxsiy ta'siri juda katta bo'ladi. Chunki, bu davrdagi har bir taassurot bolaning xotirasida bir umrga saqlanib qoladi. Bolani tushuna bilish va uning ma'naviy dunyosiga kira olish tarbiyachidan zo'r kasb tayyorgarligini talab etadi. Bola bilan jonli munosabatda bo'lish - fikrlar manbayi, pedagogik yangiliklar, quvonch va tashvishlardirki, busiz tarbiyachining ijodiy mehnatini tasavvur etib bo'lmaydi.

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**QUROLLI KUCHLAR MODDIY TA’MINOTINI AMALGA
OSHIRISHDA TASHQI RESURSLARGA BO‘LGAN EHTIYOJNI VA
AUTSORSING TIZIMI SAMARADORLIGINI BAHOLASH
MEZONLARI**

Annotasiya: mazkur maqolada Qurolli Kuchlar moddiy ta’minotini amalga oshirishning zamonaviy texnologiyalaridan biri bo‘lgan autsorsing tamoyilining tadbiri va uni amalga oshirish, kelgusida tizim nazorati va monitoringi, shuningdek, autsorsingni qo‘shinlar moddiy ta’minotining yaxlit tizimi sifatida ilmiy jihatdan o‘rganishning dolzarbligi, hamda bu borada amalga oshirilishi lozim bo‘lgan vazifalarga alohida to‘xtalib o‘tilgan.

Kalit so‘zlar: mehnat taqsimoti qonuni, autsorsing, outsorser, autsorsing-shartnomasi, iqtisodiyot, biznes jarayonlar, moddiy ta’minot, strategiya, jangovar tayyorgarlik, tashkiliy-huquqiy jihatlar, harbiy logistika, pudratchilar, xususiy harbiy kompaniyalar.

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**CRITERIA FOR ASSESSMENT OF THE NEED FOR EXTERNAL
RESOURCES AND THE EFFICIENCY OF THE OUTSOURCING
SYSTEM IN IMPLEMENTING THE MATERIAL SUPPLY OF THE
ARMED FORCES**

Abstract. This article discusses the implementation of the principle of outsourcing, which is one of the modern technologies for material support of the Armed Forces of the Republic of Uzbekistan, and its implementation, system control and monitoring in the future, as well as Scientific outsourcing as a comprehensive system of material support for troops, the relevance of training with point of view of the subject, as well as problems that should be solved in connection with this.

Key words: law of division of labor, outsourcing, outsourcer, outsourcing contract, economics, business processes, material support, strategy, combat training, organizational and legal aspects, military logistics, contractors, private military companies.

Autsorsing texnologiyasidan foydalanish tashkilot rivojlanish strategiyasini amalga oshirish bilan bog‘liq bo‘lishi lozim. Bu shuni anglatadiki,

tashkilot faoliyatiga outsorsingni joriy etish bo'yicha qarorni faqatgina "mexanik ravishda" qo'shimcha tashqi resurslardan foydalanishga nisbatan paydo bo'ladigan ehtiyoj tufayli qabul qilinmaydi.

Autsorsing texnologiyasini tashkilot strategiyasiga kiritish uchun eng avvalo tashkilot vazifa va maqsadlariga muvofiqligi bo'yicha texnologiyadan oqilona va maqsadli foydalanishning doimiy nazorati va tizimli tahlilini olib borish lozim.

Mazkur yo'nalishda tizimli yondashuv o'z ichiga tegishli vazifalar va jarayonlarni tashqi pudratchiga (xizmat ko'rsatuvchiga) topshirish va outsorsing rejimida tegishli jarayonlarni amalga oshirilishini ta'minlashni oladi. Aslida outsorsing bu davlat organlarining o'z vakolati doirasidagi majburiyati va vazifalarini amalga oshirish uchun tashqi korxonadan shartnomalar asosida xizmatlar olishni ko'zlovchi harakatlar yig'indisi sifatida ifodalanadi.

Autsorsingni tashkilot tegishli strategik qarorining amalga oshirilishi sifatida ko'radigan bo'lsak, u bir nechta bosqichlardan iborat bo'ladi:

a) strategik rejalashtirish va asoslash, jumladan:

- 1) tashkilotning mavjud holatini tahlil qilish;
- 2) vazifalarni outsorsingga topshirish bo'yicha qaror qabul qilish;

b) xizmat ko'rsatish bozorini tahlil qilish va texnik topshiriq ishlab chiqish;

v) outsorsingni tadbiq etish dasturini ishlab chiqish;

g) outsorsingni tadbiq etish, jumladan:

- 1) tanlovni amalga oshirish va outsorser-korxonani tanlab olish;
- 2) shartnoma tuzish va uni bajarish;
- 3) natijalarni monitoring qilish, outsorsingni samaradorligini baholash.²⁹

Dastavval birinchi bosqichni, ya'ni, outsorsing texnologiyasini tegishli davlat tashkiloti faoliyatiga joriy etilishi to'g'risidagi qarorni qabul qilish jarayonini ko'rib chiqamiz. Birinchi bosqichda maqsadlar va ustuvor yo'nalishlar, tashkilotning mavjud holati, outsorsingdan foydalanishdagi muammolar va kamchiliklarni aniqlash, hamda ularni oldin olish bo'yicha echimlarini izlab topish kabi masalalar ko'rib chiqiladi.

Autsorsing tizimini ishlab chiqish va uni joriy etish, hamda ish tartibi bo'yicha mas'ul shaxslar belgilab olinadi. Ushbu bosqichda, outsorsingdan kutilgan natijalarni aniq shakllantirish va ish hajmining tashkilot faoliyatining strategik jihatlariga mutanosibligini ta'minlash zarur. Qaror qabul qilish uchun zaruriy ravishda tashqi korxonaga topshiriladigan ishlar ko'lami, uni amalga oshirishning samaradorligini, maqsadga muvofiq ekanligini belgilab olish yuzasidan batafsil tahlil qilish lozim.

Tashkilotda outsorsing jarayonlarini amalga oshirish uslublari to'g'risidagi qaror qabul qilish uchun, eng avvalo, tashkilot jarayonlari tahlili va ular

to'g'risidagi qaydlar asos bo'lib xizmat qiladi: zaruriy ravishda mavjud jarayonlarni mufassal o'rganib chiqish, tahlil etish va tushunish lozim.

Yuqorida o'tkazilgan tahlillar natijalari yakuniy qarorlarni qabul qilish, yakuniy natijalar bo'yicha outsorsing tizimi tegishli jarayonlari tavsifini aniqlashtiruvchi ma'lumotlar sifatida xizmat qiladi. Boshqacha qilib aytganda, mavjud tizimdagi tashkilot faoliyatining asl holatini qanday bo'lsa, shundayligicha zaruriy ravishda baholash lozim. Ushbu bosqich doirasida quyidagilar amalga oshiriladi: mavjud faoliyat turlarini tahlil qilish, shu jumladan, har bir faoliyat turi yakunlari bo'yicha, shuningdek, aniq faoliyat turlari bo'yicha zaif va tor jihatlarini aniqlashtirib olish; alohida vazifalarni amalga oshirishda outsorsing tadbiri maqsadga muvofiqligi (samaradorligi) yuzasidan tahlil qilish, shu jumladan bozorni tahlil qilish, outsorsing tizimi iqtisodiy ko'rsatkichlari hisobi, sarf-harajatlar solishtiruvchi, outsorsing samaradorligi yuzasidan prognozlashtirish; alohida faoliyat turlariga outsorsing amaliy tadbiri imkoniyatlari; mavjud xavflarni baholash; outsorsingga qo'yiladigan miqdoriy va sifat talablarini ishlab chiqish. Shu o'rinda outsorsingdan foydalanishning samaradorligi va uni strategik asoslashning yana bir bora muhim masala ekanligini ta'kidlab o'tish lozim. Shunday qilib, mavjud holat tahlili o'tkaziladi va tashkilot tomonidan amalga oshiriladigan jarayonlar to'liq tavsiflanib chiqiladi. Shu o'rinda "davlat tashkilotining aynan qaysi vazifalarini outsorsingga o'tkazsa bo'ladi?" degan savol tug'iladi. Buning uchun esa omilli tahlildan foydalaniladi. Bu boradagi umumiy jarayonlarga ta'sir etuvchi omillar sifatida tegishli vazifalar doirasida amalga oshiriladigan jarayonlar ijrosidagi sarf-harajatlar (vaqt, zaruriy resurslar) hajmi, tegishli ishlarni amalga oshirish uchun xizmat xodimlarining salohiyati mavjudligi yoki mavjud emasligi, jarayonlar borishi ustidan nazoratning xarakteri, o'zaro munosabatlardagi iqtisodiy operatsiyalar sarf-harajatlari hisobi monitoringi olib borilishi, shuningdek umumiy tashkilot faoliyatining samaradorligi va sifatining oshishi ko'rsatkichlari shular jumlasidandir.

Umuman olganda, outsorsingni joriy etish yuzasidan qaror qabul qilishga ta'sir etuvchi quyidagi omillar mavjud: asosiy faoliyat turi bo'yicha kuch va vositalarning markazlashtirishga nisbatan xohishning mavjudligi; olib borilayotgan jarayonlar sifatini oshirishga nisbatan zarurat; sarf-harajatlarni qisqartirish va ichki resurs hamda vositalarni boshqa maqsadlarni amalga oshirish uchun bo'shatish; bir qator vazifalarni, jarayonlarni amalga oshirish uchun kerakli mutaxassis va kadrlarning etishmovchiligi; uzoq muddatli kadrlar siyosatini amalga oshirishni cheklovchi kadrlar qo'nimsizligi; tegishli vazifalarni amalga oshirish uchun xizmat ko'rsatuvchi korxonada malakali mutaxassislarning mavjudligi; xizmat ko'rsatuvchi korxonalar tomonidan zamonaviy texnologiyalarning qo'llanilishi.

Bundan tashqari, tegishli jarayonlarni o'z kuch va vositalari bilan amalga oshirishni yoqlovchi va tashqi xizmat ko'rsatuvchi korxonalar xizmatini chegaralovchi shart-sharoitlarni yaratuvchi, aniqlab beruvchi quyidagi bir qator

omillar mavjud: tashkilot faoliyatining xizmat ko'rsatuvchi tashkilotga bog'lanib qolishi; xizmat ko'rsatuvchi tashkilotning moliyaviy barqaror emasligi yoki umuman inqirozga uchrashi; tegishli xizmat ko'rsatuvchi korxonaga boshqa korxonaga tomonidan sotib olinishi yoki boshqa korxonaga aylantirilishi holatlari, pirovardida, avvalgi ish faoliyati uslubiyoti va strategiyasi o'zgarib ketishi holatlari; xizmat ko'rsatuvchi korxonaga tomonidan shartnoma majburiyatlarining bajarilmasligi holatlari; xizmat ko'rsatuvchi korxonaga ishchilari ruhiy motivatsiyasining zaifligi; muhim ma'lumotlarning chiqib ketishi holatlari; outsorsing sarf-harajatlarini zaruriy darajada hisob-kitob qilmaslik; outsorsing sharoitidagi sarf-harajatlarda tejamkorlikni miqdoriy baholashning qiyinligi. Alohida ta'kidlab o'tish lozimki, joriy uslubiyotlarda tashkilot jarayonlarini amalga oshirishdagi iqtisodiy omillar va ularning o'rniga (roliga) kam darajada e'tibor qaratiladi.

Tashkilot faoliyatida strategik qaror qabul qilishda birinchi navbatda outsorsingning iqtisodiy samaradorligini ko'rib chiqish lozim. Bir tomondan tashkilot faoliyatini amalga oshirish jarayoniga tashqi korxonalarni jalb etish uchun qaror qabul qilishda bu borada iqtisodiy mezonlarni ishlab chiqish lozim, jumladan, bozorning o'zini yangi tamoyillarni qabul qilish darajasi, outsorsing xizmatlari uchun tegishli bozordagi zaruriy raqobatbardoshlik muhitining yaratilganligi, shuningdek, aynan tashkilot ehtiyojidagi xizmat va jarayonlarni etarli darajada ijrosini ta'minlab bera oladigan darajadagi salohiyatning mavjudligi masalalari shular jumlasidandir.

Boshqa tomondan esa, qaysidir muammolarni echish yuzasidan outsorsing joriy etilishi talab etilayotgan bo'lsa, aynan qaysi muammolar, ularning mohiyati, uning kelib chiqishi, qaysi maqsadlarga ta'sir etayotganligini aniq bilib olish darkor. Shundan so'ng, tegishli muammolarning echimlari bo'yicha shakllantirilgan har bir variantni birma-bir, jarayonlarni bevosita tashkillashtirishdagi sarf-harajatlarni, foyda va zarari bilan hisoblab hamda ushbu harajatlar yakuni bo'yicha raqamlarni byudjetdan to'g'ridan-to'g'ri sarf va bilvosita sarf (outsorsing xizmatlari uchun to'lov, qo'shimcha nazorat va monitoring sarflari)lar kesimida ko'rib, taqqoslab chiqamiz. SHu o'rinda to'g'ridan to'g'ri va bilvosita sarf-harajatlar orasida aynan, outsorsing texnologiyasining qo'llanilishi natijasidagi kamaytirish mumkin bo'lgan sarf-harajatlarni ham ko'rish mumkin. Xususan: tegishli resurslarni saqlash uchun sarf-harajatlar; xizmat ko'rsatuvchi xodimlar uchun sarf-harajatlar; korxonaga faoliyatini ta'minlash uchun sarf-harajatlar; nazorat va boshqaruv uchun sarf-harajatlar.

Turli variantlar ustida olib borilgan tahlillar natijasiga ko'ra, sarf-harajat va natijalarning o'zaro manfaatli mutanosibligi tanlab olinadi. Agar tashkilotning o'z kuch va vositalari orqali faoliyatini amalga oshirishdagi sarf-harajatlari tashqi manbaalardan foydalanib amalga oshirganidagi sarf-harajatlardan ortiqcha bo'lsa, u holda outsorsing texnologiyasini joriy etish maqsadga muvofiq bo'lmaydi.

Autsorsingni amalga oshirishning imkoni yo'qligini isbotlovchi dalil – bu tegishli taklifning kelib tushmasligidir. Boshqacha qilib aytganda, autsorsing tamoyili bu boradagi xizmat ko'rsatuvchilar raqobati shart-sharoiti bo'lganda amalga oshiriladi. Shu bilan birga bir qator tadqiqotlarda autsorsing sharoitida ushbu jarayonlarga katta miqdorda ta'sir etmaydigan omillar, ya'ni tomonlar o'rtasidagi axborot almashinuvi, ushbu munosabatlardagi o'zaro boshqaruv xarakteri, shuningdek ushbu jarayonlarning qamrovi, to'liqligi, tezkorligi va bo'lishi mumkin bo'lgan cheklovlar alohida ko'rsatib o'tilmoqda.

Yana shunday holatlar mavjudki, bunda autsorserlar kundalik faolitini kuzatish, nazorat va monitoring qilishning imkoni mavjud emas, hamda uni amalga oshirish katta sarf-harajatlarni talab etadi. Agar autsorsingga topshirilgan jarayonlarning xarakteri murakkab bo'lsa va ular o'rtasidagi munosabatlarni amalga oshirish mexanizmi ham etarli darajada murakkab bo'lsa, u holda ma'muriy sarf-harajatlar ustuvor o'rin egallaydi.³⁰

Umuman olganda, autsorsing jarayonlarini borishida, talabgor tomonidan autsorserni doimiy nazoratga olish va monitoring olib borishi, ular tomonidan taqdim etilayotgan ma'lumotlarning to'g'riligini tekshirish, qolaversa, nazorat hajmini va qamrovini kengaytirish maqsadida qo'shimcha resurslarning ortib ketishi, tashkilotning autsorsingga topshirgan ish va xizmatlarni o'z kuch va vositalari orqali amalga oshirishi qaroriga kelishiga sababchi omil va turtki bo'lib qoladi. Hozirgi vaqtda autsorsing tamoyilining samaradorligini baholashdagi yondashuvlarning ikki turi mavjud bo'lib, ulardan biri – bu bir mezonli, ikkinchisi esa ko'pmezonli baholash turlaridir. Birinchi, ya'ni, autsorsingni joriy etish samaradorligini baholashdagi bir mezonli yondashuvda talabgorning byudjetdan iqtisodiy tejamkorlikka erishganligi ko'rsatkichi bilan aniqlanadi.

Ko'pmezonli baholash yondashuvida esa, autsorsingning tegishli harbiy qism turli sohalariga ta'siri, masalan, jangovar tayyorgarlik, safarbarlik tayyorgarligi, shuningdek, harbiy qismni ushlab turish umumiy harajatlari miqdori va boshqalarga ta'sirini ham inobatga olib ko'rib chiqiladi.

Birmezonli baholash usuliga ko'ra, iqtisodiy tejamkorlikni aniqlash uchun quyidagi formula orqali hisoblab chiqiladi: $F = (C_{o'zi} - S_{aut}) + N + B$.

Bu erda, F – moddiy ta'minotni autsorsing tizimiga o'tkazilishi munosabati bilan erishilgan byudjet sarflari tejamkorligi (zarari);

$C_{o'zi}$ – harbiy tashkilotning moddiy ta'minotni o'z kuch va vositalari bilan amalga oshirgandagi sarf-harajatlari miqdori;

S_{aut} – harbiy tashkilotning autsorsing tizimiga o'tilgandan keyingi to'g'ridan-to'g'ri sarf-harajatlari;

N – autsorserning davlatga topshirayotgan daromad solig'i;

B – harbiy tashkilotning autsorsing tizimiga o'tganligi munosabati bilan qisqargan ayrim xo'jalik lavozimlarining umumiy byudjeti (oylik maosh va

boshqa sarf-harajatlar) hisobi. Formuladagi qiymatlarga berilgan izohlardan ko‘rinib turibdiki, moddiy ta‘minotni outsorsingga o‘tkazilishi munosabati bilan harbiy qism ta‘minot bo‘linmalarida avval shu vazifalarni bajargan lavozimlarning qisqarishi natijasida tashkiliy tuzilishida o‘zgarishlar yuz berdi. Buning natijasida davlat buyudjet uchun iqtisodiy tejamkorlikka erishildi.

XULOSA

Yuqoridagi tahlillar va keltirib o‘tilgan statistik ma‘lumotlarga asoslanib, xulosa qilish mumkinki, Qurolli Kuchlar moddiy ta‘minotini amalga oshirishda zamonaviy ta‘minot turlariga o‘tilishi armiyada amalga oshirilayotgan tashkiliy o‘zgarishlar va islohotlarga mos ravishda joriy etilishini nazarda tutmoqda. Bunda asosiy e‘tibor moddiy ta‘minotni amalga oshirish jarayoni sarf-xarajatlarini qisqartirib sifatni oshirish, shu bilan birga har bir harbiy xizmatchilarni yuqori professional tayyorgarligini oshirish maqsadida ularni turli ishlardan ozod etish masalalari ko‘zlangan.

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VODOROD ISHLAB CHIQRISH USULLARINING TAHLILI

Annotatsiya. Ushbu maqolada vodorod ishlab chiqarishning umumiy tahlili va usullari haqida ma'lumot berilgan. Metan va tabiiy gazning bug 'konversiyasi, ko'mirni gazlashtirish, suv elektrolizi, piroliz, qisman oksidlanish va biotexnologiya kabi vodorod ishlab chiqarish usullari qisqacha tavsiflangan.

Kalit so'zlar: vodorod ishlab chiqarish, suvning elektrolizi, piroliz, elektr energiyasi.

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ANALYSIS OF HYDROGEN PRODUCTION METHODS

Annotation. This article provides information on the general analysis and methods of hydrogen production. Hydrogen production methods such as steam conversion of methane and natural gas, coal gasification, water electrolysis, pyrolysis, partial oxidation and biotechnology are briefly described.

Keywords: hydrogen production, electrolysis of water, pyrolysis, electric energy

Vodorodni sanoat ishlab chiqarish vodorod energiyasining ajralmas qismi bo'lib, vodorodni iste'mol qilish hayot tsiklining birinchi bo'g'inidir. Vodorod yerda deyarli sof holda topilmaydi va turli xil kimyoviy usullar yordamida boshqa birikmalardan olinishi kerak.

Hozirgi vaqtda vodorodni sanoat ishlab chiqarishning ko'plab usullari mavjud: chiqindilar, etanol, metallurgiya shlaklari, biomassa va boshqa texnologiyalardan vodorod ishlab chiqarish texnologiyalari ishlab chiqilgan.

Bunday usullarga quyidagilar kiradi:

- metan va tabiiy gazning bug ' konversiyasi;
- ko'mirni gazlashtirish;
- suvning elektrolizi;
- piroliz;
- qisman oksidlanish;
- biotexnologiya.

Bundan tashqari, kamdan-kam hollarda alyuminiy va gidroksidi eritmaning reaksiyasi qo'llaniladi.

Vodorod ishlab chiqarish usullarining xilma-xilligi vodorod energiyasining asosiy afzalliklaridan biridir, chunki u energiya xavfsizligini oshiradi va xom ashyoning ayrim turlariga bog'liqlikni kamaytiradi.

Hozirgi vaqtda qazib olinadigan xom ashyolardan vodorod ishlab chiqarish eng tejamkor hisoblanadi va hozirgi vaqtda eng arzon va arzon jarayon bug ' konversiyasidir (prognozlariga ko'ra, u vodorod iqtisodiyotiga o'tishning dastlabki bosqichida "tovuq va tuxum" muammosini engib o'tishni osonlashtirish uchun ishlatiladi, infratuzilma yo'qligi sababli vodorodli transport vositalariga talab yo'q.. vodorodli avtomobillar yo'qligi sababli infratuzilma qurilmayapti. Biroq, uzoq muddatda qayta tiklanadigan energiyaga o'tish zarur, chunki vodorod energiyasini joriy etishning asosiy maqsadlaridan biri issiqxona gazlari emissiyasini kamaytirishdir; bunday manbalar shamol energiyasi yoki quyosh energiyasi bo'lishi mumkin, bu esa suvni elektroliz qilish imkonini beradi). Kam uglerodli texnologiyalar yordamida olingan vodorod tufayli ishlab chiqarish tarmoqlarida uglerod chiqindilarini kamaytirish mumkin, buning uchun karbonat ангидридни ushlab va saqlash texnologiyalari, shuningdek suvni elektroliz qilish, "birinchi navbatda atom, gidro, shamol va quyosh energiyasi ob'ektlarining energiyasidan foydalanish mumkin.

Vodorodning rang gradatsiyasi uning ishlab chiqarish usuliga va uglerod iziga, ya'ni zararli chiqindilar miqdoriga bog'liq:

- "yashil" - suvni elektroliz qilish orqali qayta tiklanadigan energiya bilan ishlab chiqarilgan, eng toza hisoblanadi;
- "moviy" - tabiiy gazdan ishlab chiqarilgan; bu holda karbonat ангидрид maxsus omborlarda to'planadi;
- "sariq" - atom energiyasi yordamida ishlab chiqarilgan.
- "kulrang" vodorod ishlab chiqarishda zararli chiqindilar atmosferaga kiradi.

"Yashil" vodorodning narxi kg uchun taxminan 10 dollarni tashkil etadi (bu milliy energiya xavfsizligi jamg'armasi rahbarining so'zlariga ko'ra " mutlaqo foydasiz");" ko'k "va" sariq "vodorod" yashil " dan bir necha baravar arzon — kilogramm uchun 2 dollardan.

Vodorod ishlab chiqarish markazlashtirilgan yirik korxonalariga yo'naltirilishi mumkin, bu esa ishlab chiqarish tannarxini pasaytiradi, ammo vodorodni vodorod yonilg'i quyish shoxobchalariga etkazib berish uchun qo'shimcha xarajatlarni talab qiladi. Yana bir variant-to'g'ridan-to'g'ri maxsus jihozlangan vodorod yonilg'i quyish shoxobchalarida kichik hajmdagi ishlab chiqarish.

2019 yilda dunyoda 75 million tonna vodorod iste'mol qilinadi, asosan neftni qayta ishlash va ammiak ishlab chiqarishda. Uning 3/4 dan ortig'i tabiiy gazdan ishlab chiqariladi, buning uchun 205 milliard m³ dan ortiq gaz sarflanadi [7]. Qolganlarning deyarli barchasi ko'mirdan olinadi. Taxminan 0,1% (~100 ming tonna) elektroliz natijasida hosil bo'ladi. Vodorod ishlab chiqarishda atmosferaga ~ 830 million tonna CO₂ kiradi. Tabiiy gazdan vodorodning narxi 1 kg uchun 1,5-3 dollarga baholanmoqda.

Keling, uni biroz batafsilroq tahlil qilaylik, chunki ko'plab ixtirochilar ushbu texnologiyadan foydalanishga harakat qilmoqdalar. Elektr toki bilan distillangan suvga ta'sir qilib, uni tarkibiy qismlarga-kislorod va vodorodga ajratishingiz mumkin:



"Birinchi marta suvning kislorod va vodorodga elektrolitik parchalanishi 1800 yilda amalga oshirildi va bu usulning sanoat rivojlanishi 1888 yilda DC generatorlari mavjud bo'lganda boshlandi." Suvning elektrolizi vodorod ishlab chiqarish uchun juda qimmat texnologiyadir. Umuman olganda, u ishlab chiqarilgan umumiy vodorod hajmining atigi 4-5 foizini tashkil qiladi. Suvni elektroliz qilish texnologiyasi ishlab chiqarishning ekologik tozaligi va keng ishlash diapazoniga ega qurilmalarni yaratish imkoniyati (soatiga bir necha litrdan yuzlab kubometr gacha) tufayli jozibali ko'rinadi. Usul oddiy va ishlatish uchun qulay, ishlab chiqarilgan vodorodning yuqori tozaligiga ega. Bundan tashqari, qo'shimcha mahsulot kislorod - qimmatli kimyoviy moddalarni olishdir. Ammo eng muhimi, vodorod elektrolizi qayta tiklanadigan yoki atom energiyasi manbalaridan vodorodni ekologik toza olishning juda istiqbolli usuli hisoblanadi.

Shuni ta'kidlash kerakki, vodorod energiyasini ishlab chiqarish va uni vodorod iqtisodiyotiga yanada rivojlantirish kontseptsiyasi aniq ekologik tozalikka intiladi.

Suv quvurini chiqarish uchun suvni parchalashning ko'plab usullari mavjud.

Ularning asosiylari:

- elektrokimyoviy;
- termal;
- termokimyoviy;
- biokimyoviy;
- fotokimyoviy;
- elektrolitik.

Albatta, eng ko'p ishlab chiqilgan va o'rganilgan usul elektrolitikdir. Bu 90% gacha samaradorlik bilan vodorod ishlab chiqarishga imkon beradi.

Vodorod ishlab chiqarish uchun elektroliz texnologiyasini amalga oshirishning uchta sanoat usuli mavjud. Ular ishlatiladigan elektrolitlar turi va elektroliz shartlari bilan farq qiladi.

Elektroliz suvdan vodorod olishning eng oddiy usullaridan biridir. Buni har bir elektrodda ikkita reaksiyaga ega yon mahsulot sifatida vodorod va kislorod shaklida elektr energiyasini kimyoviy energiyaga aylantirish sifatida umumlashtirish mumkin. Biomassadan vodorod ishlab chiqarish. Biomassa o'simlik va hayvonot materiallaridan olinadigan birlamchi energiyaning qayta tiklanadigan manbaidir, o'rmon qoldiqlari, ekinlar, qattiq maishiy chiqindilar, mikroalglar yoki hayvonlarning qo'shimcha mahsulotlari, yoqilg'i va kimyoviy xom ashyoning potentsial resurslari hisoblanadi.

Ko'pgina rivojlangan mamlakatlarda mavjud texnologiya va iqtisodiy sharoitlarni hisobga olgan holda biomassa va qoldiq chiqindilardan vodorod ishlab chiqarish texnik va iqtisodiy jihatdan maqsadga muvofiqdir. 2050 yilga kelib biomassa energiyaga bo'lgan ehtiyojni 25 foizdan ko'proq qoplaydi. Fotoalbum yoqilg'idan farqli o'laroq, biomassani energiyaga aylantirish jarayonlari CO₂ emissiyasini kamaytiradi va CO₂ ni tabiiy muhitdan o'zlashtiradi, neytral uglerod emissiyasi stsenariysiga olibkeladi. Biomassani vodorodga aylantirishning ikkita asosiy jarayoni mavjud, ya'ni biologik va termokimyoviy.

Termokimyoviy jarayon odatda biologik jarayonga qaraganda ancha tezroq bo'lib, yuqori vodorod hosildorligini ta'minlaydi. Asosiy vodorod ishlab chiqaruvchi shtatlar Kaliforniya, Luiziana va Texasdir.

Bugungi kunda Qo'shma Shtatlarda ishlab chiqarilgan deyarli barcha vodorod neftni qayta ishlash, metallarni qayta ishlash, o'g'it ishlab chiqarish va oziq-ovqat mahsulotlarini qayta ishlash uchun ishlatiladi. Vodorod tabiatda erkin shaklda emasligini va ishlab chiqarilishi kerakligini hisobga olib, energiya sarfini kamaytiradigan yangi ishlab chiqarish usullarini ishlab chiqish va uni keng miqyosda ishlab chiqarishga imkon berish talab etiladi. Bundan tashqari, atrof-muhitga ta'sirni kamaytirish uchun xom ashyo sifatida suvdan foydalanish maqsadga muvofiqdir, chunki CO₂ hosil bo'ladi. Atrof-muhit sharoitida vodorod gazdir va shuning uchun u past hajmli zichlikka ega.

Bir xil miqdorda energiya ishlab chiqarish uchun boshqa suyuq yoqilg'ilarga qaraganda 3000 baravar ko'proq hajm talab qilinadi. Bundan tashqari, vodorod hajmini osongina saqlash va tashish uchun kamaytirish kerak. Vodorodning yonuvchanligi boshqa yoqilg'ilarga qaraganda yuqori, shuning uchun uning xavfsizligini shubha ostiga qo'yadi. Bundan tashqari, u asfiksiyali gazdir; shuning uchun havodagi kislorod konsentratsiyasini kamaytirish natijasida bo'g'ilishga olib kelishi mumkin.

Shunday qilib, uni xavfsiz va samarali saqlash yoki ishlatish uchun muayyan ehtiyot choralari va xavfsizlik choralari ko'rish kerak. Vodorod yakuniy foydalanish uchun mavjud bo'lgandan so'ng, issiqlik yoki elektr

energiyasini ishlab chiqarish uchun energiya qo'llanilishiga imkon qadar samarali yondashish kerak. Vodorod ishlab chiqarish jarayoni tabiiy manba bo'lmagan ishlab chiqarish xarajatlarini ko'taradi, bu uning narxini qazib olinadigan yoqilg'idan 3 baravar yuqori qiladi. Shuni ham hisobga olish kerakki, saqlash, asosan, yuqori bosimli texnologiyalar ostida amalga oshirilsa, uning narxini yanada oshirishi mumkin.

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FORMS AND METHODS OF ENVIRONMENTAL EDUCATION OF PRESCHOOL CHILDREN

Annotation. Discusses the forms and methods of environmental education for preschool children, the importance of forming children's ecological culture, ways to introduce preschool children to nature, the main directions and areas of education for children's environmental education. Opinions and opinions are presented about the importance of introducing children to the environment, teaching them to protect nature, and the importance of caring for the environment.

Keywords. Ecological education, ecological culture, nature, First step, play, work, excursion, environment.

Today, one of the events that endangers humanity is the ecological situation. Society's interconnectedness with the environment is causing great concern among the general public. Article 50 of the Constitution of the Republic of Uzbekistan states that "Citizens are obliged to treat the natural environment with care", and Article 55 states that "Subsoil resources, water, flora and fauna and other natural resources are national resources, their rational use is necessary and they are under the protection of the state." As a result of human overuse of natural resources, the face of our planet is changing. Green forests are thinning, plant and animal species are decreasing, mineral resources are running out. As a result of the pollution of water bodies and atmospheric air, as a result of increasing emissions, the problems of providing food, energy and fresh water to the population are becoming more and more complicated. As a result, it destroys the natural state that has been stagnant for millions of years.

Today, the nature of the relationship between man and nature is related to the preservation of life on earth. The urgency of these problems is based on the use of natural resources without taking into account ecological and biological laws, the rapid growth of industrial production, and finally, the fact that there is a clear environmental danger caused by human activity in nature. Scientists have come to the conclusion that nature and society should be transitioned to a new type of society in today's conditions by analyzing the uniqueness of the influence of nature and society on each other. Ecological education of preschool children is important, because at this age they receive 70% of information, the foundations of personal ecological culture, which is considered a part of spiritual culture, are formed.

Ecological education is a new form and component of general education, and it is planned to be implemented in the teaching of all subjects at school. The main goal of ecological education is to form a conscious attitude to the environment and its problems in the young generation. In the process of ecological education, young people are taught to conserve and protect the resources of our living nature. In ecological education, students are taught their school; It is very important to attract people to participate as much as they can in activities such as beautification of urban and rural streets, planting fruit and ornamental tree seedlings, keeping avenues and water bodies tidy, taking care of pets.

The concepts of environmental education are first formed in kindergarten children. In grades 1-5, environmental education is given to teachers mainly in science classes. In this, scientific concepts from ecology are generalized in all subjects taught in schools, especially in the teaching of subjects such as natural science, physics, ecology, mathematics, geography, history. At the same time, they study problems in optional activities, in extracurricular club meetings, during field trips, and in their daily activities.

Formation of ecological culture. This should first of all start with the family. There are the following ways to introduce preschool children to nature:

1. Conducting training
2. Excursion
3. Work
4. Games
5. Daily life tasks

Excursions are one of the main methods of education in preschool educational organizations in introducing children to nature. During the excursion, children will get a clear idea of nature by seeing, feeling, and hearing. In the course of the excursion, preschool children develop realistic ideas about nature and its laws. Concepts learned in this process form the basis of scientific knowledge acquired by children, and facilitate learning of natural sciences studied at school. If the knowledge about nature is not taught to children in time, it will lead to their misuse of nature.

In addition, the "Science and Nature" center, which is one of the 5 developmental centers organized on the basis of the "First Step" State curriculum, is designed to increase children's knowledge of nature.

Experiments conducted at the Science and Nature Center's experimental testing ground arouse children's interest and encourage them to make new inventions. This center is also the center of the greatest opportunity for children to learn about nature and its phenomena. If the activity of the center is properly organized, children will learn 90% of the knowledge about nature. The center arouses interest not only in children, but also in pedagogues. The information about where the things used in our life come from, what is obtained from them, the children sprinkled the seeds in pots with their own hands, put water in them and the seeds germinated. conducted and in some of these basic knowledge is

formed. For this, the educator uses observation, viewing pictures, reading stories, fairy tales, and multimedia tools. In other activities, children's knowledge is defined, expanded and strengthened. The lessons mainly use didactic games, summarizing words, and children's work in nature. In all groups, excursions are used to make training more effective and to create an interesting environment. Didactic game is considered the main form of education, making education easy, fast and a form of acquiring knowledge not intended by children in advance. For example, the game "Is the name of this animal included in the Red Book? Find this animal." The teacher makes the children stand in a circle, calls out the name of hay won and throws the ball to a child. The child picks up the ball and says whether it is included in the "Red Book" or not. When developing the content of the game about nature protection, the relationship between people, their humaneness and care for the natural environment should be in the central place. Therefore, when using such games, it is necessary to take into account the age of the children and develop games in accordance with their age. Its use gives good results. In our national education, along with not wasting water, land, air, and soil are also considered sacred. One of the most effective ways to teach children about environmental education is to give each child the task of taking care of 1 flower pot. In this way, they are taught how to take care of this flower, and they are supervised. As a result, children first of all develop a sense of compassion and love for nature.

Environmental education of preschool children in kindergarten includes:

- education of human attitude to nature (moral education);
- formation of a system of ecological knowledge and ideas (intellectual development);
- development of aesthetic feelings (seeing and feeling the beauty of nature, admiring it, striving to preserve it);
- participation of children in activities where they can take care of plants and animals, protect and protect nature.

The main directions and areas of education of ecological education of children: *Physical development; Cognitive and speech development; Artistic and aesthetic development; Social and personal development; Physical culture; Health Art; Communication; Music; Artistic reading; Perceptual Perspectives Socialization; Labor security.*

To provide preschool children with clear knowledge about the connection between the natural world and its events. 2. Formation of children's activities related to nature, its preservation, increase of its resources. 3. To familiarize with the ongoing work on protecting and preserving the nature of our republic.

Love for nature, caring for it, caring for plants and animals, and through this, interest in nature, patriotism, hard work, and respect for the work of adults who preserve nature and increase its wealth. Another important aspect of the nature corner is that children see it every day. Under the guidance of an educator, children systematically observe and take care of plants and animals in nature. As

a result, they acquire an idea and understanding of the diversity of the world of plants and animals, their growth, development, and what conditions are necessary for them. Educator forms comparison skills in children. By comparing animals and plants with each other, they will learn the commonalities and differences between them, their characteristic signs and characteristics. The educator draws children's attention to the beautiful flowering of the plant, the shape and color of the leaves, the beautiful appearance and agile movement of the fish in the aquarium. As a result, children see these beauties with their eyes and feel them with their hearts, their aesthetic taste grows. As a result of children observing and taking care of plants and animals in the corner of nature under the guidance of an educator, careful attitudes towards nature are formed. It awakens in them the desire to contribute to the further development of nature, and to participate in this process with their best efforts. Environmental education is mainly given in labor trainings to familiarize with nature by forming an image of nature.

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ADVANCING GENDER EQUALITY IN THE LABOR MARKET: A COMPREHENSIVE REVIEW AND ANALYSIS

Abstract. The research aims to assess the status of gender equality within the labor sphere. Methodologies employed include systematic and logical analysis, comparative analysis, generalization, systematization, among others. Current issues within the labor market, particularly regarding gender dynamics, have been scrutinized. A persistent concern in gender relations is the notable disparity in average wages between men and women. Analysis of employment trends over recent decades reveals a global increase in women's participation in labor markets, alongside men.

Keywords: Gender equality, Employment rate, Occupational segregation, Legal equality.

Introduction

The significance of the present academic paper lies in the imperative need to delve into the intricate issue of professional equality. Across the global labor landscape, gender segregation persists to varying degrees. Therefore, to comprehensively assess this phenomenon, it is crucial to gain a nuanced understanding of its temporal evolution and the multifaceted processes within the labor market and society at large that either exacerbate or mitigate gender asymmetry in occupational distribution. Furthermore, elucidating the economic ramifications of such segregation is essential.

Within the realm of economics, gender segregation emerges as a salient feature of the labor market, representing a dynamic and multifaceted phenomenon that profoundly influences its operations. This segmentation is commonly categorized into horizontal (branch and professional) and vertical (occupational) segregation. Gender segregation often underpins and is intricately intertwined with the concept of concentration, which denotes the unequal representation of genders across various professions, branches, or occupational categories. However, unlike concentration, gender segregation manifests as an asymmetrical distribution of men and women across different sectors rather than within a single domain.

In the contemporary landscape, the presence of a gender-balanced workforce has demonstrably positive effects on organizational performance. A diverse workforce tends to be more motivated, productive, and innovative, actively contributing to idea generation and promotion within the company. Consequently, these factors synergistically bolster financial performance and overall organizational growth. Moreover, fostering gender diversity expands the

pool of potential candidates, thereby addressing issues such as staff shortages more effectively.

In essence, this paper endeavors to explore the intricate interplay between gender segregation, organizational performance, and economic outcomes. By shedding light on these dynamics, it seeks to contribute to a deeper understanding of the complexities surrounding professional equality and pave the way for informed policy interventions and organizational practices aimed at fostering inclusive and equitable work environments.

Literature review

Gender research has recently garnered considerable attention, particularly concerning gender equality in professional engagement. It is evident that gender disparities significantly influence various realms of social activity, including the labor sector. In comparing inequalities between Europe and the United States, Blanchet, Chancel, and Gethin (2019) observed that Europe exhibits lower levels of inequality, with slower growth compared to the United States, despite differences in income and the pace of pan-European income redistribution.

Blau and Kahn (2017) utilized microdata from the Panel Study of Income Dynamics (PSID) spanning from 1980 to 2010 to examine the gender pay gap, which notably diminished over the study period. Gender disparities persist in occupations, industries, and the division of labor, emphasizing ongoing challenges. Collins, Landivar, Ruppner, and Scarborough (2020) highlighted the pandemic's impact on employment for dual-income parents, revealing that mothers experienced greater reductions in working hours compared to fathers.

Research by Hyland, Djankov, and Goldberg (2020) underscored persistent gender discrimination, especially evident in densely populated countries, hindering economic opportunities for women. Redmond and McGuinness (2017) found significant variation in convergence across Europe, with gender differences in job preferences contributing to a 10% pay gap, surpassing factors like length of service and education.

Deaton (2013) examined major global innovations and failures, linking gender inequality to growing inequality in the United States. He also analyzed the positive effects of economic growth in India and China. Amado, Santos, and Sao Jose (2018) developed an enhanced method for measuring the gender pay gap and applied it across 20 European countries, revealing substantial wage disparities for women.

Mortensen (2015) emphasized that formal legal equality is intrinsic to law, defining equality as the equitable legal standing of individuals before the law, encompassing rights, freedoms, and responsibilities. Piasna and Plagnol (2017) investigated how working conditions impact women's employment decisions and birth rates across 27 European countries, finding that mothers with young children are more likely to hold senior positions. Joyce and Xu (2019) proposed the creation of effective programs to address various forms of inequality, conducting

a comparative analysis of political institutions and policy actions in the developed world.

The study of gender equality aims to mitigate disparities among individuals, guided by international legal frameworks on human rights.

Results and discussions

In 1995, the employment-to-population ratio illustrated a disparity between genders, with 41.3% for women and 56% for men. Notably, this gap was most pronounced in lower-middle-income nations, where it reached approximately 25%, and least pronounced in high-income countries, hovering around 5%. Over the years, global employment trends have fluctuated. In 1993, the workforce comprised 948 million females and 1,425 million males, figures that shifted by 2003 to 1,130 million females and 1,661 million males. By 2000, male employment rates stood at about 73%, in contrast to nearly 48% for females. Subsequent to a slight decline for both genders until 2019, a significant drop occurred in 2020. Despite subsequent increases until 2022 (with rates of 67.86% for males and 43.82% for females), these figures remained lower than those of 2000. Nonetheless, the gender gap in employment rates remained relatively constant throughout these years.

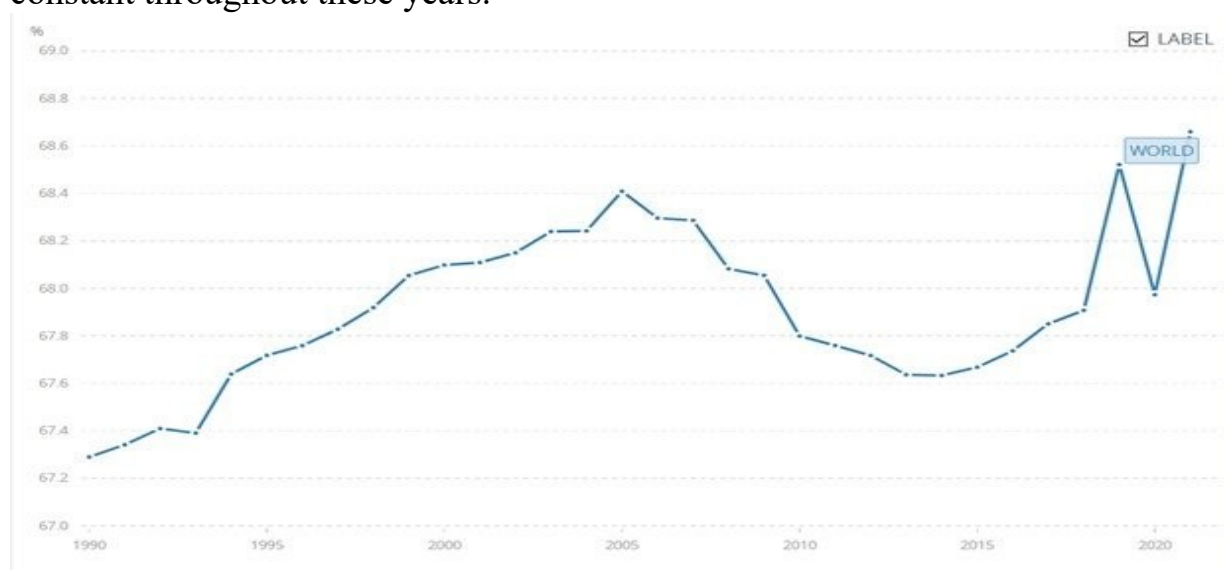


Fig. –1. The Ratio of Female to Male Labor Force Participation Rate (%)

Source: The World Bank

Gender Stereotypes permeate societal expectations, particularly pressuring women to adhere to traditional roles such as house care and childcare, leaving little time to pursue employment outside the home. According to Accountability Lab, a staggering 83% of women forego seeking employment due to household and childcare obligations. UN News highlights that entrenched gender roles are a primary reason for women constituting nearly 70% of healthcare occupations globally. Despite the demanding nature of these roles, the healthcare and caregiving sectors offer relatively low wages compared to other fields, leading men to explore alternative career paths. Conversely, women face limited options,

as they often encounter underrepresentation, lower wages, and inferior working conditions in most other professions. Furthermore, male-dominated industries perpetuate toxic gender stereotypes, hindering women's advancement. Persistent biases regarding women's suitability for STEM fields further exacerbate gender imbalances, dissuading women from pursuing careers in male-dominated sectors.

Lack of Opportunities stems from cultural perceptions that women lack ambition, leadership qualities, and commitment to their careers. Older organizational structures, designed to favor men, persist, impeding women's progress in the workplace. The underrepresentation of women historically has left today's women with few role models and limited inspirations. Research indicates that this dearth of role models discourages women from seeking senior leadership positions, resulting in a scarcity of female talent, particularly evident in STEM fields, where only 32% of graduates were female in 2016.

Gender Bias in Companies significantly contributes to workplace gender imbalances. Harmful HR practices, such as gender discrimination in decision-making, perpetuate gender biases and adversely affect women's mental and physical well-being, as well as their job performance. Reports suggest that discriminatory practices, coupled with lower pay and status, contribute to women's marginalization in the workplace.

Government initiatives to promote gender equality encompass several key areas:

1. **Equal Pay:** Achieving equal pay for equal work requires recognizing the equal value of work regardless of gender. Across many countries, the gender pay gap persists at around 20%, highlighting the need for targeted policies. Addressing occupational segregation, particularly in leadership roles, is crucial. Combating both conscious and unconscious gender discrimination necessitates educational efforts, effective communication strategies, and the implementation of public policies aimed at fostering equality.

2. **Pay Transparency:** Transparency in pay structures facilitates the identification and comparison of gender-based wage disparities. By shedding light on underlying inequalities, pay transparency enables governments to formulate informed policies to address and rectify them. According to the International Labour Organization (ILO), implementing measures to enhance pay transparency is instrumental in narrowing the gender gap and fostering fairness in the labor market. It empowers workers by providing them with tangible evidence to negotiate wages and challenge instances of gender-based salary discrimination.

3. **Family-Friendly Policies:** Implementing family-friendly policies is pivotal in mitigating gender disparities in employment and narrowing the gender wage gap. These policies aim to prevent women from being disproportionately affected by childcare responsibilities, thereby enhancing accessibility to childcare facilities and support for elder care. Promoting gender-balanced family leave enables women to re-enter the workforce more swiftly after childbirth. Moreover, such policies challenge traditional gender norms regarding caregiving roles,

encouraging greater male participation in caregiving responsibilities. By fostering a more equitable distribution of caregiving duties, family-friendly policies contribute to dismantling entrenched gender stereotypes and promoting greater gender equality in the workforce.

Conclusion

In conclusion, the synthesis of literature and empirical findings underscores the enduring challenges and complexities surrounding gender equality in the labor market. Across various studies, it is evident that gender disparities persist, impacting employment opportunities, wages, and occupational segregation.

The research highlighted the fluctuating trends in global employment rates over time, underscoring persistent disparities between genders despite incremental progress. Moreover, societal expectations and entrenched gender stereotypes continue to hinder women's advancement, particularly in male-dominated industries and leadership positions.

Government initiatives aimed at promoting gender equality, such as equal pay policies, pay transparency measures, and family-friendly policies, offer potential avenues for addressing these disparities. These policies not only seek to rectify existing inequalities but also aim to challenge traditional gender norms and promote a more inclusive and equitable workforce.

However, it is imperative to recognize that achieving gender equality requires multifaceted approaches that address deep-rooted societal norms, organizational biases, and structural barriers. Efforts to combat gender discrimination and promote diversity and inclusion must be sustained and comprehensive, involving collaboration across various sectors and stakeholders.

In moving forward, further research and policy interventions are needed to advance gender equality in the labor market and ensure that all individuals have equal opportunities to thrive and contribute to economic growth and development. By fostering an environment that values diversity and inclusivity, societies can harness the full potential of their workforce and promote social justice and prosperity for all.

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INTEGRAL BILAN XARAKTERLANUVCHI BA'ZI BIR FUNKSIYA SINFLARI HAQIDA

Annotatsiya. Ushbu maqolada kompleks sonlar maydonida ba'zi bir funksiyalar sinifining integral bilan xarakterlanishi ko'rib chiqilgan.

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ON SOME CLASSES OF FUNCTIONS CHARACTERIZED BY THE INTEGRAL

Annotation. This article considers the characterization of some class of functions with an integral over the field of complex numbers.

Integral bilan xarakterlanuvchi ba'zi bir funksiyalar.

1-ta'rif. $(0, l_0]$ da aniqlangan va uzluksiz musbat $\psi(\delta) > 0$, $\psi(\delta) \in \Psi$ yotadi deyiladi, agarda: $\left\{ \begin{array}{l} \int_0^0 \psi(u) du = +\infty \quad (1) \\ \int_0^0 u\psi(u) du < \infty \quad (2) \end{array} \right\} = \Psi$ bo'lsa.

2-ta'rif. $\psi(\delta) \in \Psi$ bo'lsin. $f \in I_\psi$ deyiladi, agarda $I_\psi = \{ \psi(\delta): \psi(\delta) \in \Psi, \int_0^0 \omega(f, \delta)\psi(\delta) d\delta < \infty \}$ bo'lsin, I_ψ – sinfnig ta'rifidan $\Rightarrow \lim_{\delta \rightarrow 0} \omega(f, \delta) = 0 \Rightarrow f \in C_\Gamma \Rightarrow I_\psi \subset C_\Gamma$.

$f \in H$ yotadi deyiladi, agarda $\exists C_f$, $\omega(f, \delta) \leq C_f H$ bo'lsa. bundan ko'rinadiki $H \subseteq I_\psi$.

I_ψ – sinfi kompleks sonlar maydonida chiziqli sistemani tashkil etadi.

$H \subset I_\psi$ bo'lgani uchun I_ψ – cheksiz o'lchovli fazo bo'ladi, chunki H – cheksiz o'lchovli fazo.

I_ψ va normani quydagicha kiritamiz:

$$\|f\|_{I_\psi} = \|f\|_{C_\Gamma} + \int_0^{l_0} \omega(f, t)\psi(t) dt \quad (1)$$

Normaning hamma shartlari bajariladi.

Teorema. I_ψ fazo (1) norma bo'yicha to'liq fazo bo'ladi.

Isbot. $\{f_n(x)\} \in I_\psi$ va fundamental ketma-ketlik bo'lsin.

$\forall \varepsilon > 0, \exists n, m \in N$ $n > n_0, m > n_0$ $\|f_n - f_m\|_{I_\psi} < \varepsilon$ (1) dan $\|f_n - f_m\|_{C_\Gamma} < \varepsilon$

\Rightarrow ya'ni $\{f_n\}$ – fundamental ketma-ketlik C_Γ da fundamental ketma-ketlik bo'ladi. C_Γ – to'liq fazo bo'lgani uchun $\exists f_0 \in C_\Gamma$ $f_n \xrightarrow{\text{tekis}} f_0$.

$\{f_n\} \subset I_\psi$ $\|f_n\|_{I_\psi} \leq r > 0$ bo'ladi. (1) dan $\forall n$ uchun $\int_0^{l_0} \omega(f_n, t)\psi(t) dt \leq r$

$\forall 0 < \eta < l_0$ uchun $\int_\eta^{l_0} \omega(f_n, t)\psi(t) dt \leq r$ (1')

$\|f_n - f_0\|_{C_\Gamma} \rightarrow 0$ (2) $\Rightarrow \omega(f_n, t) \Rightarrow \omega(f_0, t)$ uchun (1') da integral ostida limitga o'tish mumkin. $\forall 0 < \eta < l_0$ $\int_\eta^{l_0} \omega(f_0, t)\psi(t) dt \leq r$ bunda $\eta \rightarrow 0$ da limitga o'tamiz. $\int_0^{l_0} \omega(f_0, t)\psi(t) dt \leq r \Rightarrow f_0 \in I_\psi$. Endi $\|f_n - f_0\|_{I_\psi} \xrightarrow{n \rightarrow \infty} 0$ ko'rsatamiz.

Buning uchun (2) ni e'tiborga olsak $\int_0^{l_0} \omega(f_n - f_0, t)\psi(t) dt \xrightarrow{n \rightarrow \infty} 0$ ko'rsatish yetarli. $f_n \in I_\psi$ uchun $\forall \varepsilon > 0, \exists n_0(\varepsilon), n > n_0, m > n_0$ uchun $\|f_n - f_m\|_{I_\psi} < \varepsilon$. Bundan $\int_0^{l_0} \omega(f_n - f_m, t)\psi(t) dt < \varepsilon, \forall 0 < \eta < l_0$ uchun

$\int_\eta^{l_0} \omega(f_n - f_m, t)\psi(t) dt < \varepsilon$, bunda $m \rightarrow \infty$ da limiti $\int_\eta^{l_0} \omega(f_n - f_0, t)\psi(t) dt < \varepsilon \eta \rightarrow 0 \int_0^{l_0} \omega(f_n - f_0, t)\psi(t) dt \rightarrow 0$.

1-lemma. I_ψ ning C_Γ da yotishi to'la uzluksiz.

Isbot. Avvalo I_ψ ni C_Γ ning to'g'ri qismi ekanligini ko'rsatamiz.

(1) dan $\|f\|_{C_\Gamma} \leq \|f\|_{I_\psi}$. Bu tengsizlik I_ψ ning C_Γ da yotishining uzluksiz ekanligini ko'rsatadi. Endi I_ψ ning C_Γ da yotishining kompakt ekanligini ko'rsatamiz. $\{f_n\}$ ketma-ketlik I_ψ da chegaralangan to'plam bo'lsin, ya'ni $\forall n$ lar uchun $\|f_n\|_{I_\psi} \leq r < +\infty$. Bu tengsizlikni e'tiborga olgan holda, (1) dan $\{f_n\}$ ketma-ketlik C_Γ da tekis chegaralanganligi kelib chiqadi. Endi $\{f_n\}$ ketma-ketlik C_Γ da tekis darajali uzluksiz ekanligini ko'rsatamiz. Buning uchun quydagi funksiyani kiritamiz:

$$\omega(\delta) = \sup_n \omega(f_n, \delta)$$

$\omega(\delta)$ ga $\{f_n\}$ ketma-ketlik uchun Artsel xarakteristikasi deyiladi. $\lim_{\delta \rightarrow 0} \omega(\delta) = 0$ ekanligini ko'rsatamiz.

Faraz qilaylik $\lim_{\delta \rightarrow 0} \omega(\delta) \neq 0$ bo'lsin. $\omega(\delta)$ manfiy emas $\lim_{\delta \rightarrow 0} \omega(\delta) \neq 0$ uchun $\exists d > 0, \omega(\delta) > d. \forall 0 < \delta < l_0$ uchun $\delta_k = \frac{1}{k}$ (k – istalgancha katta). δ_k ni shunday tanlaymizki $\omega(\delta_k) > d$ bo'lsin. U vaqtda $\exists n_k$ topiladiki $\omega(f_{n_k}, \delta_k) > d$

$$\|f_n\|_{I_\psi} \leq r, r \geq \sup_n \int_0^{l_0} \omega(f_n, t)\psi(t) dt \geq \sup_k \int_0^{l_0} \omega(f_{n_k}, t)\psi(t) dt \geq$$

$$\geq \sup_k \int_{\frac{1}{k}}^{l_0} \omega(f_{n_k}, t) \psi(t) dt \geq \sup_k \int_{\frac{1}{k}}^{l_0} \omega\left(f_{n_k}, \frac{1}{k}\right) \psi(t) dt > d \sup_k \int_{\frac{1}{k}}^{l_0} \psi(t) dt.$$

Bu yerdan,

$$\sup_k \int_{\frac{1}{k}}^{l_0} \psi(t) dt < \frac{r}{d} \Rightarrow \int_0^{l_0} \psi(t) dt < \frac{r}{d} < \infty$$

lemma isbot bo'ladi.

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AGRAR MUNOSABATLAR VA AGROBIZNES

Anotatsiya. Ushbu maqola agrar munosabatlarning murakkab dinamikasini va bugungi qishloq xo'jaligida agrobiznesning rivojlanayotgan sohasini o'rganadi. U an'anaviy dehqonchilik amaliyotlari, yerga egalik tuzilmalari va qishloq xo'jaligi ishlab chiqarishi va taqsimotini shakllantiruvchi hukmron kuch sifatida agrobiznesning paydo bo'lishi o'rtasidagi o'zaro bog'liqlikni o'rganadi. Maqolada agrar munosabatlarning tarixiy konteksti ko'rib chiqiladi, sanoatlashtirish, globallashtirish va texnologik taraqqiyotning qishloq xo'jaligi amaliyotiga ta'siri muhokama qilinadi.

Kalit so'zlar: Dehqonchilik, zararkunandalar, qishloq xo'jaligi, tizimlar, innovatsion loyihalar, siyosiy sohalar, investitsiyalar.

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AGRICULTURAL RELATIONS AND AGRIBUSINESS

Annotation. This article examines the complex dynamics of agrarian relations and the evolving field of agribusiness in modern agriculture. It explores the relationship between traditional farming practices, land tenure structures and the emergence of agribusiness as the dominant force shaping agricultural production and distribution. The article examines the historical context of agrarian relations and discusses the impact of industrialization, globalization and technological progress on agricultural practices.

Keywords: Farming, pests, agriculture, systems, innovation projects, policy areas, investment.

Kirish:

Agrar sektor fermerlar, bozorlar va agrobiznes o'rtasidagi murakkab munosabatlarni o'zaro bog'lab turgan ko'plab iqtisodiyotlarning tayanchi bo'lib xizmat qiladi. Ushbu maqola agrar munosabatlar va agrobiznesning dinamik

manzarasini o'rganadi, an'anaviy dehqonchilik amaliyoti va zamonaviy qishloq xo'jaligi korxonalari o'rtasidagi o'zaro bog'liqlikni yoritadi. Fermer xo'jaligi va agrobiznesning rivojlanayotgan dinamikasini o'rganish orqali biz ushbu muhim sohadagi asosiy tendentsiyalar, muammolar va imkoniyatlarni ochib berishni harakat qilganmiz.

Qadimgi dehqonchilik texnikalari dunyoning ko'p joylarida zamonaviy mexanizatsiyalashgan dehqonchilik bilan almashtirilgan. Ammo tobora o'sib borayotgan barqaror qishloq xo'jaligi harakati, global isish ta'siridan xavotir bilan birgalikda, bundan taxminan 10-12 ming yil oldin dehqonchilikning dastlabki ixtirochilari va novatorlarining jarayonlari va kurashlariga qiziqishning kuchayishiga olib keldi. Asl dehqonlar turli muhitda o'sib-ulg'ayadigan ekinlar va hayvonlarni rivojlantirdilar. Bu jarayonda ular tuproqni saqlash, sovuqdan va muzlash davrlarini oldini olish va hosilni hayvonlardan himoya qilish uchun moslashtirishlarni ishlab chiqdilar. Aralash ekinlar, shuningdek, o'zaro ekin ekish yoki birgalikda etishtirish deb nomlanuvchi qishloq xo'jaligining bir turi bo'lib, bir vaqtning o'zida bitta dalada ikki yoki undan ortiq o'simlik ekishni o'z ichiga oladi. Bugungi monokultural tizimlarimizdan farqli o'laroq (fotosuratda ko'rsatilgan), o'zaro ekinlar bir qator afzalliklarni beradi, shu jumladan ekinlar kasalliklari, zararkunandalar va qurg'oqchiliklarga tabiiy qarshilik.

Zamonaviy texnologiyalar va aqli ferma konseptlari, yengil texnologiyalar va intellektual quvvatlar bilan birlashgan yangi fikrlar va usullar jamlanmasini ifodalaydi. Bu muhitning agrar sohasidagi aqli va texnologik imkoniyatlarini yaxshilaydi va uning boshqarilishini yanada sodda qiladi. Aqli fermalar, ma'lumotlar analizi, robototexnika, Internet of Things (IoT), va bir qancha boshqa texnologiyalarni jamlash orqali fermada avtomatlashtirilgan va texnikaviy jarayonlarning o'zlashtirilgan vazifalarini bajarish uchun qo'llaniladi. Bu texnologiyalar fermalarni avtomatlashtirish, ma'lumotlarni to'plash va tahlil qilish, resurslarni samarali foydalanish, va mahsulot sifatini yaxshilashda yordam beradi.

Aqli fermalar asosan ma'lumotlarni to'plash, ana-analiz qilish, va jarayonlarni boshqarishda ishlatiladi. Ular o'rganish, maslahat berish, va fermadagi muammo va zarurlarga boy texnologik javobgarlikni o'zlashtirishda muhim rol o'ynaydi. Bu esa fermalarni muvaffaqiyatli, samarali va sifatli mahsulotlar ishlab chiqarishga yo'l qo'ymoqda. Bu qanday fermalar texnologik jarayonlardan foydalanib, yengil texnologiyalarning imkoniyatlaridan foydalanishadi, shuningdek, ma'lumotlarni samarali boshqarish va qaror qabul qilishda aqli ferma konseptlarini qo'llab-quvvatlaydi. Natijada, bu muhitning effektivligini, samaradorligini, va o'zlashtirilgan resurslarini yaxshilaydi.

Siyosiy va iqtisodiy o'zgarishlar va tendensiyalar global darajada mavjud bo'lishi mumkin. Bir nechta muhim tendensiyalar va o'zgarishlar keng jihatdan ko'rinadi:

1. Qora energiya va o'zaro bog'liqlik: Energetika sohasida qora energiya manbalariga o'girish davom etadi. Mamlakatlar o'zlarini fosil yoki iste'mol qilish

darajasini pastroq qilishga qaratilganlar, va bu esa yashil energiya iste'molini oshiradi. O'zaro bog'liqlik va yashil energiya sohasidagi investitsiyalar katta darajada oshmoqda.

2. Teknologik rivojlanish: Intellektual quvvatlar, robototexnika, ma'lumotlar analizi, va boshqa yangil texnologiyalar sohasidagi rivojlanish davom etmoqda. Bu rivojlanishlar faqat mahsulot ishlab chiqarishni osonlashtirmaydi, balki hizmatlar sohasini ham o'z ichiga oladi.

3. G'aznatish va iqtisodiy rivojlanish: Bir nechta mamlakatlar o'z iqtisodiy tizimlarini yangilash uchun qat'iy to'g'ri yo'lga qo'yildilar. Bu tarzda o'zgartirishlar moliyaviy tizimlar, korporativ hisob-kitob tizimlari, va dastlabki ma'lumotlarni o'zgartirishni o'z ichiga oladi.

4. Global savdo va tijorat: Dastlabki tijorat har bir davlat uchun muhimdir, ammo global tijorat juda muhim ahamiyatga ega. Tijorat tashqi mablag'lar bilan bo'lgan bog'liqlikni ko'paytiradi va mamlakatlar o'rtasidagi iqtisodiy aloqalar, savdo shartnomalari, va rivojlanishni kuchaytiradi.

5. Dastlabki innovatsiyalar va startaplar: Innovatsiyalar va startaplar har bir soha uchun muhimdir. Har yili bir nechta yangi startaplar va innovatsion loyihalar chiqadi va ularning ko'plab innovatsiyalari global iqtisodiy va siyosiy muhitni o'zgartiradi.

Bu o'zgarishlar va tendensiyalar faqatgina dunyodagi siyosiy va iqtisodiy muhitni o'zgartirmaydi, balki bizning kunduzgi hayotimizga ham ta'sir qiladi. O'zgarishlar va tendensiyalar bilan tartibga solingan, biz moliyaviy, ijtimoiy, va siyosiy sohalarda qanday harakat qilishimiz kerakligini ko'rsatadi.

Ekinlar	Yer maydoni	Yer solig'i	Yerni ekingach a tayyorlashga ketadigan xarajatlar	Dori va oziqaviy o'g'itlar uchun xarajatlar	Urug' narxlari	Mahsulotlarni umumiy hajmi	Umumiy so'mmasi	Ishchi kuch xarajatlari	Daromad
Bo'g'doy	3.15 gk	1 gk = 700.000 3.15 = 2 mln 205.000	1gk = 1.100.000 3.15 gk = 3.465.000	2 xil 1gk = 300.000 945.000 1gk=250k 3.15gk=787k 2.675.800	1gk=250kg 6mln 300m	9.450 k	34mln 20m		18 mln 429 m 200 so'm
Tamaki (basma)	2 gk	1 mln 400.000	2.200.000	Dori 1gk=400m 2gk=800m O'g'it 1gk=300kg 50kg=170m 2.040.000	Tekin	2400 k	70mln 200m	3mln	61 mln 670 m
Tamaki (verjeniya)	2 gk	1 mln 400.000	2.200.000	Dori 1gk=300m 2gk= 600m O'g'it 1gk=400kg 50kg=170m 2.720.000	Tekin	19 t 600 k	57mln 624m	5 mln	45 mln 704 m
Makka-jo'xori	1.5 gk	1 mln 500.000	1.650.000	Dori 600.000 O'g'it 1.500kg 50kg=170m 5.100.000	34.5kg 3 mln 105m	25.5 t	76mln 500m	Texnika 8 mln	56 mln 995 m

Semichka	0.35 gk	245.000	385.000	Dori 200.000 O'g'it 250kg 50kg=17 0 m 850.000	7kg 280 m	1.75 t	18m ln		16 mln 40 m
Tut	1 gk	700.000				130 k	4 mln 800 m		4 mln 800 m
Jami:	8 gk								

Quyidagi jadvalda qishloq fermer xo'jaligida 8 gektar yer maydoni uchun bohorgi 1 chi yil boshida ekiladigan ekinlar ro'yxati aks ettirilgan va ulardan olinadigan daromad va ekinlar uchun ketadigan umumiy xarajatlar hammasi umumiy qilib hisob-kitob qilib ko'rsatilgan

Umumiy daromad:

Tamaki (basma) bilan =157.394.200 so'm

Tamaki (verjeniya) bilan = 141.968.200 so'm

Tushuntirish:

Bo'g'doy urug'i kilosi 8000 so'm, qabul qilishi 3600 so'm va plan bo'yicha 1 gk yer uchun 2600 kg.

Tamaki (basma) umumiy qabul qilishi 3 xil sortda qabul qiladi, 1-sort 1kg=35000, 2-sort 1kg=23000, 3- sort 1kg=13000 so'm. Qabul qilishi: 1-sort 1500 kg, 2-sort 600 kg 3-sort 300 kg.

Yuqoridagi jadvalda Tamaki ekinining ikki turi ko'rsatilgan va ulardan bir turini ko'rsatilgan 2 gektar yer maydoni uchun ekish kerak va umumiy daromadda har 1- (basma) yoki2-(verginiya) navlari uchun alohida alohida ketadigan umumiy xarajatlar va umumiy daromadlar aks ettirilgan. (2023)

Foydalanilgan adabiyotlar:

1. <https://uz.socmedarch.org/ancient-farming-concepts-techniques-171877-4778>
2. <https://uzdon.uz/news/info/uzbekistan/102/>
3. <https://oefen.uz/uz/documents/referatlar/umumiy/dehqonchilik-tizimi-va-uning-rivojlanish-tarixi>
4. <https://worldlyjournals.com/index.php/IJSR/article/download/1302/1746>
5. <https://e-itt.uz/index.php/eitt/article/view/742>

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**XORAZM VOHASIDA (O‘ZBEKISTON QISMI) O‘RMON
YONG‘INLARI SODIR BO‘LISHIGA ANTROPOGEN XAVF TA‘SIRINI
GAT ASOSIDA KARTALASHTIRISH**

Annotatsiya. Ushbu ilmiy tadqiqot ishida, Xorazm vohasi to‘qay mintaqasi o‘rmon yong‘inlari o‘rganildi. O‘rmonlar (to‘qaylar)ga oid ma‘lumotlar bazasi yaratildi va o‘rmon yong‘inlariga antropogen tasir xavfi GAT orqali baholandi.

Kalit so‘zlar: To‘qay, o‘rmon yong‘ini, aholi manzilgohlari, NDVI, voha.

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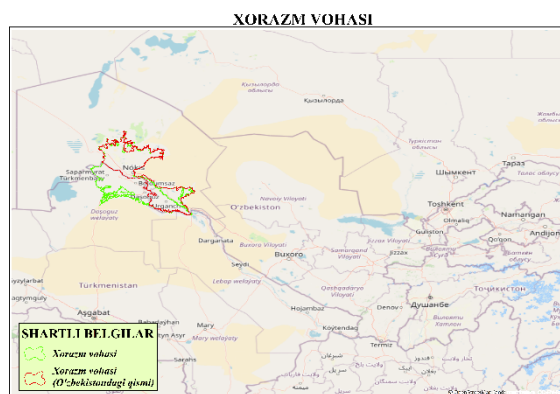
**GAT-BASED MAPPING OF ANTHROPOGENIC HAZARD EFFECTS
ON THE OCCURRENCE OF FOREST FIRES IN THE KHORAZM
OASIS (UZBEKISTAN PART)**

Abstract. Forest fires in the forest region of the Khorezm oasis were studied in this scientific study. A database of forests (tugai) was created and the risk of anthropogenic impact on forest fires was assessed through GAT.

Key words: Forest, forest fire, human settlements, NDVI, oasis.

Kirish. Xorazm vohasi — Amudaryoning quyi qismidagi qadimgi voha. Xorazm vohasida O‘zbekistonning Xorazm viloyati, Qoraqalpog‘istonning janubiy g‘arbiy qismi hamda Turkmaniston Toshhovuz viloyatining shimoliy sharqiy qismi joylashgan. Shimoldan (shartli ravishda) Qo‘ng‘irot kengligi, g‘arb va janubida Ustyurt platosi va Qoraqum cho‘llari, sharqda Qizilqum cho‘li bilan chegaradosh [1] (1-rasm).

1-rasm. Xorazm vohasi karta-sxemasi (OSM asosida).



Ko'plab ilmiy tadqiqot va izlanishlar natijasi shuni ko'rsatadiki o'rmon yong'inlari asosan antropogen omil ya'ni inson ta'sirida kelib chiqadi [2]. Xorazm vohasidagi to'qay va aholi manzilgohlarini raqamlashtirish va ma'lumotlar bazasini yaratish orqali o'rmon yong'inlari o'rganish mumkin.

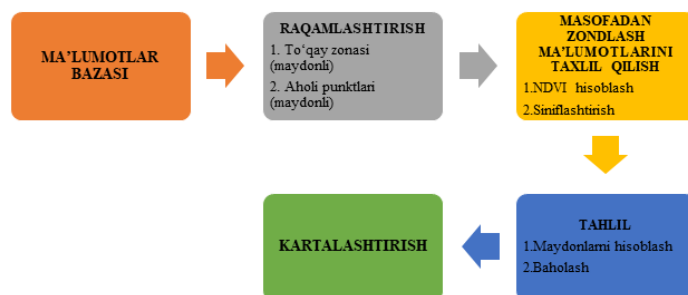
Asosiy qism. Ushbu ilmiy tadqiqot ishida ma'lumotlar bazasini yaratishda quyidagi usullardan foydalanildi:

1. "Google Earth Pro" yoki fotoplanlarni raqamlashtirish.
2. Sun'iy yo'ldoshlar ma'lumotlarini sinflashtirish.
3. Oldin yaratilgan xaritalarni raqamlashtirish.
4. Dalada kuzatish va geodezik o'lchash ishlari.

Ushbu usullardan eng qulayi "Google Earth Pro" dasturi orqali raqamlashtirish va sun'iy yo'ldosh ma'lumotlarini sinflashtirish. Bu usullarni qulayligi shundan iboratki kam vaqt ichida raqamlashtirish va aniqligi yuqori darajada bo'ladi.

Ma'lumot to'plash, o'z navbatida, boshqa jarayonlar kabi bir necha bosqichli ishlarni o'z ichiga oladi (2-rasm). Bu jarayonlarning birinchi bosqichini rejalashtirish boshlab bersa, tayyorgarlik, raqamlashtirish/uzatish (raqamlashtirish, syomka natijalarini kiritish, skanerlash, fotogrammetriya), tahrir qilish va sifatini yaxshilash kabi bosqichlar uni davom ettirib, ma'lumotlarni baholash esa tugatib beradi [3].

2-rasm. Ishni bajarish jarayoni ketma-ketligi

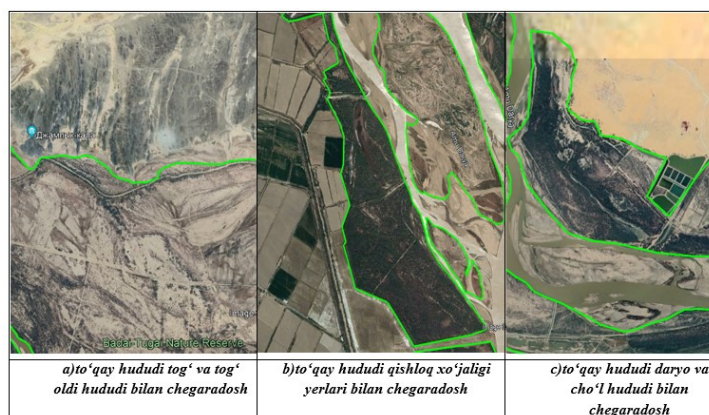


Ma'lumotlar bazasini yaratishda avvalo Xorazm vohasi maydonli vektor fayllarini to'plashimiz yoki raqamlashtirish orqali yaratishimiz mumkin. Xorazm vohasining chegarasi Matchanov, M. va boshqalarning (2016) ilmiy tadqiqot ishi natijalaridan foydalanildi [4]. Maqolada O'zbekiston qismi o'rganildi va Xorazm vohasi chegarasi Turkmaniston bilan siyosiy-ma'muriy chegarasidan o'tkazildi.

"Google Earth Pro" orqali avvalo to'qaylarni maydonli vektor formatda (kml/kmz) tanlab olindi. Bunda avvalo to'qay haqida umumiy tushuncha va qanday hududlar to'qay hisoblanishi ularning chegaralarini qanday aniqlash mumkin ekanligini oydinlashtirib olish zarur. To'qaylar o't o'simliklar, buta va daraxtlar aralash o'sadigan daryo va ko'l bo'ylaridagi botqoq yerlarni ifodalaydi.

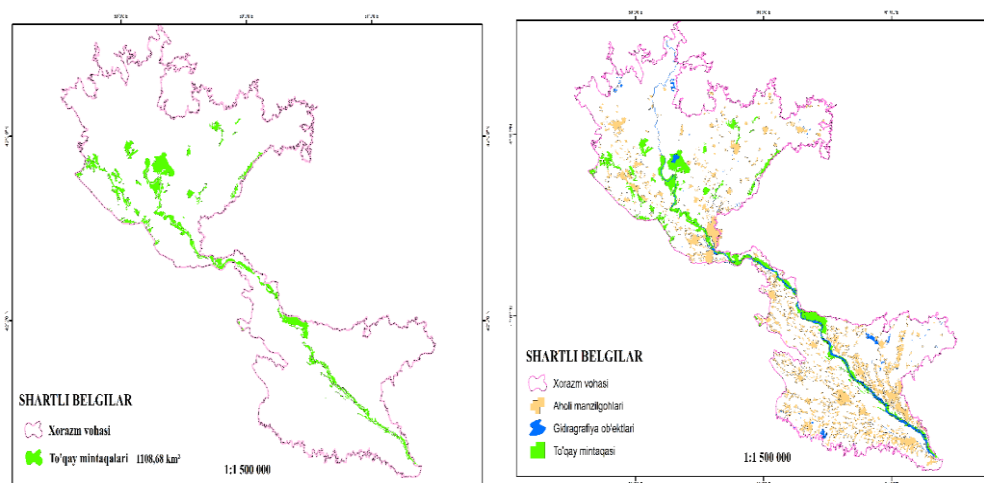
Shu tariqa to'qayning vektor ma'lumotlari shakllantiriladi (3-rasm). To'qay chegarasini chizishda o'simlik qoplamlari joylashgan arealar, gidrografik obyektlar bilan tutashgan zonalar, aholi punkti, qishloq xo'jaligi bilan tutashgan chegaralari inoabtga olib raqamlashtirish zarur. Bu esa ma'lumotlarning aniqligiga ta'sir ko'rsatadi.

3-rasm. To'qay hududining chegaralari



Raqamlashtirish yakunlangach vektor fayllarni (kml/kmz) GIS ga eksport qilib ular birlashtiriladi (Merge) va "shape" fayl shakliga keltiriladi. Xorazm vohasida joylashgan to'qay mintaqasini "Google Earth Pro" dasturi orqali raqamlashtirilgan maydon 1108,68 km² ni tashkil etdi (4a-rasm). Keyingi navbatda Xorazm vohasidagi aholi punktlarini raqamlashtirib vektor formatiga olib kelish zarur bo'ldi. Bunning uchun ham "Google Earth Pro" dan foydalanildi. Aholi punktlarini chizishda uning ahamiyatiga qarash lozim. Masalan, to'qay mintaqasidan juda olisda joylashgan kichik aholi punktlarini birlashtirib raqamlashtirildi. Biroq to'qay mintaqasi yaqinida joylashgan kichik hatto 4-5 ta uydan iborat bo'lgan aholi punktlarini ham raqamlashtirildi. Chunki ushbu aholi punktlari to'qay mintaqasiga bevosita aloqada bo'lishi mumkin. Raqamlashtirish natijani GIS ga eksport qilib "shape" fayl formatiga o'tkazildi. Asosiy gidrografik obyektlarni ochiq geofazoviy ma'lumotlar bazasidan olishimiz mumkin. Eng ko'p foydalaniladigan va aniqligi jihatidan nisbatan qoniqarli "OSM" ma'lumotlaridan

foydalanildi. Natijada yaratilgan ma'lumotlar quyidagi karta-sxemada keltirildi (4b-rasm).



a)

b)

4-rasm. Xorazm vohasi chegarasi, to'qay zonalari va aholi manzilgohlarining tarqalish karta-sxemasi (O'zbekistondagi qismi).

Ko'plab tadqiqot ishlarida maqsadidan kelib chiqqan holda vegetatsiya indeksi (NDVI)dan to'qaylar hududining aniqligini tekshirish uchun foydalaniladi. NDVI Sentinel 2 A/B sun'iy yo'ldoshining tasviridan olinadi va quyidagi formula bo'yicha hisoblanadi:

$$NDVI = \frac{NIR-RED}{NIR+RED}$$

Bu yerda:

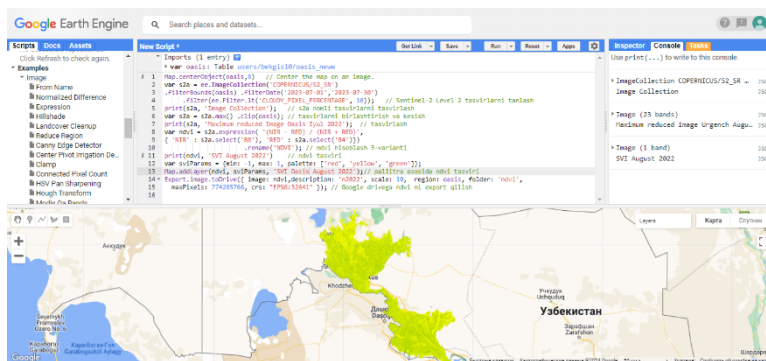
NIR-infraqizil diapozon.

RED- qizil diapozon.

Ushbu formulaga ko'ra, tasvirning ma'lum bir nuqtasida o'simliklarning zichligi (NDVI) qizil va infraqizil diapazonda aks ettirilgan yorug'lik intensivligining farqiga teng bo'lib, bu intensivliklarning yig'indisiga bo'linadi. NDVI -1,0 dan 1,0 gacha qiymatlarni belgilaydi va kichik qiymatlar asosan bulutlar, suv va qordan, nolga yaqin qiymatlar esa asosan toshlar va o'simliklarsiz tuproqlarni ifodalaydi. NDVI funktsiyasining juda kichik qiymatlari (0,1 yoki undan kam) toshlar, qum yoki qorning bo'sh joylariga to'g'ri keladi. O'rtacha qiymatlar (0,2 dan 0,3 gacha) butalar va o'tloqlarni, katta qiymatlar (0,6 dan 0,8 gacha) mo'tadil va tropik o'rmonlarni bildiradi[5].

NDVIni turli dasturiy ta'minotlardan foydalanib hisoblash mumkin. Hozirgi kunda eng ommalashib borayotgan dasturlash tillarini o'zida aks ettirgan platformalardan biri bu "Google Earth Engine" hisoblanadi [6](5-rasm).

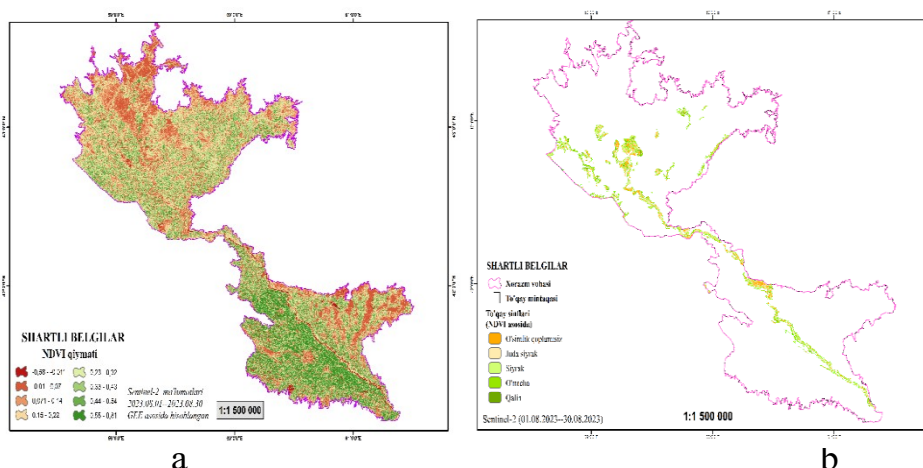
5-rasm. Google Earth Engine platformasi



Ko‘plab sun‘iy yo‘ldosh ma‘lumotlarini kodlar orqali tahlil qilish imkoniyati mavjud. Tadqiqot ishida NDVI ko‘rsatkichini aniqlashda GEE platformasidan foydalanildi. Natijani eksport qilinib GIS dasturlarida kartalashtirish mumkin (6a-rasm).

6a-rasmda avgust oyidagi Sentinel 2 A/B sun‘iy yo‘ldoshi tasvirlaridan foydalanildi. Chunki bu oyda o‘simliklar vegetatsiyasi yuqori darajada bo‘ladi va bulut miqdori past bo‘ladi. Karta-sxemada NDVI ko‘rsatkichi qizil-yashil ranglarda aks ettirilgan qizil ranglar cho‘l va qumlik hududlar hamda gidrografik obyektlarga to‘g‘ri kelganini ko‘rish mumkin. Yashil rangda qishloq xo‘jaligi yerlari, o‘t-o‘simlik o‘sadigan arealar tasvirlangan. To‘qay hududidagi sun‘iy yo‘ldosh tasvirini ajratib olib (clip) hududdagi NDVI ko‘rsatkichi sinflashtirish orqali ham to‘qay hududidagi o‘simlik bilan qoplangan arealarni aniqlash mumkin(6-b-rasm).

6-rasm. Xorazm vohasi to‘qay hududini sinflashtirish karta-sxemasi.



To‘qay hududidagi o‘simlik qoplamini sinflashtirish orqali hududlardagi o‘simliklar holatini aniqlash mumkin. Ushbu sinflashtirish NDVI ko‘rsatkichi bo‘yicha olingan va quyidagi jadval orqali maydonlari ko‘rsatib o‘tilgan (1-jadval).

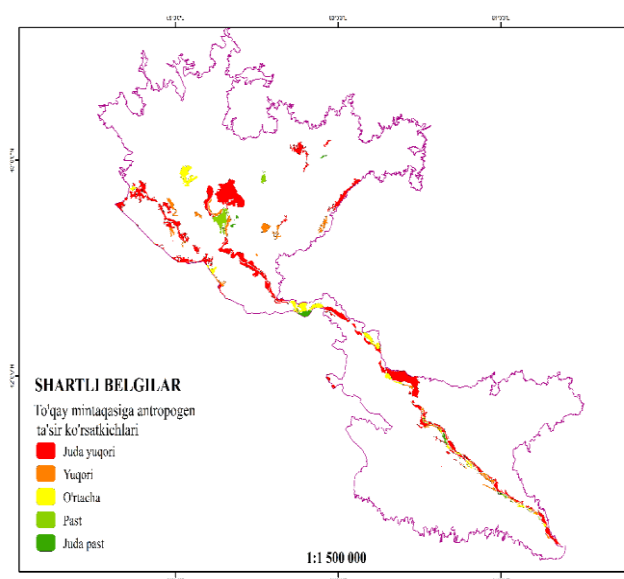
“Reclassify” orqali to‘qaylar hudunini o‘rganish natijasi

T/R	To‘qay holati	Maydoni km ²	NDVI ko‘raskichi
1	O‘simlik qoplamasiz yerlar	171.61	0,10 dan past
2	Juda siyrak	285.07	0,10–0,18
3	Siyrak	309.63	0,18–0,3
4	O‘rtacha	241.81	0,3–0,4
5	Qalin	91.57	0,4 dan yuqori
JAMI:		1 099.69	[-1;1]

Xorazm viloyati va Qoraqalpog‘iston Respublikasi hududlarida to‘qay hududi Amudaryoning chap va o‘ng qirg‘oqalari hamda janubi-g‘arbiy tomoni Turkmaniston Respublikasi bilan chegara hududida, asosan gidrografik obyektlarga yaqin joylarda joylashgan. Aholi punkti tarqalish asosan Xorazm viloyatida binolar bir-biriga yaqin posyolkalarda uzluksiz tarqalgan. Qoraqalpog‘iston Respublikasidagi aholi punktlari esa tarqoq va nisbatan kichik, uylar esa bir-birlari bilan uzoq masofalarda joylashgan.

Tadqiqot ishining yakuni sifatida yaratilgan ma‘lumotlar bazasidan foydalanib baholash ishlari olib borildi. Baholash to‘qay mintaqasi hududining aholi manzilgohlari orasidagi masofalari orqali bajarildi. Baholashda ta’sir darajalari 5 ta xavf darajasiga ajratildi va quyidagi karta-sxemada shuni ko‘rish mumkin (7-rasm). To‘qaylarning katta qismi juda yuqori xavfli darajasiga ega hududlarda qolib ketgan.

7-rasm. Xorazm vohasi to‘qay mintaqasiga antropogen ta’sir ko‘rsatkichlarini baholash karta-sxemasi



“Juda yuqori” va “yuqori” xavf darajalarida aholi manzilgohlari to‘qay mintaqasi hududiga juda yaqin joylashgan va ular faoliyati to‘qay mintaqasi bilan uzviy bog‘langan. “Juda yuqori” va “yuqori” xavf darajalari hududiga aholi tez va arzon yetib borishi va xavfli vaziyatlarni, jumladan, gulxan yoqish kabilarni yuzaga keltirish mumkin. “O‘rtacha” darajadagi to‘qay mintaqalari aholi punktlariga nisbatan olisda joylashgan va aholi punktlari to‘qaylarga ta’sir ko‘rsatkichi o‘rtacha qiymatga ega bo‘lib, ularga to‘qay mintaqasiga yetib borishlari uchun transport shart bo‘ladi. “Past” va “juda past” darajalariga ega to‘qay hududlari aholi manzilgohlaridan nisbatan olisda joylashgan. Ular ushbu manzillarga tashrif buyurishi uchun qandaydir transportdan foydalanadi va qolgan hududlarda boshqa darajalarga qaraganda antropogen ta’sir kam bo‘lishi mumkin (7-rasm).

Xulosa. O‘rmon yong‘inlarini aniqlash va ularni oldini olishda yoki oqibatlarini tadqiq qilishda GAT dan foydalanish orqali yuqori natijalarga erishish mumkin. Tadqiqotda aniqlangan xavf yuqori qiymatdagi hududlarda nazorat punktlarini tashkil qilish. Aholiga tushuntirish ishlarini olib borish talab qilinadi. Masofadan zondlash ma’lumotlari orqali kunlik sun’iy yo‘ldosh ma’lumotlarini tahlil qilish va bu orqali ehtimoliy o‘rmon yong‘inlarini oldindan aniqlash hamda kerakli chora-tadbirlarini ko‘rish mumkin.

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DARSLARDA BAHR VA VAZNNI O‘QITISH

Annotatsiya. Ushbu maqolada aruz vazni qoidalari, bahr tushunchasining mohiyati tushuntiriladi. Aruzshunoslik qoidalari haqida bahs yuritiladi.

Kalit so‘zlar: Aruz, qoida, vazn, bahr, istiloh, she’riyat, g‘azal, qit’a, ruboiy.

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BAHR AND WEIGHT TRAINING IN CLASSES

Annotation. this article explains the rules of aruz weight, the essence of the concept of bahr. The rules of aruzology are discussed.

Keywords: aruz, rule, weight, bahr, occupation, poetry, ghazal, continent, ruboi.

An’anaviy aruz qoidalarini tushuntirishda vazn va bahr kabi istilohlar qo‘llanilgan bo‘lib, mumtoz she’riyatdagi 19 bahr an’anaviy tartibda emas, balki tarixiylik tamoyili bilan saqlangan holda avval arab she’riyatida qo‘llanilgan 5 bahrni, so‘ng arab va fors she’riyatida barobar iste’molda bo‘lgan 10 bahrni, undan so‘ngra esa arab aruzshunosi Axfash tomonidan qo‘shilgan 1 bahrni hamda fors aruziylari tomonidan kiritilgan 3 bahrni keltirgan. Natijada aruz vaznining tarixiy o‘shishini ko‘rsatadigan o‘ziga xos shakl yuzaga kelgan.

Risolada keltirilgan bu shakl uni aniqroq tasavvur qishiga yordam beradi. Fitrat o‘zi yaratgan sxemaga shunday tushuntirish beradi: “...arab aruzida olti rukn (chtana)dan tuzilgan vaznlar eron aruzida sakkiz rukndan tuziladi; arab aruzi vaznlari sistemasiga ko‘ra 15 bahr bo‘lsa ham, so‘ngra Axfashdan bir bahr olib, 16 bahrga chiqarilgan. Eron aruzi bulardan 5 bahrni chiqarib, yana uchta bahr qo‘shib, 14 da to‘xtatadi. Keyinchalik, mashhur chiqarilgan 5 bahrda ham she’r yozilib, Eron aruzi 19 bahrga chiqariladi”.

Bu kabi aniqlik bilan aytilgan tarixiy o'zgarishlarni hech bir aruzshunos tadqiqotida uchratmaymiz. Yuqorida aytilganidek, Fitrat an'anaviy aruz qoidalarini tushuntirishdagina bu usuldan foydalangan. O'zi kashf etgan usul bo'yicha ish tutilganda esa, bu o'n to'qqiz bahr asosida "oltilik, sakkizlik, to'qquzlik, o'nlik, o'n birlik, o'n ikkilik, o'n uchlik, o'n to'rtlik, o'n beshlik, o'n oltilik, o'n sakkizlik, yigirmalikdan iborat 12 vazn (eskicha aruzchilar tili bilan aytganda 12 bahr)" chiqarilgan. Bu o'n ikki bahrning har biridan qisqa, to'liq hijolarning joy o'zgarishlari bilan ayrim-ayrim vaznlar yig'ilgan. Mana shu tariqa saksonga yaqin yangi tizimdagi vazn tartibga solingan.

Aruzshunoslikda bahrlarni bayon qilishda ma lum darajada yengillik tug'dirish uchun juzvlarga nisbatan teng va o'zaro bir-biriga o'xshash bahrlarni jam qilib doiralar qabul qilingan bo'lib, aruz ilmida 6 doira ma'lum. Fitrat bu usulni soddalashtirib, har bir bahrni o'zi yuqorida bayon qilgan "to'plam" va "bo'lim"larga ajratib yuborgani uchun ham uning uslubiyatida doiralar o'zo'zidan ahamiyatini yo'qotgan.

Fitratning Navoiy va Bobur risolalaridan qoniqish hissi tuymaganini yana shunda kuzatish mumkinki, olimning aytishicha, ular arab va fors aruzi qonunlarini aynan olib, turkiy misollar bilan tushuntirganlar, xolos. Shuning uchun ham Navoiy va Bobur asarlarida turkcha misollar topilmagan o'rinlarda forscha nazm parchalari keltirilgan. Fitratni ayni mana shu holatlar qanoatlantirmagan. Fitrat nazdida Navoiy turklikni o'z ijodining mazmuni bilib, turk alfozini jahonda ustuvor qilishga bel bog'lagan ekan, aruz ilmini ham o'zbek tilining qonun qoidalariga bo'ysundirishi kerak edi. Navoiy va Boburda ushbu amalni ko'rmagan Fitrat bu vazifani o'zi bajarishga harakat qiladi. Rukn o'rniga "to'plam" va "bo'lim" atamalarini, afoyl-u tafoyil o'rniga doira usulini qo'llashni taklif etadi. Aruz ilmi Markaziy Osiyoda Fitratga qadar ham mavjud bo'lganidek, uning qatidan keyin ham bu sohada ilmiy izlanishlar olib borildi. Ayniqsa, o'tgan asrning 60-70-yillariga kelib aruzga doxil bir qancha asarlar e'lon qilindi. Bu sohada o'zbek olimlaridan A.Rustamovning "Aruz haqida suhbatlar" (1972), Ummat To'ychievning "O'zbek she'riyatida aruz sistemasi" (1979), Anvar Hojiahmedovning "Aruz nazariyasi asoslari" (1979), "Maktabda aruz vaznini o'rganish", Safarboy Ro'zimboevning "Aruzdin saboqlar" kabi risola va metodik qo'llanmalari nashr qilindi. Shulardan akademik Alibek Rustamov ham Fitrat taklifini qo'llab, "chirmanda"ga o'xshash usulni aruzshunoslikka tatbiq qilishga harakat qildi.

Alibek Rustamov tavsiya qilgan usul Fitratnikidan ham birmuncha soddaroq bo'lishiga qaramay, aruz amaliyotida ishlatilmadi. Bizningcha, Navoiy va Bobur aruzshunosligi, xususan, "Mezon ul-avzon" va "Muxtasar" asarlari o'z davrida, arab yozuvi asosidagi alifbo iste'molda ekanligi paytida juda katta nazariy va amaliy ahamiyat kasb etib, adabiyotshunoslar va aruznavis shoirlar uchun zarur qo'llanmalar sifatida ish bergan. Fitrat singari ularni arab va fors aruzshunosligi ta'siriga qattiq berilganlikda ayblash ham noto'g'ri harakat. Negaki, o'sha davrlarda iste'moldagi alifbo arabcha bo'lgach, uning fonetik

qoidalari ham arablarnikiga yaqin edi. O‘zbek tili fonetikasi hozirgi darajada shakllanib, taraqqiy etmaganligi uchun ham ular arabcha tovush texnikasiga tayanib ish ko‘rishganlar.

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YURAK QON – TOMIR KASALLIGI MIOKARD INFARKTINI XALQ TABOBATIDA DAVOLASH USULLARI

Annotatsiya. Ushbu maqolada yurak qon – tomir miokard kasalligi va uni zamonaviy tibbiyotda va xalq tabobati usulida davolash usullari ko'rib chiqilgan.

Kalit so'zlar: Yurak qon – tomir, miokard infarkti, allergik, infeksiyon-allergik, qandli diabet.

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METHODS OF TREATMENT OF HEART BLOOD - VASCULAR DISEASE MYOCARDIAL INFARCTION IN FOLK MEDICINE

Abstract. In this article, cardiovascular and myocardial disease and its treatment methods in modern medicine and folk medicine are considered.

Key words: Cardiovascular, myocardial infarction, allergic, infectious-allergic, diabetes.

Kirish. Miokard infarkti (yurak xuruji deb ham ataladi) yurak mushagi ishemiyasining o'tkir davri bo'lib, u qon ta'minoti buzilganida qonning yurakka oqishining to'xtashi bilan tasiflanadi [1].

Bu kasallik bilan 50-60 yoshdagi kishilar kasalanadi. Ayniqsa kasallikda ayollarga nisbata erkaklar ko'p chalinadi. Miokard infarkti asosan yurak sohasida bo'ladigan qattiq og'riq bilan boshlanadi [2].

Miokard infarkdi – o'tkir holat, yurak ishemik kasalligining klinik shakli, to'liq yoki qisman qon yetishmovchiligi natijasida yurak muskul to'qimasining (miokard) nekrozi (o'limi) tufayli yuzaga keladi [3].

Epidemiologiyasi. Miokard infarkti ko'pincha 50 yoshdan oshgan erkaklarda uchraydi [4].

Bu erkaklarda aterosklerozning erta rivojlanishi bilan bog'liq. Erkaklar ayollarga nisbatan miokard infarktiga ko'p chalinadilar. Ayollar erkaklarga nisbatan o'ra hisobda 10-15 yil kech kasal bo'ladilar [1].

Kasallikning kelib chiqish sabablari: Statistika ma'lumotlarga ko'ra hozirgi vaqtda miokard bilan kasalanishning doimiy o'sishi kuzatilyapti, shu bilan birga ko'pgina tadqiqotchilarning fikricha, infeksiya, allergik, allergik va boshqa miokarditlar hisobiga yuz beryapti. Allergik kelib chiqadigan miokardit bilan kasallanishning ayrim preparatlarni (antibiotiklar, oqsil preparatlari va boshqalar) keng va asossiz qo'llanish, qishloq xo'jaligida ekinlarga har hil zaxarli ximikatlardan foydalanish bilan ishlov berishda gigiyena normalariga amal qilmaslik, aktiv immunlash va tez – tez reimmunlash, sanoatning jadal rivojlanib borishi, urbanizatsiya, regionda ekologik sharoitning yomonlashishi bilan bog'liq [5].

Chekish. Surunkali nikoti bilan zaharlanish natijasida toj arteriyalar toriyib ketadi, bu esa miokardda kislorod yetishmasligiga olib keladi.

Semizlik va gipodinamiya: yog' almashuvi buzilganda aterosklerozning rivojlanishi tezlashadi, qandli diabet kasalligi xavfli ortadi.

Qandli diabet bilan og'riq bemorlarda miokard infarkti rivojlanishi xavfli yuqori, chunki qondagi yuqori qand miqdori tomir devorlari va gemoglobinga salbiy ta'sir ko'rsatadi, buning natijasida uning transport (kislorodni tashish) qobiliyati yomonlashadi [6].

Miokard infarkti belgilari. Kasallikning asosiy belgisi bu kuchli og'irlikdir. Miokard infarkti bilan kechadigan og'irlik ko'krak orqasida joylashgan. Og'irlik chap qo'lga, pastki jag'ga, kuraklar orasiga tarqalishi mumkin [4].

Miokard kasalligini davolash usullari. Xalq tabobatida Miokard kasalligini davolashda tabiiy giyohlardan, o'simliklardan foydalanishimiz kerak. Isiriqni maydalab, elakdan o'tkazib, kunjut moyidan ko'shib istemol qilish yurakni baquvvat qiladi. Qattiq non istemol qilish yurak zaifligiga shifo bo'ladi. Namatak, oddiy chetan, oddiy bodrezak mevalari, maiz va bargdan teng miqdorda aralashtiriladi. Undan bir stakani ustiga bir litr qaynoq suv kuyib, bir kecha termosda damlab qoyiladi. Kun davomida choy o'rniga ichiladi. Bu damlamani uzoq vaqt ichish mumkin. 100 gram bugdoy ustiga suv quyib, issiq joyda qoyiladi. Maysasi 1mm uzunlikda unib chiqqandan keyin go'sht qiymalagichdan o'tkazib, unga o'simlik moyi, asal va mayiz ko'shib, naxorda istemol qilinadi [7].

Miokard infarktini oldini olish juda oddiy: siz dietada yog'li ovqatlar va qizarilib pishgan ovqatlar miqdorini cheklashingiz, chekishni to'xtatishingiz va spirtli ichimliklar miqdorini kamaytirishingiz, xolesterin va qon shakarini nazorat qilishingiz kerak. Jismoniy va hissiy jihatdan ortiqcha stressdan qochish kerak [3].

Xulosa. Bugungi kunda miokard infarktini davolashning yangi chora tadbirlarni ishlab chiqilmoqda. Yallig'lanish, stress, angiogenezga ijobiy ta'sir

ko'rsatadigan genlari modulyatsiya qilish strategiyalari kabi biotexnologik innovatsiyalar yaratilmoqda va hayvonlarda tajriba orqali sinab ko'rilmogda. Buroq bu juda katta daromad talab etadi. Xulosa qilib aytganda, miokard infarktini oldini olish uchun 45 yoshdan katta insonlarda yog' almashuvi metabolizimni va qondagi xolesterol miqdorini nazorat qilish lozim [8].

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METHOD OF CORRELATION AND REGRESSION ANALYSIS FOR FORECASTING BUSINESS DEVELOPMENT

Abstract. This article discusses correlation and regression analysis as a method of predicting the economic development of an enterprise. Calculation of correlation coefficients allows to determine the closeness and direction of the relationship between the studied indicators. Regression analysis is a natural continuation of correlation analysis and consists in determining the analytical expression of the relationship between the resulting value and factor indicators.

Key words: correlation and regression analysis, forecasting, random variables, effective sign.

Businesses widely use correlation and regression analysis to plan economic development. It is used to test forms of communication that establish quantitative relationships between random variables of the studied process. This method is used in socio-economic forecasting to construct conditional forecasts and forecasts based on the assessment of stable cause-and-effect relationships.

Correlation and regression analysis is a classic method of stochastic modeling of economic activity. It is used to study the relationship between indicators of economic activity, if the relationship between them is not strictly functional and is broken under the influence of extraneous, random factors. Using the method of correlation-regression analysis, correlation and regression models of economic activity are created, in which factors and efficiency indicators are determined [2]. Correlation analysis is used to measure the strength of the relationship between different variables. It is also used to evaluate the factors that have the greatest influence on the effective attribute.

Regression analysis is necessary to determine the approximate values of the dependent variable (outcome characteristic) to select the form of the relationship and the type of model (U.R., 2021).

Correlation and regression analysis are widely used. Pair correlation is the most developed in theory and most often used in practice. It is used when studying the relationship between an effective sign and a factor characteristic. It is a one-factor correlation and regression analysis [3].

Let's show the use of correlation and regression analysis on the example of an enterprise producing "pure milky milk and milk products" in **Taylak** district.

"**Pure milky milk and milk products**" enterprise is engaged in the implementation of works and services related to milk products, for example, yogurt, yogurt, cream, butter and other products.



Using correlation and regression analysis, let's analyze the effect of income on the amount of working capital of a particular enterprise. The baseline data are shown in Table 1 below

Using the initial data presented in the table, we make a graph of the dependence of the effective characteristic Y on the X factor.

*"pure milky milk and milk products"
business income and working capital*

<i>day</i>	<i>Expense for milk and milky products. (x)</i>	<i>income, thousand, dol. (y)</i>
<i>1</i>	<i>0,20</i>	<i>0,22</i>
<i>2</i>	<i>0,22</i>	<i>0,24</i>
<i>3</i>	<i>0,24</i>	<i>0,26</i>
<i>4</i>	<i>0,26</i>	<i>0,28</i>
<i>5</i>	<i>0,28</i>	<i>0,30</i>
<i>6</i>	<i>0,30</i>	<i>0,32</i>
<i>7</i>	<i>0,32</i>	<i>0,34</i>
<i>8</i>	<i>0,34</i>	<i>0,36</i>

Table 1. The graph of the dependence of the amount of working capital on the amount of income

Taking into account the nature of changes in the data presented in the table and confirmed graphically, we chose a parabola of the second order, which has the following form:

$$Y_x = a + bx + cx^2$$

a, b and c the values of the parameters are found by solving the system of equations:

$$\begin{cases} na + b\sum x + c\sum x^2 = \sum y \\ a\sum x + b\sum x^2 + c\sum x^3 = \sum xy \\ a\sum x^2 + b\sum x^3 + c\sum x^4 = \sum x^2 y \end{cases}$$

There is: n is the number of observations.

We substitute the obtained values into the system of equations:

$$\begin{cases} 8a + 2,16b + 0,60c = 2,32 \\ 2,16a + 0,60b + 0,1711c = 0,5344 \\ 0,60a + 0,1711b + 0,0499c = 0,148256 \end{cases}$$

Using the determinant method, we found the parameters of the regression equation:

$$\begin{aligned} a &= 57,07 \\ b &= 441,90 \\ c &= 825,92 \end{aligned}$$

So the equation of the parabola is:

$$Y = 825,92 + 441,90x + 57,07x^2$$

We put the corresponding values of X into this equation, the equalized values of working capital depending on the amount of income (Table 2)

The rank values of the final function Y:

n	X, thousand,dol.	Y, thousand,dol.	Y _x , thousand,dol
1	0,20	0,22	916,5828
2	0,22	0,24	925,9002
3	0,24	0,26	935,2632
4	0,26	0,28	944,6719
5	0,28	0,30	954,1263
6	0,30	0,32	963,6263
7	0,32	0,34	973,1720
8	0,34	0,36	982,7633

We calculate the correlation ratio to measure the closeness of the relationship between the factor and performance indicators to a non-linear relationship:

$$R = \sqrt{1 - \frac{\sum(Y - Y_x)^2}{\sum(Y - \bar{Y})^2}} = \sqrt{1 - \frac{0.00318}{0.0168}} = 0.9002 \quad (4)$$

The correlation ratio can take a value from 0 to 1. The closer its value is to unity, the closer the relationship between the studied phenomena is [7].

If the value of the correlation coefficient is equal to 0,96668, it means that the correlation between the factor and the resulting characteristic is strong. If income changes by 1%, the cost of working capital changes by 0,97%.

To evaluate the relationship model with a non-linear relationship, it is necessary to determine the detection index, which is equal to the square of the correlation ratio:

$$R^2 = \mu^2(5)$$

$$R^2 = 0,810714$$

We performed calculations using different model variants. The tendency of the amount of working capital to depend on the amount of income is best described by a polynomial function, since the determination index R^2 is the largest – 0,810714. This means that 81,0714% of the source data is subject to the selected model.

It follows that 81,0714% of the change in the value of working capital is due to the change in income. 18,9% depends on the influence of other factors.

To evaluate the quality of the built model, we calculate the average approximation error (A). It shows by what percentage the actual values of the Y indicator differ from the values calculated using the constructed model.

The average error of approximation is determined by the following formula:

The average error of approximation is determined by the following formula:

$$\bar{A} = \frac{\sum |Y_i - Y_x| / Y_i}{n} 100\% \quad (6)$$

There are: $|Y_i - Y_x|$ - deviation of the adjusted Y values from the actual values modulo.

$$\bar{A} \approx 4,95\%$$

The obtained value allows us to conclude that the quality of the built model is good, because the regression model is considered to be well adapted and, if the average error of approximation does not exceed 10%, describes the relationship between the factor and the performance indicator sufficiently accurately.

From the results of the created regression model, it can be concluded that we.

Through this regression equation, we can analyze in advance how much profit the factory will make.

If we use this formula to determine, then this is a theoretical study

Others we can define for enterprises or factories and this is more convenient for us.

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Termiz davlat universiteti O'zbek tilshunosligi kafedrasida o'qituvchisi

KASALLIK NOMLARIGA OID LEKSEMALARNING LINGVOMADANIY, LINGVOKOGNITIV TADQIQI

Annotatsiya. Ushbu maqolada tibbiy leksemalarning lingvomadaniy, lingvokognitiv tadqiqi borasida so'z boradi. Unda maqollar yordamida tibbiy leksemalarning lingvomadaniy jihatlarini ochib beriladi.

Kalit so'zlar: tibbiy terminlar, lingvomadaniyat, kognitiv lingvistika, semantika, tushuncha, mantiqiy kategoriya.

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LINGO-CULTURAL AND LINGO-COGNITIVE STUDY OF LEXEMAS RELATED TO DISEASE NAMES

Abstract. This article covers the linguistic, linguocognitive study of medical lexemes. In it, with the help of Proverbs, the linguistic aspects of medical lexemes are revealed.

Key words: medical terms, linguistics, cognitive linguistics, semantics, understanding, logical category.

Kirish. Bilamizki, Lingvokulturologiya – tilshunoslikning til, madaniyat, xalq madaniyatining tilda namoyon bo'lish xususiyatlarini aks ettiruvchi, o'rganuvchi fan. Til birliklarining lingvokulturologik tahlili tilshunoslik va madaniy hamjamiyatning o'ziga xos xususiyatlari, milliy-madaniy xarakteristikani tavsiflaydi, kommunikativ toifa, milliy madaniyat tushunchasining ahamiyatini tushuntiradi³¹.

Lingvokulturologiyaning asosiy vazifasi ma'lum bir lingvokulturologik doiraning muloqot makonining madaniy kelib chiqishi, diskurs va til, shuningdek, lisoniy birlikning madaniy belgilar terminlari interpretatsiyasi, xalqning tarixiy xotirasi prizmasidan kelib chiqqan holda tavsiflashdan iborat³². Shu jihatdan olib qaraganimizda, tibbiy diskursni, ya'ni kasallik nomlariga oid leksemalarni lingvokulturologik jihatdan tahlil qilish matnning lingvokulturologik maydonini tashkil etuvchi lingvokulturologik birliklar tizimini aniqlashni, matnning mazmuniy-tematik dominantlari sifatida madaniy tushunchalarni o'rganishni, nutqni individual – muallifning tilshunosligi sifatida ko'rib chiqishni o'z ichiga

³¹ Газизов Р. А., Мурясов Р. З. Лингвокультурология и современная лексикография. 2016.. № 2

³² Маслова В.А. Лингвокультурология.–М.: 2001

oladi. “Madaniy ahamiyatga ega soʻz boyligi, – deb toʻgʻri yozadi O.S.Chesnokova, – oʻziga xos konseptual va konnotativ yukka ega³³. Boshqacha qilib aytganda, tabiatan bunday soʻzlar qimmatli maʼlumot ombori, ammo tayyor boʻlmagan odam uchun, agar siz ularning maʼnosini tushunmasangiz, tushunishga jiddiy toʻsqinlik qilishi mumkin. Bunday asarlar tabiatan qoʻllaniladi, chunki ulardagi maʼlumotlar keyinchalik hayotda (ishda, sayohatda va hokazo) foydalanish uchun berilgan. Badiiy adabiyot, bunda estetik funktsiya axborotdan ustun boʻlsa-da, xuddi shunday rolni bajarishi va xalq tarixi, madaniyati va kundalik hayoti haqida ekstralingvistik bilim manbayi boʻlishi mumkin. Lingvokulturologiyaning bevosita tibbiy diskurs bilan bogʻliq jihatiga kelsak, shuni aytish lozimki, tibbiy diskurs ham boshqa til birliklari qatorida bu sohaning tadqiq obyektlaridan biri hisoblanadi. “Lingvokulturologiya” kitobining muallifi V.A. Maslova bu borada quyidagicha yozadi: “Matn tilshunoslik va madaniyatning haqiqiy kesishuv nuqtasidir. Zero, diskurs til hodisasi va uning oliy sathi hisoblanadi, shu bilan birga, u madaniyat mavjudligining amal qilish shakli hamdir”³⁴.

Ayni paytda tilga antroposentrik yondashuv tilshunoslik sohasining eng soʻnggi yutuqlarini oʻzida mujassam etib, mustaqil paradigma sifatidagi maqomini borgan sari mustahkamlab bormoqda. Koʻplab tadqiqotchilarning eʼtirof etishicha, kognitiv tilshunoslik va lingvokulturologiya antroposentrik paradigmaning yetakchi yoʻnalishlari hisoblanadi.

Adabiyotlar tahlili va metodlar. Oʻtgan asrning soʻngi choragida oʻzining ilk qadamlarini qoʻygan kognitiv tilshunoslik XXI asr boshidayoq lingvistikaning peshqadam sohalaridan biriga aylanib ulgurdi. Zamonaviy kognitiv tilshunoslikning vujudga kelishi amerikalik olimlar J. Miller, J. Bruner, J.Lakoff, R.Langaker, R.Jakendoff va boshqalarning ilmiy ishlari bilan bogʻlanadi. Kognitiv tilshunoslik tilni falsafadagi bilish nazariyasi bilan bogʻlab, uning hosil boʻlishidagi psixologik, biologik va neyrofiziologik jihatlarining ijtimoiy, madaniy va lisoniy hodisalar bilan uzviy aloqasini ilmiy tadqiq etuvchi soha hisoblanadi. Kognitiv soʻzi inglizcha “cognize-bilmoq, anglamoq, tushunmoq” demakdir. Kognitiv tilshunoslik “chegaradosh fan” boʻlib, kognitologiya, kognitiv psixologiya, psixologvistik, lingvistik kabi sohalar toʻqnashuvida vujudga keldi. 1975-yilda J. Lakoff va S. Tompsonning maqolasida “kognitiv grammatika”termini paydo boʻldi-da 80-yillarda yevropaning anʼanaviy tilshunosligida kognitiv tilshunoslik qaror topdi. Rus tilshunosligiga esa kognitiv lingvistik V.I. Gerasimovning (“Новое в зарубежной лингвистике”,1988) ilmiy maqolasi bilan kirib keldi. Rus tilshunosligining yana bir atoqli vakili E.S. Kubryakova quyidagicha fikr bildiradi: ”Kognitologiya koʻp qirrali fan sohalaridandir. Uning doirasida shakllangan tilshunoslik, oʻz navbatida,

³³ Usmanova Sh. Lingvokulturologiya. – T.: 2014.

³⁴ Маслова В.А. Лингвокультурология.–М.: 2001

murakkab vazifa ijrosini ko'zlaydi, lisoniy va bilim strukturalari o'rtasidagi munosabatlar hamda doimiy muqobilliklar tahlili, izohi rejalashtiriladi"³⁵.

O'zbek tilshunosi Sh.S.Safarovning fikriga ko'ra, "Kognitiv tilshunoslikning vazifasi til yordamida bilim olish va saqlash, tilni amalda qo'llash, hamda uzatish, umuman til tizimi va tarkibini inson miyasidagi in'ikosi sifatida tafakkur bilan bog'lab, chuqur ilmiy tadqiq etishdir"³⁶.

Professor A.Mamatov til tizimini kognitiv jihatdan tahlil qilish borasida fikr yuritar ekan, shunday deb yozadi: "Kognitiv fan kognisiya bilan shug'ullansa, kognitiv tilshunoslik kognisiyaning, ya'ni bilishning tilda aks etishini, verballashuvini tadqiq qiladi. Tilga bo'lgan kognitiv yondashuv – bu til shaklining oxir-oqibat inson ongi, fikri, bilish strukturalarining aks ettirilishidir. Kognitivlik o'z tuzilishiga ko'ra insonning bilish faoliyatiga tayangan barcha tipdagi bilimlarning tizimlashishini ifodalaydi"³⁷.

XXasrning oxirlariga kelib, til va madaniyat muammosi masalasini o'rganishni maqsad qilgan tilshunoslikning yangi sohasi lingvokulturologiya jadal rivojlandi. Lingvokulturologiya - madaniyatshunoslik va tilshunoslik fanlari o'rtasida umumlashma fan bo'lib, til va madaniyatning o'zaro ta'siri va bog'liqligi, bu bog'liqlikning shakllanishi hamda yaxlit bir sistema sifatida til va tildan tashqarida aks etishi kabi hodisalarni o'rganish bilan shug'ullanadi.

Lingvokulturologiya o'rganish obyektiga ko'ra madaniyatshunoslik va tilshunoslik fanlariga birmuncha yaqin, biroq mazmun-mohiyati, o'rganish obyektiga bo'lgan yondashuviga ko'ra farqli deb aytish mumkin. Uning chegaralanuvchi maqomi shundan iboratki, u xalq madaniyatining tilda namoyon bo'lishi hamda ifodalanishi, til mentaliteti, milliyligi, til ruhiyati bilan bog'liq ravishda nutqiy muloqotni tashkil etishdagi milliy-madaniy spesifik qoidalarni o'rganadi hamda millatning tilda aks etgan o'ziga xos milliy til xususiyatlarini aniqlash hodisalarini tadqiq etish bilan shug'ullanadi. Lingvokulturologiyaning vazifasi shundan iboratki, u til birliklarining madaniy mazmunini o'zga til elementlari va madaniyatining tanish simvolik "kodlari" bilan almashtirmagan holda to'liq ochib berishdir.

Muhokama va natijalar. Biz quyida ko'rib o'tmoqchi bo'lgan kasallik nomlariga oid leksemalarning lingvomadaniy, lingvokognitiv jihatlari aynan maqol va matallar yordamida yanada yaqqol namoyon bo'ladi. Sababi shundaki, maqol va matallar jamiyat madaniyati hamda turmush tarzidan, shu bilan birgalikda hududiy mentalitetdan xabar beruvchi vosita hamdir. Biz ayni shu jihatlarni ko'rib chiqishni maqsad qildik:

"Dard" semasini birlashtiradigan o'zbek xalq maqollari:

³⁵ Кубрякова Е.С О когнитивной лингвистики и семантики термина когнитивны// Вестник Воронежского государственного университета. –Воронеж, 2001.90-с

³⁶ Safarov Sh. S. Kognitiv tilshunoslik.-Jizzax: Sangzor,2006.- B.91

³⁷ Mamatov A. E. Tilga kognitiv yondashuvning mohiyati nimada? Tilshunoslikning dolzarb masalalari: Prof. A.Nurmonov tavalludining 70 yilligiga bag'ishlab o'tkazilgan ilmiy-amaliy anjuman materiallari.-Andijon,2012/-B.212-219.

1. *Toza havo – dardga davvo*. Har kuni o‘z ustida ishlash, badantarbiya qilish, toza havodan nafas olish har bir insonning salomatligi garovidir. Ushbu maqolda ham toza havodan nafas olish turli dardlarga davoligi aytilgan.

2. *Asrayman desa balo yo ‘q, O‘laman desa – davvo*. Dardni ham, davosini ham Olloh beradi. Har kim peshanasidagini ko‘radi. Taqdirimizga bari yozilgan. Ushbu maqolda ham shu falsafa aks etgan holda ba‘zi kasalliklarga o‘lim davvo, degan tushuncha ham singdirilgan.

“Anqov” semasi qatnashgan xalq maqollari tahlili:

Kasalga davvo topilsa ham, Anqovga davvo topilmas. Xalqimizda Olloh bergan har qanday kasallikka davvo topish mumkin, ammo farosatdan qisgan bo‘lsa bedavvo, degan gap ham mavjud. Odamlar orasida shunday insonlar borki, ularga qancha tarbiya bersang ham, gap uqtirsang ham befoyda, baribir yuzingga angrayib ne qilishini bilmay qarab turishadi. Ushbu maqol shu kabi kimsalarga atab aytilgan.

Anqov o‘yin buzar, Tentak – uyin. Hech narsani tushunmay “qovun” tushuradigan insonlar yaxshigina ketayotgan o‘yinni buzishlari, tentak esa axmoqligidan uyini ham buzib yuborishi mumkinligi ushbu maqolda aks etgan.

Yer yuzini baxmal olsa ham, Anqovga taqiyalik tegmas. Anqov, tentak kabi insonlar oldida turgan bir dunyo imkoniyatlardan ham foydalana olmaydi. Go‘yoki, yer yuzini baxmal olsa ham u kabi insonlar tangadek joyni ololmasligi kabi. Ushbu maqolda sergak bo‘l, imkoniyatlardan foydalan, anqovga o‘xshab qolma, degan fikr yoritilgan.

Yolg‘onga yo yalqov inonar, Yo – anqov. Xalqimizda “yolg‘onga bola ishonadi”, “aldagani bola yaxshi” kabi iboralar mavjud. Yana shunday toifadagi insonlar borki, ularni aldash oson. Ular anqov va tentaklardir. Maqolda ehtiyotkor bo‘lish lozimligi, har narsaga ishonish kerak emasligi aytilgan.

“Pes” leksemasi qatnashgan xalq maqollari:

Pes pes bilan qorong‘uda topishar. Ushbu maqolda “Ko‘r ko‘rni qorong‘uda topadi” degan mazmun bor. Har kim o‘ziga mos odam bilan do‘stlashadi, Ularning nafaqat dunyoqarashlari, balki ko‘rinishlari ham bir xillik kasb etishi haqida so‘z boradi.

Pes pesni topar, Suv – pastni. Ushbu maqolda ham yuqoridgi fikr o‘z ifodasini topgan.

“Moxov” kasalligi nomi qatnashgan xalq maqollari:

Pesning chekiga moxov tushibdi. Ushbu maqolda har kim o‘ziga o‘xshagan inson bilan do‘st tutinadi, u bilan munosabatga kirishishni hayotning o‘zi taqozo etadi, degan fikr o‘z ifodasini topgan.

Moxov qoshdan gapirar, Mechkay oshdan gapirar. Har bir inson bu dunyoni o‘z qarichi bilan o‘lchaydi. Tabiiyki, u aytayotgan fikrda ham uning tafakkuru aks etadi. Yuqoridagi maqolda shu fikr aks etgan.

“Kasal” semasi qatnashgan o‘zbek xalq maqollari:

Kasal jonning harakatida, Tabib pulning harakatida. Ushbu maqolda ba‘zi tabiblar haqida tanqidiy fikr bildirilgan. Bemor odam jonini asrash uchun har

qanday ishga tayyor bo'lsa, ba'zi tabiblar bemorlardan pulni olish maqsadida har ishga tayyor bo'ladi. Ular uchun iqtisodiy manfaat birinchi o'rinda turadi.

Kasal dardini sog' bilmas, Och qadrini to'q bilmas. Tirik jon bor ekan uning isitmasi ham bor. O'sha holatga tushgan bemorning ahvolini, hissiyotlarini u kabi holatda bo'lmagan inson tushunmaydi. Ushbu maqolda aynan shu fikr o'z ifodasini topgan.

Kasalga so'z yoqmas, Kambag'alga – o'yin. Dardga chalingan insonning nafaqat ishtahasi, balki kayfiyati ham bo'lmaydi. Dardga chalingan inson uchun har qanday so'z ortiqchadek tuyilaveradi. Ushbu maqolda shu haqda gap ketadi.

Kasal – oshdan, Davo – qarindoshdan. Inson biror bir dardga chalinganda bir og'iz shirin so'zga, yoqimli kalonga zor bo'ladi. Shunday vaqtlarda qarindoshlarning siylayi rahm ko'rsatishi joningizga oro kiradi. Mazkur maqolda aynan shu g'oya o'z ifodasini topgan.

Bunday tibbiy birliklar qo'llanilgan maqollarning guruhlarini yanada davom ettirishimiz mumkin. Maqollar tilning ko'rki hisoblanadi. Ulardagi ixcham hajm va ma'no xalq ma'naviyati, zakovati mahsulidir. Maqollardan nutqda foydalanish mazmuni boyitishga, ta'sirchanlikni oshirishga va shuning barobarida tilning ko'rkamligini namoyon etishga olib keladi, nutqning xalq tiliga yaqin bo'lishini ta'minlaydi. Maqol matni qisqa, ixcham va lo'nda fikrlash, aniq bayon etishni taqozo etgani bois ijodkorga qo'l keladi. Maqol matni mazmun jihatdan tahlil etilmaydi, chunki maqollar, odatda, to'g'riligi isbotlangan holda, qayta-qayta ishlanib vujudga keladi. Maqollar asosan ifoda nutqning rang-barangligini, ta'sirchanligini, badiiyligini ta'minlovchi uslubiy vositalardan biri hisoblanadi. Tibbiy birliklar qo'llanilgan maqollarni mumkin qadar o'rganish va tadqiq etish til va nutq uchun xarakterli bo'lib, shu orqali o'zbek tilining lug'at tarkibi boyib boradi. Bunday mazmundagi maqollarga muloqot jarayonida ko'proq murojaat qilish, ayni paytda kishilarning nutq odobi va muomala madaniyati yuksalaveradi. O'zbek tilshunosligida ushbu uslubiy vositaning lisoniy mohiyatini ochib beruvchi maxsus ish yuzaga kelgan emas. Mavjud ma'lumotlar esa ilmiy jamoat ahlini qondirish darajasida emas.

Xulosa. Xullas, ilmiy nutq adabiy nutq ko'rinishining alohida bir shakli bo'lib, bunda individuallik ham sezilmas darajaga boradi. Uning o'ziga xos xususiyatlari ana shuni taqozo qiladi. Faqat ilmiy-ommabop nutq shakllarida ma'lum individuallik yaqqol sezilishi mumkin ya'ni ilmiy nutqda ham ma'lum darajada qolipga solinganlik kuzatiladi. Ilmiy uslub tilshunos M.Mukarramov ta'kidlaganidek, murakkab tipdagi qo'shma gaplarning ko'p ishlatilishi bilan, ayniqsa, xarakterlidir³⁸. Shunday qilib, ilmiy uslub insonning uni o'rab turgan borliq bilan munosabatini, shuningdek, jamiyat, ijtimoiy hodisalar bilan munosabatini ifodalaydi. Bu nutq shakllari ana shu ehtiyojdan kelib chiqqan holda, ana shu munosabatlarni ta'minlash maqsadida yuzaga keladi³⁹. Bundan tashqari, tibbiy leksemalarning lingvomadaniy, lingvokognitiv jihatlarini aynan

³⁸ Mukarramov.M. Hozirgi o'zbek adabiy tilining ilmiy stili.-T.,1981

³⁹ Xalilova.M. O'zbek tili stilistikasi asoslari.''Farg'ona''nashriyoti.2009

maqollar yordamida ochib berish, ularning shifokorlar nutqida yoki oddiy xalq soʻzlashuv uslubida qoʻllanilishi madaniyatimizga xos boʻlgan jihatlarni koʻrsatib beradi desak mubolagʻa boʻlmaydi.

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THE USE OF GENERIC TERMS IN THE ENGLISH LANGUAGE FOR DESCRIPTION SPECIFIC OBJECTS OR ACTIONS

Abstract. The vocabulary of any language is so large and heterogeneous that not any translator, not even the native speaker can know all the words and distinguishes all their meanings. A vague knowledge of the text, the deep meaning hidden under the surface structure obliges the translator to be in constant contact with dictionaries, because they do translators in estimate service in understanding the text more clearly.

Key words: source language, target language, analysis of the various types of translation, technical and scientific literature, theory of translation.

The right choice of the word for a complete transformation of the meaning of the word in the text is one of the complicated objectives in the translation process. The difficulty of this task is conditioned by the complex nature of the word and its versatile and semantic value.

The theory of translation is subdivided into general theory, dealing with the general characteristics of translations regardless of its type, and special branches concerned, with a theoretical description and analysis of the various types of translation, such as the translation of fiction, poetry, technical and scientific literature, official documents, etc.

The general theory of translation has a clearly defined subject-matter: the process of translation in its entirety, including its results, with due regard to all the factors, affecting it. Each special branch specifies the general theory of translation for it is the job of the general theory to reflect what is common to all types and varieties of translation, while the special branches are mainly concerned with the specific features of each genre.

The general theory of translation is an interdisciplinary area, predominantly linguistic but also closely allied to psychology, ethnography and area studies. It is based on the application of linguistic theory to a specific type of speech, i.e., translation.

It differs from contrastive linguistics in that the former seeks to compare different language systems with a view to determine their similarities and distinctive features, while the theory of translation has a subject-matter of its own (the process of translation) and uses the data of contrastive linguistics merely as a point of departure.

Translation may be viewed, as an interlingual communicative act in which at least three participants are involved: the sender of source information, the translator who acts in dual capacity - as the receptor of the source language message and as the sender of the equivalent target language message and the receptor of the target language message (translation). If the original is produced not with a foreign language receptor in the mind, there is one more participant the source language receptor for whom the message was originally produced. Translation consists in producing a text (message) in the target language equivalent to the original text (message) in the source language.

Translation as an interlingual communicative act includes two phases: communication between the sender and the translator and communication between the translator and the receptor of the newly produced target language text. In the first phase the translator acting as a source language analyzes original message extracting the information contained in it. In the second stage the translator acts as a target language sender producing an equivalent message in the target language and redirecting it to the target language receptor.

In producing the target language text, the translator changes its plan of expression (linguistic form) while its plan of content (meaning) should remain unchanged. In fact, the production of an equivalent message implies that the message produced is equivalent to the original in the plan of content. The message produced by the translator should evoke practically the same response in the target language receptor as the original message in the source language receptor. That means, above all, that whatever the text says and whatever it implies should be understood in the same way by both the source language user for whom it was originally intended and by the target language user. It is therefore the translator's duty to make available to the target language receptor the maximum amount of information, carried by linguistic signs, including both their denotational (referential) meanings (i.e., information about the extra linguistic reality which they denote) and their emotive-stylistic connotations.

The theory of translation provides the translator with the appropriate tools of analysis and synthesis, makes him aware of what he is to look for in the original text, what type of information he must convey in translation and how he should act to achieve his goal. In the final analysis, however, his trade remains an art. For science gives the translator the tools, but it takes brains, intuition and talent to handle the tools with great proficiency.

Translation is a complicated phenomenon involving linguistic, psychological, cultural, literary and other factors.

Different aspects of translation can be studied with the methods of the respective sciences. Up to date most of theoretical research of translation has been done within the framework of linguistics.

The linguistic theory of translation is concerned with translation as a form of speech communication establishing contact between communicants who speak different languages.

The study of the language is arguably the most hotly contested property in the academic realm. It becomes a tangle begetting multiple language discrepancies. That is why linguistics compares languages and explores their histories, in order to find and to account for its development and origins to give the answers to this or that language point.

Due to the semantic features of language the meanings of words, their ability to combine with other words, their usage, the “place” they hold in the lexical system of a language do not concur for the most part. All the same “ideas” expressed by words coincide in most cases, though the means of expression differ.

The principal types of lexical correspondences between two languages are as follows:

- Complete correspondences;
- Partial correspondences;
- The absence of correspondences [1: 96].

Let's deal with them more exactly.

1) Complete lexical correspondences.

Complete correspondence of lexical units of two languages can rarely be found. As a rule they belong to the following lexical groups:

- proper names and geographical denominations;
- the months and days of the week, numerals.
- scientific and technical terms (with the exception of terminological polysemy).

2) Partial lexical correspondences.

While translating the lexical unit's partial correspondences mostly occur. That happens when a word in the language of the original conforms to several equivalents in the language it is translated into. The reasons of these facts are the following [2:5].

1. Most words in a language are polysemantic. That's why the selection of a word in the process of translating is determined by the context.

2. The specification of synonymous order. However, it is necessary to allow for the nature of the semantic signs which an order of synonyms is based on. Therefore, it is advisable to account for the concurring meanings of members of synonymic orders, the difference in lexical and stylistic meanings, and the ability of individual components of orders of synonyms to combine.

3. Each word affects the meaning of an object it designates. Not infrequently languages “select” different properties and signs to describe the same denotations. The way, each language creates its own “picture of the world”, is known as “various principles of dividing reality into parts”. Despite the difference of signs, both languages reflect one and the same phenomenon adequately and to the same extent, which must be taken into account when translating words of this kind, as equivalence is not identical to having the same meaning.

4. The differences of semantic content of the equivalent words in two languages. These words can be divided into their sub-group:

a) Words with a differentiated (undifferentiated) meaning e.g. In English: to swim (of a human being), to sail (of a ship), to float (of an inanimate object).

b) Words with a “broad” sense: verbs of state (to be), perception and brainwork (to see, to understand), verbs of action and speech (to go, to say).

c) "Adverbial verbs" with a composite structure which have a semantic content, expressing action and nature at the same time: e.g., the train whistled out of the station.

5. Most difficulties are encountered when translating the so called pseudo-international words. The regular correspondence of such words in spelling and sometimes in articulation coupled with the structure of word-building in both languages may lead to a false identification.

6. Each language has its own typical rules of combinability. A language has generally established traditional combinations which do not concur with corresponding ones in another language.

Adjectives offer considerable difficulties in the process of translation.

A specific feature of the combinability of English nouns is that some of them can function as the subject of a sentence though they do not belong to a lexico-semantic category.

The habitual use of a word, which is bound up with the history of the formation and development of its lexical system.

In conclusion, as in all areas, the article can be useful for all the teachers of foreign languages when they teach their students to translate the written sources of information or when the letters are taught to speak and transmit the information in foreign languages.

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Qorauzak tumani axborot- kutubxona markazi
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AXBOROT-KUTUBXONA MUASSASALARIDA ZAMONAVIY INFORMATSION TEXNOLOGIYALARNING O‘RNI

Annotatsiya: ushbu maqolada axborot-kutubxona markazlari faoliyati hamda axborot-kutubxona muassasalarida zamonaviy informatsion texnologiyalarning ahamiyatining hozirgi kundagi ahamiyati haqida ma‘lumotlar keltirilgan.

Kalit so‘zlar: axborot olami, kutubxona, ma‘lumot, kiber olami.

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ROLE OF MODERN INFORMATION TECHNOLOGIES IN INFORMATION LIBRARY INSTITUTIONS

Abstract. This article provides information about the activity of information-library centers and the importance of modern information technologies in information-library institutions today.

Key words: information world, library, information, cyber world.

Bugungi kunda ‘axborot olami‘ degan yangi dunyo paydo bo‘ldi. Zamonaviy texnologiyaga asoslangan olamshumul elektron axborot tarmoqlaridan borgan sari muvaffaqiyat bilan foydalanilmoqda va uning qudrati kundan-kunga ortib bormoqda. Har birimizning hayotimizda Axborot olamining ahamiyati tobora kuchayib bormoqda. U olis manzillarni yaqinlashtirib, oraliqdagi masofalarni qisqartirmoqda. Axborot kiber olami deb ataluvchi bu soha rivoj topib borayotgani tufayli dunyoning turli millatlari bir-birlari bilan qadrdonlashmoqda. Chunki mazkur kiber olamda insoniyat tarixida erishilgan barcha bilimlar jamlangan. Tarix, siyosat, madaniyat, san‘at, ilm-fan, ta‘lim va hokazo sohalarga doir ma‘lumotlar dunyoning barcha kishilari uchun qiziqarli. Kiber olam ma‘lumotlaridan kompyuter va Internet vositasida dunyoning barcha burchaklaridagi kishilar bemalol foydalanishi mumkin. Kompyuter va Internet imkoniyatlaridan foydalana bilish axborot kiber olami bilan kengroq tanishish, bahramand bo‘lishga muyassar etadi. Dunyoning istalgan nuqtasi bilan bir zumda bog‘lanish, muloqot qilish imkonini yaratadi.

Bugungi kunda yoshlar ma‘naviyatini oshirishda kitob eng katta vosita hisoblanadi. Ammo bugungi kun yoshlari kitob o‘qishyaptimi? degan savol ham tug‘iladi Ular o‘zlariga qulay bo‘lgan usuldan ya‘ni elektron manbalardan

ko'proq foydalanishadi. Masalan, biror bir so'zning ma'nosini qidirayotgan bo'lishsa, albatta uni lug'at kitobdan qarashmaydi, aksincha telefon orqali elektron lug'atdan tez va oson ko'rib olishadi. Bu qulay va tezkor bo'lganligi uchundir. Shunday ekan axborot-kutubxona markazlarida elektron bazani shakllantirish va ko'paytirish muhim ahamiyatga egadir. Kutubxonaga borgan kitobxonning o'zi qidirayotgan kitobini tez va oson topishi uchun elektron katalog tizimini ham rivojlantirishimiz lozim. Fondagi barcha kitoblarni elektron katalogga kiritish hamda ularning to'liq elektron variantini yaratish, bibliografik faoliyatni takomillashtirib borish kerak.

Prezidentimiz Sh. Mirziyoyev ta'kidlagani kabi, "Jahon tarixi shundan dalolat beradiki, har qanday yangi sivilizatsiya, yangi Uyg'onish davri kitob va kutubxonalardan boshlanadi". Kutubxonashunoslik sohasini yanada rivojlantirish uchun bugungi kunda juda katta imkoniyatlar yaratilmoqda. Ayni vaqtda respublikamiz bo'yicha ko'plab yirik kutubxonalar zamonaviy texnologik jihozlar bilan ta'minlanib bormoqda. Kompyuter, internet, modem tarmoqlari bilan ta'minlangan bo'lib, kutubxonalararo ma'lumot almashishlar ham yo'lga qo'yilgan. Bir kutubxonada yo'q bo'lgan kitobning elektron shakli, boshqa bir kutubxonaning elektron fondida mavjud bo'lishi ham mumkin. O'zaro ichki elekton almashishning yo'lga qo'yilganligi bu kitobxonning tez va oson eng muhimiqidirganma'lumot, adabiyotinitopishigaalbatta yordamberadi.

Axborot-kutubxona xizmatlarini asosan ikki turga bo'lishimiz mumkin: an'anaviy va noan'anaviy xizmatlar. An'anaviy xizmatlar bu kitob berish, kataloglashtirish, bibliografiya, fondni saqlash kabi xizmatlar sanalsa, noan'anaviy xizmatlar safiga zamonaviy axborot texnologiyalaridan foydalangan holda xizmat ko'rsatishlar kiradi.

Bugungi kunda noan'anaviy axborot-kutubxona xizmatlaridan foydalanuvchilar soni oshib borayotganligining guvohi bo'lishimiz mumkin.

Xorijiy davlatlarning yirik kutubxonalarida barcha xizmatlar avtomatlashtirilgan bo'lib, ularda zamonaviy texnologiyalar keng qo'llaniladi. Kitoblarni elektron bazaga kiritish uchun ko'plab dasturlar ishlab chiqilgan bo'lib, bu dasturlarni bizning kutubxonalar ham o'zlashtirishmoqda va eng qulayi tanlab olinib kutubxonalarimizda tadbiiq qilinib kelinmoqda.

Dunyodagi eng nufuzli bo'lgan universitetlarning kutubxonalarini tahlil qilish va ularni O'zbekistondagi oliy yurtlari kutubxonalarida joriy qilishimiz darkor. Masalan:

1. "Harvard Library" Garvard universiteti kutubxonasi. Kutubxona 1638 yilda tashkil etilgan, AQSh dagi eng qadimgi hamda dunyodagi eng kata akademik kutubxona tizimi hisoblanadi. Garvard universitetiga tegishli kutubxonalar 25 dan ortiq bo'lib, u yerda 800 dan ortiq xodimlar ishlashadi. Kutubxona fondi 60 millionda ortiq moddiy hamda elektron resurslar bo'lib, ular 460 dan ortiq dunyo tillarida yozilgan manbalardir.

2. "Bodleian Libraries" Oksford universiteti kutubxonalari. Bodleian kutubxonalari Oksford universitetini qo'llab-quvvatlaydigan kutubxonalar

tizimidir. Kutubxona 4 asr muqaddam tashkil etilgan bo‘lib, hozirda Buyuk britaniyadagi eng yirik kutubxona hisoblanadi. Kutubxonada 13 milliondan ortiq bosma nashrlar, 80 000 dan ortiq elektron jurnallar va noyob kitoblar va qo‘lyozmalar, klassik papiruslar, xaritalar, musiqa, san‘at va bosma efemera kabi ajoyib maxsus to‘plamlar mavjud.

Ba‘zi kutubxonalarda kitobxonlar kutubxonaga borishlaridan avval kutubxonachiga qo‘ng‘iroq qilib o‘z o‘rnini band qilib qo‘yadi. Bu esa kutubxonada tartibni saqlash, kitobxonning kutib qolishini oldini olish va bir qancha qulaylik paydo qiladi. Yilda yilga har bir sohada yengillik yaratish maqsadida yangiliklar yartilayotganligini hisobga olgan holda bu sohani yanada takomillashtirishimiz uchun bor imkoniyatlarimizni ishga solishimiz zarur. Zero, barcha ilm-u bilimlarning boshi albatta kitobdir.

Xulosa o‘rnida shuni aytish mumkinki, kutubxona eng qadim zamonlardan beri insonlarning ma‘naviyatini oshiruvchi bir ziyo maskani bo‘lib kelmoqda. Zamon bilan hamnafas bo‘lgan holda kutubxonachilik ishini ham yangi bosqichga olib chiqish har bir soha fidoiysining burchi hisoblanadi.

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PROSPECTS FOR THE LOCALIZATION OF THE CONSTRUCTION OF ENERGY-EFFICIENT BUILDINGS IN WORLD PRACTICE

Abstract. This article provides information about the work carried out in many countries on increasing energy efficiency factors in the construction of modern buildings and structures, which are now one of the most pressing issues, and the implementation of this type of work in local conditions and the results expected from it.

Key word: Energy efficient, environmental, Passive House, thermal mass, environmental, renewable energy, thermal mass.

In our country, today, the issue of building energy-efficient, economical houses is emphasized as one of the most important factors in the development of the construction sector, in particular, the main task is to enrich the buildings of residential, social sphere facilities, which are being built on the basis of model projects in rural and urban areas within the framework of state programs.

More than three years have passed since the signing of the Paris agreement on climate change by Uzbekistan, a global climate agreement adopted within the framework of the main United Nations climate change convention and urging participants to take measures to reduce the amount of carbon dioxide in the atmosphere from 2020.

The date of signing this international document almost coincided with the approval by the Government of Uzbekistan of a joint project with our GEJ (Global Environmental Fund) and the Ministry of construction of Uzbekistan to promote and build energy-efficient and low-carbon country houses and rural settlements.

Work in this direction has been successfully carried out from 2017 to the present day, and the first high-quality results have determined a positive direction for the entire project.

Work on this area was initially carried out on the basis of the decision of the president of the Republic of Uzbekistan dated October 21, 2016 “on the program for the construction of affordable housing on model projects updated in rural areas in 2017-2021”, the construction of model and energy-efficient rural housing in rural areas continues to this day.

This in turn gave a strong impetus to the study of the microclimate and climate of the building, studying and solving the energy saving problems that arise in the process of building modern buildings. This explains the wide range of buildings based on various concepts of energy-efficient and environmentally friendly technologies.

The design concepts of modern buildings are based on the idea that the quality of the environment directly affects the quality of our life.

The modern building, in terms of efficiency, is characterized by consumer calculations. One of the main systems of consumer construction indicators is the energy efficiency indicator system of the building.

An energy efficient building is a building within a building that is achieved through the use of innovative solutions that are technically based on energy conservation, are economically expedient, environmentally and socially acceptable, and do not change the usual lifestyle. Energy-efficient homes are becoming the European standard.

The following countries have extensive experience in implementing energy-efficient passive house projects:

energy-saving accommodation was built in Western European countries and, first of all, in Helsinki, Finland, in London, United Kingdom, the energy-saving public building project of the municipality was successfully implemented.

Recently, in connection with the intensification of energy conservation and environmental protection problems, interest in the use of unconventional types of energy has increased, such as solar energy, wind energy and renewable energy sources: solar, wind, etc. have been used by man since ancient times. The solar energy used in the design of modern buildings - a passive house and a solar House, has a significant effect on reducing energy consumption from traditional sources - heating and cooling devices.

Separate passive building features are as follows:

compactness and good insulation of the outer surrounding parts of the building, 2-3 times higher than the normative indicators of thermal conductivity;

forced pasting of the southern part of the building and passive use of solar energy, taking into account the peculiarities of the shade;

at least 0.8 m. Energy-saving windows with thermal conductivity of window structures with °C/W;

air permeability, which can flow air through closed connections, does not exceed 0.6 rooms per hour;

The heat carrier used is the thermal mass Passive House, represented by three main types: stones, water and eutectic salts (with variations). A distinctive feature of heat storage materials is that they have a high thermal inertia.

Thermal inertia is the ability of materials or environments to absorb heat and hold it until it heats up. If the ambient temperature drops, the accumulated heat enters the environment and the materials themselves or the environment are cooled. But changing the ambient temperature or cooling will take some time. Solar energy inside the house, from other surfaces illuminated by sunlight, can be transferred to the surface of the mass, where thermal energy accumulates due to reflection and thermal radiation. Try to place the thermal mass on all surfaces illuminated by the sun. When materials that store heat from solar energy are absorbed, an increase in temperature is observed on the surface of the materials. The energy absorbed by the surface is transferred to the material through thermal conductivity.

The absorbency depends on the surfaces of the heat storage materials: The place where the thermal mass is exposed to direct solar radiation should have a large volume without being excessively thick, so thin heat-collecting plates are more efficient than thick ones.

The most effective thickness of the heat-accumulating plate is 100 mm, and the thickness exceeds 150 mm is meaningless. The most effective thickness for Wood is 25 mm. The passive floor of the House should be dark in color, because the dark color, absorbs the sun's rays, but does not reflect it, and makes the floor warmer and easier to clean.

The thermal mass of walls and ceilings should be light, since the dark wall heats up quickly, an air flow of thermosiphon is formed, which leads to overheating of the room.

Experts from the International Energy Agency estimated that by 2050, the widespread introduction of energy-efficient building technologies would lead to carbon dioxide emissions of 2 billion. allows a reduction in metric tons.

The construction of energy-efficient housing provides positivity both constructively and economically. For this reason, measures for the construction of energy-efficient housing in all regions of our country are being carried out on a large scale.

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INCREASE LOCAL PROSPECTS OF INNOVATIVE APPROACHES TO IMPROVING ENERGY EFFICIENCY OF BUILDINGS

Abstract. This article will talk about the implementation of the work carried out on the scale of developed countries on the basis of our local conditions, the results and decisions made in this regard, as well as the state and positive results of the work carried out in some regions.

Key word: Energy-saving, aerated concrete blocks, Passive House, modernizatsiya, environmental, kam uglerodli, thermal mass.

It is known that the growth of the population on Earth and economic development are leading to an increase in the consumption of energy resources, an increase in demand for them and price.

At the same time, such a situation is caused by the absorption of the Earth's general ozone layer, pollution of the atmosphere from acidic residues, the emergence of toxic substances as a result of the occurrence of secondary chemical reactions in all layers of the biosphere, pollution of oceans, land-based water bodies surfaces and groundwater, violation of global and territorial environmental balance and

Therefore, the importance of energy conservation and efficiency will continue to increase. Work on this is being carried out in each country with an approach to aloxida.

Some changes are ignored, others are successfully introduced into production. A similar situation once happened with energy-saving window profiles, which are now widely used in construction. Sometimes they are still installed on the panels in the factory, which excludes incorrect installation and, as a result, heat loss.

Interestingly, in recent years, a proposal has been considered to take into account environmental indicators in the process of assessing the energy efficiency of the building. For example, many companies are replacing lead stabilizers on the window profile with safer materials.

An important role in improving energy efficiency is played by the materials provided for the construction of the building. For example, modern aerated

concrete blocks allow you to connect them with the most delicate seam. This reduces the risk of heat loss through the joint solution. In addition, a special glue has recently been presented, the use of which reduces any heat loss to a minimum. In most cases, they are reduced to zero.

Often innovative changes also affect the engineering systems of the building. This applies primarily to ventilation and heating systems. However, in recent years, elevators have also been evaluating energy efficiency, as energy loss has been proven to reach fifteen percent in some cases when using these devices.

Experts advise to evaluate the elevators not in production, but after installation on the construction shaft. In this case, the data will be as close to reality as possible.

I would also like to note that energy efficiency ideas are very popular. If we talk about the residential sector, then apartments built on the basis of modern technologies are in great demand from buyers. In this regard, there is hope that integrated technologies aimed at improving energy efficiency will be used everywhere and become one of the priorities. public policy is in construction.

An energy-saving House is a building that combines very low energy consumption with a comfortable microclimate. Energy savings in such houses are up to 90%.

The annual heating requirement of an energy-efficient house can be less than 15 kW per square meter.

For example, in the most common design of a private house today (reinforced concrete foundation, a "warm floor" system without insulation, 1.5 brick walls with cement plaster, ordinary metal-plastic windows, roof insulation 150 mm and no supply) and exhaust ventilation with heat release) the energy consumption for heating is 110-130 kW per 1 m² per year.

A building built on the basis of modern energy efficiency standards can save 40-70% of utility bills. Large amounts of energy and resources are saved. At the same time, the general indicators of temperature, favorable microclimate, air humidity are in a larger order than the generally accepted ones, and are regulated by the owner of the room.

Today, there are four of the most popular ways to check the energy efficiency of buildings, consisting of those below:

1. Short-term measurement method. This style consists of a one-time measurement of the reading of one or two modernized engineering equipment in a building. In this case, the readings of other systems are analyzed based on General Statistics. As a result, the readings of new and old models are compared, the difference is taken into account and the energy efficiency class of the building is established.

2. Continuous sequential measurement method. In this case, the auditor measures the performance of modernized engineering equipment with a certain regularity for a certain period of time. The readings of old equipment, as in the first method, are measured by statistical analytical calculations. The final

indicators will help to identify shortcomings in engineering equipment and update the system as efficiently as possible.

3. Analysis of the reading of equipment inside the building. As a rule, this is a long-lasting process that involves constantly recording the readings of all equipment in the building, on the basis of which an analytical conclusion is drawn and a certificate of energy efficiency of the building is issued.

4. Computational and experimental. A modern way to determine the energy efficiency of buildings and structures, it is based on computer calculations and modeling the energy curve model of the building. This type of analytical work, as a rule, is carried out throughout the building.

In our country, work is also being carried out in a high way, for example, more than three years have passed since the signing of the Paris agreement on climate change. The date of signing this international document almost coincided with the approval by the Government of Uzbekistan of a joint project with our GEJ and the Ministry of construction of Uzbekistan to promote and build energy-efficient and low-carbon country houses and rural settlements.

Work in this direction has been successfully carried out from 2017 to the present day, and the first high-quality results have determined a positive direction for the entire project.

In accordance with the Presidential Decree No. 5577 of November 14, 2018 "on additional measures to improve state regulation in the field of construction", according to the state program "affordable housing of rural residents", all housing construction should be energy-efficient on new model projects developed with Project Support.

In 2019, their number exceeded 12,000 units, the main feature of such structures is the use of additional thermal insulation made of mineral wool (Basalt Fiber), which retains heat in winter and cool in summer, reducing energy consumption by about 30 percent.

In addition, within the framework of our project, a green mortgage scheme was tested in order to attract personal investments in construction in five regions of our country (Samarkand, Surkhandarya, Fergana, Khorezm and Bukhara). It is noteworthy that 800 one-story three-room houses were built not only with the insulation of the outer wall, but also with photovoltaic devices with a power of 300 Watts, as well as water heaters with a volume of 200 liters, which are powered by sunlight.

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MULTICULTURAL ASPECTS OF IMPROVING STUDENTS' DISCOURSE COMPETENCE

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Key words: Discourse competence, writing skills, multicultural aspects, modern methods, approaches of discourse (written) competencies, the usage of technologies, problems in writing, the methodology of writing.

Discourse is an ambiguous term of the humanities, in which the subject of study directly or indirectly involves the study of the functioning of the language - semiotics, literary criticism, linguistics, ethnology, sociology, anthropology, philosophy. There is no unambiguous, universally recognized definition of the concept of "discourse" that would cover all cases of its use, and perhaps this is the reason for the wide popularity of this term in the past few decades: various understandings, connected by non-trivial relations, quite successfully satisfy various kinds of conceptual needs, modifying traditional ideas about dialogue, speech, style, text, and even language. In 1999, a collection of works dedicated to the French school of discourse analysis was published. In the introductory article to this work, P. Serio lists eight different understandings. Also, the stress in this

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Through this study, we mainly aim to examine and formalize the process of building the multicultural aspects of discourse competence of future teachers in the context of teaching internships; it also looks at the factors which influence it. How do student-masters perceive their learning path of a pedagogical approach, sensitive to multicultural differences? What are the factors influencing the construction of multicultural competence of future teachers during teaching placements? What learning models future participating teachers would prefer? Here are the main questions to which this article will propose answers, in observing the following four steps: as a first step, we will specify the theoretical framework underlying. Second, we will describe the research methodology used. The presentation of the results and interpretation in the light of the theoretical framework chosen will be followed by conclusions, which will also suggest avenues for future research. This research took place in Uzbekistan. The program followed by the participants lasts four-academic year. In order to be eligible, candidates must hold a first degree in university cycle. Structured in two terms, the program includes theoretical courses on learning, on the education system and didactics courses of different subjects offered to two terms and two teaching placements of four weeks each (in the fall and spring), carried out under the supervision of an associate teacher and an internship supervisor attached to the faculty education.

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can self-regulate his responses to unexpectedness. When it comes to challenging the multicultural aspects of discourse competence of students, research rarely deals with all aspects mentioned above.

Conclusion. This study proposed a formalization of the process of building multicultural aspects of discourse competence of the students mostly, as perceived by student-masters during study period. Analysis of results identified the learnings achieved and the factors which influenced them. Interpreted from the perspective of experiential learning the journeys of the nine participants are proving to be incomplete, mainly because of the lack of specific framework. A model supervision during teaching courses inspired by the theory of experiential learning emerged from this research. According to the participants, these suggestions would lead to the construction of the multicultural competence of future teachers, a professional dimension considered like important in the current global context. Conducted with a small number of participants and taking into consideration only the point of view of the student-masters, this study will not be able to claim the generalization of its conclusions. Future descriptive research may inform the proposed model for the construction of the multicultural competence of the teacher by using a larger number of participants and by adding categories that appeared to be significant. The perceptions of associate teachers and practicum supervisors should also be considered. In an approach of action research, the proposed model of supervision of trainees could be experimented with in teaching in order to verify its transferability to the construction of skills other than multicultural competence. As well as the written competence is the fact of good skills which shows the reality of multicultural relation.

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EFFECTIVENESS FACTORS OF INTENSIVE WALNUT CULTIVATION IN UZBEKISTAN

Abstract. The article discusses ways to increase economic efficiency in the walnut industry in intensive ways and the results of reforms implemented in this area. As a result of the analysis, a comparison was made on the basis that the intensive method is more efficient in terms of income per hectare of land, even when the lowest level of productivity and product prices are calculated at prices 25-30 percent lower than retail prices.

Key words: walnut production, intensive method, economic efficiency, cost, profit, profitability.

Introduction. The best practices of foreign countries, the implementation of modern intensive and innovative technologies in the field of walnut growing, which is currently considered one of the most important areas of horticulture, are of great importance in the continual increase of the productivity of walnuts. Another important point is that the establishment of walnut fields based on intensive technologies is being considered as one of the important strategic directions of modern horticulture to improve the food supply of the population.

In the last five years, the demand of farmers and subsistence farms and the population of our country for intensive horticulture products and intensive tree seedlings is increasing day by day. Therefore, a lot of attention is being paid to the development of semi-intensive and intensive plantations, including the establishment of walnut groves in the foothills. Today, a number of positive indicators are being achieved in the field as a result of comprehensive arrangements implemented in Uzbekistan to increase the production of walnuts, unabi, pistachios and other fruits, which are considered to be of high demand in the world market. In particular, a seedling delivery system is being developed on the basis of walnut and unabi seeds imported from foreign countries.

President Shavkat Mirziyoyev's decree of June 1, 2017 "On the Establishing and organizing the Association of walnut producers and exporters"⁴⁰ through the effective use of dry land in agriculture and the establishment of intensive walnut orchards aimed at increasing the production of walnuts in the domestic and foreign markets, and as an important document made a great contribution to the development of the walnut industry. According to the decision,

⁴⁰ The Decision of the President of the Republic of Uzbekistan dated June 1, 2017 "On the establishment of the association of walnut producers and exporters and organization of its activities". People's word January 17, 2017. <https://lex.uz/docs/3225162> .

"Walnut Producers and Exporters Association" was established and its tasks were clearly defined.

The mountain regions of Uzbekistan are favorable places for the growth and high yield of tree seedlings such as walnuts, almonds, and pistachios. In particular, today it is possible to get a good harvest from walnut trees in Andijan, Jizzakh, Namangan, Samarkand, Navoi, Kashkadarya, Surkhandarya, Fergana, Tashkent regions ⁴¹.

With the Decree of the President No. PF-4947 of the Republic of Uzbekistan dated February 7, 2017 "On the Strategy of Actions for the Further Development of the Republic of Uzbekistan"⁴², five priority areas of development of the Republic of Uzbekistan in 2017-2021. In connection with the implementation of the Strategy of Actions, the State Program defined also important areas such as increasing the volume of walnut production, encouraging walnut production in farms.

In the current conditions, special attention is paid to the implementation of projects aimed at the production of agricultural products, including fruit and vegetable products, their processing and export. The Decree on additional measures for the rapid development of horticulture and vegetable growing serves as an important factor in this direction ⁴³.

Literature review and methodology. Foreign agro-economists such as H. Adem & Peter H. Jerie, Larry Harper, Dr. William Kurtz, Russian economists such as Nazranov X.M, Chemazokova Z.Z., Salvaridze L.X., Nakonechnaya O.A., Khashir A.A., Bakhshinejad M. conducted research on the development of walnut production, increasing their yields and the development of horticulture in the foothills..

Scientific-theoretical solutions aimed at improving the economic basis of fruit and vegetable growing, cooperation relations, intensive horticulture in the agriculture of Uzbekistan were reflected in the research works of a number of agro-economists such as O'.Umurzakov, N.Khushmatov, O.Jumaev, Kh.Khushvaktova, Ch.Murodov, S.Eshmatov, O.Sattorov, N.Ashurmetova, O.Norbekov, F.Polvonov, etc...

Economic efficiency reflects the result of economic activity of the farm in a complex way and the interaction of its elements. Economic efficiency evaluation criteria is a system of absolute, relative and dynamic efficiency indicators that allows to evaluate the effectiveness of the methods and means of ensuring economic efficiency used in the farm.

If we consider the term "efficiency" in a broad sense, we can emphasize that it is a general concept, since this term can be used in any field of human

⁴¹Astanakulov N., and others. Recommendations for establishing walnut groves. <https://www.agro.uz/uz/services/recommendations/9029/> . _

⁴²Decree of the President of the Republic of Uzbekistan dated February 7, 2017 "On the Strategy of Actions for the further development of the Republic of Uzbekistan" <https://lex.uz/acts/3107036>.

⁴³<https://xs.uz/uzkr/post/istiqbolli-lojihalar-aholi-bindligini-tasetsen-va-yurt-vorovonliga-kizmat-qilidadi>.

activity. D. Ricardo, one of the founders of the concept in economics, in his work "Political Economy and the Beginning of Taxation (1817) "expressed economic efficiency as the ratio of the result to certain types of costs ⁴⁴. "

O. Sattorov's researches show that "the fruit trees are low, the crop can be harvested easily by hand, and the mechanical damage of the harvested crop is avoided due to the weight of high-quality products offered to the market." This ensures a 20-25 percent increase in the economic efficiency of intensive orchards. Also, scientific and practical approaches such as carrying out feeding activities during the growing season, creating conveniences in the use of drip irrigation system and mechanization tools⁴⁵ have been reflected.

Results. It is known that today in Uzbekistan, one of the most important tasks is to fully satisfy the growing needs of the population for natural products and the industry's requirements for raw materials. Because today, the living standard of the population and further development of the economy of Uzbekistan remains one of the most urgent tasks in the conditions of intensive development of agriculture.

Walnuts are grown in almost all regions of Uzbekistan. Today, there are 337,300 hectares of groves, of which 18,700 hectares are walnut plantations. It is reported that in Uzbekistan walnuts varieties such as "Bostonliq", "Thing shell", "Jubilee", "Ideal", "Shakl N-86", "Chandler", "Peschansky", "Cogalniceanh", "Codrene" are being cultivated ⁴⁶.

Discussion. Improving global food supply is an integral part of every country's economic goals and national security. The food market reflects the real situation of producers and consumer demand.

One of the key aspects of food safety is related to walnuts and nut products. Walnut farmers stress the importance of nut production for food security and emphasize the need for sustainable development and increased efficiency in producing nuts.

Also, the increase in the consumption of walnuts and its inclusion in the diet is of great importance today. This is expressed by the fact that walnuts contain a large amount of protein and other useful elements.

Data from the analysis show that even in the case when the minimum level of yield and the price of products are calculated at 25-30 percent lower than retail prices, the income from each hectare of land in the production of products in the traditional way was 42-51 mln UZS, and in the intensive method-86,8-103,5 mln UZS (Table 1).

Product profitability levels will be 150.4 and 329.5 percent, respectively. The trends among the data presented in the table are mainly due to walnut

⁴⁴Рисардо Д. Начала политической экономии и налогового обложения. М.: ЭСКО, 2007. 960 р. С. 48.;

⁴⁵ O.B. Sattorov "Directions for improving the economic basis of intensive horticulture development in farms" dissertation of Doctor of Philosophy (PhD) in economics. 2021. – B.12.

⁴⁶ <https://east-fruit.com/uz/yangilikar/this-year-in-spring-of-uzbekistan-s-alcohol-planted-areas-increased-to-11-thousand-hectares/>

cultivation methods, walnut varieties, land terrain, planting scheme, i.e. seedling consumption per hectare. It should be emphasized that these calculations serve as a basis for making relevant conclusions in the assessment of various economic and financial risks of product growers and investors in the establishment of walnut groves.

Table 1

Analysis of economic efficiency indicators of walnut cultivation in different ways on average per hectare of land (in 2021 estimates)⁴⁷

Indicators		Unit of measure	In the traditional way, according to varieties		In an intensive way, by varieties	
			Ideal	Chandler	Ideal	Chandler
Costs of establishing a walnut grove on 1 hectare of land		thousand UZS	13164	14926	133657	136755
Annual maintenance costs of 1 hectare of walnut grove, (<i>when in full harvest</i>)	Total	thousand UZS	14577	15491	19446	22263
	Salary		5559	5915	7414	7919
	Material and others		9018	9576	12032	14344
Periods of entry into the main harvest of walnut groves	5 years	c/ha	5.3	8.4	10.5	16.4
	7 years	c/ha	10.1	15.3	22.2	32.1
	10-15 years	c/ha	25	31.2	54.4	65.5
On average, 1 hectare of walnut grove (<i>when in full harvest</i>)	Income	thousand UZS	36500	45552	79424	95630
	Income	thousand UZS	42059	51467	86838	103549
	Net profit	thousand UZS	21923	30061	59978	73367
Rate of return		%	150.4	194.1	308.4	329.5

Based on the calculations, it can be seen that the difference between the costs associated with the establishment of one hectare of walnut grove is 8-9 times higher in the intensive method. However, it can be noted that intensive walnut cultivation is effective through the following aspects:

- 3-4 times the number of seedlings placed on one hectare of land in an intensive way;
- high potential for efficient use of water and mineral fertilizers through intensive drip irrigation;
- high level of labour mechanization in production;
- ease of product quality control and management;
- high efficiency and ease of combating diseases and pests;

⁴⁷ The calculation was made on the basis of "Sample technological cards for the care of agricultural crops and production of products" intended for the years 2016-2020 and the scientific research of the author.

- the high possibility of quick fruiting of intensively established orchards and the implementation of appropriate agrotechnical measures;
- the convenience of harvesting the product and carrying out other agrotechnical activities;
- despite the 8-9 times higher costs associated with the establishment of a orchard in an intensive way, these costs will be reduced within 3-4 years after the field is fully harvested due to the introduction of high resource-saving technologies full coverage, etc.

Also, resource efficiency in walnut production was calculated on a scientific basis. It compares the land area required to produce 10 tons of walnuts, irrigation water required for the number of walnut seedlings, labor costs, orchard establishment costs, and annual maintenance costs in different production methods (Table 2).

Table 2.

Assessment of resource efficiency in walnut growing technologies⁴⁸

No	Indicators	Unit	For 10 tons of walnuts		Compared to the traditional method, in the intensive method, %
			In local conditions		
			In the traditional way	In an intensive way	
1.	Cultivated area	hectares	1.7-2.4	1.14	67.1-47.5
2.	The number of seedlings	bush	360-508	3 19	88.6-62.7
3.	Irrigation water	m ³	3600-6192	5341	148.4-86.3
4.	Mineral fertilizers (all)	Kg	283-447	316	111.7-70.7
5.	Fuels	liter	374 - 528	328	87.7-62.1
6.	Labor cost	person/hour	2150-3024	1539	71.6-50.9
7.	The cost of planting a garden	thousand UZS	17280-24384	143550	8.3-5.9 times
8.	Annual maintenance costs	thousand UZS	21382-30187	17609	82.3-58.3

Note: 2021 when average orchards are in full harvest.

This table requires placement according to microclimate, soil and hydrogeological conditions in each area.

The available natural resources of the Republic of Uzbekistan, especially the reserve of lands not in use in agriculture, show the high potential for ecological, social and economic development.

This, in turn, offers great opportunities in the nut industry itself, which has a long historical experience.

The internal possibilities of establishing walnut orchards in Andijan region, which has special demographic indicators in our republic, were analyzed. In 2020, the total area of walnut groves in the urban area of the district was 1223 hectares.

⁴⁸The calculation was made on the basis of "Sample technological cards for the care of agricultural crops and production of products intended for 2016-2020" and the scientific research of the author.

In some districts, it can be seen that the available walnut area is 10 to 100 times less than the domestic capacity. That is, the weight of the land area occupied by existing walnut groves is 7.1 percent compared to the internal potential (Table 3).

Monographic studies were conducted in Andijan, Oltinkol and Pakhtaabad districts of Andijan region. 10 walnut farms were selected from each district and questionnaires were conducted.

According to the results of the survey, it was found out that most of the farms engaged in walnut growing, i.e. 82%, are subsistence farms, and 18% are multi-branch farms.

The reason for these changes may be the increasing demand for nuts and nut products by the growing population, environmental changes, the need for calorie-dense products, and other reasons.

Table 3

Internal opportunities for the expansion and establishment of pine plantations in the Andijan region (in hectares)⁴⁹

No	Districts	Walnut groves available in 2021	Total agricultural land where walnut groves can be established	Including	
				Forest land fund	Reserve lands
	Andijan	134	2 3 6 6	2330	36
	Andijan town	38	373	1	372
	Asaka	43	984	760	224
	Baliqchi	58	206	206	
	Buloqboshi	15	2703	425	2278
	Bo'ston	11	350	338	12
	Jalaquduq	56	1080	325	755
	Izboskan	57	214	214	
	Qo'rg'ontepa	56	5327	5268	59
	Marxamat	64	2413	915	1498
	Oltinko'l	222	107	106	1
	Pakhtaabad	82	35	0	35
	Ulug'nor	115	554	95	459
	Xonobod.sh	9	50	44	6
	Xo'jaobod	27	417		417
	Shahrixon	236	2039	2039	
	TOTAL	1223	19218	13066	6152

Also, if we analyze the gross yield, yield and per capita indicators of walnuts in the republic, in 2021, 79,300 tons of walnuts were harvested in our country. This indicator has increased by 119.2% compared to 2017. In 2021, yield was 147.6 c/ha, an increase of 125.4% compared to 2017 (Table 4).

In addition, comparing the indicators of the Andijan region and the Republic for the cultivation of nuts, we can see that in the Andijan region 7022 tons of nuts were grown in 2021, which is 12.1 times less than the Republican

⁴⁹It was compiled by the author based on the data of Andijan Regional Land Cadastre Department.

indicator, but in the Andijan region this indicator has reached an increase of 1.6 times than in 2017. As for the volume of nuts per capita, there is also a trend of growth on this from year to year.

If the annual average consumption of walnuts per capita is 8 kg according to medical norms, in 2021 it is observed that we are consuming 4.5 or 2.1 times less than the norm.

Table 4

Key indicators of walnut production⁵⁰

No	Indicators	Unit	2017 year	2018 year	2019 year	2020 year	2021 year
	Gross production of walnuts by republic	tons	65463	59758	67733	79141	79300
	The average yield of walnuts in the republic	c/ha	117.7	122	120.3	123.2	147.6
	Gross yield of walnuts in Andijan region	tons	4397	4886	5933	6980	7022
	Average yield of walnuts in Andijan region	c/ha	64.4	53.2	54.6	57.1	57.4
	Annual average nut volume per capita	kg	3.1	3.5	3.8	4.4	4.5

In general, in recent years, a lot of attention has been paid to walnut growing, increasing the volume of walnut production in the foothills, creating opportunities for farmers to use dry land efficiently, focusing on the development of intensive planting, As a result of large-scale implementation of reforms, such as the establishment of intensive walnut orchards, opportunities for increasing the income of the population will be created.

Conclusion. The initial period of post-independence economic reforms related to the development of the sector covers the years 1990-2002, the second stage covers the years 2003-2016, and the 3rd stage covers the years after 2017. In this last third period, rapid changes and reforms are being implemented in the industry, and the volume of walnut production is increasing with the help of modern resource-efficient technologies and intensive methods.

In 2021, the volume of walnut production in the Republic of Karakalpakstan (2.4 times), Andijan (2.1 times), Bukhara (4.9 times), Jizzakh (1.94 times), Navoi (2.02 times), Tashkent (1.9 times) Namangan (1.8 times), and Fergana region (2.39 times) amounted to a high share in the Republic. There was also a decline in walnut production in the regions of Kashkadarya (30.8 %), Samarkand (82.3%) and Surkhandarya (46.2%).

Looking at the analysis in the cross section of all categories of farms, it can be seen that mainly the production of nuts corresponds to the contribution of peasant farms, that is, 60217 tons were grown in 2017, and by 2021 74648 tons or 124.0 percent more were grown. 94.1% of the total walnut crop grown in 2021

⁵⁰It was compiled based on the information of the State Statistics Committee of the Republic of Uzbekistan.

corresponds to peasant farm contributions. In 2021, the production of nuts on farms decreased by 92.1% compared to 2017.

As a result of the development of high-demand products in Uzbekistan such as nuts, funduk, almonds, pistachios, a number of consumers are buying nuts at low prices, nisba-tan, due to the savings in transportation costs. In general, the organization of nut production in our country in a cluster method expands the possibility of ensuring the processing industry's need for raw materials.

The presence of "informal intermediaries" in the markets in the regions where the study was conducted, mainly among manufacturers and buyers, forms the basis for the fact that the price of nuts increases by 25-30 percent at each stage in the middle.

Organization of sale of nuts and nut products based on the vending system; direct delivery of nuts and nut products to retail outlets; organization of "mobile trade" of nuts and nut products; organizing the sale of nuts and nut products based on the establishment of "producer - seller-consumer" cooperatives; organization of sales using the service of logistics centers; establishment of agricultural products portal and others.

According to the sociological research and monographic observations conducted in the districts of Andijan region, it is appropriate to organize special training courses for them to acquire legal knowledge in farms.

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USE OF GEOINFORMATION TECHNOLOGIES IN DETERMINING SOIL SALINITY

Abstract. In this article, soil salinity was analyzed using geoinformation technologies based on the soil data of the Karakalpakstan district of the Republic of Karakalpakstan in 2017, 2020, and 2023. Based on the research results, soil salinity was classified and mapped. Such studies help to assess the salinity of the soil and to determine operationally in which areas their change is high.

Keywords: electrical conductivity, interpolation, GIS, digitization.

Introduction

Soil salinity is the main problem affecting crop productivity in the use of irrigated land. The area of irrigated land in the Republic of Karakalpakstan is 514.6 thousand hectares, which is 3.09% of the total land area of the Republic, and 15.78% of the land intended for agriculture (2022). This requires organizing rational use of land under the conditions of limited resources, identifying negative changes in it in time, and developing measures.

Geoinformation technologies play a crucial role in determining soil salinity through data collection, analysis, and visualization. Geographic Information Systems (GIS) software allows the integration of different spatial data layers, including soil type, topography, land use, and climate, to analyze the distribution

and extent of soil salinity. By overlaying these layers and using spatial analysis tools, GIS can help identify correlations related to soil salinity.

Data and research methods

Research object. In the article, the Karaozak district of the Republic of Karakalpakstan was taken as the object of research (Fig. 1). Its area is 587.1 thousand ha, including 32.1 thousand ha of irrigated land. The Earth's surface is mostly flat. The northeastern part of the district is occupied by the dunes of the Beltov Mountains, and the large area in the southern part is occupied by the Tashkuduq dunes. On the southern edge is the Sultan Uvais Mountain (the highest point is Karachingil, 485 m). The climate is strictly continental, with hot summers and cold winters. The average temperature in January is from 5° to 8°. The lowest temperature is 35°, in July 26-28°. The highest temperature is 42° in July. The cold-free period is 195-200 days. Annual precipitation is 110 mm, mainly in winter and spring. District farms receive water from the Yesimozak, Karaozak, and Central canals of the Kuvanish-Jarma canal. Amudarya flows from its southern edge. The soils are grassy, sandy, meadow, meadow-swamp, and saline soils. There are large portable and semi-portable dunes in the southern part.

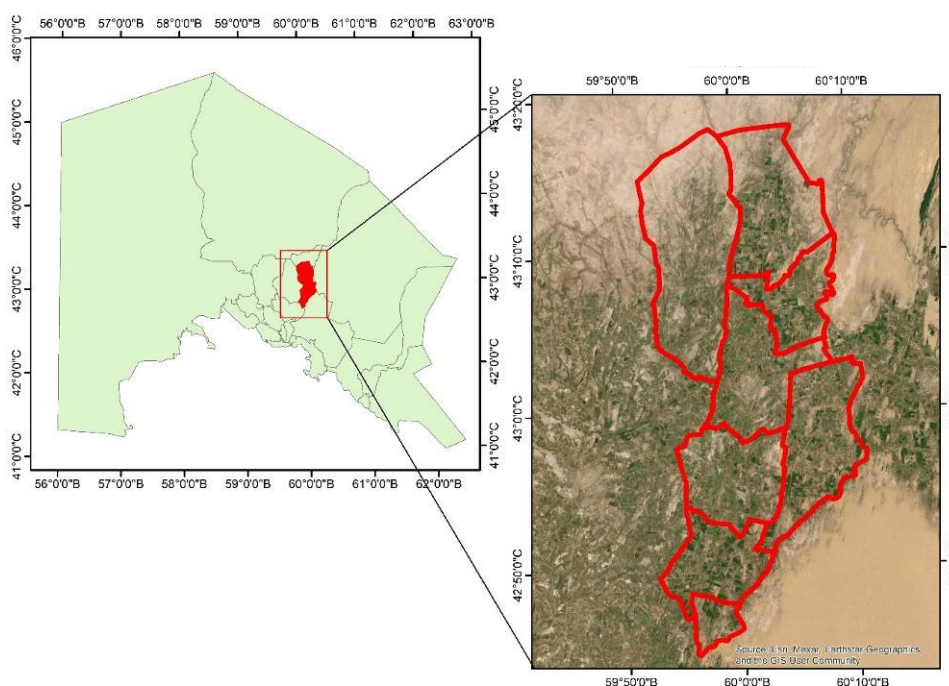


Fig 1. Location map of the research object.

Collected data. In the assessment of soil salinity, the data of soil electrical conductivity (EC) in 2017, 2020, and 2023, determined in laboratory conditions by the reclamation expedition under the Ministry of Water Management of the Republic of Karakalpakstan, were collected and digitized. (Fig. 2).

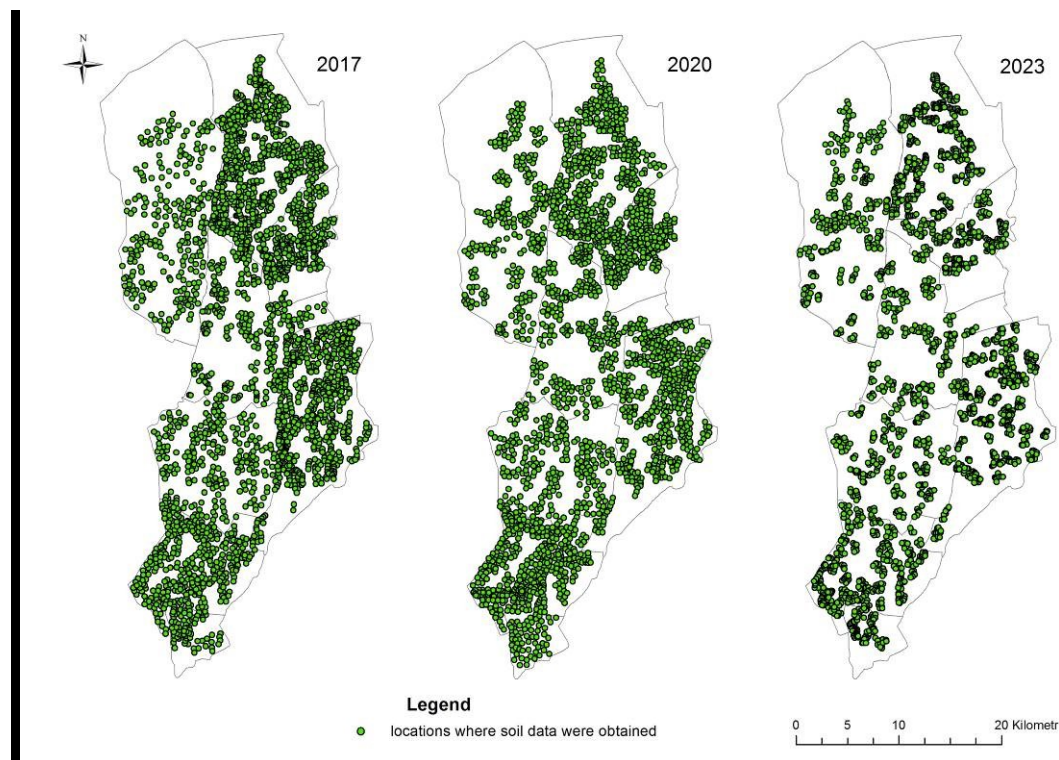


Fig 2. Digitized database view.

In the fall of 2017, the total electrical conductivity of the soil was obtained from 2752 points, while in 2020, 2260, and in 2023, data was collected and processed from 2273 points. The obtained data were classified using the classification developed by the Food and Agriculture Organization of the United Nations (FAO).

Table 1. Classification of soil according to electrical conductivity.

Salinity class	None salted	Medium salted	Salted	Highly salted	Very high salted
EC, ds/m	<2	2-4	4-8	8-16	>16

In the data of 2017, the lowest indicator was 0.44 ds/m, while this indicator was 0.58 and 0.44 ds/m in 2020 and 2023, respectively. It is possible to see that the highest indicators have changed significantly. That is, 9.57 ds/m in 2017; and 16.87 ds/m in 2020; in 2023, it will be 47.04 ds/m.

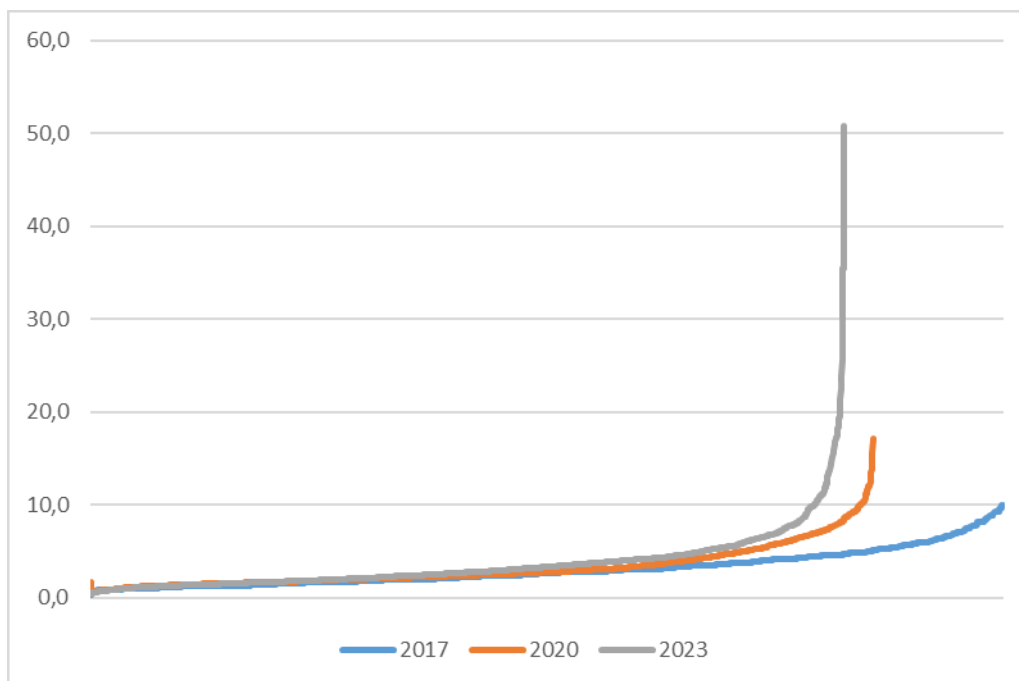


Fig 3. Soil EC changes in 2017, 2020, and 202.

The collected data was analyzed based on the interpolation method in ArcGIS 10.8 software, and the changes over the years were visualized. The extracted data were converted from raster data to vector data, and the salinity areas were calculated by class.

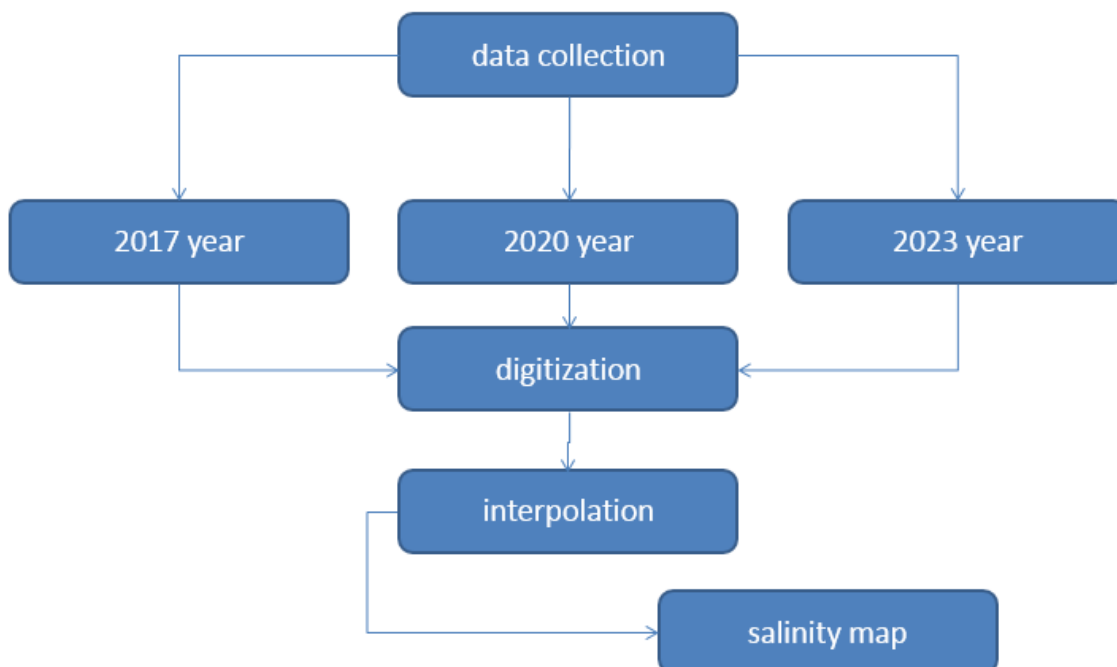


Fig 4. Research methodology.

Results

Based on the results of the research, the dynamics of soil salinity in Karaozak district over the past 6 years were studied and mapped using geoinformation methods. If in 2017 there was no very high level of salinity (>16 ds/m) in the total area of the district, we can observe that by 2023 such areas will be 0.1% (Table. 2).

Table 2.

Percentages of salinity classes by district in 2017-2023 (%).

Salinity class	2017	2020	2023
Non-saline	28,7875	15,9547	13,4066
Slightly	58,2328	63,9383	58,4665
Moderately	12,8797	19,5572	26,1183
Very	0,10004	0,54898	1,89916
Extremely	0	0,0008	0,1095
Total	100%	100%	100%

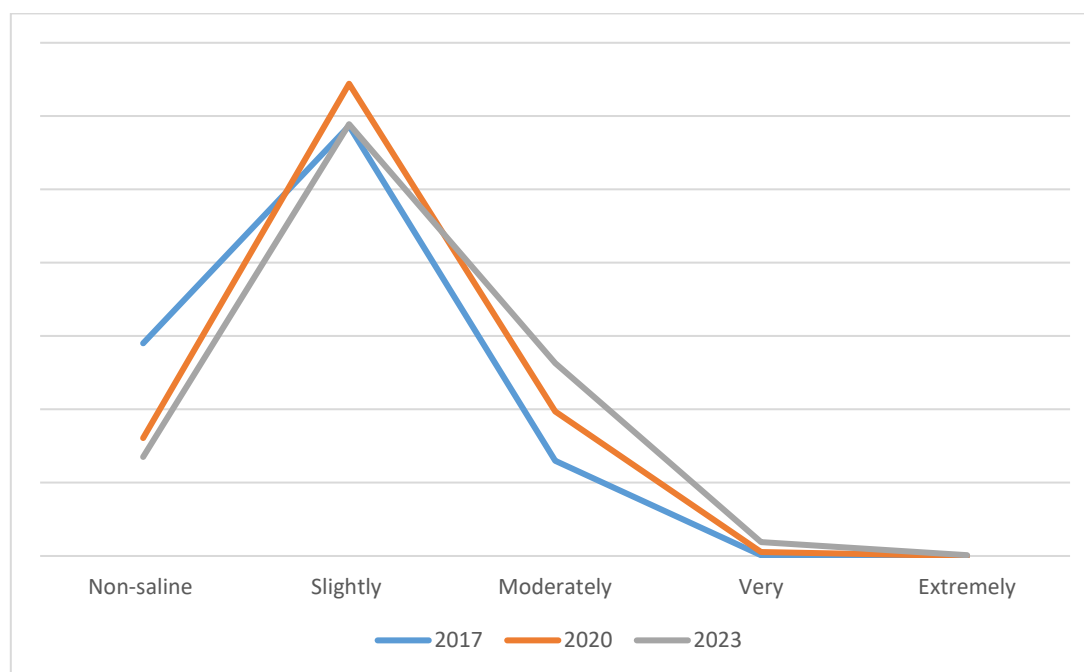


Fig 5. Dynamics of salinity.

The class with the most changes was determined in the non-salted (class 1) and salted (class 3) classes. In 2017, the non-saline land was 28.78%, and in 2020, it was 15.95%; by 2023, it was found to be reduced by 13%.

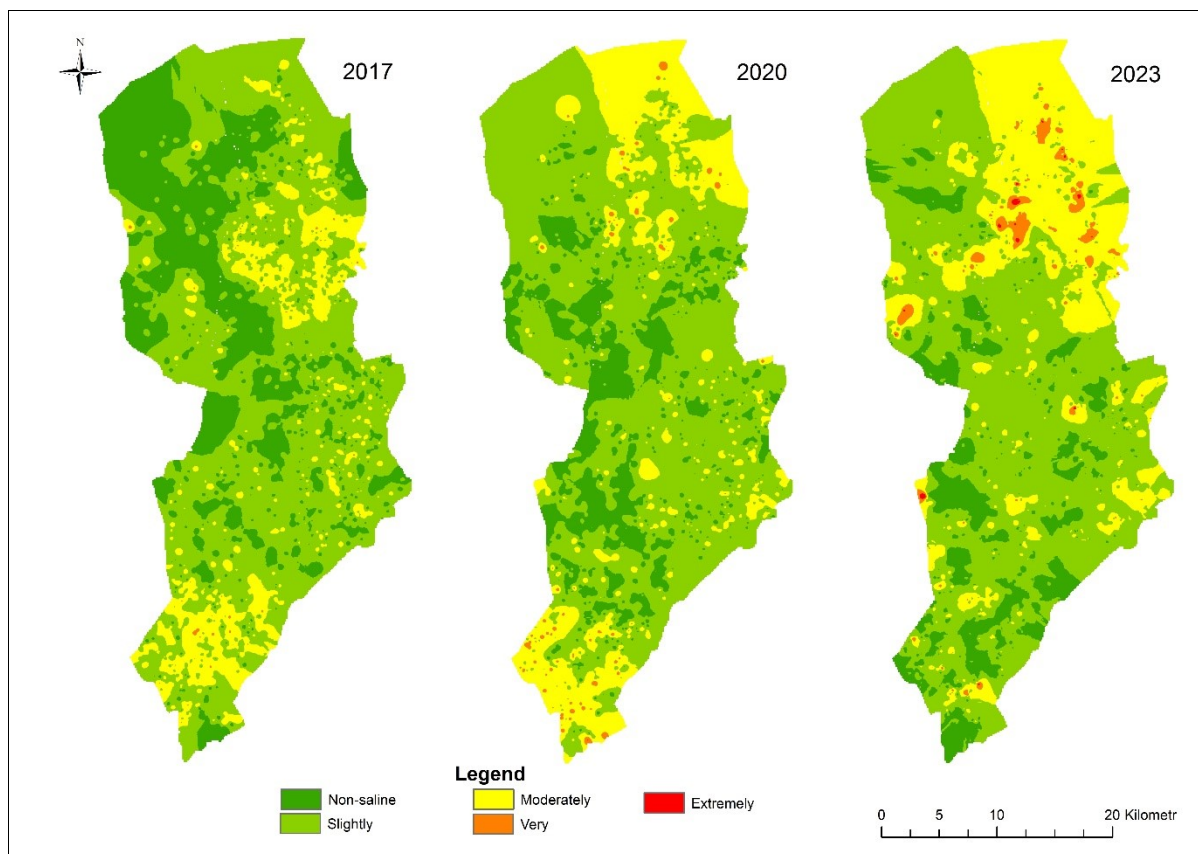


Fig 6. 2017, 2020, and 2023 salinity map of Karaozak district.

In the ArcGIS program, the research object was mapped over the years and placed side by side for visual comparison of the changes, which greatly helps in assessing which area the changes were strong and defining the area of future measures.

Conclusion

In short, the use of Geoinformation technologies in the determination and mapping of soil salinity allows operational identification and assessment of changes in the ground, and monitoring. In this paper, we started by building a database of soil samples, which, if correlated with remotely sensed spectral data, will help identify changes that are difficult to perceive in the future and negative impacts. Plays a major role in preventing secrets. Such studies are also of great importance in forecasting the correct implementation of agriculture.

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MAPPING THE CURRENT STATE OF THE LOWER AMUDARYA STATE BIOSPHERE RESERVE

Annotation. In our country has wealthy nature, including four seasons of year that represents unique zone. However, a relationship to nature is being changed in the conditions of humanity developing. Therefore, now every country is organizing protected areas to save and protect their nature environment and natural resources. Government authorities manage these protected areas. Reserves are important to protect and research nature and natural resources. Reserves are organized for ecosystems in a certain zone and the animals and plants that compose them also to scientific researches and to motivate stakeholders.

Key words: Environment; Protected area; Lower Amudarya biosphere reserve; Flora and Fauna; Ecosystems.

Introduction. In Uzbekistan, have many networks of natural zone that crowded of several biocenosis and ecosystems. In particularly, in our country have 9 protected areas, 2 national parks, the centre of republic (Jayron ecocentre) is according to increase types of rare animals, 12 state order offices. Total area of protected areas is 20520 km²; this is 5% of all territory of Uzbekistan. One of the reserves is Lower Amudarya reserve that located in the lower Amudarya river, on the territory of Beruni and Amudarya districts, on the right bank of the river. First, in 1939, this reserve had been organized as a “Primorskiy qoriqxonasi”, but later

it was reorganized as a “Baday-Tog’ay” in 1971. In 2011, the Cabinet Ministers of the Republic of Uzbekistan decided to accept the proposal of the Council of Ministers of the Republic Karakalpakstan and the Ministry of Agriculture and Water Resources to transform the Badai-Tugai nature reserve into Lower Amudarya State Biosphere Reserve by increasing its territory from 6462 until 68718 hectares resolution.

Results: The main objective of Lower Amudarya State Biosphere Reserve is to preserve and restore landscapes, flora and fauna of Tugai forests, including their rare and extinction species, improve ecological condition and provide sustainable use of natural resources and study of natural processes, and promote environmental education, training and awareness. In order to realize the aims and tasks of the biosphere reserve, the territory is divided into 3 zones:

- protection;
- buffer;
- transitional (economic) zones.

The protection zone is composed of 11568 hectare (17%) and it is under strict protection regime. This zone is for protecting natural objects and complexes, for conducting monitoring and scientific research.

The buffer zone consists of 6734 hectare (10%) and is for protection and restoration of natural objects and complexes. The regime is set according to the law. The land of Buffer zone is in possession of renters (Pic. 1).

The Transitional (Economic) zone consists of 50418 hectare (73%) and is formed for realization of household and other activities without damaging the natural objects and complex. Transitional reserves land is also in possession of land users and renters Resolution.

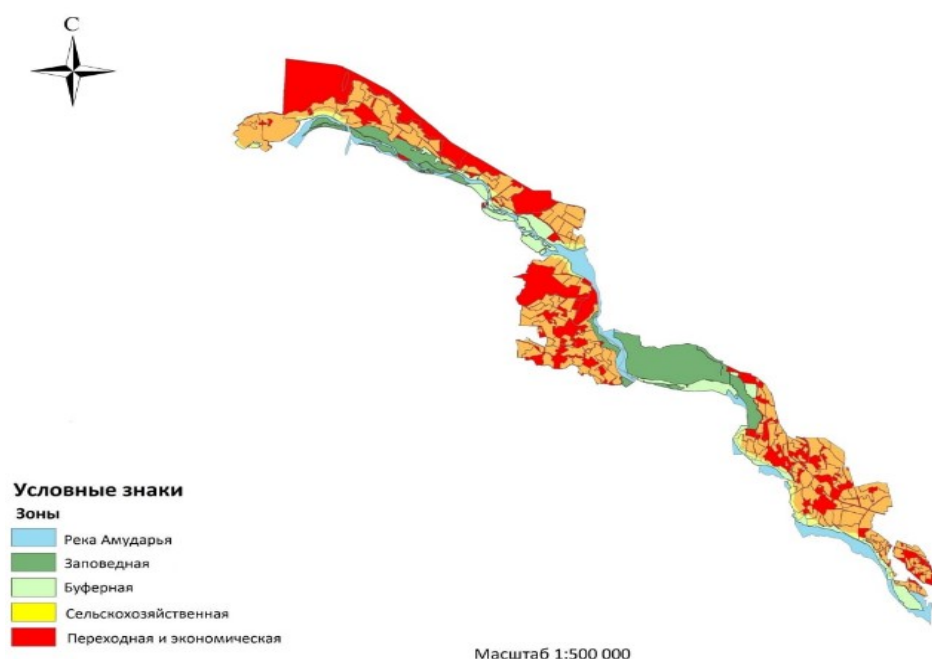


Fig. 1. Proposed zonal map of the Lower Amudarya State Biosphere Reserve

Also, in this reserve have objects of cultural and historical heritage:

-Shilpik. Shrine building e.a. II-IV - IX-XI centuries.

- Janpikh-castle. Ancient Castle e.a. IX-XI - XIII-XIV centuries

-Gyaur Castle II - IV centuries.

- The signal tower in the Janpikh-Kala castle (Koyanshikh-say) from the 10th century to the 13th century.

- Mausoleum of Sultan Uays Baba e.a. XIV century.

- Ancient Khiyat Castle XII-XIV centuries. (From uzbekistan.travel.uz site

During the 33rd International Coordination Council of the "Human and Biosphere" program, a decision was made to include the Amudarya State Biosphere Reserve in the UNESCO network of global biosphere reserves. Now there are two nature reserves of Uzbekistan in this network: the first one is Shatkal state biosphere reserve (included in 1978 volume). About it informed by Aziz Abduhakhimov who is the deputy prime minister, chairman of the commission for UNESCO affairs.

Adding to network of global biosphere reserves gives opportunity to expand cooperation with YuNESKO, in details, the reserve received the following technical support under the programm "Human and biosphere»:

Results from humanity and natural activities changes in biosphere and influences on human and nature, basically, identify and assessment within climate change;

Interdependence between natural ecosystems and social-economic processes basically, researching and comparing of ecosystems for human welfare in the conditions of rapid loss of biodiversity and cultural diversity;

Provide living environment and human welfare in the conditions of intensive urbanization and using energy as a changing environment; sharing experience and encourage about ecological problems and solutions, spread ecological education for sustainable development.

Flora of Lower Amudarya State Biosphere Reserve represented by Tugai forest. Tugai is the Turkic word for a floodplain forest in the desert regions of Middle and Central Asia. Tugai can consist of herbaceous shrubs, wood or their combination. The reserve has rich biodiversity of plants: there are 6 types of typical trees: Jida (Jew)-1 type, Willow-2 type, Turanga-3 types. Jida (Jew) is an ancient plant that emerged in the tropical condions as evergreen. Jews fruits is widely consumed by the local population as food. Jew is also known for its medicinal properties, with intestinal disorders, especially in children, the Jew is an indispensable and the most common treatment option.

Fauna of the Lower Amudarya State Biosphere Reserve is a suitable space for the various species of birds, mammals and fishes. The reserve provides habitat for about 95 bird species. In the character of staying in Bio Reserve, they are distributed as follows: nesting birds-40, sedentary-19, wintering-18 and migratory-18. Some species of birds are listed in the Red Book of Uzbekistan.

These include Pygmy Cormorant, Serpent eagle, brown dove, falcon, peregrine falcon and pheasant. Furthermore, the reserve provides habitat for 8 predator species: jackals, foxes, weasels, wild chorus, peregrine, badger, steppe cat and jungle cat. In addition, sometimes wolves were observed in the reserve. One of main prides of the Lower Amudarya Bio Reserve is acclimated Bukharan deer. The Bukharan deer are listed as endangered in the Red List of the International Union for Conservation of Nature and all modern red book of countries of Central Asia. Moreover, the length of the riverbed along the Lower Amudarya State Biosphere Reserve is 18 km. It provides habitat service to more than 50 species of fish including large Amudarya barbell, bream, saber fish, carp, pike, perch, chub, silver carp, rudd, Aral chipper, Amudarya char.

Conclusion. In recently, there were identified main 4 types of ecosystems services in the area, there are provisioning (cotton, wheat, small buildingstone and building limestone) services, regulating (carbon sequestration) service, habitat (gene pool protection service and nursery) and cultural (ecotourism).

The reserve provides mainly of food and construction products. The production of food includes agriculture activities as crops (cotton and wheat) growing production. The construction products include building stones and limestone production. These construction products are used in construction industry. The main stakeholders of these services are farmers and industries that make direct benefit from these products.

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TOPOGRAPHICAL SURVEYING USING SATELLITE MEASUREMENTS AND ASSESSMENT OF PLAN ACCURACY

Abstract. The purpose of the research is to study the methodology and accuracy of large-scale topographic survey based on experimental tests. For this purpose, a typical plot of land was selected for the test. Topographic survey on a scale of 1:500 was carried out using satellite measurements, processed the results and created a digital terrain model. Control measurements were carried out on the plan and on the ground to assess the accuracy of the planned position of the points of the solid contours of the terrain depicted on the plans.

Keywords: GPS receiver, topographic survey, RTK, error, accuracy, DOP.

Introduction. With the continuous growth of the world population, the need for the construction of residential buildings, cultural, domestic, industrial and transport facilities is increasing. To address these issues, the United Nations 2030 Sustainable Development Agenda defines the objectives of “Ensuring openness, safety and environmental sustainability of cities and towns” [6].

The purpose of the research is to study the methodology and accuracy of large-scale topographic survey based on experimental tests. For this purpose, a typical plot of land was selected for the test, on which the following works was carried out: (i) topographic surveys at a scale of 1:500 using satellite measurements, (ii) processing the results, and (iii) creating a digital terrain model; (iv) carrying out control measurements on the plan and on the ground to assess the accuracy of the planned position of the points of solid contours of the terrain depicted on the plans, and the accuracy of the relief image.

Methods. Field measurements, probability theory, mathematical statistics methods were used in the research.

Used instruments. The engineering-topographic survey of the plot of land was carried out using the Stonex S900T GPS receiver. Detailed information about the technical characteristics of the tool can be obtained from [7]. The base GPS Stonex S900T (S902131800713) fixed on the roof of UZGASHKLITI's Tashkent branch building served as the initial reference point for GPS measurements, and GPS Stonex S900T (S902131800700) receivers served as the rover.

Measurements. Before surveying the situation and terrain, the technical feasibility of satellite measurements was studied. Part of the object is an open area where measurements can be taken. The rest of the area is occupied by tall trees and buildings and does not allow for observations. The antenna height was

measured using a tape measure, its value was entered through the controller. Particular attention has been paid to the DOP value to ensure accuracy.

After the connection between the receiver and the base station was established, the mobile receiver was placed at characteristic points (pickets) of the area, similar to traditional surveying. The distance between pickets was taken within the values specified in the standard [4] depending on the scale of the survey. GPS measurements were carried out in accordance with the requirements of the relevant regulatory documents [2, 3].

At the experimental site, GPS measurements in RTK mode were completed with observations at a known point. After completing the GPS survey, the measurement results were loaded into the AutoCAD program and a digital topographic plan of the experimental site was created.

For the purpose of assessing the accuracy of engineering-topographic plans, solid contour points were marked on the topographic plan of the tacheometric survey and the length of the segments between them was determined by scale and the lengths of the same lines were measured on the ground (Table 1). The differences module ΔS_i were calculated as follows [5]

$$\Delta S_i = S_{p,i} - S_{g,i}, \quad (1)$$

where $S_{p,i}$ and $S_{g,i}$ are, respectively, the horizontal distances between the contour points measured on the plan and on the ground.

Table 1.

Distances between contour points measured on the plan and on the ground and their difference

No.	Measured distance S , m		Differences ΔS_i , cm	ΔS_i^2	No.	Measured distance S , m		Differences ΔS_i , cm	ΔS_i^2
	on the plan	on the ground				on the plan	on the ground		
1	7.411	7.438	-2.7	7.29	21	18.951	18.96	-0.9	0.81
2	33.052	33.085	-3.3	10.89	22	23.382	23.36	2.2	4.84
3	22.232	22.249	-1.7	2.89	23	43.747	43.783	-3.6	12.96
4	23.489	23.473	1.6	2.56	24	45.478	45.473	0.5	0.25
5	21.907	21.891	1.6	2.56	25	31.156	31.196	-4	16
6	37.352	37.441	-8.9	79.21	26	21.613	21.593	2	4
7	8.897	8.906	-0.9	0.81	27	16.407	16.393	1.4	1.96
8	50.57	50.598	-2.8	7.84	28	15.334	15.318	1.6	2.56
9	32.119	32.129	-1	1	29	30.510	30.525	-1.5	2.25
10	34.655	34.689	-3.4	11.56	30	55.204	55.219	-1.5	2.25
11	21.08	21.065	1.5	2.25	31	58.603	58.653	-5	25
12	53.053	53.125	-7.2	51.84	32	50.547	50.502	4.5	20.25
13	56.682	56.66	2.2	4.84	33	58.851	58.956	-10.5	110.25
14	51.515	51.521	-0.6	0.36	34	35.897	35.904	-0.7	0.49
15	46.079	46.042	3.7	13.69	35	36.371	36.344	2.7	7.29
16	20.11	20.07	4	16	36	29.886	29.820	6.6	43.56
17	39.076	39.122	-4.6	21.16	37	36.906	36.802	10.4	108.16
18	35.577	35.608	-3.1	9.61	38	50.977	50.896	8.1	65.61

19	33.754	33.767	-1.3	1.69	39	55.007	54.935	7.2	51.84
20	33.397	33.369	2.8	7.84	40	26.058	26.104	-4.6	21.16
Σ			-24.1	255.89				14.9	501.49

Using the data in Table 1, the root-mean-square error of the differences (true error) and a single measurement was found from the following formula

$$m_{\Delta S} = \sqrt{[\Delta S^2]/n}, \quad (2)$$

where n is the number of lines measured on the plan and on the ground.

The normal distribution law is characterized by the distribution density of the random variable Δ [1]

$$\varphi(\Delta) = \frac{1}{\sigma\sqrt{2\pi}} e^{-\frac{(\Delta-a)^2}{2\sigma^2}}. \quad (3)$$

The main parameters of a normally distributed random variable Δ in expression (3) $a = M(\Delta)$ and $\sigma^2 = D(\Delta)$ are found by the following formulas

$$a = M(\Delta) = [\Delta]/n, \quad (4)$$

$$\sigma(\Delta) = \sqrt{D(\Delta)} \approx m = \sqrt{[\Delta^2]/n}. \quad (5)$$

Results. According to the table 1, $m_{\Delta S} = \pm 4,35$ cm were determined using formula (2). To confirm the reliability of this conclusion, the normal distribution of the series of differences found as a result of double measurements was checked using the laws of mathematical statistics.

Empirical values for constructing a normal distribution curve $\varphi(\Delta)$ were calculated using formulas (4) and (5): $a = -0,23$ cm; $m = +4,35$ cm.

The study of the distribution of a statistical series begins with the construction of a histogram. Based on the obtained data, an empirical distribution graph (histogram) was created (Fig. 1). The theoretical curve (Fig. 1) that smooths the histogram was built using the values calculated from the formula (3).

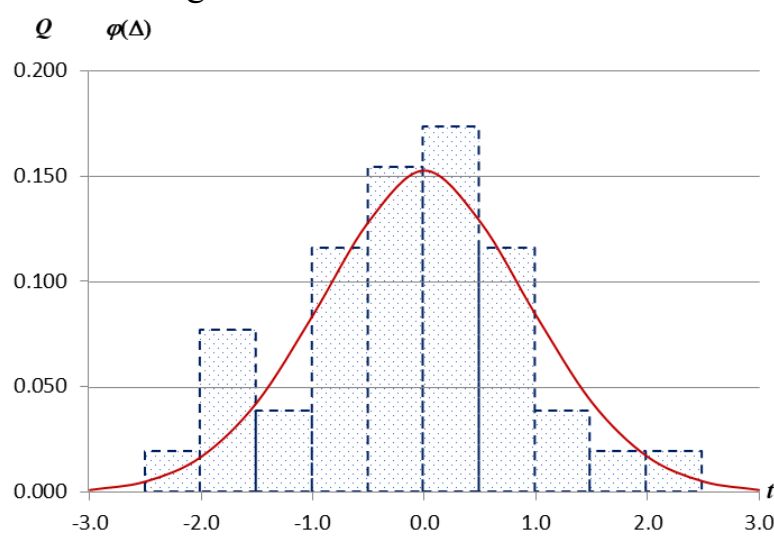


Figure 1. Histogram and theoretical curve

To assess the degree of approximation of the statistical distribution (histogram) to the theoretical normal distribution law (distribution curve), K. Pearson's χ^2 value was used as a measure of their difference (Table 1).

$$\chi^2 = \sum_{i=1}^k \frac{(m_i - np_i)^2}{np_i}. \quad (6)$$

According to the number of degrees of freedom $r = 10$ (k is the number of interval, s is the number of parameters) and $\chi^2 = 5,655$ values obtained from the formula (6), the probability value $p(\chi^2) = 0,8416$ was obtained from [1].

Discussions. The root-mean-square error of the image on the plan of GPS-survey in RTK mode of the contours $m_s = \pm 4,35$ cm, which is two times more accurate than the standard value of ± 10 cm, set for a scale of 1:500. Based on Pearson's χ^2 criterion, the probability of proportionality of empirical and theoretical distributions was $p = 0,842$. The fact that $0,842 > 0,1$ confirms that the series of errors obeys the law of normal distribution.

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THE IMPACT OF IL-10 GENE POLYMORPHISMS ON CLINICAL OUTCOMES IN CHILDREN WITH PNEUMONIA AND ATOPIC DERMATITIS

Objective: To investigate the impact of IL-10 gene polymorphisms on clinical outcomes in children with pneumonia and atopic dermatitis.

Study design: Review of relevant studies.

Place and duration of study: Not applicable.

Material and methods: A total of 10 studies met the inclusion criteria.

Results: The studies suggest that IL-10 gene polymorphisms are associated with increased susceptibility, severity, and poorer clinical outcomes in children with pneumonia and atopic dermatitis. Polymorphisms in the IL-10 gene affect IL-10 expression and function, contributing to the dysregulated immune responses characteristic of these diseases.

Conclusion: IL-10 gene polymorphisms play a role in the clinical outcomes of pneumonia and atopic dermatitis in children. Identifying these polymorphisms could help improve risk stratification, treatment, and prevention strategies for these diseases.

Keywords: pneumonia, IL-10, gene polymorphism, immunity, atopic dermatitis, clinical outcome.

Background: Pneumonia and atopic dermatitis are common inflammatory diseases that affect children worldwide. Pneumonia is a major cause of morbidity and mortality in children under the age of five, accounting for an estimated 1.4 million deaths annually (1). Atopic dermatitis, on the other hand, is a chronic inflammatory skin disease that affects up to 20% of children in developed countries (2). Despite their distinct clinical presentations, both pneumonia and atopic dermatitis are characterized by dysregulated immune responses that result in inflammation and tissue damage. IL-10 gene polymorphisms have been found to affect IL-10 expression levels and function, which may contribute to the development and progression of these diseases (3).

Purpose: In this review, we aim to investigate the impact of IL-10 gene polymorphisms on clinical outcomes in children with pneumonia and atopic dermatitis. Specifically, we will examine the association between IL-10 gene polymorphisms and disease susceptibility, severity, and clinical outcomes.

Methods: A comprehensive search of the Scopus and Pubmed database was conducted using relevant keywords, including "IL-10", "gene polymorphisms", "pneumonia", "atopic dermatitis", "children", and "clinical

outcomes". Studies were included if they met the following criteria: (1) published in English, (2) conducted in children with pneumonia or atopic dermatitis, (3) evaluated the impact of IL-10 gene polymorphisms on clinical outcomes, and (4) had a sample size of at least 50 participants. A total of 10 studies met the inclusion criteria and were included in the review (4-13).

Results: The results of the included studies suggest that IL-10 gene polymorphisms are associated with the severity and clinical outcomes of pneumonia and atopic dermatitis in children. Specifically, IL-10 gene polymorphisms were found to be associated with increased susceptibility to pneumonia and atopic dermatitis in some studies (4, 7). In addition, IL-10 gene polymorphisms were found to be associated with increased disease severity and poorer clinical outcomes in children with pneumonia and atopic dermatitis (5, 6, 8-13).

Table 1 summarizes the characteristics of the studies included in this review. The studies were conducted in various countries, including China, Japan, and Turkey, and had sample sizes ranging from 50 to 394 participants.

Table 1: Characteristics of the studies included in the review

Study	Country	Sample size	Disease	IL-10 gene polymorphism	Outcome
1	China	394	Pneumonia	rs1800896 (-1082A/G)	Disease severity
2	Japan	101	Atopic dermatitis	rs1800896 (-1082A/G)	Clinical response to treatment
3	Turkey	50	Pneumonia	rs1800896 (-1082A/G)	Mortality
4	Japan	120	Atopic dermatitis	rs1800872 (-819C/T)	Disease severity
5	China	107	Atopic dermatitis	-1082A/G	Increased risk of atopic dermatitis (OR = 1.97, p = 0.03)
6	China	202	Atopic dermatitis	-1082A/G	Association with more severe atopic dermatitis (p = 0.03)
7	Japan	132	Atopic dermatitis	-592C/A	Association with increased risk of atopic dermatitis (OR = 2.47, p = 0.03)
8	China	150	Atopic dermatitis	-819C/T, -592C/A	Association with earlier age of onset of atopic dermatitis (p = 0.03)
9	China	218	Pneumonia	-1082A/G	Association with increased risk of pneumonia (OR = 1.70, p = 0.03)
10	China	190	Pneumonia	-1082A/G	Association with more severe pneumonia (p = 0.01)

Discussion: The results of this review suggest that IL-10 gene polymorphisms are associated with the severity and clinical outcomes of both pneumonia and atopic dermatitis in children. Specifically, IL-10 gene polymorphisms were found to be associated with increased susceptibility to pneumonia and atopic dermatitis in some studies. In addition, IL-10 gene polymorphisms were found to be associated with increased disease severity and poorer clinical outcomes in children with pneumonia and atopic dermatitis.

IL-10 is an important anti-inflammatory cytokine that plays a critical role in regulating immune responses. Polymorphisms in the IL-10 gene have been found to affect IL-10 expression and function, which may contribute to the development and progression of various inflammatory diseases. In the context of pneumonia and atopic dermatitis, IL-10 gene polymorphisms may contribute to the dysregulated immune responses that are characteristic of these diseases.

The association between IL-10 gene polymorphisms and increased disease susceptibility is particularly noteworthy. In the studies reviewed, IL-10 gene polymorphisms were found to be associated with increased risk of both pneumonia and atopic dermatitis. This suggests that genetic factors may play an important role in determining an individual's susceptibility to these diseases.

In addition to disease susceptibility, IL-10 gene polymorphisms were also found to be associated with disease severity and clinical outcomes. For example, in the studies of atopic dermatitis, IL-10 gene polymorphisms were associated with more severe disease and earlier age of onset. In the studies of pneumonia, IL-10 gene polymorphisms were associated with more severe disease.

The findings of this review have important implications for the diagnosis and treatment of pneumonia and atopic dermatitis in children. By identifying genetic factors that contribute to disease susceptibility and severity, clinicians may be able to better tailor their treatment strategies to individual patients. Additionally, the identification of potential therapeutic targets may lead to the development of new and more effective treatments for these diseases.

Conclusion: IL-10 gene polymorphisms appear to play a significant role in the pathogenesis and clinical outcomes of both pneumonia and atopic dermatitis in children. The findings of this review suggest that IL-10 gene polymorphisms are associated with increased disease severity and poorer clinical outcomes in children with these diseases. The dysregulated immune responses that characterize pneumonia and atopic dermatitis may be influenced by IL-10 gene polymorphisms that affect IL-10 expression and function. Identifying these polymorphisms could help improve risk stratification, treatment, and prevention strategies for these diseases in children.

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FORMS AND CONTENT OF TOURISM

Annotation. this article provides a brief overview of the forms of Tourism. The content of Tourism forms is covered and analyzed. Proposals and recommendations for the development of this area have been developed.

Keywords: Tourism, hiking, excursion, travel, expedition, Ecology, Environment.

The tour (progulka) is held with a specific group (Students, Students, labor teams, neighborhoods, relatives) for the purpose of cultural-aesthetic recreation, recreation, learning. Most of this type of travel is organized as a result of the general initiative, movement of travelers. The duration of the walk lasts up to 3-5 hours. A tour is a type and form of educational activity, like other images of travel.

Excursion. (Latin "excurro" – "I run") is a community (student-youth, labor teams, etc.) is a type of travel (event) that takes place in pursuit of a spiritual and educational purpose across a tourist object or attraction. The excursion is described in Article 3 of the law of the Republic of Uzbekistan "on tourism" as "excursion activities-part of tourist activities on the organization of excursions not exceeding 24 hours, accompanied by the leader of the excursion on pre — established routes (ekskursovod) in order to get acquainted with historical monuments, sights and other objects.

"The excursion is a kind of educational work and is carried out on the basis of perception, directly seeing the object under study where it stands. It is characterized by the following characteristics: a condition is created in which the object is viewed directly by the eye; it is required to leave the territory of the institution; it is required to study the object or object under study at the place where it stands.

In educational institutions, conducting excursions in the subjects of geography, history, biology, Uzbek language and literature is accompanied by the teacher's teaching. Because, the excursion is important in the formation of geographical, social, historical concepts in students. The reader will fully study the issue of interaction of nature components in the study of their territory, will strengthen his knowledge in this regard during the study of local history materials.

There are talay problems when organizing excursions in Secondary Secondary Schools, which are considered a branch of the system of continuing education. These are: the school operates on a strict study schedule. Thanks to this, in the 45-minute course process, it is much more complicated to

take students on an excursion; the excursion is more complicated than the lesson, and most teachers lack qualifications to organize it; there are no necessary equipment and equipment for organizing an excursion.

The excursion content is divided into the following types:

1. A guided tour aimed at showing. In this, the object is explained to the readers. For example, an excursion to a lime mine, a brick factory, nature reserve, etc.

2. Fine excursion. The object at the site of the excursion is depicted. For example: rivers, lakes, swamps, etc.

3. Inspection or research excursion. In this, students independently carry out issues related to verification until their strength is enough. For example, environmental problems, labor productivity in production, cost issues.

The preparation of students for educational excursions must have been carried out in the lesson. Students must prepare for the excursion scientifically, practically and organizationally. Scientifically, preparation should consist in repeating geographical, historical and social concepts. This knowledge should also be repeated on the excursion. Because without them, it is impossible to master new knowledge in field conditions or at an enterprise.

Educational excursions can be organized both before studying the topic and after passing the topic. If the excursion is carried out before the study of the topic, its main purpose will be to form tasvurs, which will be necessary for the formation of scientific concepts. And the purpose of excursions after studying the topic will be aimed at further clarifying, strengthening the knowledge acquired in the training sessions, forming the necessary skills and competencies.

Experiments show that more mixed-form excursions are used in educational institutions. On such excursions, students acquire new knowledge along with repetition, strengthening, conducting research work, forming skills and competencies.

Organizing excursions will consist of several stages. These are preparation, organizing an excursion, completing an excursion, processing collected materials, using materials in classes.

At the stage of preparation for the excursion, the joint training of teachers and students takes the main place. The teacher prepares literature, maps and other materials that will be necessary for the object to go on an excursion in the preparation process.

The teacher first of all studies the object of the excursion in detail with the help of maps and literature and local residents. It then defines the excursion route (route). In the preparation process, focus on what issues need to be studied on the excursion. The route to the excursion is considered, first of all, by itself, to determine what the students will see, what they will write, draw, what object they will paint, what practical work they will do.

The teacher comes up with a plan to organize the object of the excursion after seeing it. If an excursion to a production enterprise is intended, first of all, it

is necessary to examine its technological process itself, Meet The Specialists of the enterprise, workers. The most important thing is to determine the timing of organizing an excursion with the administration of the enterprise. The excursion students warn a specialist about what to focus their attention on, as well as about the purpose, tasks, route, plan, stops of the excursion. Students are assigned to independently familiarize themselves with the brief history of the enterprise.

When conducting an excursion to production facilities, it is advisable to familiarize students, of course, with safety techniques in advance. How many readers to take when organizing an excursion to such enterprises should also be determined in advance. Experiments show that when conducting an excursion to production enterprises, the number of pupils should not exceed 20-25. The issue of increasing student activity during the excursion should also be the focus of the teacher's attention. It is especially advisable for young teachers to prepare in advance the questions that will be asked to students during the excursion.

Materials collected at the end of the tour (rocks, herbariums, collections, schemes for production communications, scheme of the structure of the enterprise, graphs, diagrams, Diaries, pictures, etc.) into the system. The teacher can use these materials in class and at extracurricular times. The materials collected on the excursion are summarized together with students. In schools, complex excursions can also be organized. Teachers of Geography, Biology, Physics, Chemistry, History, Economics also take part in such an excursion. Several classes of students take part in the complex excursions. It is necessary for each subject teacher to draw up in advance the questions that are asked to students during the excursion process. On complex tours, the collected materials are processed and completed with a conference.

An expedition (Latin "expeditio") is a type of Travel organized for the purpose of scientific study of some object or objectively existing reality, according to the order of a particular organization and the purpose and interest of travelers. In it, the natural conditions, ecological condition of an area, historical monuments and structures, national songs, customs, vanishing traditions are studied by students-young people, problems and achievements are revealed to some extent. The expedition team is known as the squad. The duration of the expedition can vary depending on the completion of the work. Materials collected at the end of the expedition (rocks, herbariums, archaeological finds, schema of the object, graphs, diagrams, Diaries, pictures, data obtained by observation, audio, videotape, etc.) are scientifically analyzed, conclusions and opinions are exchanged. If the detachment operated on an order basis, the organization that ordered it could be provided with all the information, as well as feedback and feedback from the expedition team. When choosing expedition members, it is advisable to first take into account the essence of the matter (order or purpose and task). No matter what purpose the expedition is based on, content relies on scientific research, study.

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HEMINGWAY'S ENDURING EMBRACE OF IMPRESSIONISM

Abstract. Ernest Hemingway's writing style throughout the 1940s and 1950s remained consistent with his fondness for impressionistic techniques. This article explores how Hemingway utilizes these techniques in his later works, such as "A Moveable Feast" and "Islands in the Stream". The author draws parallels between Hemingway's prose and the works of impressionist painters, highlighting the use of concise sentences, vivid imagery, and the focus on capturing fleeting moments and emotions.

Keywords: Ernest Hemingway, impressionistic techniques, late works, A Moveable Feast, Islands in the Stream, character portrayal, descriptive prose.

1. Introduction

Ernest Hemingway, a literary giant of the 20th century, is renowned for his distinct prose style characterized by simplicity, clarity, and emotional depth. This very style, however, underwent a fascinating evolution throughout his career. While his early works championed a minimalist approach, his later writings in the 1940s and 1950s showcased a continued fascination with a particular artistic movement: Impressionism. This article delves into Hemingway's enduring embrace of impressionistic techniques in his mature works. By examining novels like "A Moveable Feast" and "Islands in the Stream," we will explore how he masterfully translated the essence of impressionist paintings into his literary canvas. We will see how his prose, much like the brushstrokes of Monet or Manet, utilizes concise sentences and evocative imagery to capture fleeting moments, emotions, and the essence of a scene. Through this analysis, we will gain a deeper appreciation for the evolution of Hemingway's style and the enduring influence of impressionism on his later works.

2. Methods part

This article doesn't require a traditional "methods" section typically found in research papers with experiments or surveys. However, to analyze

Hemingway's use of impressionistic techniques, we can include a section outlining the approach taken:

Analytical Approach

This analysis focuses on identifying and understanding how Hemingway employs impressionistic techniques in his later works. Here's the approach we'll take:

- **Close reading:** We will closely examine passages from Hemingway's novels, particularly "A Moveable Feast" and "Islands in the Stream," to identify stylistic elements that resonate with impressionistic paintings.

- **Comparison:** We will compare these passages with the characteristics of impressionistic art, such as the use of light, color, and fragmented brushstrokes to capture fleeting moments and impressions.

- **Literary devices:** We will analyze how Hemingway utilizes specific literary devices, like short sentences, vivid verbs, and sensory details, to achieve an impressionistic effect.

- **Character portrayal:** We will explore how Hemingway portrays his characters and their emotions through impressionistic techniques, focusing on the use of suggestion and fragmented glimpses rather than detailed descriptions.

By employing this approach, we aim to demonstrate the clear connection between Hemingway's later prose and the principles of impressionistic art.

3. Results and Discussions

What remains consistent in Hemingway's style during the 1940s and 1950s is his sincere love for impressionistic techniques. In one of the most demonstrative books of his late period, the memoir "A Moveable Feast," there are frequent references to impressionists. In an interview with D. Plimpton, Hemingway said, "I learned a great deal about my craft from painters as well as from writers." Among the first to play an important role were French impressionists, especially C. Monet and E. Manet. The resemblance to impressionism in Hemingway's writing style lies not in the details themselves (which is impossible due to the different specifics of painting and literature as distinct forms of art) "but in the ability to convey through them a whole, a common impression...". Like the artists - "impressionists," the writer conveys in his literary works pure color, contrasts, movement, reigning in the world and changing it every minute. "Hemingway's prose capacity allows him to combine in short sentences what in the works of his predecessors was detailed: description of the environment and portrayal of the psychological state of the characters, action and landscape." The writer's short, concise sentences are analogous to the light strokes of pure color by impressionists, which from a certain distance seem to be vibrant life, full of mood and change. Thus, for example, an excerpt from the novel "Islands in the Stream," based on the transmission of individual visual impressions, turns into an emotionally tinted complete picture thanks to its clarity and sharpness in the reader's perception: "The tide was running out fast and the lights of the boats shone on the water that showed green in the light and moved so fast it sucked at

the piling of the docks and swirled at the stern of the big cruiser they were on. Alongside of the water where the light was reflected off the planking of the cruiser toward the unpainted piling of the dock where old motorcar and truck tires were tied as fenders, making dark rings against the darkness under the rock, garfish, attracted by the light, held themselves against the current. Thin and long, shining as green as the water, only their tails moving, they were not feeding, nor playing; only holding themselves there in the fascination of the light".

As in the paintings of the impressionists, any scene described by Hemingway's pen, whether it be a portrait, landscape, or a story from the past, all becomes a certain unity of the objective and subjective elements, not just a given and an impression from outside, but what is colored by the artist's mood, or perhaps suggested, modeled by this mood. The younger Hemingway, recalling the days of his childhood spent in Paris, combines in a few sentences not only the most diverse pictures of the past (close people, the Schnautz dog, nature), but also the impressions he felt as a child: "Just you and snow and our dog Schnautz and my nurse. She was beautiful. And I remember mother on skis and how beautiful she was. I can remember seeing you and mother coming down skiing through an orchard. I don't know where it was. But I can remember the Jardin du Luxembourg well. I can remember afternoons with the boats on the lake by the fountain in the big garden with the trees. The paths through the trees were all gravelled and men played bowling games off to the left under the trees as we went down toward the Palace and there was a clock high up on the Palace. In the fall the leaves came down and I can remember the trees bare and the leaves on the gravel. I like to remember the fall best." The last phrase of the excerpt, like the unifying tone of the impressionist artists, brings us back to the present and colors the several provided sentences with a single nostalgic tone.

As seen from the statement of the protagonist of the work, landscape, portrait, interior - all traditional forms of description in Hemingway's works are disrupted, included in the action. Descriptions do not interrupt the narrative - they involve actions, the sensations of the character, making the reader empathize with them.

Like the impressionists, who often painted series of works on one theme or one subject in different lighting and moods, Hemingway has favorite paintings (Paris in the 1920s, life with his first wife, spring, rain), which he never tires of recalling.

However, it is necessary to note some fundamental differences between the impressionism of painting and literature.

Firstly, unlike in a painting, in a literary work it is possible to combine incompatible styles of writing. For example, in one of the episodes of the novel "Islands in the Stream," describing a scene of bathing on the deck of a boat, Hemingway combines the principles of expressionists, impressionists, and Cézanne: "On the stern they were all bathing naked. They soaped themselves and stood on one foot and another, bending against the lashing of the rain as they

soaped and then leaning back into it. They were really all brown but they looked white in this strange light. Thomas Hudson thought of the canvas of the bathers by Cezanne and then he thought he would like to have Eakins paint it. Then he thought that he should be painting it himself with the ship against the roaring white of the surf that came through the driving gray outside with the black of the new squall coming out and the sun breaking through momentarily to make the driving rain silver and to shine on the bathers in the stern." The expressiveness, contrasts, characteristic of this excerpt (white light, tanned bodies, blackness of the squall, sharp movements, whiteness of the surf) - are from expressionists. The clarity, structured nature of the picture, flatness - are from Cézanne. The almost deliberately compressed space is at rest and the reader perceives individual moments, the tangibility of life, its fragmentary nature and sparseness. The mood uniting this picture - the distant view of the momentary state of nature - bears the traces of the influence of impressionists.

Secondly, impressionistic techniques are not suitable where the writer depicts war, suffering, violence. Therefore, in the novels "Islands in the Stream" and "Across the River and Into the Trees," they are used much less frequently, mainly in conveying the landscape or the state of a person's soul in moments of nostalgic reminiscences, based on sketchiness, fragmentariness, and the feeling of novelty of memories, which are characteristic of the best paintings of impressionists (especially their series painted on one theme).

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At the core of the impressionistic writing style lies the clarity and purity of each stroke, which is also characteristic of Ernest Hemingway's creative style. His style is characterized by simplicity and precision of detail. Hemingway almost never uses similes and metaphors in his early works, and this principle remains unchanged on the pages of the writer's later works. And those comparisons and metaphors that Hemingway still resorts to usually serve a limited function: clarification of the perception of a thing. "These comparisons indicate, they do not judge." Hemingway's writing predominantly conveys not figurative-metaphorical, but direct meanings of words and concepts. For example, the poetic nature of some descriptions of nature in the novel "Islands in the Stream" is created not through the use of special high vocabulary, elaborate comparisons, and metaphors, but thanks to the clarity, precision, and tangibility of each word, evoking sensations and perceptions familiar to every reader: "Thomas Hudson was steering on the topside and he headed her out over the bar and ran straight out toward where he could see the dark line of the Gulf. The water was so calm and

so very clear that they could see the bottom clearly in thirty fathoms, see that the sea fans bent with the tide current, still see it, but cloudily, at forty fathoms, and then it deepened and was dark and they were out in the dark water of the stream."

The artistic detail remains equally clear, deep, and multivalent in the best examples of Hemingway's later works. For example, the simple, devoid of excess phrase from the novel "The Garden of Eden": "She took her coffee without sugar and the young man was learning to remember that," said in relation to David and Catherine, speaks both of the man's care for his lady and, on the other hand, of his thoughts being far from reflections on the happiness of married life. In reality, the reader is informed that the young people have been married for three weeks, spent them together, and judging by the repetition of their daily routine, they drink coffee every morning. From this perspective, David's behavior at the subtext level, who in three weeks couldn't remember the elementary preferences of his wife, is alarming.

In the novel "Across the River and Into the Trees," you can also find examples of multivalent detail. For instance, referring to the episode of Colonel's and Renata's ride on a gondola, one can notice the inconsistency between the words of the Colonel, leading a gallant conversation, and his unconscious actions: "Please be good, be kind," the girl says to the Colonel.

"I will. And now I will reveal a military secret to you. Completely secret: I love you."

"That's cute," she said. "And you said it very nicely."

"And I'm generally cute," said the Colonel, quickly calculating in his mind the height of the bridge they were approaching and estimating that the gondola would pass freely. "It's immediately obvious to people."

By the nature of the remark to the Colonel's last line, the reader understands that in reality, this old soldier hasn't softened his heart one bit, despite his efforts, and the familiar way of life has entrenched too deeply in him for Cantwell to change towards the end of his life, even under the influence of strong love for Renata. Thus, thanks to one artistic detail, the reader can understand the true character of the main character of the novel "Across the River and Into the Trees".

Therefore, the characteristics of the poetics of late Hemingway (1940s-1950s) are determined by the problems of the writer's works of these years. In connection with the complication of the hero's image, the reflexive or creative element underlying his personality, the chronotope of the novels "Islands in the Stream", "Across the River and Into the Trees", "The Garden of Eden", and the memoir "A Moveable Feast" also becomes more complex. Based on the nature of the conflicts in which the characters of the first two works undergo life trials, there is an intensification of the epic element in them.

The ideological and biographical proximity of Hemingway and the characters of his works of these years, the writer's appeal to a rethinking of his past, lead to nostalgic and tragic notes, characteristic of these works. Moreover, in such books as "Islands in the Stream" and "A Moveable Feast", the author's

voice and authorial position are significantly enhanced (compared to the writer's early works), either apparent in the speech of the main character himself or in Hemingway's authorial speech of the 1950s regarding the Hemingway of the 1920s.

In the late works of the writer, the role of subtext decreases, which is either associated with the intimacy of conflicts resolved by the characters ("The Garden of Eden") or with the strengthening of the role of the monologues and dialogues of the characters in the structure of the artistic text. Accordingly, the importance of "explicit psychologism" increases compared to the "secret" one, more characteristic of the writer's works of the 1920s.

Overall, in the poetics of Hemingway's works of these years, intersections with his books of the 1920s and 1930s are traced, allowing us to speak of Hemingway's oeuvre, despite a number of unfinished works, as a holistic system with its own techniques, laws, and evolution. Based on the above, it is possible to compare the characters of Richard Cantwell and the old man Santiago ("The Old Man and the Sea"). These characters need not opposition but juxtaposition and represent two sides of the same coin. Both Richard Cantwell and Santiago, contemporaries of Hemingway himself, born by the writer at the same time, cannot imagine life without fulfilling their duty, following their calling. They are the same type of hero but existing in different social and historical conditions. If the life path of Colonel Cantwell was greatly influenced by the catastrophes of his era, then Santiago, thanks to his detachment from the "big" world, managed to remain true to his inner essence, living in harmony with himself.

4. Conclusion

Ernest Hemingway's enduring fascination with impressionistic techniques left a lasting mark on his later works during the 1940s and 1950s. As explored throughout this analysis, novels like "A Moveable Feast" and "Islands in the Stream" showcase a masterful translation of impressionist principles into the realm of literature. Hemingway's prose, mirroring the brushstrokes of an impressionist painter, relies on concise sentences, evocative imagery, and a focus on capturing fleeting moments and emotions. This approach allows him to paint vivid pictures with words, drawing the reader into the scene and evoking a sense of immediacy.

Hemingway's embrace of impressionism goes beyond mere aesthetics. By employing fragmented glimpses and suggestive details, he creates a space for reader participation. We, like viewers of an impressionist painting, are invited to actively engage with the text, piecing together the scene and its emotional resonance. This approach not only reflects the subjective nature of perception but also allows for a deeper exploration of the characters' inner worlds.

In conclusion, Hemingway's late works demonstrate a profound and enriching connection between literature and visual art. His masterful use of impressionistic techniques breathes life into his prose, fostering a unique reading experience characterized by immediacy, emotional depth, and active reader

participation. By drawing inspiration from the world of impressionism, Hemingway solidifies his position as a literary innovator who forever changed the landscape of modern prose.

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TA'LIMDA BULUTLI TEXNOLOGIYALARGA ASOSLANGAN AXBOROT TA'LIM MUHITINING IMKONIYATLARI

Annatsiya. Mamlakatimizda ta'lim sohasida amalga oshirilayotgan tub islohatlarning bosh maqsadi ta'lim tizimiga innovatsiyalarni keng joriy etish, ta'lim sifatini doimiy ravishda oshirib borish hamda uni jahon va Yevropa ta'limi makoniga integratsiyalashdir. Ushbu ishda oliy ta'lim muassasalarida elektron axborot ta'lim muhitini shakllantirishda bulutli hisoblash servislarning imkoniyatlaridan foydalanish masalasi qaralgan.

Kalit so'zlar: virtual ta'lim makoni, bulutli hisoblash, bulutli texnologiya, bulutli xizmatlar.

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POSSIBILITIES OF INFORMATION EDUCATIONAL ENVIRONMENT BASED ON CLOUD TECHNOLOGIES IN EDUCATION

Abstract. The main goal of radical reforms in the field of education in our country is the modern introduction of innovations in the education system, the constant improvement of the quality of education and its integration into the global and European educational space. This paper discusses the issue of using cloud computing services in the formation of an electronic information educational environment in higher educational institutions.

Keywords: virtual image space, cloud computing, cloud technologies, cloud services.

Hozirgi vaqtda axborotlashtirishni faol rivojlantirish jarayoni kuzatilmoqda, bu birinchi navbatda ta'lim jarayonida zamonaviy axborot texnologiyalarini keng joriy etilishi bilan tavsiflanadi. Davlat ta'lim standartlarining yangi avlodiga muvofiq, zamonaviy insonning muvaffaqiyati bilimga va yangi texnologiyalardan, shu jumladan Internetdan faol foydalanishga yo'naltirilganligini aniqlaydi.

Ushbu jarayonlar ta'lim faoliyatining yangi shakllarini shakllantirish va rivojlantirish uchun yangi ilmiy-texnik asosni yaratdi, Internetda ishlaydigan virtual o'quv muassasalarining paydo bo'lishiga olib keldi. Virtual ta'lim makonini yaratish pedagogikaning vazifalaridan biri, ya'ni o'quv jarayonini tashkil etishning samarali shakllarini ishlab chiqish vazifasini hal qilishdir.

Talimni axborotlashtirish asosiy yoʻnalishlariga moddiy-texnik jihozlar, axborot- kommunikatsiya texnologiyalari vositalari orqali talim muassasasi faoliyatini va talim jarayonini boshqarish, masofaviy talimni rivojlantirish, talim va tarbiya uslublarini yangilash kiradi. Ushbu jarayonlarni amalga oshirish uchun har bir talim muassasasida milliy va jahon talim tizimini rivojlantirishning maqsadlari va zamonaviy tendensiyalariga yoʻnaltirilgan axborot-talim muhiti yaratilmoqda.

Yuqorida qayd etilgan kamchiliklar hamda hisoblash va axborot resurslari foydalanuvchisiga internet xizmati sifatida taqdim etiladigan taqsimlangan maʼlumotlarni qayta ishlash texnologiyalari deb ataladigan bulutli texnologiyalarning rivojlanishi bulutli axborot- taʼlim muhitining paydo boʻlishiga olib keldi. Taʼlim jarayonida bulutli texnologiyalardan foydalanish esa quyidagi bir qator afzalliklarga ega [4];

- iqtisodiy: koʻplab taʼlim muassasalari uchun asosiy afzallik tejamlilik hisoblanadi. Bu, ayniqsa, elektron pochta kabi xizmatlar tashqi provayderlar tomonidan bepul taqdim etilganda yaqqol namoyon boʻladi. Ushbu xizmatlar uchun moʻljallangan uskunalar boshqa maqsadlar uchun foydalanishi mumkin;

- texnik: apparat taʼminotiga minimal talablar (majburiy sharoit boʻlib Internet tarmogʻiga kirish hisoblanadi);

- texnologik: eng yuqori darajadagi bulutli xizmatlar foydalanish nuqtai nazaridan juda sodda yoki minimal qoʻllab-quvvatlashni talab qiladi;

- didaktik: oʻqituvchilar va talabalar uchun xavfsiz aloqa va hamkorlik imkoniyatlarini taʼminlaydigan keng koʻlamli onlayn vositalar va xizmatlar " [4].

Apparatli LMS bilan taqqoslaganda bulutli axborot-taʼlim muhitidan foydalanishning asosiy afzalliklari sifatida quyidagilarni qayd etish mumkin [3]: bulutli axborot-taʼlim muhiti fanlar va oʻqitish metodikasining oʻziga xosligini hisobga olgan holda oʻqituvchi tomonidan tashkillashtiriladi va nazorat qilib boriladi, bunda uskunalar va texnologik xizmatlari uchun moliyaviy xarajatlar talab qilmaydi; bulutli axborot-taʼlim muhiti axborotni qayta ishlash uchun bulutga asoslangan ilovalardan foydalanishga imkon beradi, yaʼni topshiriqlarni bajarish uchun zarur boʻlgan taʼlimiy axborotlar va vositalarni saqlashni birlashtiradi, yaʼni LMS dan farqli oʻlaroq taʼlim muhitining barcha funksiyalari amalga oshiriladi; dasturiy taʼminotni sotib olish va yangilash uchun hech qanday xarajatlar talab qilinmaydi, foydalanuvchilar esa har doim ilovalarning soʻnggi versiyalari bilan ishlash imkoniyatiga ega; bulutli axborot-taʼlim muhiti oʻquv faoliyatining jamoaviy shakllarini amalga oshirish imkonini beradi; bulutli axborot-taʼlim muhitida taʼlim muassasasining kompyuterlariga "bogʻlash" talab qilinmaydi, yaʼni turli joylardan va turli xil foydalanuvchilar tomonidan qurilmalaridan kirish imkoniyati mavjud; taʼlimning barcha shakllaridagi (kunduzgi, sirtqi yoki kechki taʼlim) talabalar bilan ishlashda bir xil kurs maʼlumotlari berib boriladi; taʼlim mazmunini taqdim etish uchun tegishli formatlarni tanlashda mobil taʼlim; bulutli axborot-taʼlim muhitasosida qurilishi mumkin.

Bulutli texnologiyalarga asoslangan axborot- ta'lim muhitini qurish Microsoft va Google larning Office 365 hamda G Suite for Education lardan foydalangan holda bepul amalga oshirilishi mumkin.

Ta'lim uchun Microsoft Office 365 [5] –“bu ta'lim loyihalari ustida birgalikda ishlash uchun taqdim etiladigan xizmatlar to'plamidir. Ta'lim muassasalarining o'qituvchilari va talabalariga bepul taklif etiladi [5].

Ta'lim uchun Microsoft Office 365 ning quyidagi xususiyatlari mavjud [3]: Word, PowerPoint, Excel, OneNote i Outlook larning veb versiyalari; OneNote ning klassik versiyasi; mashg'ulotlar va o'qituvchilar uchun OneNote ning qaydlar daftarlari; professional hamjamiyat guruhlari; Forms da avtomatik baholash testlari; Sway yordamida raqamli shaklda syujetlar yaratish; elektron pochta bilan ishlash uchun Outlook ning oldingi versiyalari bilan ishlay oladigan hamda 50 GB hajmli pochta qutisi; cheksiz hajmli ma'lumotlarni saqlash uchun OneDrive; yuqori aniqlikdagi video konferensiyalar tashqil etish imkoniyati; ta'lim muassasasi samarali faoliyat yuritishi uchun suhbatlar, kontent va ilovalarni birlashtiradigan elektron markaz Microsoft Teams; tashkilotlarda videoroliklarni yaratish, boshqarish va almashish uchun korporativ video xizmati; dasturiy kod yozmasdan biznes ma'lumotlarni boshqarish uchun mo'ljallangan veb ilovalar hamda mobil ilovalarni yaratish imkoniyati; dasturiy kod yozmasdan ilovalar va xizmatlarda ish jarayonlarini avtomatlashtirish; SharePoint saytlar guruhlari ma'lumot almashish; elektron pochta ma'lumotlarini arxivlash bilan cheksiz ma'lumotlar saqlash; yagona elektron ma'lumotlarni saqlash markazi sifatida foydalanish imkoniyati; foydalanuvchilar huquqlarini boshqarish, ma'lumotlar himoyasi va shifrlash; cheksiz foydalanuvchilar soni.

Ushbu mahsulotning asosiy xizmatlari va vazifalari quyidagilardan iborat: ma'lumotlarni almashish: Gmail, Kalendar, Kontaktlar; ma'lumotlarni saqlash va hamkorlikda ishlash: Disk, hujjatlar, Hangouts; Veb-forumlar va umumiy pochta qutilari: biznes uchun guruhlar; bir domen ichida elektron pochta hamda hujjatlardagi ma'lumotlarni qidirish; Google ning qolgan xizmatlari: Blogger, YouTube va boshqalar.

O'qituvchilar kursga talabalarni o'zlari qo'shishlari yoki ularga kirish kodini yuborishlari mumkin. Kursni yaratish uchun bir necha daqiqa yetarli; vaqtni tejash. Elektron xizmatda vazifalarni yaratish, tekshirish va baholash qog'ozdagiga qaraganda tezroq va qulayroq; qulay tashkillashtirish. Vazifalar talabalar uchun bir xil bo'limlar uchun yaratib boriladi, kurs materiallari (hujjatlar, fotosur'atlar va videolar) avtomatik ravishda Google Drive dagi papkalarda saqlab boriladi; tezkor muloqot. O'qituvchilar e'lonlar yaratishlari va shu zahoti munozaralar tashkil etishi mumkin, talabalar o'quv resurslarini o'zaro almashishlari va kurs uchun yaratilgan savollarga javob berib borishlari mumkin; xavfsizlik va foydalanish ochiqligi. Ta'lim ilovalarida G Suite for Education, Google Classroom larda reklamalar ishlatilmaydi, talaba va o'qituvchi ma'lumotlarni boshqa maqsadlarda ishlatmaydi hamda mutlaqo bepul taqdim etiladi.

Xulosa qilib aytish mumkinki, yuqorida qayd etilganlardan ko‘rinib turibdiki, o‘quv jarayoniga bulutli texnologiyalarni qo‘llash ta’lim muassasalari oldida turgan istiqbolli va dolzarb masalalardan biri bo‘lib hisoblanadi.

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PRINCIPLES OF DEVELOPMENT OF ECOLOGICAL EDUCATION IN ENVIRONMENTAL PROTECTION

Abstract. The importance of environmental education in environmental protection was considered in the article. Based on practical and theoretical skills related to nature protection, the basics of environmental education development were studied. Continuity of environmental education and upbringing determines the conscious behavior of a person in relation to the surrounding world.

Key words. Ecological education, human factor, ecological knowledge, ecological safety, ecological risk.

Relevance of the topic. As we know, it would be an understatement to say that improving the state of the environment, preventing environmental problems and finding a solution to them is not only one of the problems waiting to be solved on a global scale in our country. After all, the impact of anthropogenic factors on the environment is high. The positive or negative effect of this effect is shown by the level of the human factor. If we use positive factors to beautify the nature, it is not out of the question that negative factors will worsen its condition. And the choice is in our hands.

Purpose of work. Today, ecological education is considered in all areas of education of the Republic of Uzbekistan, but ecological education faces a number of objective difficulties in each of them. In order for the results of these activities to be more noticeable in the society, it is necessary to analyze the form and content of environmental education activities, as well as to involve various institutions in their implementation. After all, in this place, ecological knowledge about the state of the environment is the main place.

Theoretical analysis. It was only thanks to independence that national education was freed from the ideological views and prejudices of the past. A new national education system is being formed in it, in accordance with the unique and local conditions. The experience of the educational system of developed countries is being implemented in a manner adapted to the conditions of our republic. Environmental knowledge and education are not left out of this process. After all, ecology, history, mother tongue and literature, national ideal sciences are of great importance in educating our young people as highly spiritual individuals, in training them as personnel who can harmonize the laws of nature and society. [1]

Nature conservation in the Republic of Uzbekistan includes protection of endangered species, management of water resources, preservation of natural habitats, introduction of sustainable farming practices and development of environmental education. In order to solve these tasks, effective work is being

carried out in our country. The ecological situation in Uzbekistan plays a decisive role in the sustainable development of the country. It is very important to educate and raise awareness about the importance of environmental protection and conservation. Environmental education and upbringing are of great importance in environmental protection. Education helps people understand the impact of their actions on the environment and promotes sustainable practices. By raising awareness, we should encourage people to make conscious choices that contribute to the preservation of the ecology of our country. After all, with effective education and effective education and awareness initiatives, we can empower people to become supporters of environmental protection, which will lead to positive changes and long-term preservation of Uzbekistan's ecology.

The problems of regulating the impact of humans on the biosphere, harmonizing the interaction between social development and maintaining a favorable natural environment, and achieving a balance in the relationship between man and nature are becoming more and more urgent. Environmental security is one of the most important problems of human society today and tomorrow because of its relevance and necessity. If these problems are solved in a practical way, it will make it possible to determine the condition and quality of life of the current and future generations [2, p. 1].

Human spirituality and social activity depend on the family, which has multifaceted social situations, the quality of education in kindergartens, schools and colleges, and their effectiveness. First of all, it is important to develop environmental education of young people in the family circle and then in educational institutions. At this point, we should have an understanding of ecological education.

Ecological education is understood as the process of inheritance and extended reproduction of ecological culture through education, training and development by a person. Environmental education is an integral part of the general education system. But this modern educational process has a new meaning. Environmental education directly responds to the goals of the renewal of society in the context of transition to sustainable development, provides a proportionate solution to socio-economic problems and the problems of maintaining a favorable environment and natural resource potential. is becoming a national task. The purpose of any education is to assimilate the social experience accumulated by previous generations of people, and its result is manifested in a person's knowledge and behavior in a certain situation. The goal of environmental education is to create a generation capable of ensuring the sustainable development of society.

We must completely abandon the thinking of "man is the master of nature" and switch to a new way of ecological thinking in the form of "the unity of nature and man, harmonious development - the highest value, "man is not the owner of nature, but its component", living we need to know our environment deeply, for this we need to be ecologically conscious and cultured. This, in turn, depends on

the extent to which environmental education is established in the minds of people and in educational institutions.

The shortcomings in this regard are reflected in the concept of development of ecological education in the Republic of Uzbekistan. In particular, "current state education standards and curricula are not sufficiently enriched with environmental knowledge, skills, qualifications and competencies; educational programs, nationwide measures aimed at eliminating global environmental problems, reducing existing environmental risks, and restoring the natural environment are not coordinated with the essence" [4].

Also, in this concept, the tasks awaiting their solution are clearly defined. In particular, "improvement of educational programs based on the elimination of existing environmental problems and the requirements of the times; to strengthen the responsibility of learners to preserve non-renewable resources of mother nature and use them wisely; development and implementation of effective forms and methods of environmental education" [4].

The role of ecological culture and consciousness in environmental protection is incomparable. A person with ecological education and upbringing does not harm the components of nature. Environmental education covers all stages of human life and requires constant updating and replenishment of their knowledge and skills.

It is difficult to restore such a relationship between nature and man. But in the process of teaching ecology, it is necessary to set the goal of forming a worldview. [5]

In fact, environmental education and training is important for the rational use and preservation of the gifts of mother nature, the prevention of environmental pollution, the improvement of the ecological knowledge, skills, and abilities of young people, the formation of ecological consciousness and culture, and the expansion of their worldviews. When a plan is started, it will definitely bear fruit in the future [6]

In short, the processes of education and upbringing during a person's life provide his living conditions. Ecological education and training serves as a program to further improve the condition of the environment in the preservation of all its components.

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A PROCESS-ORIENTED APPROACH TO TRANSLATION TYPOLOGY

Abstract. This paper explores the concept of translation typology, the categorization of different translation approaches. While acknowledging existing models based on text types and purposes, the argument presented here emphasizes the need for a process-oriented typology. Such a typology would focus on how languages and cultures are conveyed during translation, rather than what is being conveyed. The paper outlines the limitations of existing models and proposes a set of foundational principles for a new typology, including a process-oriented approach, invariant criteria for differentiation, clear applicability guidelines, and a framework for interdisciplinary collaboration.

Keywords. Translation typology, translation studies, process-oriented translation, interdisciplinary approaches, translation criteria.

1. Introduction

The history of translatology as an academic discipline doesn't align chronologically with any specific translating traditions or with the act of translating itself, which dates back to the dawn of human communication. Translatology emerged relatively recently, in the early 1970s, whereas in the 1950s and 1960s, it was considered a subset of applied linguistics. Throughout its brief existence, translatology has been shaped, influenced, and enriched by numerous neighboring or seemingly disparate disciplines. Today, as translatology has become established as a traditional humanistic discipline and has found its place in the curricula of many faculties worldwide, there is skepticism among scholars about whether to maintain its diversity. Some advocate for translatology to become an independent discipline, while others argue that interdisciplinary approaches are essential for its continuous enrichment and vitality. Translatology naturally intersects with other disciplines, but this doesn't mean uncritically adopting concepts from them simply due to tradition. The main argument of this

paper is that translology requires a solid theoretical foundation to guide its interactions with other disciplines. Once such a foundation is established, the parameters of its engagement with other fields will become clear. The issue of translation typology is crucial in this context, as it exemplifies the interdisciplinary nature of translology. Typology not only addresses core theoretical concerns within translology but also serves as a reference point for its interaction with other disciplines. This paper aims to reconsider translation typologies by exploring traditional and contemporary models and addressing theoretical challenges. It proposes criteria for a typology grounded in translation studies while defining the space for contributions from other disciplines. Ultimately, the goal is to affirm the interdisciplinary nature of translology, not merely through its theoretical underpinnings but as a result of its practical application.

2. Methods (Analytical approach)

This analysis will explore the concept of translation typology through the following methods:

1. **Review of Existing Models:** We will examine prominent models of translation typology, including word-sense distinctions (e.g., literal vs. dynamic equivalence), foreignization vs. domestication approaches, and multidimensional models based on text types (e.g., Reiss/Vermeer, Sager).

2. **Critical Evaluation:** We will critically evaluate these models, highlighting their strengths and limitations. The focus will be on how well they align with the proposed principles of a process-oriented typology.

3. **Theoretical Foundations:** We will explore relevant theoretical concepts from translation studies, such as equivalence, purpose, and the role of the translator. This will help establish a foundation for the proposed typology.

4. **Developing New Principles:** Drawing on the analysis of existing models and theoretical foundations, we will propose a set of core principles for a new, process-oriented typology of translation.

By employing this approach, we aim to:

- Demonstrate the need for a typology that emphasizes the translation process itself.
- Identify limitations in existing models based on text types or purposes.
- Propose a framework for a new typology that adheres to the established principles.

3. Results and Discussions

Throughout history, the earliest categorization of translation types revolved around the distinction between "word-for-word" and "sense-for-sense" translation. This dichotomy can be traced back to Cicero's work "De optimo genere oratorum," where translation "ut interpres" (word-for-word) was contrasted with translation "ut orator" (sense-for-sense). This binary concept persisted through the centuries, from Luther's "Sendbrief vom Dolmetschen" in 1530 to Nida's concept of "formal" versus "dynamic" equivalence in 1964, and

Catford's differentiation between "literal" and "free" translation in 1965. This distinction has sparked lively debates among scholars over time, resulting in various perspectives, all leading to the same differentiation.

According to Chesterman, the most recent iteration of this distinction is between "semantic" and "communicative" translation, as introduced by Newmark in 1981. In this framework, "semantic translation is more literal and closer to the original," while "communicative translation is freer, prioritizing the effectiveness of the message being communicated." However, Nord's distinction between "documentary" and "instrumental" translation, proposed in 1988 and 1997, appears to be the latest contribution to the word-sense opposition. In Nord's framework, documentary translation involves a word-for-word approach, while instrumental translation focuses on functionally-oriented rendering. In both cases, the choice of translation type is determined by the translation commission (Übersetzungsauftrag). Nord emphasizes that it is precisely this reliance on the translation commission that distinguishes her framework from similar distinctions.

Another closely related distinction is the one between "foreignizing" and "domesticating" translation, which also operates on a binary model. Historically, the domesticating approach was favored by the Romans, aiming for a freer translation to produce an outcome that reads as if it were an original work. In contrast, the foreignizing approach, advocated by Schleiermacher in the 19th century, favors a more literal translation to ensure that the original word enriches the target culture or audience. However, the explicit connection between the domesticating type and free (i.e., sense-for-sense) translation, or between the foreignizing type and literal (i.e., word-for-word) translation, has not always been stated.

Recent discussions on this matter include House's distinctions in 1977 between "overt" and "covert" translation, where overt corresponds to the foreignizing type and covert to the domesticating one. Additionally, distinctions have been made between "direct" and "indirect" translation by Gutt in 1991.

Beyond binary models, there have been numerous classifications containing more than two types. Among the most discussed in translation theory are multidimensional models, which are object-oriented rather than process-oriented. While process-oriented models focus on the method of translation, object-oriented models classify translation based on the texts themselves. This criterion ultimately reflects text type or genre and is strongly influenced by text linguistics and stylistics. Reiss and Vermeer argue that the method of translation depends on both the type of text and the purpose it serves. Different types of texts, as suggested by Reiss, are examined in conjunction with their purpose, resulting in various types of translation.

Folkart (1989:20) proposes an approach based on reversibility, which entails the possibility of achieving a text identical to the original through back-translation. This approach categorizes outcomes into four different types: the first

type, mathematical texts, exhibits the highest reversibility; the second and third types, technical and constrained texts, respectively, demonstrate medium reversibility; and the fourth type, general and literary texts, shows the lowest reversibility.

Sager (1998:70) expands on this by considering a broader range of criteria. These criteria include the presence or absence of situational antecedents in the target culture, the familiarity of the target language text type in the target culture, the purpose of the translation, the relative status of the source and target texts, the reader's awareness or lack thereof that the target text is a translation, and the presence or absence of standardized solutions.

The bibliography on text-type oriented classifications of translation is extensive, as seen in works such as Trosborg (1997) and Snell-Hornby et al. (1999:205). These models have significantly influenced the contemporary understanding of translation types, particularly in the curricula of translation institutes worldwide, where translation is taught across distinct modules focusing on literary, technical, economic, or legal translation.

Schreiber (1999:152) presents yet another approach, delineating three distinct types of translation. Firstly, "text translations" (Textübersetzungen) prioritize text-internal consistencies and strive for a balance between "cultural foreignization" and "interlingual domestication." Conversely, "situational translations" (Umfeldübersetzungen) emphasize text-external consistencies such as original textual meaning, cultural function, or effect. In contrast, the third type involves intentional alterations and is termed "interlingual revision" (interlinguale Bearbeitung). Schreiber outlines specific procedures for each of these three types.

Chesterman (2000:54) introduces the latest suggestion regarding multidimensional models. He discusses a comprehensive set of criteria and variables, including equivalence, target language, translator, and situational variables. These factors contribute to the delineation of various translation types, fostering improved communication between translators and their clients. Chesterman suggests that these translation types can be best examined within the framework of the sociology of translation.

The premise of this paper asserts that a typology of translation should adopt a process-oriented approach. While acknowledging the significance of the object of translation, the primary goal of such a typology is to elucidate how languages and cultures are conveyed, rather than what is being conveyed. This stance is necessitated by the observation that object-oriented methodologies, such as multidimensional models based on text types, do not inherently imply procedural distinctions. For instance, distinctions between "technical" and "economic" translation, or between "original" and "literary" translation, may lack clear justifications due to the substantial similarities among these types (e.g., terminology, formal characteristics, background knowledge management). Given that a typology primarily involves differentiation, it follows logically that criteria such as type and function, as proposed by models like Reiss/Vermeer (1984),

Nord (1988), and Sager (1998), may not be suitable for classifying translation, as even texts with different functions may exhibit similar translation processes.

Another significant issue arises with typologies solely based on the purpose of translation. In such cases, theory must address the matter of choice, whether by the translation commissioner or the translator themselves. The question of whether the function of translation remains constant depends on various factors such as the situation and personal preferences. However, I argue that a typology requires invariant differentiation criteria rather than criteria subject to choice or preference. A typology grounded in purpose, which must be determined prior to translation, excludes the translation process from classification efforts. Therefore, approaches based on text types or genres may be somewhat limited, as they focus solely on the source and target texts or on criteria inherent to these texts rather than on the translation process itself.

Folkart's approach, as outlined in 1989, utilizes the concept of reversibility, wherein the extent of reversibility hinges on specific attributes of the source text, such as its technical complexity or cultural nuances. Although this approach also leads to a categorization of translation types based on text types, its implications offer valuable insights for the model proposed below.

Schreiber's model, presented in 1999, reiterates the issue of choice discussed earlier. The third type, interlingual revision, heavily relies on deliberate decisions regarding changes in translation. Consequently, the translation process takes a secondary role in this aspect of classification, while the other two types appear to involve crucial criteria like "cultural foreignization" and "cultural domestication," aligning with the process-oriented binary models previously discussed. If we interpret "foreignization" as implying a "word-for-word" translation and "domestication" as suggesting a "sense-for-sense" approach, then the binary approaches essentially boil down to a word-sense dichotomy.

The primary challenge posed by this dichotomy pertains to determining the extent to which each type should be applied in a given text, or in other words, the degree of literalness. This issue has been widely acknowledged and extensively debated within contemporary translation theory. Despite the common assertion in translation theory about the need to maintain a balance between fidelity to the source and readability in the target text, there remains insufficient explanation regarding the appropriate application of each type in a text.

To justify the application of each type, scholars have turned to related disciplines such as theoretical linguistics, cultural studies, intercultural communication, and even psychology. However, this has often resulted in conflicting interpretations of translation. While this diversity of perspectives is beneficial, there is a need to establish common ground where differing viewpoints can converge within a clearly defined framework of interdisciplinarity, without risking contentious debates. Indeed, the absence of a universally accepted definition of translation underscores the complexity of this endeavor.

The preceding discussion leads to the formulation of the following foundational principles for a translation typology. In essence, a translation typology should:

- differentiate various types based on a process-oriented approach rather than focusing solely on the characteristics of the source and target texts;
- rely on invariant criteria for differentiation, unaffected by individual preferences or choices of the translator or commissioner;
- clearly delineate the circumstances in which each specific type is applicable;
- establish a robust framework for collaboration with related disciplines.

In the forthcoming model, an endeavor will be made to devise a classification criterion and a set of types that align with the aforementioned principles.

4. Conclusion

The concept of translation typology, the categorization of different translation approaches, serves as a vital roadmap within the vast landscape of translation studies. This paper has advocated for a paradigm shift, urging a move away from existing typologies heavily reliant on text types or purposes. Instead, we propose a process-oriented typology that delves deeper, focusing on how translators bridge the intricate gap between languages and cultures. This shift prioritizes understanding the "how" of translation, the very methods and strategies translators utilize to navigate the complexities of conveying meaning across linguistic and cultural boundaries, rather than simply the "what" – the content itself.

Our analysis has critically examined prominent existing models. We explored the well-established word-sense dichotomy (literal vs. dynamic equivalence), the foreignization vs. domestication approaches, and the multidimensional models based on text types (e.g., Reiss/Vermeer, Sager). While these models offer valuable insights and have undoubtedly shaped the field, they often face limitations. Some lack clear differentiation criteria, relying on subjective choices made during the translation process. Others struggle to address the spectrum of possibilities that lie between literal and free translation, leaving translators with limited guidance.

To address these shortcomings, we have proposed a set of core principles for a new typology. This novel typology would be:

Process-oriented: This approach prioritizes understanding the methods and strategies translators employ to achieve the desired outcome in the target text. It delves into the decision-making process, the translator's toolkit, and the various techniques used to navigate cultural nuances and linguistic challenges.

Grounded in invariant criteria: Unlike existing models that may be swayed by individual preferences or choices, this typology would rely on objective criteria. These criteria would be inherent to the translation process itself, offering a more consistent and reliable framework for categorization.

Clearly applicable: The new typology would not simply categorize different approaches but also provide practical guidance. It would offer translators insights into when to utilize specific approaches based on the unique demands of the source text, target audience, and the overall translation purpose.

Open to interdisciplinary collaboration: Translation, by its very nature, fosters a bridge between cultures and disciplines. This typology would embrace collaboration with related fields such as theoretical linguistics, cultural studies, and intercultural communication. By drawing insights from these disciplines, the typology can be enriched and continuously refined.

Developing such a process-oriented typology is an ongoing endeavor that requires further research and theoretical exploration. However, by establishing a new framework, we can move towards a more comprehensive understanding of how translators navigate the complexities of their craft. This will ultimately benefit both translation theory and practice. On the theoretical level, it will lead to a more nuanced understanding of the translation process itself. In practical terms, it will empower translators with a richer toolkit and a clearer understanding of when to utilize specific approaches. Ultimately, this will lead to more informed choices, fostering a deeper appreciation for the artistry and critical thinking skills that lie at the heart of successful translation.

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METHODOLOGY OF TEACHING THE SUBJECT OF DESIGN OF MODERN BUILDINGS IN ARCHITECTURAL DRAWING LESSONS

Abstract. The purpose of writing this article is to expand the worldview of students in the teaching of construction drawing (drawing course) in general secondary schools of our republic, to introduce the professions of architects and designers, to introduce construction drawings and their features, and to encourage students to read them. marked as teaching.

Keyword: architect, designer, plan, facade, cutting, builder-geodesists, graphic language, construction graphics, general construction.

Construction drawing is studied in-depth in appropriate specialties of general secondary education schools, and future drawing teachers should acquire sufficient deep knowledge and skills in reading and performing all types of construction drawings.. That is why in-depth knowledge of this knowledge is required in the professional activity of the future drawing teacher. In this section of the drawing course of public secondary schools, "Construction drawings. Plan of the building. Trimming and facade", "Reading construction drawings", "Practical training on drawing a master plan" are given.

If we take into account the extremely limited time devoted to the study of construction drawings in schools based on the curriculum, it is difficult for students to master these topics at the intended level. Because, according to their nature, construction drawings are very different from technical and engineering drawings. The reason for this is that the objects being depicted are large in size; a large number of types of materials included in the structure; rules for placement of sanitary and technical equipment and their marking on the drawing; specific aspects of the plan, cut, execution of the facade; master plan drawings and conditional symbols on it, etc. This list can be continued. Considering these aspects, some Methodist pedagogues tried to prove that there is no need to teach construction drawing in general education schools. Is it really necessary to teach construction drawing in its current form in schools?

If we look at the educational materials in the program and the textbook from the point of view of the students' daily life and future work activities, it can be said that it is not so necessary. Because, in the future, students who choose professions in the field of architecture and construction will acquire knowledge in this field in the next educational institutions.

But it is also possible to organize construction drawing classes in general schools in a completely different form in terms of content and volume. We will give methodical recommendations about this below.

Everyone in the process of building a house, shopping, refurbishing a house or garden yard, placing furniture in a room or office, encounters the appearance of construction drawings to one degree or another. In addition, knowledge of the characteristics of the "graphic language" of architecture is one of the elements of general human culture and knowledge.

Before starting to teach this knowledge, information about the main parts of buildings (Fig. 1) and the sequence of construction works will be given very briefly. In this case, we advise you to mention the coordination axes of the building determined by builder-geodesians and their importance in the construction of the building and the construction technology of the object.

After that, it is noted that all objects of industry and construction are described according to uniform standards (DST 305-68).

However, architectural-construction drawings have their own conditions and some differences in accordance with construction norms and rules.

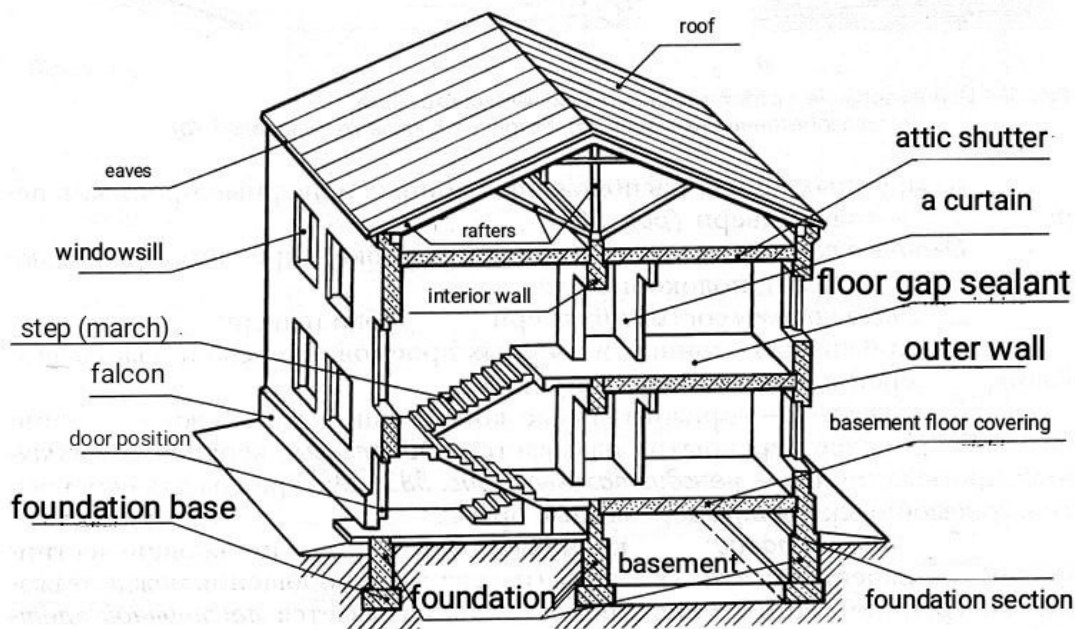


Figure 1

Here is an example of specific features of architecture-construction graphics. At this stage, when studying building elements (walls, windows, doors, stairwells, etc.), examples are filled with illustrations, and the concepts of plan, cut, and facade are studied. Emphasizing that in existing textbooks for general education schools, these topics of construction drawing are very short and given with some errors (in particular, old standards are used in conditional designations; age and interest characteristics of students are not taken into account in the examples of construction drawings presented, etc.). "We need our teeth." Therefore, it is recommended that the teacher choose familiar, simple and interesting examples for students when explaining the topic. In this way, the

students become interested in architectural and construction drawings, and superficial knowledge about these drawings is not formed.

It is necessary to pay attention to the following features: "plan" in architecture and construction has its meaning: a) horizontal section of the building using a plane passed through the level of window and door positions; b) top view of building parts or place (territory) (roof plan, floor plan, master plan, etc.).

Building cuts are only in the vertical - transverse or profile direction. Clippings are architectural (contours shown) or structural (a drawing detailing the structural elements of a building).

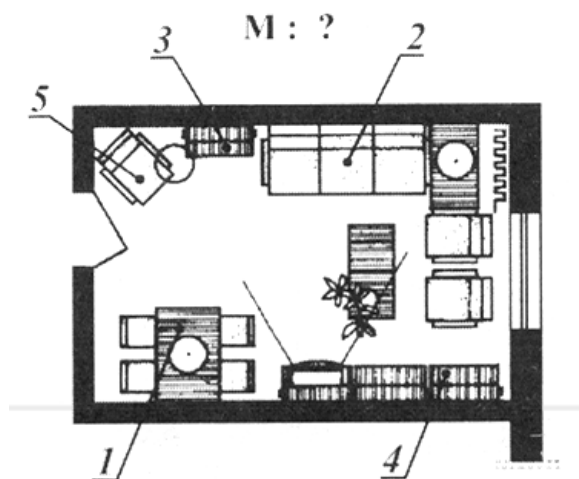
The phrase "façade" means a basic appearance. The facade is open (facing the street), it can be viewed from the courtyard or viewed from the side.

In contrast to mechanical detail drawing, in construction drawing, the names of the architectural construction drawings are written above each image on the sheet of paper (for example, 1st floor plan; BB (1-1, 2-2...) cut; 1-7 facades; 1... 7 - bin o k o o rdina o nooks). Elements of constructions lying in the cutting plane in plans and sections S (0 - 1.4 mm) thick line, and those behind the cutting edge are drawn with S /3... S/2 thick line.

Cuts of walls and curtains on the plan are not drawn (here it is better if they are painted in a dream or watercolor). The facade of the building is painted in watercolor, and shadows are often shown in order to increase its clarity. The facade is made in strips 0.2...0.4 mm thick. Plans, cuts and facades are usually made in 1:100 or 1:200 scale. In construction and architectural drawings, the viewing direction is usually taken from the front (from top to bottom in the plan) and from right to left (in mechanical drawings, cuts from left to ten are often used).

with the types of architecture - construction graphics and general construction drawings, they can be offered the following tasks (they can choose according to their wishes):

1. Plan your home. On this scale (1:20;...) make models of the furniture and appliances in this room from thick colored paper and according to your taste and needs Place j o (Fig. 2).



Furniture explanation		
T/r	<i>Number</i>	<i>Name</i>
1	<i>Table</i>	<i>1</i>
2	<i>Sofa</i>	<i>1</i>
3	<i>Bookshelves</i>	<i>1</i>
4	<i>Closet</i>	<i>2</i>
5	<i>Chair</i>	<i>3</i>

Figure 2.

2. Based on the isometric projection of the interior, make a sketch of its plan with the placement of furniture (Fig. 3).



Figure 3. An example of an assignment to make a room plan drawing on the isometric projection of the interior and show the placement of furniture in it.

3. Divide the surface of the apartment into functional zones using the example of zoning according to the plan given in Figure 4-5.



Figure 4. Two-room apartment plan and placement of furniture in it



Figure 5. Examples of dividing apartment rooms into functional zones

4. Improve the facade of the building shown in Figure 6.

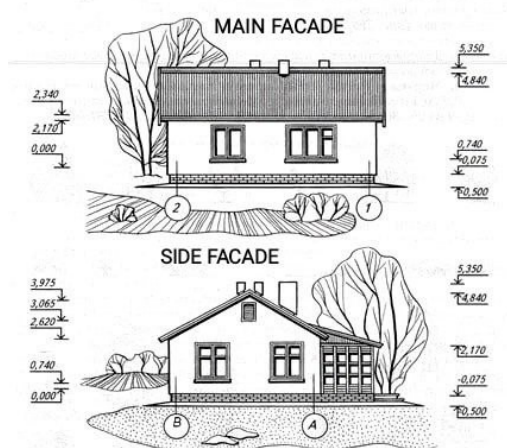


Figure 6. An example of the task of improving the facade of the building shown in Fig

5. Based on the clear image of the garden yard, draw a) a sketch of its facade; b) make a sketch of the plan (Fig. 7).

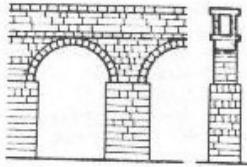

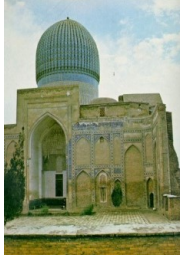




Figure 7. Execution of the facade and building plan according to the clear image.

If the students are interested in the issues of interior design, in addition (in group classes), you can consider the options of interior design in color with them. If students are interested in construction drawing, they can organize a trip to the city and tell stories about the construction style of various buildings and the history of their construction. Architectural construction graphics can be used as an excellent resource when organizing workshops and other special courses.

Self-assessment (Charkhpalak) method

Based on the image of the architectural construction drawings presented in Table 1, it identify the names. Table 1.

No	Illustration of construction drawings	Types of construction drawings							Correct answer
		The mausoleum	Bridge	Castle	Aqueduc	Dam	Modern building	Madrasa	
1									
2.									
3.									
4.									
5.									

The above table shows the definition of its names based on images of architectural construction in the "Charkhpalak" technology.

With the help of this method, it is possible to divide not one student into groups and conduct a competition between them. Through this method, the teacher not only provides students with theoretical knowledge, but at the same time it is possible to determine their acquired knowledge.

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USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES IN THE DEVELOPMENT OF STUDENTS' PROFESSIONAL QUALITIES IN DRAWING CLASSES

Abstract. The science of drawing is determined by the role it plays in the practical activity of a person in the creation and introduction of new technology in all sectors of our developing independent country. In the world, computer graphics and information technologies are rapidly developing and improving.

New programs on subjects suitable for the needs of the times are widely used. In this regard, the professional qualities of drawing students are developed through the use of information and communication technologies such as FastSton Captur and Auto CAD 2007.

Keywords: FastSton Captur, Auto CAD 2007, interactive programs, moodle spring market, learn.

Information and communication technologies such as websites, online classes, interactive programs, and several platforms can be used to develop the professional qualities of students in drawing classes. These technologies provide students with opportunities for distance learning, rapid access to information, and skill development. Teachers can also use these tools to review students' progress, provide advice, and share ideas.

There are several ways to develop the professional qualities of students in drawing classes:

Emphasize practice: Drawing classes provide opportunities for students to develop skills through hands-on activities rather than theory. This allows students to apply acquired knowledge, solve problems, search for creative solutions, and analyze processes.

Use of additional resources: In drawing classes, the use of interactive programs, online information, video tutorials, and other electronic learning tools will further strengthen the acquired knowledge of students.

Graphic Training: Professional development can also be fostered through graphic training. In these classes, graphics activities and other drawing activities engage students' interests and teach them to collaborate with the community.

Individualization of Learning: Each student is isolated from other students to provide support appropriate to their developmental stage. This allows

individualized advice, labels, time allocations, and developmental assistance to foster reciprocal relationships rather than intimate relationships with the student.

These methods are of great importance in the development of students' professional qualities.

Also, information and communication technologies help to develop how students look at social information and data, learn, analyze, and make decisions. This will have important tasks in improving and developing their professional qualities.

Proper organization of the educational process and systematic work of students helps to acquire deep knowledge, skills, and abilities. Therefore, it is important to provide this in full in general secondary education schools as well as in higher education. Platforms created through sites such as **Moodle**, **iSpringMarket**, and **Learme** can help us with this. We know that materials should be placed on the platform created in turn. I've set out below to cover the projection drawing unit for students to create slide animations for teaching in general secondary schools. For this, I used **FastStone Captur**, a screen recording program.

World experience shows that it is not difficult to view the subjects of the projection drawing department in 3D through modern computer programs (**AutoCAD**, **3DS Max**, **Civil 3D**, etc.), to give cuts and projections to the details, and to visualize the detail itself through them, but has led to them being viewed as topics of interest to everyone.

The science of "computer graphics" is primarily related to the science of computer science. It is impossible to master computer graphics without knowing a set of simple operations on a computer. So, in the educational system, students should first master the science of informatics. The next requirement comes from the requirement of the graphics program being studied. **AutoCAD** graphic software also requires knowledge of drafting because it is related to drawing. It is necessary to know simple geometric constructions (division of a circle into equal parts, arc of a circle, diagonal, diagonal, angle bisectors, properties of perpendicularity and parallelism...). Otherwise, it is inappropriate for us to ask the program to perform some action by issuing a set of commands incorrectly. In short, when learning the **AutoCAD** graphics program, first computer science and then drawing must be mastered.

Using ready-made drawings in the Auto CAD program in general secondary schools can sometimes cause inconvenience. Explaining the drawings in the program to students in the most convenient way, and showing the order of drawing correctly through animation saves the teacher's time and increases the efficiency of the lesson.

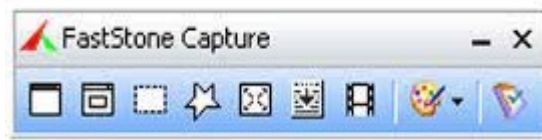


Figure 1.

For this, we take a ready-made drawing drawn in the AutoCAD program

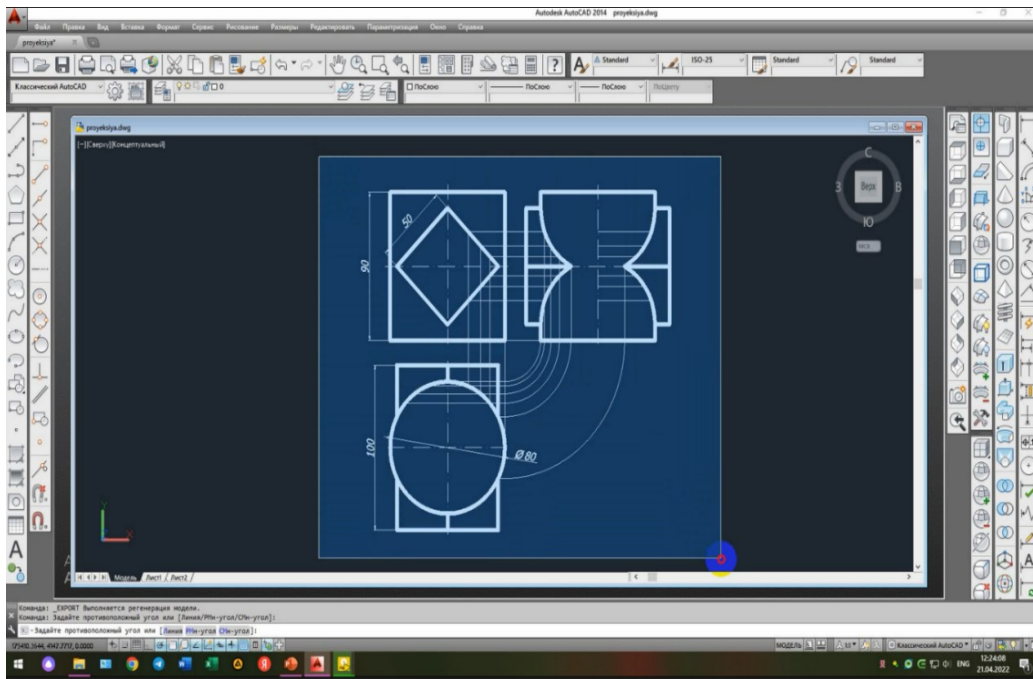


Figure 2

We define it as above. And we click on the icon in the upper left corner, and after clicking the export button, the next window will appear.

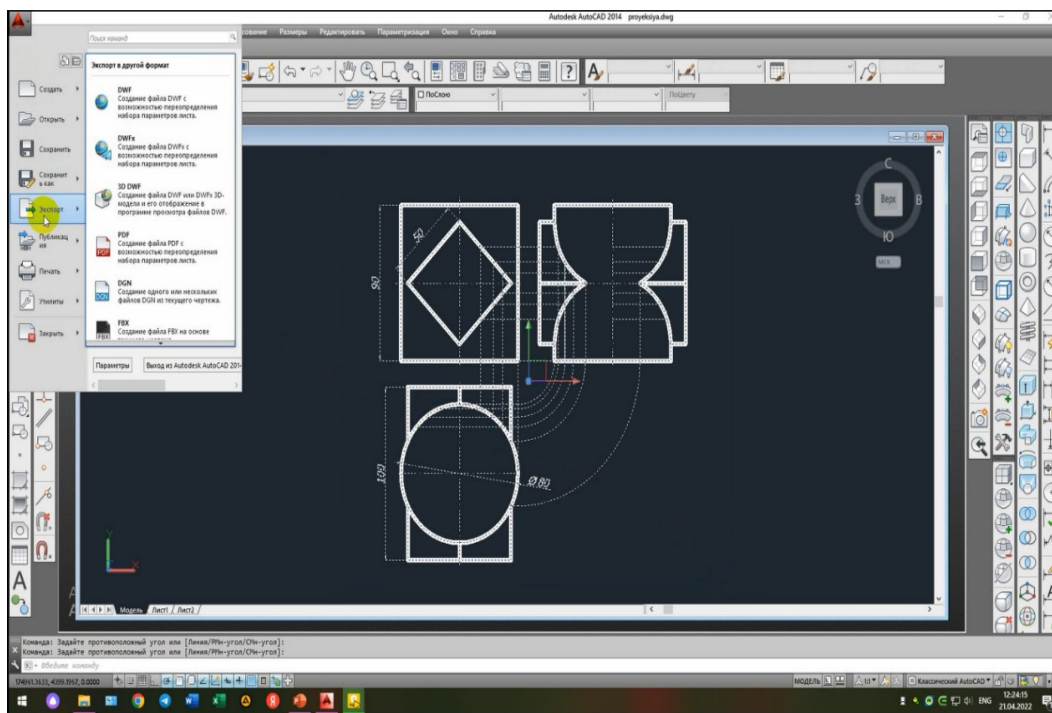
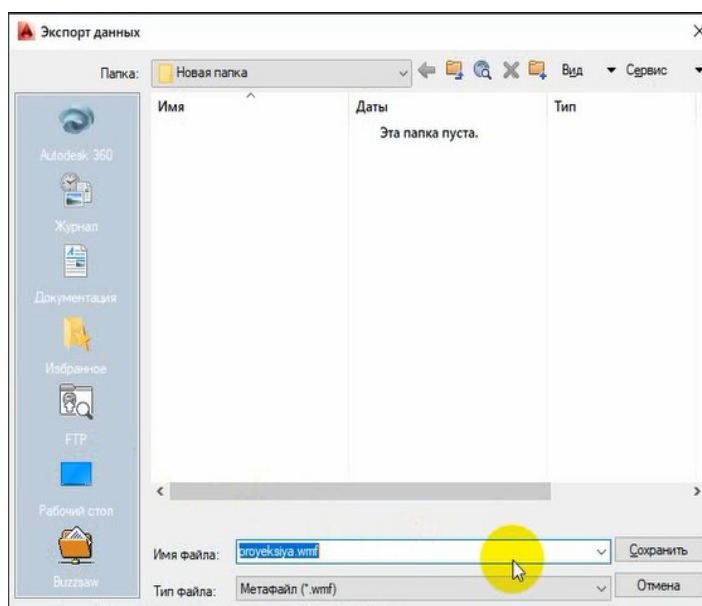


Figure 3

From the resulting list, click the "Drugie Format" button. Then the "Export dannyx" window will appear on the screen. In this window, you can specify the storage location of the above drawing defined in AutoCAD. And you need to write .wmf after the dot before saving. The PowerPoint program will open: insert pictures from the "Insert" section into the prepared slide. An animation is created in PowerPoint by dividing each line of the drawing into pieces or placing each one separately as above and giving it a separate animation. Figure 4



A video guide is prepared by recording the screen in the FastStone Captur program of the above-mentioned workflow.

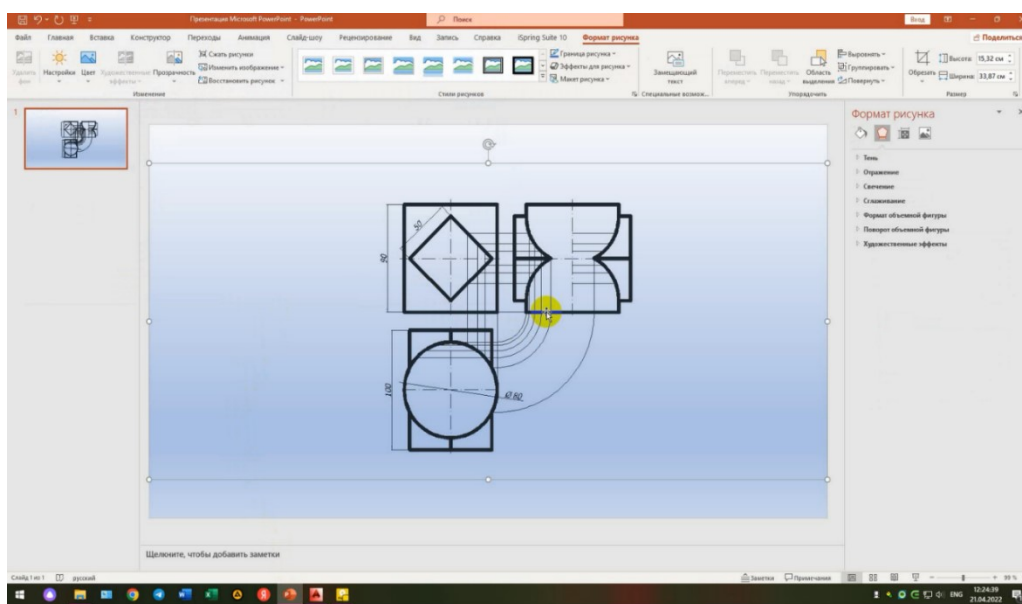


Figure 5

The finished animation is suitable for use in general secondary education or for the platform materials department.

The use of information and communication technologies in drawing classes will have the following advantages in the development of students' professional qualities:

Skills and Reasoning: Technologies allow students to access and analyze information on their own time. This provides an opportunity to transfer adults to another area, consult, and express their opinions.

Personalized learning: Information and communication technologies allow students to create their curriculum and programs. This allows students to choose educational paths tailored to their interests and needs.

Collaboration and Community Engagement: Technologies create opportunities for community collaboration and engagement. Students develop community connections by providing feedback and reviews through websites, forums, blogs, or social media.

Job-related skills: ICT helps students develop job-related skills required in real life. This will guide them in putting the information into practice and applying the knowledge they have acquired.

Skills and creativity: In drawing classes, information and communication technologies are of great importance in developing students' skills and creativity. This allows them to work on finding innovative solutions, solving problems, and creating new ones.

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STUDY OF THE CHEMICAL COMPOSITION OF ALOE VERA

Abstract. This article discusses the chemical composition, uses and biological importance of the aloe vera plant, which has been widely used in the fields of pharmaceutical and cosmetology for centuries.

Keywords. Aloe vera, gel, latex, mannans, saccharides, anthraquinones, aloin.

Introduction. Aloe vera (*Aloe barbadensis miller*) is a succulent plant, originates from the Arabian Peninsula, which is widely distributed and is considered an invasive species in many world regions. The name aloe vera was derived from the Arabic word “Alloeh”, meaning a “shining bitter substance” and vera came from Latin word “vera”, meaning “true”. For years, aloe vera has been widely use in several cultures – Egypt, Greece, Mexico, India, China, and Japan. The plant belongs to the Asphodelaceae (Liliaceae) family that thrives in dry regions in Asia, Europe, America, and Africa.

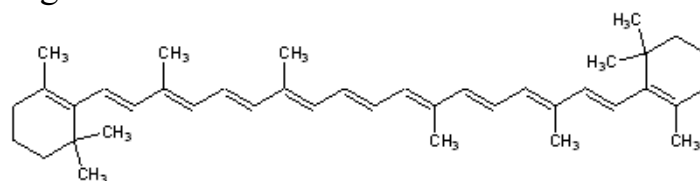
The two substances from aloe vera – a clear gel and its yellow latex are widely used to manufacture commercial products. Aloe gel is typically used to make topical medications for skin conditions, such as burns, wounds, frostbite, rashes, psoriasis, cold sores, or dry skin. Aloe latex is used to be ingested for relief of constipation.

Orally ingested non-decolorized aloe vera leaf extract was listed among “chemicals known to the state to cause cancer or reproductive toxicity” by the California Office of Environmental Health Hazard Assessment. Since 2016, aloe vera whole leaf extract is classified as a possible human carcinogen by the International Agency for Research on Cancer. Aloe skin contains aloin which is toxic. Oral ingestion of aloe vera is potentially toxic, and may cause abdominal cramps and diarrhea.

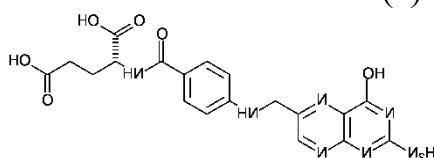
Cosmetic companies commonly add sap or other derivatives from aloe vera to products such as makeup, tissues, moisturizers, soaps, sunscreens, incense, shaving cream or shampoos. Reviews show that its inclusion in many hygienic products is due to its “moisturising emollient effect”.

In compositional studies on the structural components of leaf portions of the Aloe vera plant, the rind was found to compose 20-30% and the pulp 70-80% of the whole leaf weight. On a dry-weight basis, the rind and pulp contain 2.7% and 4.2% lipids, and 6.3% and 7.3% proteins respectively. The percentages of soluble sugars (11.2% and 16.5%), primarily as glucose, and the percentages of ash (13.5% and 15.4%), in particular calcium, were relatively high in the rind and pulp, respectively. Non-starch polysaccharides and lignin represented the bulk of each leaf fraction and were found to be 62.3% and 57.6% of dry weight of the rind and pulp, respectively. Acetylated mannan is the primary polysaccharide in aloe vera gel. Other chemical constituents of aloe vera include lectins such as aloctins A and B.

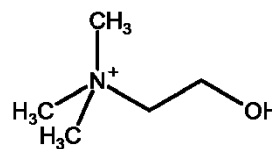
The inner leaf pulp of the Aloe vera plant contains large, thin-walled cells that produce gel. Aloe vera gel serves as the water and energy storage component of the plant. The main feature of the Aloe vera plant is its high water content, ranging from 99% to 99.5%, while the remaining 0.5-1.0% solid material is reported to contain over 200 different potentially active compounds, including vitamins, minerals, enzymes, simple and complex polysaccharides, phenolic compounds, and organic acids.



(a) Beta-carotene



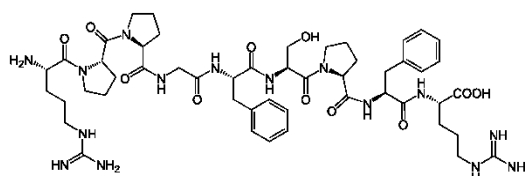
(b) Folic acid



(c) Choline

Aloe vera contains vitamins: beta-carotene; C and E, which are antioxidants. It also contains vitamin B12, folic acid, and choline.

Of the enzymes, there are 8 enzymes: allinase, alkaline phosphatase, amylase, bradykinase, carboxypeptidase, catalase, cellulase, lipase and peroxidase.



(d) Bradykinin

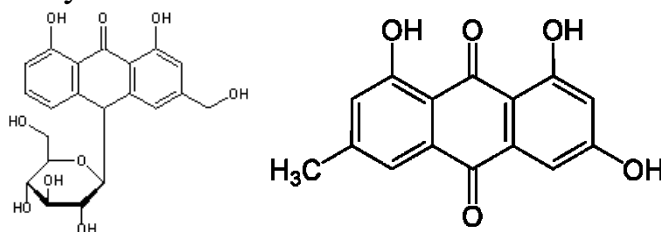
Bradykinase helps to reduce excessive inflammation when applied to skin topically, while others help in the breakdown of sugars and fats.

Minerals provides calcium, chromium, copper, selenium, magnesium, manganese, potassium, sodium, and zinc. They are essential for the proper functioning of various enzyme systems in different metabolic pathways and few are antioxidants.

Saccharides provides monosaccharides (glucose and fructose) and polysaccharides (glucomannans, polymannose). These are derived from the mucilage layer of the plant and are known as mucopolysaccharides. The most prominent monosaccharide is mannose-6-phosphate, and the most common polysaccharides are called glucomannans [β -(1,4)-acetylated mannan].

Acemannan, a prominent glucomannan has also been found. Recently, a glycoprotein with antiallergic properties, called alprogen and novel anti-inflammatory compound, C-glucosyl chromone, has been isolated from Aloe vera gel.

Anthraquinones provides 12 anthraquinones, which are phenolic compounds traditionally known as laxatives.



(e) Aloin (f) Emodin

Aloin and emodin act as analgesics, antibacterials and antivirals. Lipids provides 4 plant steroids: cholesterol, campesterol, β -sitosterol and lupeol.

All these have anti-inflammatory action and lupeol also possesses antiseptic and analgesic properties.

Hormones like auxins and gibberellins help in wound healing and have anti-inflammatory action. It provides 20 of the 22 human required amino acids and 7 of the 8 essential amino acids. Salicylic acid possesses anti-inflammatory and antibacterial properties. Lignin, an inert substance, when included in topical preparations, enhances penetrative effect of the other ingredients into the skin. Saponins that are the soapy substances form about 3% of the gel and have cleansing and antiseptic properties.

Aloe vera latex contains four major C-glycosyl constituents: aloin A, aloin B, aloesin, and aloeresin A. Aloin A, a C-glycosyl anthrone, also referred to as barbaloin, is the major component of aloe latex. Aloin A and its epimer, aloin B, also referred to as isobarbaloin, have a 9-anthrone skeleton and a β -D-glucopyranosyl substituent. Aloesin, also known as aloeresin B, is a 5-methyl chromone with an 8- β -D-glucopyranosyl substituent, and aloeresin A is a 5-methyl chromone with an 8- β -D-glucopyranosyl-2-O-*trans*-*p*-coumarol substituent. In addition, the latex from Aloe vera contains several aromatic compounds, such as aldehydes and ketones.

Advantages of Aloe Vera	Disadvantages of Aloe Vera
Soothing for skin irritations	Potential for allergic reaction
Wound healing properties	Excessive consumption may cause digestive discomfort (due to aloin)
Moisturising effects	Limited scientific evidence for some health claims
Sunburn relief	Not suitable for everyone
Antioxidant properties	

Aloe vera is an ancient succulent plant with green, fleshy leaves. The leaves contain two liquids: a yellow, bitter-tasting latex in the bark and a sticky gel inside. The product is made from recycled leaves. Aloe vera has been used for centuries and grown throughout the world for its medicinal properties, including anti-inflammatory and antibacterial properties. Aloe vera gel consists of water, amino acids, vitamins, lipids, sterols, tannins and enzymes. It also contains phenols, saponins and anthraquinones, which have antiviral, antibacterial and antifungal properties. Contains antrones, aloins, aldehydes and ketones. Aloe vera has immunomodulatory, moisturizing, wound healing, antioxidant, anti-inflammatory, antitumor, antibacterial and antifungal effects.

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AUTOMATING THE PROCESS OF USING ALTERNATIVE ENERGY IN "SMART HOUSES"

Abstract. In this article, the methods of operation of the "Smart House" systems, which are rapidly developing today, the contribution of this system to the use of alternative energy, and other advantages of the system were discussed in detail.

Keywords: Smart home, light control system counting people entering the room, wind energy, solar energy, Wi-fi, GSM.

Enter

A smart house, or in other words "Smart house" is a house that includes modern trends of automation of home management, can monitor expenses or other functions of the building for the residents of the house.

For example, a smart home can control lighting systems, multimedia, temperature, security, opening and closing of doors and windows. Energy efficiency is one of the most important issues. Household appliances, air cleaning and cooling (heating) systems and lighting are the most energy demanding parts of the dwelling. Smart home technology is a good choice for people to manage their above needs and save energy.

The daily increase in the world's population significantly increases energy consumption. As a result, it is becoming clear that civil buildings consume more energy compared to industrial buildings. Providing sufficient energy for the population is the most urgent issue. In this way, increasing the use of renewable, alternative energy is a clear and obvious solution to the problem.

Automation of "smart home" technology to improve energy efficiency is one of the growing trends in the development of world home technologies today. Automation includes the ability to use devices, control energy consumption in a smart home and, as a result, save on energy bills. This is the main advantage of smart home automation technology. Below we will consider other effective and negative aspects of automation of smart home technology.

Improving the energy efficiency of "smart houses": achievements and conclusions

Smart home automation has a number of energy-saving advantages. By using this system, you can save energy consumption to the maximum. The system automatically controls the lighting, ventilation, and heating systems depending on whether there is a person in the house or not. It takes into account the number of people in the house. As a result of this smart work of the system, you can save a lot of money.

There are several ways for homeowners to automate their smart home. One of the most common ways is to use an intelligent thermostat. With the help of this system, the necessary temperature inside the house is realized with the help of minimum energy consumption. In addition, the automatic control system of lighting systems prevents unnecessary flashing of lights. This system is based on the principle of photodiode operation, and the lights turn on and off at the right time of the day.

Energy efficiency of the "smart house" means optimization of energy consumption inside the house, i.e. intelligent management. By transferring the operation of various energy-consuming systems (household appliances, heating and cooling, lighting systems) to automatic control, considerable energy and money savings are achieved. As mentioned above, these processes have a positive effect on the ecology of the environment.

The principle of operation of the "Smart House" is based on the management of various measuring and monitoring devices, control devices and techniques connected with a wired or wireless connection using the operating system. These devices are usually connected to a central hub, allowing homeowners to control all devices from one place (for example, from an Android phone or tablet).

Smart thermostats are one of several smart home control system devices. These devices allow homeowners to easily control the temperature using tracking sensors and machine control algorithms. This device automatically turns off heating (cooling) systems when there is no one in the house, and when someone comes home, it helps to save a lot of energy as a result of heating (cooling) the most necessary part of the house.

Green energy

The term green energy, as its name implies, refers to energy obtained from natural sources (for example, sunlight, wind, rain, plants, algae, or geothermal heating) that does not have any negative impact on the environment. These energy resources are renewable, that is, they can be artificially restored.

Renewable energy sources have a much lower negative impact on the environment than various petroleum fuels. Green energy sources do not produce harmful substances that destroy the climate (such as greenhouse gases).

During the mining of fossil fuels, grooves appear in a large area underground, as a result of which the world's ecosystem is damaged. Only green energy sources can be used anywhere in the world. Technologies for the development of renewable energy sources have reduced the production costs of

solar panels, and wind turbines or other green energy sources have provided mankind with the opportunity to produce energy without harm.

In the "Smart House" system, the house blends in with the surrounding nature as a whole composition. The system adapts to the climate and controls household processes at home by taking in information from the surrounding area. The received information is collected through a central link and processed using mechanisms.

A solar energy collector is a device that receives sunlight and turns it into thermal energy, and a system consisting of a collector that collects the produced energy, a reservoir or cistern that directs energy. The accumulated thermal energy can be converted into mechanical energy, i.e. electrical energy. Energy from the sun produces electromagnetic radiation (infrared, ultraviolet, X-rays). Now a reasonable question arises, how can we use this energy at home? For this we need solar panels that convert mechanical energy into constant electric current. The use of solar energy is especially relevant in Uzbekistan, where there are 300 sunny days.

Installation of modern solar collectors in our country, use of smart home technologies using its energy is fully justified. For this, it is necessary to involve modern technologies. For example, ZIGBEE, RFID, WLAN, BLUETOOTH, IoT, WI-FI devices turn our home into a "smart home".

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KANALLARINI BETONLASH VA TOZALASHDA BIR CHO'MICHLI EKSKAVATORLARNING AHAMIYATI

Annotatsiya. Kanallarni va kollektorlarni tozalash davrida gidravlik ekskavatorlar ishlash jarayonida obektning loyihaviy parametrlarini o'zgarishga sabab bo'ladi. Buni oldini olish maqsadida irrigatsiya tizimlarini tozalashda girdavlik ekskavatorlarning kovush tishlariga xarikat berish kerakligi va bu bilan er ishlari xajmining kamayishiga va ish unumdorligi ortishiga erishish mumkin.

Kalit so'zlar: beton, qoplama, kanallar, ishchi jihoz, kovsh, ekskavator, ekspluatatsiya, suv resurslari, tizim, gidrotexnika inshootlari, texnik ishonchlilik, loyqa cho'kindilar.

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THE IMPORTANCE OF SINGLE BUCKET EXCAVATORS IN CONCRETING AND CLEANING THE CHANNELS

Abstract. During the cleaning of channels and collectors, hydraulic excavators cause a change in the design parameters of the object during operation. In order to prevent this, it is necessary to adjust the hollow teeth of

rotary excavators when cleaning irrigation systems, thereby reducing the volume of earthworks and increasing productivity.

Key words: concrete, coating, channels, working equipment, scoop, excavator, operation, water resources, system, hydrotechnical structures, technical reliability, muddy sediments.

O‘zbekiston Respublikasi Vazirlar mahkamasining 2018-2022 yillarda sug‘oriladigan yerlarning meliorativ holatini yaxshilash va suv resurslaridan oqilona foydalanish Davlat dasturida vazifalari yuklatilgan. Shu o‘rinda, hukumatimiz tomonidan suv xo‘jaligi sohasiga katta e‘tibor berilib, respublikamizdagi qudratli suv xo‘jaligi tizimini ta‘mirlash-tiklash va rekonstruksiya qilish ishlariga milliardlab so‘m mablag‘lar ajratilayotganligining o‘zi gidrotexnika inshootlarining texnik ishonchliligini, uning ekspluatatsion samaradorligini oshirish orqali, ularning joriy va kapital ta‘mirlash muddatlarini uzaytirish, suv resurslaridan samarali foydalanish masalalarining naqadar dolzarb ekanligini ko‘rsatib turibdi. Shuning uchun bugungi kunda beton qoplamali kanallarni tozalash jarayonlarida beton qoplamalarga jiddiy shikast yetkazilmoqda [1].

Yerlarni meliorativ holatini yaxshilashda kanal va kollektorlardan samarali foydalanish zarur. Qurilgan va ishlatilayotgan kanal va kollektorlar ko‘rsatilgan muddatda (odatda 2...3 yil) tozalanishi talab qilinadi. Beton qoplamali kanallarda cho‘kindi va har xil o‘tlarni o‘sishi ularni ko‘ndalang kesim yuzini qisqartirib, suvni o‘tish miqdorini kamaytiradi. Kollektorlarda asosan qamishlar (uning bo‘yi ayrim hollarda 8 m gacha) o‘sib, orasi cho‘kindilar bilan to‘ladi va natijada yer osti suvlari ko‘tarilib, yerlarning meliorativ holati yomonlashishiga olib keladi. Kanal va kollektorlarni tozalash uchun maxsus mashinalar mavjud bo‘lib, ularning oddiy va faol hamda aralash ish jihozli turlari ishlatiladi. Suv havzalariga magistral kanal, daryo, ko‘l va suv omborlari kiradi. Suv havzalarida ham, vaqt o‘tishi bilan ularning tubida cho‘kindi hosil bo‘ladi. Bu cho‘kindilarni tozalashda zemlesos yoki zemsaryadlardan foydalaniladi (15.3,15.5-rasmlarga qarang). Bundan tashqari ularni maxsus bir cho‘michli qadamlovchi ekskavatorlar yordamida ham tozalanadi.



1-rasm. Kanallarni betonlashtirish jarayoni.

Екскаватор lotincha excavo – qazish so‘zidan olingan bo‘lib, yer qazish va qazilma boyluklarni qazib olish ishlarida ishlatiladigan mashinadir. Bir cho‘michli ekskavator konstruksiyasini uchta asosiy qismga ajratish mumkin: yurish uskunasi, aylanish platformasi va ish jihozi. Agar bir ekskavatorga bir nechta tur ish jihozlarini almashtirib o‘rnatish orqali ish bajarish mumkin bo‘lsa, bunday ekskavatorlarga universal ekskavatorlar deb ataladi [1,2,3,4,5,6].

Cho‘michni tushirishga ketgan vaqtni quyidagi formula bilan aniqlash mumkin: Notekis, noqulay relefli joylarda qurilgan kanal va kollektorlarni tozalashda, shuningdek, cho‘kindi tarkibida tosh bo‘laklari va kollektorda o‘sgan qamishlar poyasi yo‘g‘on bo‘lgan sharoitlarda ish unumdorligi kam bo‘lsada bir cho‘michli ekskavatorlardan foydalaniladi. Bunda ekskavatorga maxsus cho‘michlar va uskunalar o‘rnatiladi. Maxsus cho‘michlarning turlari 26.1-rasmda keltirilgan.



Bir cho‘michli kanal tozalovchi mashina.

Beton qoplamali kanallarni loyqa-cho‘kindilardan tozalash jarayonida ekskavator kovshini kanal tubiga urilishi davrida prujinalar siqiladi, betonga tushadigan ekskavator kovshining og‘irlik kuchi prujinaning siqilishi va kengayishi evaziga kamaytirishga erishiladi. Buning natijasida beton qoplamaning yahlitligi ta‘minlanadi.

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EXPLORING IMPACTS OF GLOBAL VALUE CHAINS ON MIGRATION GEOGRAPHY

Abstract. Global value chains (GVCs) refer to the international fragmentation of production systems that allow for the efficient use of resources and the extraction of value from different parts of the world. Over the past few decades, the rapid expansion of these chains has been facilitated by globalization, which has made it easier for businesses to find new suppliers and customers in different regions of the world. This has led to a remarkable increase in the number of migrants who are traveling from one part of the world to another in search of work, and it has had a significant impact on the labor force and socio-economic development of nations.

Keywords: Global value chains, migration, global economy, low-paid jobs.

Introduction

Globalization has led to an increase in the interconnectedness of economies through trade and investment linkages. This has resulted in the emergence of Global Value Chains (GVCs), which are production networks that involve multiple countries and firms working together to produce goods and services (Kuznetsov et al., 2022). The importance of GVCs has grown rapidly over the past few decades, as many countries strive to integrate into the global economy and increase their competitiveness.

At the same time, migration has also become a significant feature of globalization. Technological advancements in transportation and communication have made it easier for people to move across borders in search of better economic opportunities or due to social, political, or environmental factors. As a result, migration has increasingly become an important driver of economic development and growth (Abel & Cohen, 2019).

This paper seeks to explore the nexus between GVCs and migration by examining how these two phenomena are related and what implications they may have on each other. Specifically, we will investigate how GVCs shape patterns of migration by creating job opportunities in different parts of the world while also providing insights into how migration can impact GVC participation through effects on labor costs, productivity levels, skills availability among others. In addition to this review of literature concerning GVCs' relationship with international labour mobility patterns (including both skilled workers like engineers or executives firms need for manage technical production processes-

‘high-skill’ migrating groups affects (Zatonatska et al., 2020); along with ‘low-skill’ migrating group’s impacts such as low-paid employees involved) affecting movement within industries themselves), our discussion will extend beyond these considerations towards possible spill-over.

Literature review

Global value chains (GVCs) are a fundamental aspect of globalization and have brought immense success to companies and countries alike. GVCs refer to the interconnection of manufacturing, processing, and services that are required to create a product, starting from the initial stages to the final stages of production. GVCs have transformed the way companies operate, allowing them to source raw materials and intermediate goods from different countries, thus optimizing their supply chain (WB. Global Value Chain Development Report: 2019), (Menon & Shah, 2019).

Migration, on the other hand, has become a defining feature of the global economy, with migrants transcending national boundaries in search of better economic prospects, higher wages, and a better standard of living. The potential synergies between GVCs and migration are significant, since an increase in the number of migrants can create new opportunities for workers within the supply chains, thereby enhancing economic growth and diversification (García-Alaminos et al., 2020), (Chellapandi, 2021).

Various scholars have explored the relationship between GVCs and migration, in terms of the impact that migration has on the value chain strategies and operations of companies. Some of the research has focused on how migrant workers are used as an integral part of the value chain, often operating in low-skilled and low-paid jobs, such as manufacturing or processing. The presence of these workers can help reduce labour costs for companies and has been viewed as a competitive advantage in global markets (Migrant worker numbers rise by five million: ILO | UN News, n.d), (MIGRATION: The Economic Benefits of Immigration, n.d), (Huang, 2017), (Casi, 2022).

Other scholars have investigated how GVCs can affect migration patterns, with some arguing that GVCs can help reduce the pressures of migration by creating employment opportunities in developing countries. In contrast, some scholars argue that GVCs can exploit migrant workers, by hiring them on a contractual basis with no specific job security, leading to a precarious working environment (Farago et al., 2020), (Nagar & Hurd, 2020).

Overall, the literature on GVCs and migration highlights the importance of developing policies that protect migrant workers' rights and provide fair labour practices within the value chain (Li et al., 2020), (Shi, 2020), (Fu & Xiao, 2022). Doing so could help maximize opportunities and minimize inequalities, while promoting sustainable economic growth.

Methodology

There is a growing interest in the intersection between GVCs and migration, particularly in understanding the impact of GVCs on labor migration and the role

that migration plays in shaping GVCs. The methodology used to study this intersection could include conducting surveys or interviews with migrant workers and conducting case studies of specific industries or GVCs.

Overall, studying the intersection between GVCs and migration requires an interdisciplinary approach that draws on insights from economics, sociology, political science, and other social sciences, along with rigorous research methodology.

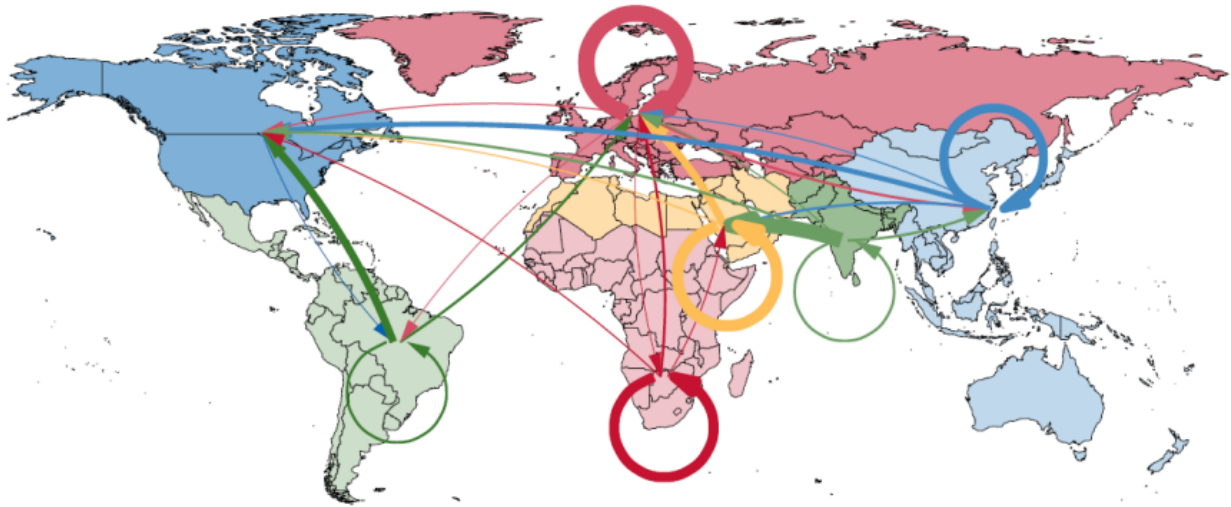
Results and discussions

It is helpful to begin by situating the discussion within a few key details regarding global migration and its development over the past 30 years. Since 1990, the total number of migrants as a share of the world's population has been fairly stable at around 3%. While migration from Africa and the Middle East to Europe and North America has received a lot of attention in the media and among politicians in recent years, the majority of migration worldwide is actually intra-regional (Figure 1). There are significant regional migration hubs emerging in Asia (Hong Kong, Singapore), the Middle East (GCC countries), Africa (Cote d'Ivoire, South Africa), and the European Union.

According to the IMF WEO 2020, the proportion of migrants from developing to advanced economies has increased from 4 to 9 percent over the past 30 years, which has sparked intense social and political reactions and drawn more attention to the issue in the majority of advanced countries.

The majority of the increased migration from developing to advanced economies can be classified as "economic migration," meaning it is motivated by people looking for better economic opportunities. This is an additional crucial fact. While the number of migrants has increased as a result of wars, natural disasters, and political unrest, the majority of them are within developing nations or between them. As a result, the majority of this essay's discussion focuses on economic migration, though occasionally we'll mention the unique situation of refugees and how their effects may differ from those of economic migrants.

Figure 1. Migration Flows between 2010 and 2020



Source: IMF (2020)

Note: Migrants are defined as the foreign-born population in a destination region. Migration flows larger than 200,000 people between 2010 and 2020. The width of flows is proportional to the number of migrants.

Figure-1. Migration Flows between 2010 and 2020

The expansion of GVCs has had a profound impact on global migration patterns. According to the International Labour Organization (ILO), around 150 million people worldwide are employed in jobs that are part of GVCs. These people work in a wide range of industries, including clothing, electronics, and food production, and they often move from one country to another to find work.

The increasing demand for labor in GVCs has led to changes in migration patterns. In the past, migrants often traveled from less developed countries to more developed ones in search of work (Aceituno-Aceituno et al., 2017). However, today, there is a growing trend of migration within countries or regions, as people move from rural areas to cities, or from countries where jobs are scarce to those where they are abundant (Miljkovic et al., 2021).

The role of GVCs in this trend is significant. Many multinational companies set up factories in developing countries to take advantage of the lower labor costs and to tap into new markets. This has led to the creation of new jobs in places where they were previously scarce, and it has attracted many people to migrate to these regions for work (Determinants of Participation in Manufacturing GVCs in Africa: The..., n.d).

Impact of GVCs on the Labor Force

The expansion of GVCs has had a significant impact on the labor force. One of the most obvious effects is the creation of new job opportunities in developing countries. Workers who were previously unemployed or underemployed now have access to stable jobs with regular salaries (Labour market effects and GVCs - ESCAP, n.d).

However, working conditions in GVCs can be difficult, and many workers are subjected to long hours, low wages, and poor working conditions. This has led to concerns about labor exploitation and human rights violations in many regions that are part of GVCs (Lialina, 2019).

Furthermore, the increasing demand for labor in these chains has also had an impact on local labor markets. For example, the entry of multinational corporations into developing countries has often led to the displacement of small businesses and disrupted traditional supply chains, which could have long-term economic and social impacts on the affected communities.

Impact of Migration on GVCs

The migration of workers is an essential factor in the functioning of GVCs. The movement of people across borders allows firms to access new pools of labor or to meet the demands of customers in different regions of the world. This movement is often facilitated by multinational corporations, which may recruit workers from different countries, provide them with training, and relocate them to different parts of the world (Piraquive et al., 2022).

However, the mobility of workers also poses significant challenges for GVCs. For example, a lack of coordination between different agencies and governments can lead to significant delays and extra costs in transporting workers across borders (Gereffi & Luo, 2015). In addition, the movement of people can be disrupted by political instability or natural disasters, which can create significant logistical challenges for global production chains.

Conclusion

In conclusion, the expansion of global value chains has had a significant impact on the migration patterns of people around the world. On the one hand, it has created new job opportunities in developing countries, which has attracted many people to migrate in search of work. On the other hand, it has also led to concerns about labor exploitation and the displacement of local businesses. Furthermore, the movement of workers across borders is an essential factor in the functioning of GVCs, but it also poses significant challenges for logistics and coordination. As GVCs continue to expand in the coming decades, it will be critical to manage these challenges effectively to ensure that they contribute to sustainable development and social welfare around the world.

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KUCH TRANSFORMATORDA BO'LADIGAN ISROFLAR VA UNING QIZISHI

Annotatsiya. Masolada transformatorlarda bo'ladigan isroflar va ularning kelib chiqish sabablari o'rganilgan hamda ularni optimal qiymatlarga keltirish bo'yicha tavsiyalar berilgan. Transformatorning qizishi va sovitish yo'llari o'rganilgan.

Kalit so'zlar: aktiv quvvat, induktiv quvvat, isrof, yuklama.

WASTE IN THE POWER TRANSFORMER AND ITS HEAT

Annotation. In this article, the problem of transformer losses and their causes are studied and recommendations are given for their optimal values. The methods of heating and cooling the transformer have been studied.

Keywords: active power, reactive power, loss, load.

Biz bilamizki, transformatorlarda bo'ladigan isroflar uning foydali ish ko'effitsentiga ta'sir korsatmay qolmaydi. Ikkilamchi chulg'amdan iste'molchi (yuklama)ga beriladigan aktiv (foydali) quvvat P_2 ning transformator birlamchi chulg'ami elektr manбайдan oladigan aktiv quvvat P_1 ga nisbatidan hosil bo'ladigan natijani foydali ish ko'effitsenti (FIK) η deyiladi. Uni aniqlash formulasi quyidagicha:

$$\eta = \frac{P_2}{P_1} = \frac{P_2}{(P_2 + \Sigma P')} (1)$$

Transformatoridagi quvvat isroflari ($\Sigma P'$) ga o'zgaruvchan magnit oqimining o'zakda hosil qilgan magnit isroflari va chulg'am o'tkazgichlaridan tok o'tganda Joul- Lens qonuniga binoan vujudga keladigan elektr isroflari (shu jumladan qo'shimcha isroflar ham) kiradi.

$$\Sigma P' = P'_{O.N} + K_{Yu}^2 P'_{qt.N} (2)$$

Elektr energiyani podstantsiya shina manbalaridan uzatishda elektr ta'minoti liniyalari bo'yicha elektr energiyaning 5–10% gacha isrof bo'ladi. Elektr energiya isrofini nolgacha kamaytirish mumkin emas, ammo ularni maksimal kamaytirishga intilish zarur.

Transformatorga beriladigan kuchlanish $\Sigma U_1 = const$ va uning yuklamasi salt ishlashdan nominalgacha bo'lgan qiymatlarda magnit oqim deyarli o'zgarmas

bo'lganligidan transformatorning magnit isroflari ham o'zgarmas bo'ladi. Bu isroflar transformatorning salt ishlash isroflariga taxminan teng bo'ladi.

Asosiy va qo'shimcha elektr isroflari tokning kvadratiga mutanosib ravishda o'zgaradi. Albatta, bu holat Joul-Lens qonuniga asosan qurilmadagi magnit va elektr o'tkazgichlarning *qizishida* ham ifodalangan. Yuklama ulangan transformator ish jarayonida elektr energiyani bir qismi isrof bo'ladi, ya'ni issiqlik energiyasiga aylanib atrof muhitga tarqaladi. Bunda isroflarning taxminan 80% ni chulg'amlar, qolganini esa magnit o'zak va metal konstruksiya elementlari hosil qiladi.

Issiqlik ajralib chiqishida transformator qiziydi. Bunda uning harorati atrof muhit haroratidan ancha oshib ketadi. Bunda asosiy sabab yuklama ulangandagi quvvatning cheklanganligidir.

Qizish tufayli bak ichidagi moyning tabiiy konvensiyasi vujudga keladi, ya'ni magnit sistemasi va chulg'amlarning qizishidan ularga yaqin joylashgan moy zarrachalari yengillashib bakning yuqorisiga ko'tariladi, bak devoriga yaqin bo'lganlari esa tashqaridan esa tashqaridan xavoning tabiiy sirkulyatsiyasi tufayli sovib bakining pastiga tushadi. Bak devorlaridan issiqlik atrof muhitga nurlanish (ko'zga ko'rinmas to'lqinda) va konveksiya yo'llari bilan tarqaladi.

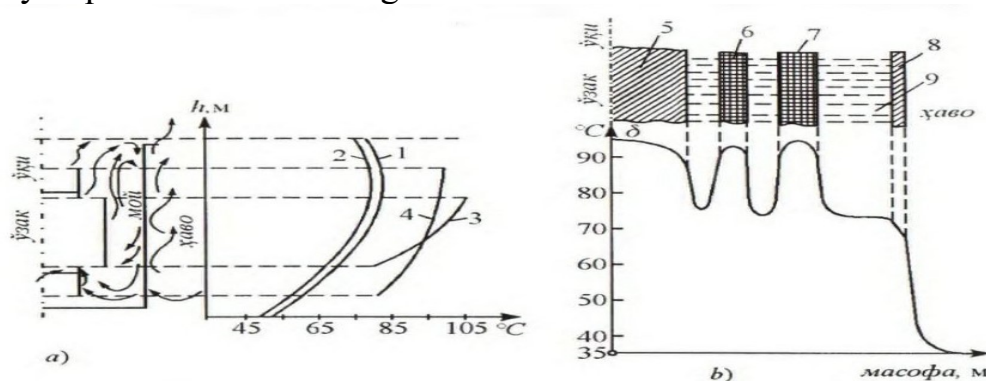
Transformator qo'llaniladigan qog'oz asosidagi A klass izolyatsiyasi uzoq vaqt yuqori temperatura ta'sirida bo'lganda o'zining egiluvchanligi xossasini yo'qotadi va sinuvchan holga kelib qoladi. Buning natijasida ekspluatatsiya qilish jarayonida sodir bo'ladigan kam miqdordagi mexanik kuchlar ham izolyatsiyaning buzilishiga sabab bo'ladi va elektr mustahkamlik yo'qolishiga olib keladi. Bu esa transformator ishlash muddatini qisqartiradi.

Chulg'am harorati qancha yuqori bo'lsa, ularning izolyatsiyasi shuncha tez eskiradi. Transformatorlar quvvatlar qatori orta borgan sari isroflar uning massasiga, ya'ni taxminan uning liniyaviy o'lchamlari kubi (uchinchi darajasi)ga, sovutish yuzasi esa ularning kvadratiga mutanosib ravishda o'sib boradi. Demak, transformatorda issiqlikni tarqatish uning sovutish yuzasiga nisbatan isroflar tezroq o'sar ekan. Sovutish muhiti sifatida transformator moyi ishlatilsa, havo bilan sovutilganga nisbatan 6-8 marta samaralidir.

Transformator normal holatda ya'ni nominal ish rejimida ishlab harorat ham belgilangan qiymatda bo'lsa, unga qo'yilgan ishlash muddatini albatta o'tab beradi. Demak, uning harorati va sovutish tizimi albatta umriga tasir qilmasdan qolmaydi. Moyli transformatorlarni normal sharoitda, ya'ni uning eng qizigan nuqtasidagi izolyatsiyaning temperaturasini 105⁰C dan oshirmasdan ishlatilganda izolyatsiya kamida 20-25 yil xizmat qiladi. Agar bu haroratdan 8-10⁰C ga oshgan sharoitda ishlasa, izolyatsiya xizmat muddati taxminan 2 marta qisqaradi.

Bunda izolyatsion materialga qo'yiladigan talab, izolyatsiya 110⁰C temperaturagacha transformator moyi bilan kimyoviy reaksiyaga kirishmasligi kerak.

1, a- rasmda temperaturaning transformator balandligi bo'yicha o'zgarishi, 1,b-rasmda esa temperaturaning moyli transformator gorizontol kesimida taxminiy taqsimlanishi ko'rsatilgan.



1-rasm. Moy bilan sovutiladigan kuch transformatorining: a) balandligi bo'yicha temperaturaning taxminiy o'zgarishi (1-moy, 2-bak devorlari; 3-chulg'am va 4-magnit sistemasi); b) gorizontol kesimida temperaturaning taxminiy taqsimlanishi. (5-o'zak; 6,7-PK va YUK chulg'amlari; 8-bak devori; 9-moy).

Transformatorning qizishi umuman olganda yuklamaga bog'liq ravishda o'zgaradi. Bunda biz asosan yuklamani nominaldan oshmasligi taraddudini ko'rish maqsadga muvofiq deb bilishimiz lozim. Shu sababli, ushbu taraddudlardan biri bu **elektr yuklamalar markazi**(EYuM) hisoblanadi. Transformatorning ikkilamchi chulg'amiga ulangan yuklama, transformatorning yuklamalar og'irlik markaziga siljishiga undaydi. Buning natijasida: **birinchidan** tok o'tkazgich rangli metallar tejaladi va **ikkinchidan** tarmoq oxiridagi istemolchilarida bo'ladigan kuchlanish tushuvlari bartaraf etiladi va bir yo'la transformatorga tushayotgan yuklamalar ham kamayishiga erishiladi.

EYuM ni hisoblash va bosh podstansiyaning og'irlik markaziga o'rnatish bu sanoat korxonalarida keng qo'llaniladi. Bundan esa energiya samaradorligi va elektr istemolchilari nominal ish rejimida ishlashi ta'minlanadi. Xar turdagi sanoat korxonalarini elektr bilan ta'minlash sistemalarini qurishda, shu ob'yektlarni **bosh planlari** yaratiladi, shu planlarda hamma sanoat ishlab chiqarish sexlari ko'rsatiladi. Sexlarni joylanishlari ishlab chiqarish texnologiyasi asosida aniqlanadi. Bosh planda sanoat korxonasining hisoblangan yoki belgilangan quvvati ko'rsatiladi. Bundan tashqari, loyihada yuqorida ko'rsatilgan sex va butunlay korxonaning elektr nagruzka grafiklari ham bor. Loyihalashning yana bir muhim vazifalaridan biri BPP, BTP, TP larni korxonada territoriyasida eng qulay joyga o'rnatishdir.

Elektr ta'minoti sistemalarini loyihalash vaqtida BPP, BTP, TP larning o'rnatish joylarini aniqlash uchun, korxonaning bosh planlarida yuklamalar kartogrammasi ko'rsatiladi.

Yuklamalar kartogrammasi degani, bosh plandagi aylanalarning bo'lib, bu aylanalarning yuzasi bilan chegaralangan maydon, Sexlarning hisoblangan

yuklamalarini tanlangan masshtab bo'yicha tasvirlashga aytiladi. Xar bir sex uchun o'zining aylanasi ko'rsatiladi, qaysiki bu aylananing markazi sexning yuklama markaziga to'g'ri keladi.

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THE SCIENTIFIC BASIS OF SAVING ELECTRIC USING CARNOT CYCLE

Abstract. This article analyzes the theoretical basis of energy saving measures in enterprises.

Keywords — consumption of energy, energy conversion, energy resources, heat of the system, enterprises.

Introduction

The final consumption of energy by a person, society or industrial production (heat, light, electricity, sound, movement, etc.) has always corresponded to the level of development of civilization. At the same time, the extraction and production of energy resources significantly, several times, exceeds the final energy consumption. This is explained not so much by the shortcomings of existing energy technologies as by fundamental limitations associated with the very nature of energy conversion processes. The main stages of converting fossil fuel energy into electricity are as follows. The chemical energy of the fuel in the combustion process is converted into the internal energy of water vapor, then in the process of steam expansion, its internal energy is converted into mechanical energy of the turbine generator rotor rotation. Further, the electrical energy received in the turbine generator after transformation and transmission through the networks will be consumed by the consumer. Materials and methods Such stages are present in many types of power plants. The laws of energy conversion are the subject of thermodynamics. This area of science developed back in the 19th century. But its basic laws constitute the fundamental foundations of modern scientific knowledge. For a quantitative comparison of various methods of energy conversion, the simplest criterion is the efficiency, calculated by the formula

$$\eta = \frac{W}{E} 100\%,$$

where W is the useful work being performed; E - expended energy.

At point C, the working fluid is steam, which has a low temperature and very low pressure. In the condenser, the working fluid is again transferred to a liquid state. The energy that needs to be removed from the system to condense the steam is usually taken away by the cooling circulating water. The working fluid is returned to the steam generator by a feed pump. The amount of energy supplied to the system in total is equal to the amount of energy removed and the work

performed. To change the state of aggregation of the working fluid, its evaporation or condensation, it is necessary to supply or withdraw a certain amount of energy. And the working body has the ability to store energy. If the change in the internal state of the working fluid is characterized by the amount of energy stored by it ΔE , then the mathematical expression of the first principle of thermodynamics - the law of conservation of energy for a system that exchanges energy with the external environment in the form of heat and work W , is expressed as follows:

$$Q = \Delta E + W,$$

where Q is the heat of the system.

Discussion

The efficiency of a power plant is always less than one. When $\eta = 1$, all the energy supplied to the system is converted into work. In practice, such a coefficient of efficiency can be obtained, but not in a cyclic process. An example is the isothermal expansion of a gas. It can only go until the moment when the pressure becomes equal to the atmosphere. But the cyclic sequence of processes for which $Q = W$, $\Delta E = 0$ is impossible to implement, although this does not contradict the first law of thermodynamics. This contradicts the second law of thermodynamics: it is impossible to build a periodically operating machine, the whole action of which would be reduced only to converting the heat received from the source into work. Removal of a certain amount of heat from the working fluid to the cold source is a prerequisite for the implementation of the heat engine cycle. The work in the cycle is equal to the difference between the supplied and removed amount of heat:

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where is the time of maximum losses. The maximum possible efficiency of the cycle of a power plant in the idealized case is determined by the ratio of the temperatures of hot T_1 and cold T_2 sources:

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Such an ideal power plant is called the Carnot heat engine.

This machine works as follows:

- the working fluid is adiabatically compressed, the temperature rises to T_1 ;
- the working fluid expands isothermally, performing work W ;
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- the working fluid is isothermally compressed until its internal energy assumes its initial value, dumping it into a cold source ΔE . It is known that no other machine can achieve greater efficiency over the same temperature ranges.

The value $\eta = 100\%$ corresponds to the condition: $T_2 = 0$, which in principle cannot be achieved. Real thermodynamic cycles used in real heat engines - internal combustion engines (Otto, Diesel, Wankel cycles), steam and gas turbines (Rankine, Brayton cycles), refrigeration machines and heat pumps can differ quite significantly in their weight and size characteristics, ecological and other quality properties. However, economic characteristics show the degree of their approach to the ideal. Thus, the processes of energy conversion are always associated with its losses. At the same time, a significant part of the losses is determined by the fundamental laws of nature and, in fact, determines the technological consumption of energy in the processes of its transformation. Another part of energy losses is associated with deviations of real technological processes from the ideal. Finally, the remaining part of the loss is determined by improper operation of technological installations, incorrect setting of the technological mode, idle runs of equipment, uneconomical loading or poor insulation. It is in this last part that one should first of all look for the most effective energy saving solutions.

$$\Delta A = \frac{P^2 + Q^2}{U^2} R \tau$$

With regard to the electrical part of a power plant, complex or system, improving the efficiency of energy use most often consists in reducing electricity losses. If on the network section voltage U with active resistance R active power P and reactive Q flow, then electricity losses ΔA are determined as follows: where τ is the time of maximum losses. Measures to reduce losses in networks immediately become obvious:

- reactive power compensation;
- increasing the voltage level of the network;
- increasing the cross-section of wires to reduce resistance;
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The most complete picture of the state of extraction, production, transmission and consumption of energy resources is provided by the analysis of the balance of energy resources. The balance can be drawn up for any energy-using installation, enterprise, territory, region, country. Energy balancing consists in measuring and calculating energy flows by sources and areas of use. Balance analysis allows you to compare the useful use of energy resources and losses. The structuring of the balance is usually carried out by the types of energy resources used, by energy-using equipment, by workshops, buildings, production facilities, areas, types of converted energy, types of products, etc. The balance of energy resources in this case allows you to get a clear idea of the efficiency of their use.

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$$\eta = \frac{W}{E} 100\%,$$

where W is the useful work being performed; E - expended energy.

The efficiency of existing power plants differs quite significantly. So the efficiency of a thermal condensing power plant (IES) is about 40%, a combined heat and power plant (CHP) - 60%, and a diesel power plant DES - 20%. The simplest model of a power plant can be the diagram shown in Fig. 1. In such a simple system, three main processes are performed over the working fluid:

evaporation, expansion, condensation. The arrows connecting these three processes show the direction of movement of the working fluid. The energy supplied to the system in the form of combusted fuel is spent on the evaporation of the working fluid (water). At point B, the working fluid is steam with high temperature and pressure. Then the working fluid expands, causing the rotor of the turbine generator to rotate, producing electrical energy.

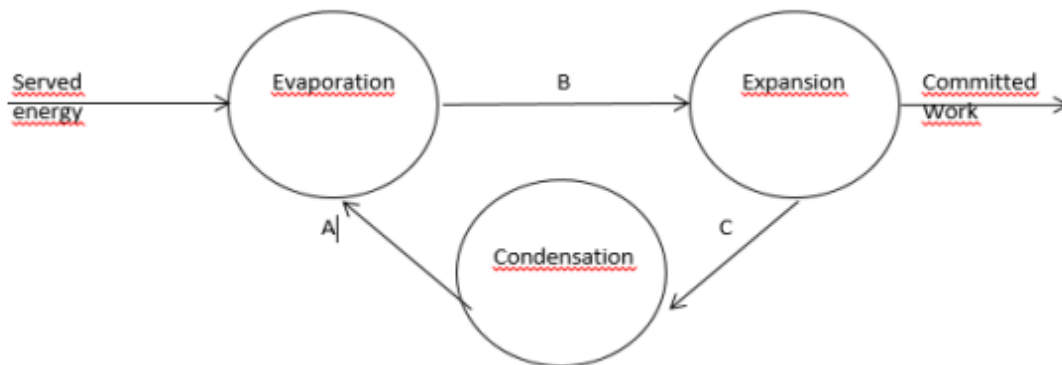


Fig. 1. The simplest model of a power plant

At point C, the working fluid is steam, which has a low temperature and very low pressure. In the condenser, the working fluid is again transferred to a liquid state. The energy that needs to be removed from the system to condense the steam is usually taken away by the cooling circulating water. The working fluid is returned to the steam generator by a feed pump. The amount of energy supplied to the system in total is equal to the amount of energy removed and the work performed. To change the state of aggregation of the working fluid, its evaporation or condensation, it is necessary to supply or withdraw a certain amount of energy. And the working body has the ability to store energy. If the change in the internal state of the working fluid is characterized by the amount of energy stored by it ΔE , then the mathematical expression of the first principle of thermodynamics - the law of conservation of energy for a system that exchanges energy with the external environment in the form of heat and work W , is expressed as follows:

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$$k_{\text{в}} = 1 - 0.66 = 0.34$$

The utilization rate of energy resources in the consumer complex (industry, transport, agroindustry, commerce) is equal to

$$k_{\text{вн}} = \frac{34 + 7.3 + 3.8 + 2.9 - 24}{34 + 7.3 + 3.8 + 2.9} = \frac{24}{48} = 50\%$$

The coefficient of efficient use of energy in the energy complex of the region (power plants and boiler houses) is

$$k_{\text{вэ}} = \frac{40 + 38 - 34}{40 + 38} = 0.56\%$$

Energy balancing is based on the reliable collection of information about energy flows and their measurements.

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QUYOSH ISSIQLIK ELEKTR TA'MINOTI TIZIMLARI

Annotatsiya. Ushbu maqolada biz quyidagilarni taqdim etdik, muqobil noan'anaviy energiya manbalaridan samarali foydalanish, quyosh nurlari oqimi o'rtacha yillik zichligi, quyosh nuri energiyasining sezilarli kamchiliklari, uning fazodagi sochilganligi, quyosh radiatsiyasi oqimi yer sharida taqsimlanishiga oid ma'lumotlar, tushunchalari va nazariyalar bilan bog'liq bo'lgan jarayonlarni aks etdirdik.

Kalit-so'zlar: Muqobil energiya tushunchasi va quyosh radiatsiyasi oqimi. Quyosh energiyasi oqimi zichligi, parabolik konsentratorlar.

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SOLAR HEAT ELECTRICAL SUPPLY SYSTEMS

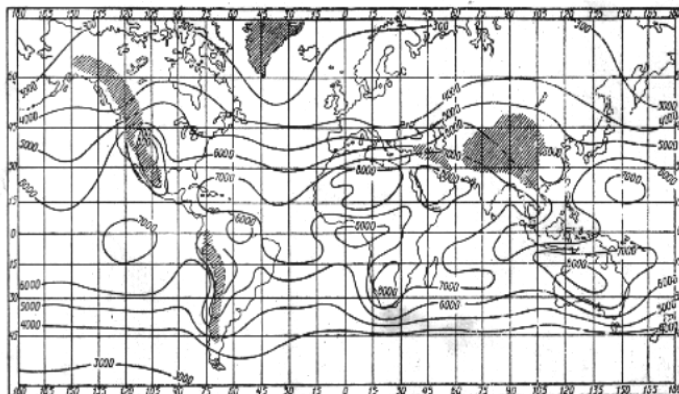
Abstract. In this article, we presented the following, highlighted the processes related to the effective use of alternative non-conventional energy sources, the average annual density of solar radiation, the significant shortcomings of solar energy, its spatial dispersion, the distribution of solar radiation flux on the globe, the concepts and theories.

Key words: Concept of alternative energy and flow of solar radiation. Solar energy flow density, rare earth concentrators.

Qadim zamonlardan boshlab insonlar quyosh energiyasidan o'z maqsadlari uchun foydalanib kelishgan. Bizning eramizdan oldin 212 yillarda bir joyga jamlangan quyosh nurlari yordamida ibodatxonalar oldida qutlug' olov xosil qilganlar. Aytishlaricha buyuk grek olimi Arximed o'zi tug'ilgan Sirakuza shahrini himoya qilishda Rim floti Keyja (paruslarini) yelkalarini xuddi shu usulda yonib ketishiga sabab bo'lgan quyosh nurlari oqimi quvvati yer atmosferasi yuqori chegarasida $1,78 \cdot 10^{17}$ Vt satx qilishda esa $1,2 \cdot 10^{17}$ Vt tashkil qiladi.

Quyosh radiatsiyasi oqimi yer sharida taqsimlanishi nihoyatda notekisdir. Quyosh energiyasi miqdori 1 m^2 yer yuzasiga bir yil mobaynida 3000 Mj/m^2 dan

shimoliy rayonlarda va 8000 Mj/m²gacha issiqlik janubiy rayonlarda taqsimlanadi (1-rasm).



1-rasm. Quyosh radiatsiyasi oqimi yer sharida turli rayonlarda taqsimlanishi (MDj/m² yiliga).

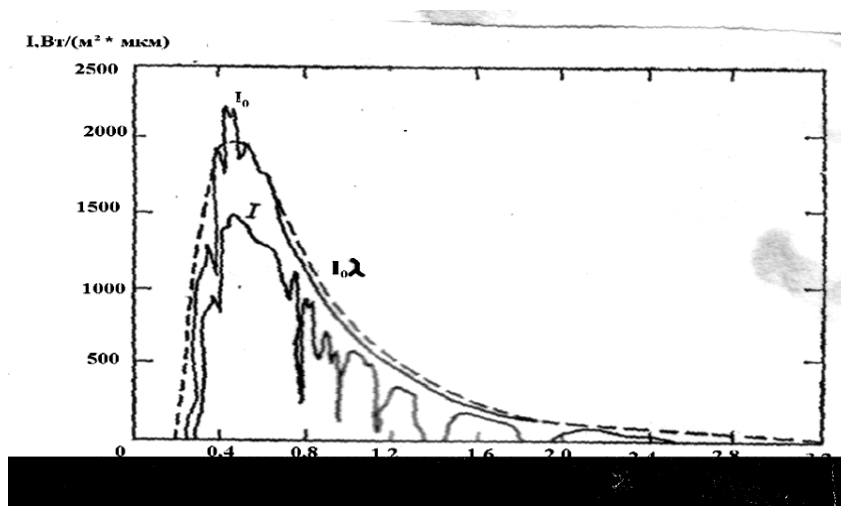
Quyosh energiyasi oqimi zichligi U_0 atmosferaning yuqorigi chegarasida nurlarga perpendikulyar yuzaga 1353 Vt/m²ga teng bo'lib, uni quyosh doimiysi o'rtacha energiya miqdorini Ye_0 1 soatda 1 m² yuzaga 4871 kJ/s·m² bo'lishi anaqlangan.

Quyosh nurlari oqimi o'rtacha yillik zichligi 210-250 Vt/m² subtropik va cho'l o'lkalarida va 130-220 Vt/m² Markaziy Rossiya zonasiga to'g'ri keladi.

Quyosh energiyasi tik zichligi 1 kVt/m² ga yetadi.

10.2-rasmda quyosh nurlarining u to'g'ri taqsimlanish spektri atmosferaning yuqoriga chegarasida va quyosh nurlari atmosfera yuqori chegarasi hamda dengiz sathiga nisbatan ko'rsatilgan.

Yer atmosferasi yuqori chegarasida quyosh nurlari absolyut qora jismning 5900 K temperaturada nur sochishiga to'g'ri keladi va ultrabinafsha nurlanish hisoblanib (to'lqin uzunligi $X=0,2-0,4$ mkm), ko'rinayotgan yorug'lik $\lambda=0,4-0,78$ mkm va infra qizil nurlaridan (ular uzun to'lqinga) iborat bo'ladi. quyosh nurlarining maksimum tezkorligi (tezlashishi) 0,5 mkm to'lqin uzunligi intensiv to'g'ri keladi.



1.1-rasm. Atmosferadan tashqarida quyosh nurlanish to‘g‘ri ta’sir etish.

Quyosh nurlarining yer atmosferasidan o‘tishida bir qismi atrofga tarqaladi va havoning oson va suv bug‘lari molekulalariga yutiladi. Hamda chang zarralariga ham sarflanadi. Bu to‘g‘ri tushayotgan quyosh nurlari kuchini susaytirib diffuziyalangan (tarqaladigan) nurlanishga olib keladi.

Quyosh energiyasining bir qismi gazlashgan zarralarga yutilib va tarqalib kosmik barqarorlikka qaytib ketadi.

Diffuz (tarqalgan) nurlar ko‘rinishida Qening asosiy oqimi yer yuzasiga yetib boradi, umumiy oqimda quyosh radiatsiyasi tushishida tarqalgan nurlar miqdori geografik va iqlim omillariga yil davomida o‘zgarib turadi. Masalan, Kievda uning kattaligi 0,39 iyul oyida, 0,75 dekabrda. Moskvada 0,54-0,8; Toshkentda esa 0,19-0,5; Ashxobodda 0,3-0,5.

Quyosh energiyasi potentsialini $1m^2$ gorizontaal yuzaga tushayotgan quyosh radiatsiyasining o‘rtacha yillik kattaligi bilan xarakterlash mumkin.

MHD maydonlarida quyosh nurlanish yillik oqimi keng miqyosda o‘zgaradi. $1m^2$ gorizontaal yuzaga shimoliy orolchalarda va shimoliy-sharqiy Sibir o‘lkasida yil davomida 550...830 kVt/s, Ukraina, Moldaviya, Volga bo‘yi, Sibir va uzoq sharqda 1100-1300 kVt/s, Kavkaz orti va Markaziy Osiyoda 1400-1600 kVt/s, O‘zbekiston cho‘l xududlarida 2000 kVt/s va undan ortiq energiya tushadi.

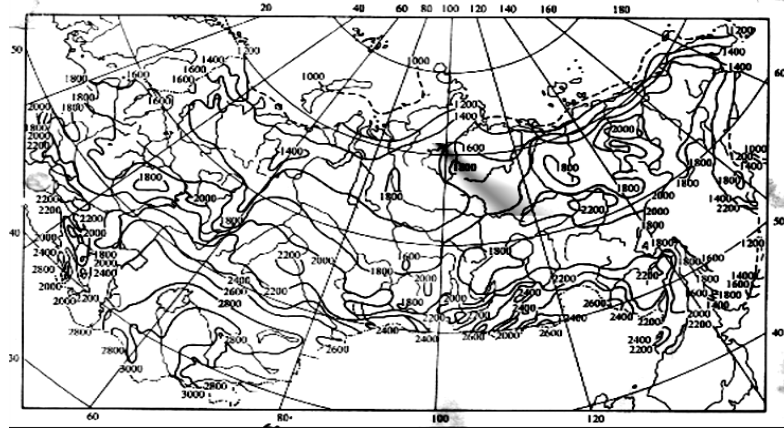
Yillik quyosh nur sochish soatlari soni Turkmanistoda 3000, O‘zbekiston va Tojikistonda 2815...2880, Qozog‘iston va Qirg‘izistonda 2575...2695, Armaniston, Gruzziya va Ozorbajonda 2125...2520, Ukraina va Moldaviyada 2005...2080 ga teng (1.1-rasm).

Markaziy Osiyoda quyosh nuri yorug‘ligi davomiyligi iyun oyida 16s, dekabr oyida 8..10s. bu xududlarda 300 quyoshli kun hisoblanib, quyosh yorug‘ligi davomiyligi 2500..3100 s/yil, yoz oylarida 320...400 s/oy ni tashkil qiladi.

Quyosh energiyasi nurlari tushushini ochiq kun davomida kuzatilsa, kun boshlanishida va oxirida quyosh enrgiyasi miqdori nurlarga perpendikulyar tekislikda katta emas.

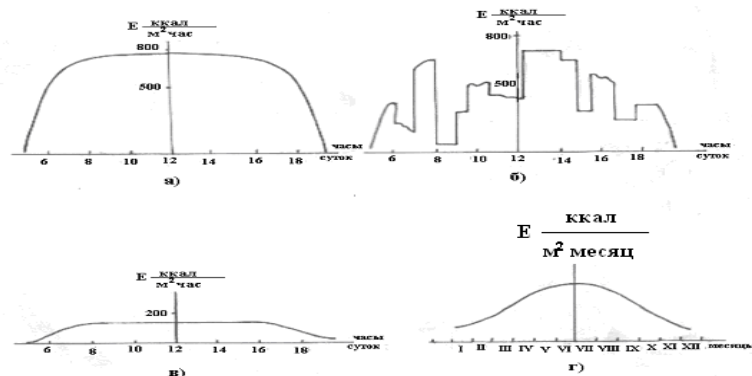
Quyosh chiqishidan bir soat keyin uning energiyasi $400 \text{ kkal/m}^2 \cdot \text{s}$ bo‘ladi. Yarim kunda esa u maksimal kattalikda bo‘lib, $800 \text{ kkal/m}^2 \cdot \text{s}$ ga yetadi.

Quyosh nurlanish darajasi bulutli kunlarda I_p da notekis va kuchsiz bo‘ladi. Bunday kunlarda quyosh energiyasi tushishi kata kamayish zonalariga ega bo‘lib quyoshni to‘sadigan bulutlar o‘lchamiga bog‘liq.



1.2-rasm. Quyosh nur taratishi, soat, yil davomida.

To‘laligicha bulutli kunlari faqat diffuz (tarqoq) quyosh nurlanishidan foydalanish mumkin. Quyosh nuralarining taxminiy grafik ko‘rinishi bunday holat uchun 10.4 v-rasmda bir tekis, lekin radiatsiyaning absolyut ko‘rsatkichi kichik.



1.3-rasm. Kun davomida quyosh radiatsiyasi yuzaga perpendikulyar tushishi ochiq (a), yarim ochiq (b) kunda, bulutli kundagi tarqoq radiatsiya (v) kunlik va oylik quyosh energiyasini tushishi (g).

Yillik quyosh radiatsiyasi kuzatilishi 10.4.g-rasmda beridgan, bundan ko‘rinadiki quyosh energiyasi tushish xarakteri notekis bo‘lib, uni chegaraviy qiymatini va undan foydalanish imkoniyatini kuchaytiradi. Geliotexnikaning asosiy vazifalaridan biri quyosh energiyasini akkumulyatsiya (to‘plash) imkoniyatini kengaytirish hisoblanadi.

Geotermik optikadan ma‘lumki, aylanma paraboloid bo‘lgan nur qaytaruvchilarga (oyna yoki silliq yuza) quyosh nurlarini to‘ssa, uning parallel nur o‘qlari fokus sistemasi deb atalgan o‘qdagi bor nuqtada yig‘iladi. Parabola

uchidan fokusgacha bo'lgan masofani – fokus masofasi deyiladi. Aylanma paraboloid – uning uchidan o'tadigan o'q atrofida aylanma tekislikdan hosil bo'ladi.

Nur qaytaruvchiga tushgan hamma energiya bir nuqtada jamlanishi hisobiga katta harorat va juda katta issiqlik kuchlanishi hosil qiladi. Amalda esa tabiatda ideal sxemani yaratish qiyin. Quyosh bizdan 150 mln. km, olisda, uning o'lchamlari juda ulkan, biz esa uni nuqta sifatida emas, balki ma'lum bir diametrga ega disk sifatida ko'ramiz. Ma'lumki, quyoshning burchak diametri $\varphi=32^\circ$. Demak shunday ekan quyoshdan tarqalayotgan nurlar o'zaro parallel emas.

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KATTALARDA VA BOLALARDA ALLERGIYA HOLATLARI

Annotasiya. Ushbu maqolada kattalar va bolalarda sodir bo'ladigan allergik holatlar, hamda ularning paydo bo'lish vaqti va sabablari, davolash uchun tavsiyalar bayon etilgan.

Kalit so'zlar: allergiya, antitela, limfotsit, sensibilizatsiya, gistamin, seratonin, metionin, triptofan, gistidin, kazein, albumin, loratidin, allergin, retinol, advantam, ketotifen, elacom.

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ALLERGIC CONDITIONS IN ADULTS END CHILDREN

Abstract. This article describes the allergic conditions that occur in adults and children. As well as the time and causes of their appearance. As well as recommendations for treatment.

Key words: allergy, antibody, lymphocyte, sensitization, histamine, seratonin, methionine, tryptophan, histidine, kazein, albumin, loratidine, allergen, retinol, advantam, ketotifen, elacom.

Allergiya- organizmga kirgan allergen moddani organizm zamburug', virus yoki bakteriya deb o'ylab unga qarshi kurasha boshlashidir. Allergen organizmga tushganida unga nisbatan haqiqiy yoki soxta reaksiyalar paydo bo'lishi mumkin. Haqiqiy allergik reaksiyada organizmga birinchi marta tushgan allergenga nisbatan sezgirlik ortib boradi va hujayralar antitela ishlab chiqara boshlaydi. Allergen organizmga qayta tushganida limfotsitlar unga qarshi ishlay boshlaydi. Bu sensibilizatsiya davri hisoblanadi. Natijada bir qancha biokimyoviy jarayonlar sodir bo'ladi, gistamin va seratonin kabi moddalar ishlab chiqariladi. Gistamin hujayra devoriga tasir qilib fosfolipazani faollaydi, bu ferment fosfatidilinozitolni inozitol fosfat va diatsilglitseringa parchalaydi bu o'z navbatida teridagi va nafas yo'llaridagi nerv oxirlarini qitiqlab achishish, qichishish va og'riqni paydo qiladi.

Organizmida allergik kasallik paydo bo‘ladi. Soxta allergik reaksiya allergenga birinchi bor duch kelganida ham yuzaga chiqaveradi. Bunda sensibilizatsiya davri kuzatilmaydi. Allergen to‘g‘ridan to‘g‘ri to‘qima hamda hujayralarni zararlovchi moddalarni paydo qiladi. Soxta reaksiya asosan oziq-ovqat va dori vositalariga nisbatan paydo bo‘ladi. Hozirda “Allergy UK” ma’lumotlariga qaraganda yer yuzida 30-40% insonlar surunkali allergiyadan aziyat chekmoqdalar.

Allergiya uchta davrda bo‘lishi mumkin. Birinchi davr mart oyidan may oyigacha bo‘lgan vaqtni o‘z ichiga oladi. Bu vaqtda daraxtlar gul ochadi. Ikkinchi davr esa may oyining oxiridan avgustga qadar, dala o‘simliklari gullagan vaqt. Boshqali o‘simliklar gullashi bilan esa so‘nggi davr boshlanadi. Bu avgust oyidan noyabr oyigacha davom etadi.

Allergiya asosan uch xil turda bo‘ladi. Bulardan birinchisi oziq-ovqatga allergiya, ya’ni sitrus mevalar rangli taomlar, ikkinchisi uchuvchan moddalarga, ya’ni chang par yoki iforga, uchinchi turida esa jonzotlarga bo‘lgan allergiya tushuniladi, bularga mushuk, kuchuk, chivin chaqishiga yoki biror hayvonning kuchsiz zahriga ham allergiya huruj qilishi mumkin.

Allergiya insonning hayoti davomida orttirilgan yoki tug‘ma, irsiyat orqali ota yoki onadan o‘tgan bo‘lishi mumkin. Statistik ma’lumotlarga qaraganda, tug‘ulgan chaqaloqlarning 20% qismida allergiyaga moyillik kuzatiladi. 3% qismida esa hayoti davomida allergik kasallik sifatida namoyon bo‘ladi. Homilador ayolning hayot tarzi ham kelajakda farzandining hayotida yuzaga keladigan patologiyalarga sabab bo‘ladi. Agar homilador ayol sigareta hamda alkogol mahsulotlari iste’mol qilsa, farzandida yuzaga chiqishi mumkin bo‘lgan allergik holatlarning ehtimoli, sog‘lom ovqatlanish ratsioniga ega bo‘lgan onaning farzandiga nisbatan ancha yuqori hisoblanadi.

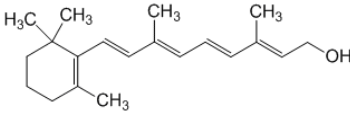
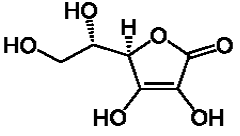
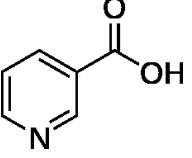
Bola dunyoga kelganidan so‘ng iloji boricha ona suti orqali oziqlanishi kerak. Ko‘p holatlarda tavsiya qilinmagan qo‘shimcha sut mahsulotlari iste’moli orqali bolalarda turli xildagi teridagi toshmalar, ich qotishi yoki ich suyilib ketishi, tinimsiz yig‘lash holatlari kuzatiladi, bu esa bolaning asab tizimiga ham salbiy ta’sirini o‘tkazadi. Normal holatda bolaga olti oygacha qo‘shimcha ovqat berish tavsiya qilinmaydi. Olti oylikdan so‘ng oz-ozdan yani bir choy qoshiq bola organizmi uchun yangilik hisoblangan ozuqadan beriladi va bir oz muddat uning bolaga qanday ta’sir qilishi kuzatiladi. Agar salbiy o‘zgarish paydo qilmasa istemol qilishi mumkin. Ko‘plab onalar tomonidan farzandlariga juda erta, yani qo‘shimcha ovqat iste’mol qilish uchun bolaning organizmi tayyor bo‘lmasidanoq turli sut mahsulotlari bilan ovqatlantirishadi. Bunga ayniqsa sigir suti yaqqol misol bo‘la oladi. Bu mahsulot tarkibida bolalar uchun tavsiya qilinmagan allergiyaga moyillik holatlarini paydo qiluvchi moddalar mavjud, shu sababli ovqatlanish ratsioniga qo‘shishdan avval bolalarning organizmini unga nisbatan qanday reaksiya bildirishini hisobga olish ta’kidlanadi. Onalarga farzandlarining sog‘lom bo‘lishi uchun ovqatlanish ratsioni yoritiladigan kundalik tutish tavsiya qilinadi.

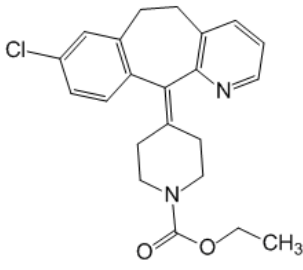
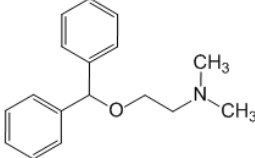
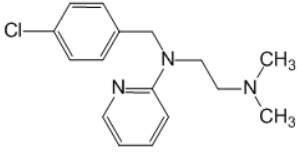
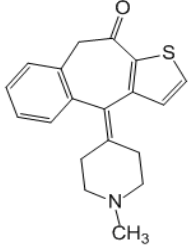
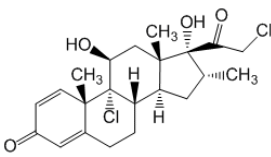
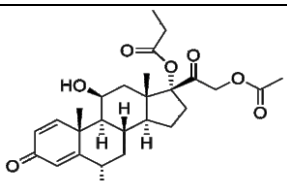
Amerikaning “Astma, allergiya va immunologiya” institutining tadqiqotlariga ko‘ra, toza uy allergiyaning asosiy sababchisi hisoblanar ekan. Bu g‘ayritabiiy tuyulsada, lekin ferma, yaylov, o‘tloq va shunga o‘xshash tabiat qo‘ynida hayvonlar bilan aloqada bo‘luvchi oilalardagi farzandlarning allergiyaga duchor bo‘lish foizi, steril hayotda yashab o‘sgan bolalarga nisbatan ancha past bo‘lar ekan. Bunga sabab bola organizmida turli allergenlarga nisbatan immunitet hosil bo‘lishidir. Agar bola immunitet sistemasi yod allergenga nisbatan antitela hosil qilmasa, allergiya yuzaga keladi.

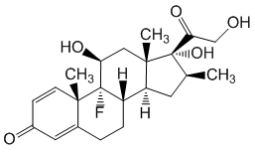
Allergiyani uch xil usul bilan davolashni amalga oshirish mumkin. Bularndan 1-allergenni hayot tarzidan chiqarib tashlash; 2-allergenga nisbatan immunologik usul bilan kurashish; 3-allergiyaga qarshi dori vositalari qo‘llash.

Allergiyaga qarshi qo‘llaniladigan dori vositalarining turlari, kimyoviy tuzilishi hamda organizmga salbiy va ijobiy ta’sirlari 1-jadvalda keltirilgan.

1-jadval

T /r	Dori sinflari	Ta’sir etuvchi moddanin g nomi	Kimyoviy tuzilishi	Organizmga ijobiy ta’siri	Organizmga salbiy ta’siri
1	antioksidant dorilar	Retinol atsetat (retinol)		Hujayralar bo‘linishini kuchaytiradi, infeksiyaga chidamlilikni oshiradi, fotoresepsiya jarayonlarida qatnashadi	Gipervitaminoz A ning simptomlari: bosh o‘rik, ko‘ngil aynishi, lanjlik, uyquchanlik, oyoq suyaklaridagi og‘riq
		Askorbin kislotasi (askorbin kislotasi)		Immunologik reaksiyalari boshqarib organizmni infeksiyaga chiqamliligini oshiradi, jigarda glikogenning to‘planishiga yordam beradi.	Uzoq vaqt qabul qilinganida siydik yo‘lida tosh hosil bo‘lishiga olib keladi, modda almashinuvi buzilishi, arterial gipertenziya,
		Nikotin kislotasi (nikotin kislotasi)		Qon tomirlarni kengaytirib arterial bosimni tushiradi, to‘qimalarni nafas olishini va yog‘ uglevod almashinuvini boshqaradi	Yuz va tananing yuqori qismida sanchiqlar, eshakyemi, qichishish, toshmalar, uzoq muddat qabul qilinganda

					jihardagi nojo'ya holatlar
2	Antigist amin hususiyatli dorilar	Klaritin (Loratidin)		Allergik reaksiyalarni kuchayishini oldini oladi, yallig'lanishga va infeksion kasalliklarga chidamlilikni orttiradi	Uyqusizlik, bosh og'rig'i, ishtahaning pasayishi, taxikardiya, og'iz qurishi, bosh aylanishi
		Allergin (difengidramin)		Yuqori nafas yo'llaridagi qichishish holatlarini yengillashtiradi	Bolalarda qo'zg'aluvchanlikni ortishiga sabab bo'ladi
		Suprastin (xloropiramin)		Achishishni kamaytiradi, yallig'lanishga qarshi tasir ko'rsatadi, ishtahani ko'taradi, dermatitga qarshi qo'llaniladi	Ko'z yoshlanishi, uyquchanlik, arterial bosimning pasayishi, umumiy holsizlik
		Ketotifen (ketotifen)		Gistamin ishlab chiqarilishini susaytiradi, nafas olishni yengillashtiradi, immunologik reaksiyalarda ishtirok etadi	Sistit, uyqu bosishi, ortiqcha vaznga moyillik
3	Topik glukokortikosteroid kremlar	Elakom (mometazon)		Yallig'lanishga qarshi, qichishishga qarshi, qon tomirlarini toraytiradi, dermatitga qarshi qo'llaniladi	Achishish, husnbuzar, teri toshmalari, ikkilamchi infeksiya, allergik kontakt dermatit
		Advantam (metilprednizolona aseponat)		Allergik astma holatlarida, nafas qisish holatlarida nafas olishni yengillashtiradi	Qo'llangan joyda pufakchalar hosil bo'lishi,

					allergik reaksiyalar
		Stelostederm (Selestoderm-B)		Yallig'lanishni kamaytiradi, ekzemaga hamda dermatitga va neyrodermatitni yengillashtiradi	Terining qurishi, gipertrixoz, ikkilamchi infeksiya, follikuliti

Orttirilgan allergiyani tabiiy yo‘l bilan bartaraf etish mumkin. Buning uchun allergenga ega bo‘lgan mahsulotning iste‘molini cheklash va uning ozuqaviy va energetik tarkibini to‘ldira oluvchi allergensiz mahsulotlarning iste‘moli yo‘lga qo‘yish. Agar yuqori darajadagi o‘zgarishlar sodir bo‘lgan bo‘lsa iloji boricha tezroq shifokorga murojaat qilish tavsiya qilinadi. Bu ayniqsa allergiya orqali shish holatlari yuzaga kelganida juda havfli hisoblanadi, chunki shish nafas olish sistemasining to‘qimalariga yetib borsa nafas olish sistemasining to‘silib qolishiga va bemorning hayotini havf ostida qolishiga olib kelishi mumkn. Allergiya oqibatida teri sirtida toshmalar, yiringli yaralar, qichishish holatlari, uyquchanlik, uyqusizlik, nafas yetishmasligi yoki nafas olishga qiynalish, yuzko‘zlarning qizarishi, tajanglik, ich qotishi va hazm sistemasining turli qismlarida og‘riq paydo bo‘ladi. Shifokor esa allergiya asorati, turi, holatiga va bemorning yoshiga etibor bergan holda antiallergen xususiyatga ega bo‘lgan dori vositasini tavsiya qiladi. Antiallergen xususiyati mavjud bo‘lgan dori vositalarining organizmga ta‘siri shundaki, to‘qima va organlarda allergen oqibatida hosil bo‘ladigan turli patalogiyalar hujayralar tomonidan gistamin hamda seratoninni normadan yuqori miqdorda ishlab chiqarilishi bilan bo‘liq, shunday ekan hujayra faoliyatini normaga kelishiga, ya‘ni gistamin va seratoninni ishlab chiqarilishini sustlashtiruvchi xususiyatga ega bo‘lgan dori vositalari shifokor tomonidan tavsiya qilinadi. Allergik kasallik hisoblanuvchi allergik rinit hamda allergik astma haqida quyida ma‘lumot berildi.

Allergik rinit- allergenlar bilan aloqa qilish natijasida burundagito‘qimalarning yallig‘lanishi. Bu holat burun oqishi, burun bitishi, qichishish, yo‘tal bilan namoyon bo‘ladi. Allergik rinit- mog‘or zamburug‘lari, gulchanglar, hayvonlar yunggi sababli paydo bo‘lishi mumkin.

Allergik astma- allergik reaksiyalar nafas yo‘llarining torayishiga va siqilib qolishiga olib kelaganda paydo bo‘lgan astma turi. Bunday hollarda nafas olish yo‘llari yangilanadi va bronxlari torayib qoladi, shuning uchun nafas olishning qiynlashuvi, ko‘krak qafasidagi siqilishlar va hirillash paydo bo‘ladi.

Biz turli hildagi sut mahsulotlarining allergiya chaqirish xususiyatlarini solishtirish uchun qator kuzatishlarni amalga oshirgan holda chaqaloqlarga bir yoshga to‘lmasidan avval sigir, echki, quyon, bug‘u, tuya kabi hayvonlarning

loktatsoya davrida sut bezlaridan ajralib chiqadigan mahsulotlarni ovqat ratsioniga qo'shish qator salbiy oqibatlariga olib keladi. Jumladan hayvonlarning suti tarkibida temir moddasi, kalsiy hamda fosfor moddalari odam organizmiga nisbatan juda ham yuqori bo'lganligi sababli dastlab hazm sistemasida qator o'zgarishlar sodir bo'ldi. Ich ketishi, qayt qilish, turli ekssudativ diatez holatlari, suyaklardagi ortiqcha kalsiy va fosfor to'planishi sababli suyakning shakllanishida buzilishlar kabi qator salbiy oqibatlar namoyon bo'ldi.

Lekin sut tarkibida allergenlik hususiyatidan tashqari organizm uchun foydali hisoblangan kimyoviy moddalar ham mavjud. Misol uchun sut tarkibidagi oqsillardan, kazein, albumin va globulinlar. Kazein asosan juft tuyoqli hayvonlar: sigir, echki va qo'y sutida. Albuminlar esa to'q tuyoqlilar sutida: biya, bug'u va eshak sutida ko'p miqdorda bo'ladi. Kazeinli sutda 75% kazein, albuminli sutda 50-65% albumin mavjud. Bular tarkibida almashtirib bo'lmaydigan aminokislotalarning deyarli barcha turi uchraydi. Misol uchun: kazeinli sutda sistein, sistin, metionin, triptofan, gistidin kabi aminokislotalar.

Kimyoviy bilimlarimizga tayangan holda, yuqorida bayon etilgan allergik reaksiyalar natijasi hisoblangan gistamin hamda seratonin kabi biologik faol moddalarning hosil bo'lishi hayvonlar suti tarkibidagi aminokislotalar bilan bevosita bog'liq. Ya'ni triptofan aminokislotalardan seratonin sintezlanadi, gistidin aminokislotalardan gistamin sintezlanadi. Shunday ekan sut mahsulotlarini ortiqcha istemol qilish bolalar va kattalar uchun qat'iy taqiqlanadi.

Xulosa qilib aytganda, inson hayoti davomida kasallikka chalinishi ehtimolini kamaytirishi uchun dastlab to'g'ri ovqatlanish ratsioniga e'tibor berishi kerak. Kichik bolalarning sog'lom voyaga yetishi uchun ham albatta ratsionga amal qilish ijobiy natija ko'rsatadi.

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QATTIQ JISM SIRT XOSSALARINI O'RGANISH VA UMUMIY TUZILISHLAR

Annotatsiya. Maqolada qattiq jismlarning suyuqlik va gazlardan farqi, qattiq jismning sirtiy tuzilishlari haqida malumotlar berilgan.

Kalit so'zlar: qattiq jism, tebranma harakat, sirt tuzilishi, kristal panjara, faza, Tamm sathlari, ta'sirlashuv energiyasi.

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STUDY OF SOLID SURFACE PROPERTIES AND GENERAL STRUCTURES

Annotation. The article provides information on the difference between solids from liquids and gases, and the surface structures of solids.

Key words: solid body, vibrational motion, surface structure, crystal lattice, phase, Tamm levels, interaction energy.

Xozirgi davirda faqatgina erkin sirt yoki ajralish sirtlarini strikturasi, tarkibi, fizikaviy va ximiyaviy xossalari to'g'risidagi ma'lumotlarga asosiy yechimlari tanilayotgan amaliy masalalarni sanab o'tish ancha murakkab. sirt haqidagi bilimlar navbatdagi sirt xossalari atom va molekulyar darajasida o'zgarish uchun yaroqli bo'lgan analitik metodlarni ishlab chiqish qiyinchiligi bilan izoxlanadi [1-3]. Hozirgi vaqtda qalinligi atom qalinligining ulushlarida 100 mkm ga yupqa sirt qatlamlarini atom va elektronlar strukturasi ximiyaviy tarkibini analiz qilish 70 metod 70dan ziyod asboblardan qo'llanadi, ularning keskin rivovlanishi va mukammallashuvi uzluksiz davom etmoqda. Sitni analiz qilish metodlarini va ular yordamida olinayotgan natija-larning mohiyatini bilish juda keng doiradagi tadqiqotchilar va injinerlar uchun zarur.

Ma'lumki tabiatdagi moddalar gaz, suyuqlik, qattiq jism va plazma holatlarida bo'ladi. Bu holatlar moddaning agregat holatlari deb atalib, bir-biridan fizik xossalari bilan farq qiladilar. Suyuqlik va gazlarda ularni tashkil qiluvchi atom va molekulalar orasidagi o'zaro ta'sirlashish energiyasi ularning issiqlik harakati energiyasidan kichik bo'ladi [4-5]. Shuning uchun suyuqlik yoki gazni tashkil etuvchi atom va molekulalar bir nuqtadan ikkinchi nuqtaga ko'chib yurishi mumkin, ya'ni oquvchanlik xossasiga ega. Qattiq jismlarda esa molekula yoki atomlar orasidagi ta'sirlashuv energiyasi ularning issiqlik harakati energiyasidan ancha katta bo'ladi, shuning uchun ular erkin ko'chib yura olmaydi va muvozanat vaziyatlari atrofida tebranma harakat qilib turadi [6-7]. Demak qattiq jismni boshqa agregat holatlardan ajratib turuvchi asosiy farqlari:

- birinchidan, uning normal sharoitda o'z shaklini saqlashi;
- ikkinchidan, ularni tashkil etuvchi atom va molekulalarning tebranma harakatda bo'lishidir.

Qattiq jismlar asosan kristall holatda bo'ladi. Kristall jismlarda atom yoki molekulalar bir biriga nisbatan ma'lum bir tartibli vaziyat egallab joylashadi. Buning oqibatida kristallning tashqi ko'rinishi ma'lum geometrik shaklga ega bo'ladi. Agar kristall tarkib topgan zarralarni bir-biriga to'g'ri chiziq bilan tutashtirsak, fazoviy yoki kristall panjara deb ataladigan panjara hosil bo'ladi [8]. Kristallning ayrim zarralari panjarani hosil qilgan chiziqlarning kesishgan nuqtalarida – panjara tugunlarida joylashgan bo'ladi.

Qattiq jism sirti - hamma vaqt ikki faza (muhit)ni ajratib turadigan chegaradir. Bu chegara bir tomonda qattiq jism va ikkinchi tomondan, gaz, suyuqlik yoki boshqa qattiq jism orasida bo'ladi. Shuning uchun ajratish sirti chegaraning har ikki tomonidagi fazalar bilan o'zaro ta'sirlashadi. Sirt bilan bog'liq masalalarni yechish yarim o'tkazgichli asboblarni ishlab chiqarish va qo'llanishida muhim, chunki sirt xossalarining beqarorligi, ularning benazorat o'zgarishlari asboblarning ishlash muddatini kamaytiradi va ishonchli ishlashini pasaytiradi [9]. Metallarning zanglashi va oqibatda ularning buzilishi ham sirt xossalariga bog'liq bo'ladi. Qattiq jism sirtining ba'zi umumiy holatlari haqida to'xtalib o'tamiz. Birinchidan, sirtida kristall hajmidagi atomlarning davriy joylashishi buziladi (kesiladi), natijada tugallanmagan (uzilgan) kimyoviy bog'lar paydo bo'ladi. Boshqacha aytganda, sirt mavjudligining o'zi kristalldagi ichki potensial davriy maydonning buzilishidir. Bu davriylikning har qanday buzilishi mahalliy energetik holatlarni yoki sirtiy holatlarni vujudga keltiradi.

Kristall chegarasidagi potensial maydonning yarim o'tkazgich xossalariga ta'sirini tahlil qilib, I.Ye.Tamm yarim o'tkazgichning taqiqlangan zonasida ruxsat etilgan energetik sathlarning yuzaga kelishiga olib kelishini ko'rsatgan edi. Bu sathlar faqat sirtga xos bo'lib, ularni egallagan elektronlar (energiyasini o'zgartirmay) kristall ichkarisiga o'ta olmaydi [10]. Shuning uchun bunday sathlar sirt sathlari yoki Tamm sathlari deb ataladi. Tamm sathlari ruxsat etilgan zonalardagi mavjud sathlar soniga qo'shimcha sathlar emas va mos ruxsat etilgan zonalardan ajralib chiqqan sathlar hisoblanadi. Tamm sathlarining

konsentrasiyasi kristallning sirt atomlari konsentrasiyasi bilan diagrammadagi joylashish o'rniga ko'ra ular donor, akseptor sathlari yoki rekombinasiya markazlari bo'lib namoyon bo'ladi.

Tamm sathlari kristall sirti ideal toza va bir jinsli bo'lganida ham, kristallning sirt oldi qatlamlaridagi elektron gaz holatiga jiddiy ta'sir ko'rsatadi [11]. Real yarim o'tkazgich sirtida doimo dislokasiyalar, vakansiyalar va boshqa tipdagi ancha –muncha nuqsonlar mavjud bo'ladi bunday sirtiy holatlar zichligi 10^{18} - 10^{19} m⁻² tartibida bo'ladi. Ikkinchidan, haqiqiy sharoitda qattiq jismlar sirtida amalda hamma vaqt oksid parda yoki yopishgan yot atomlar va ionlar bo'ladi. Shu tufayli sirt sohasi murakkab ko'p qatlamli tuzilishga ega bo'ladi.

Xulosa qilib autganda, ko'p hollarda qattiq jismlar sirtini qoplagan qatlamlarda mahalliy sathlar hosil qiluvchi kirishmalar va nuqsonlar bor [12]. Kristallning o'z sirtidagi ichki holatlar kuchli elektr maydoni ta'siriga tez javob beradi, ularni tezkor holatlar deyiladi, qatlamlardagi (tashqi) holatlar nisbatan ancha sekin ta'sirlanadi, ularni sekin holatlari deyiladi.

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DISCUSSION AS A METHOD OF FORMING COMMUNICATION SKILLS IN ENGLISH LESSONS IN HIGH SCHOOL

Abstract. This article defines the relevance of studying discussion as a method of forming communication skills in high school. The authors consider the definitions of the basic concepts given by different methodologists. The relevance of the formation of communication skills in high school is due rather to the psychological side of the personality. In this regard, the authors consider the psychological characteristics of senior schoolchildren. The reasons why students are afraid to speak a foreign language are revealed.

Keywords: discussion, methodologist, communication, competence.

Today, inter language communication is becoming an integral part of modern man. Due to the development of technology, virtual space and intercultural tourism, knowledge of the language of interethnic communication is becoming almost mandatory. In this regard, modern secondary schools are trying to socialize a person as comprehensively as possible, setting themselves one of the most difficult tasks – to teach a person to communicate in English fluently and fluently, in accordance with grammatical norms and rules. The fulfillment of such a complex task is directly related to a well-chosen teaching methodology, teaching materials, the desire of the student to develop and learn, and of course the professional competencies of the teacher. Thus, we approach the relevance of the topic under study. Here there is a need for the ability to communicate qualitatively with representatives of other states. Due to the expansion of cross-cultural ties, more and more international companies and organizations are appearing in Russia, where it is often necessary to use debating English skills during presentations and communication with global colleagues, for example. In addition to the professional component, the tourism sector is developing quite actively these days; it is probably not easy to find a person in our country who has never had the opportunity to visit abroad, this trend will spread more and more. English, as the language of international communication, copes with the task perfectly, allowing tourists from different countries to exchange experience, knowledge and information. Through discussion in a foreign language that unites many countries, we can better understand each other, communication allows us to broaden our horizons and explore many cultures in direct observation of the way of life of peoples, so we can easily navigate the unfamiliar moment in the state, and the fear of the unknown fades into the background. At the same time, it is important to note that such communication, among other things, also means communication for performing ordinary, elementary and everyday things: ask for

directions while abroad, find out the price of the goods and much more. Without basic communication skills, it is quite difficult for a person to express what he wants from the people around him. Thus, the secondary school aims to teach the child to express his thoughts and understand the interlocutor, to get involved in a dispute, in a discussion, to lag behind-create your own point of view. The relevance of the formation of these skills in high school is due rather to the psychological side of the personality.

By the time they enter the senior level, school children acquire greater consciousness, awareness of the need to develop communicative skills. It is 23 during this period of their vital activity that the sprouts are most "effective". In general, it is important to say that there are 4 main reasons why students are afraid to speak: 1) firstly, teenagers are mostly afraid to make mistakes, they have there is a fear of the teacher, a fear of criticism due to making speech mistakes; 2) secondly, students may not be very well oriented in the topics put up for discussion. When a person has nothing to say, there is a problem in communication; 3) thirdly, frequent switching to your native language during an English lesson can also affect the difficulties in reproducing your thoughts in English. In this regard, students have a fairly small and meager vocabulary; 4) and finally, fourthly, the level of training of students is very important. English language groups, as a rule, include a fairly large number of students; there are guys who are not afraid to speak and often express their opinions, and there are those who need more time to adapt to the conversational situation, therefore, in most cases, such students prefer to remain silent. Before talking about the discussion, it is important to define the term itself. So, a discussion is a discussion of a question, a problem; a kind of dispute aimed at achieving the truth and using only correct methods of conducting a dispute. One of the goals of the discussion is to achieve the truth, as well as a deep understanding of the aspects of a particular issue. Thanks to the discussion, we can analyze quite fully- receive information, express your opinion on a particular issue, listen, understand and analyze the arguments and opinions of your opponents. Thus, discussion is the process of determining a common opinion on the issue, the exchange of ideas, knowledge, experience, judgments and opinions for the purpose of self expression, the search for truth. The secondary school has a task to prepare the student for self-education, so that in the future students could think independently innovatively and be able to integrate their skills into the foreign language sphere. Here, according to the federal state according to the educational standard, we are talking about the formation of communicative competence and communication skills. Thus, we have come to the definition of two more important and related concepts. So, communicative competence is a person's ability to communicate in one or all types of speech activity, which is a special quality of a real person acquired in the process of natural communication or specially organized training. Communication skills – abilities, personality traits, providing-increasing the effectiveness of her communicative activity, primarily communication with other

personalities, and psychological compatibility in activity. We have defined the concept of discussion and communication comp the persistence that affect the process of speech activity, but in addition to all stated it was important to define another concept – speech situations, as any discussion takes place in a specific context, and the formation of speech competence, in turn, is influenced by many external factors. Communication is being formed, a system of speech and non-speech communication conditions necessary and sufficient for performing a speech action. Speech situations are quite important in the educational process, as they play a very important role in oral communication, they determine the content of the communication itself, its structures, the pace of speech of students and teachers, the definition of the languages of the means. Domestic and foreign scientists look at the discussion from different angles. For example, Russian scientists M. Clarin and S. Melnikova define discussion as a form of organization of training. From the point of view of Polish scientist V. Okon, discussion is a way of acquiring new knowledge and developing special competencies, skills and abilities. B. Badmaev believes that discussion is an interactive method, akin to a conversation, a round table, brainstorming, etc. This approach is explained by the fact that the discussion is based on the psychology of human relations in their interaction. The well-known scientist A. Savchenko believes that discussion is the coordination of communicative and speech activity.

English language is legally fixed as a mandatory subject for study. At the moment, there is no way to accurately predict whether our state will come to such a decision or not. Such a category as discussion modeling is analyzed, where it is shown that the system of exercises can be represented in the form of three forms: verbal, nonverbal, mixed. As the student extracts information from various sources, he receives and remembers the knowledge that can be useful to him in his future activities. Such a transformation is a prerequisite for the semantic interaction of the participants in the discussion. In addition, it is characterized by the fact that each student intends to change the semantic field during the discussion their opponents according to their own. The modern world is dynamic and you need to constantly "keep your finger on the pulse of events", especially in the methods of teaching English, because, with all the variety of languages, it is today an international language of communication. The practical significance of learning English is the expansion of cultural boundaries, the expansion of the consciousness of mankind. Students strive to know the world not only with the help of their native language, but also to open the veil of the English language for themselves, and the teacher here is an important guide to this new world.

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INCORPORATING PRONUNCIATION AND INTONATION PRACTICE IN SPEAKING TASKS

Abstract. Incorporating pronunciation and intonation practice in speaking tasks is a crucial aspect of English language instruction, as it helps learners develop clear, accurate, and natural speech. Pronunciation and intonation are fundamental components of effective communication, as they contribute to the overall meaning, tone, and comprehensibility of spoken language.

Key words: fluency, communicative competence, linguistic competence, meaning, language, accuracy, pronunciation.

One effective approach to incorporating pronunciation and intonation practice in speaking tasks is through explicit instruction. Teachers can dedicate specific lessons or activities to focus on the different aspects of pronunciation, such as individual sounds (phonemes), word stress, sentence stress, rhythm, and intonation patterns. Teachers can provide explanations, 80 demonstrations, and practice opportunities for learners to master these pronunciation features. For example, learners can practice minimal pairs (words that differ in only one sound) to develop their ability to discriminate between similar sounds, or they can practice sentence stress and intonation patterns to convey different meanings or attitudes in speech. In addition to explicit instruction, pronunciation and intonation practice can be seamlessly integrated into speaking tasks as part of the overall language learning process. For example, during speaking activities, teachers can provide feedback on learners' pronunciation and intonation, focusing on specific areas that need improvement. This can be done through error correction, modeling, and guided practice. Teachers can also encourage peer feedback, where learners can listen to and provide feedback to their peers on their pronunciation and intonation. By making pronunciation and intonation a regular part of speaking tasks, learners can gradually develop more accurate and natural speech habits. Authentic materials, such as videos, dialogues, and recordings of native speakers, can also be used as resources for pronunciation and intonation practice. Learners can listen to and imitate the speech patterns of native speakers, paying attention to their pronunciation and intonation features. Teachers can design speaking tasks that involve role-plays, simulations, and discussions based on authentic materials, where learners can practice using appropriate pronunciation and intonation in context. This helps learners develop their ability to produce English speech that sounds more native-like and natural. Moreover, technology can be employed as a powerful tool for incorporating pronunciation and intonation practice in speaking tasks.

There are numerous online resources, such as pronunciation apps, websites, and multimedia tools, that offer interactive exercises and activities for learners to practice their pronunciation and intonation skills. Teachers can use these resources to provide additional opportunities for learners to practice outside of the classroom, or during in-class activities. For instance, learners can record themselves speaking and listen to their own recordings to self-assess their pronunciation and intonation, or they can use speech recognition tools to receive immediate feedback on their pronunciation accuracy. Engaging in interactive speaking activities is an effective way to develop language skills, build confidence, and improve communication abilities. These activities involve actively participating in conversations, discussions, debates, and other language-based interactions with others. They can be done in various settings, such as classrooms, language exchange programs, social gatherings, or online platforms. Here are some more detailed information about engaging in interactive speaking activities: **Language Practice:** Interactive speaking activities provide ample opportunities for language practice. Students or participants engage in real-life conversations, using the target language in a meaningful context. This helps them reinforce their vocabulary, grammar, pronunciation, and overall language proficiency. It allows learners to apply what they have learned in a practical and engaging way, facilitating better retention and mastery of the language. **Authentic Communication:** Interactive speaking activities promote authentic communication. Participants engage in meaningful conversations, expressing their thoughts, opinions, and ideas on various topics. This allows learners to develop their ability to express themselves clearly and coherently, negotiate meaning, and respond to different communication styles and contexts. Authentic communication also fosters cultural awareness, as learners learn to understand and adapt to different cultural norms and communication patterns.

Active Engagement: Interactive speaking activities require active engagement from participants. They need to listen actively to their conversation partners, respond appropriately, and contribute to the conversation. This encourages learners to actively use their language skills, think critically, and participate actively in the discourse. Active engagement also helps learners build their confidence in using the language, as they practice and apply their skills in a supportive environment. **Social Interaction:** Interactive speaking activities provide opportunities for social interaction. Participants engage in conversations with others, building social connections, and developing interpersonal skills. This helps learners build their social and cultural intelligence, as they learn to navigate different social dynamics, build rapport, and establish meaningful connections with others. Social interaction also makes the language learning experience more enjoyable, as learners have the opportunity to connect with others who share similar interests and goals.

Real-world Relevance: Interactive speaking activities are relevant to real-world communication. Participants engage in conversations and discussions on

topics that are meaningful and relevant to their lives, such as personal experiences, current events, or everyday situations. This helps learners develop the language skills necessary for real-life communication, such as making requests, giving opinions, negotiating, and expressing emotions. The real-world relevance of interactive speaking activities makes language learning more practical and applicable to learners' everyday lives. Flexibility: Interactive speaking activities can be designed to suit various language levels, interests, and learning goals. They can be tailored to the specific needs and preferences of the learners, making them flexible and adaptable. Activities can range from simple conversations and role-plays for beginners to more complex debates, presentations, and discussions for advanced learners. This allows participants to engage in activities that are suitable for their language proficiency level and learning objectives, ensuring a meaningful and effective language learning experience.

In conclusion, incorporating pronunciation and intonation practice in speaking tasks is crucial for helping learners develop clear, accurate, and natural speech. Through explicit instruction, integration into speaking tasks, use of authentic materials, and leveraging technology, teachers can provide learners with ample opportunities to practice their pronunciation and intonation skills in a meaningful and engaging way. By focusing on these important aspects of spoken language, learners can improve their overall communicative competence and become more effective and confident English speakers. Furthermore, engaging in interactive speaking activities is a valuable approach to language learning. It provides language practice, promotes authentic communication, requires active engagement, encourages social interaction, has real-world relevance, and offers flexibility to suit different learners' needs. Incorporating interactive speaking activities in language learning programs or language exchange programs can significantly enhance learners' language skills, boost their confidence, and enable them to communicate effectively in real-life situations.

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GLOBAL IQLIM O'ZGARISHINING IQTISODIYOTGA TA'SIRI

Annotatsiya. Ushbu maqola global iqlim o'zgarishining jahon iqtisodiyotiga ijobiy va salbiy ta'siri haqida yoritilgan va bu salbiy ta'sirini pasaytirish uchun takliflar berilgan.

Kalit so'zlar: iqtisodiy sektorlar, investitsiya, to'lov tizimlari, risklar, mulkiyot, infrastruktura.

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IMPACT OF GLOBAL CLIMATE CHANGE ON THE ECONOMY

Abstract. This article describes the positive and negative effects of global climate change on the world economy and offers suggestions for reducing this negative effect.

Key words: economic sectors, investment, payment systems, risks, property, infrastructure.

Global iqlim o'zgarishining iqtisodiyotga **ijobiy ta'siri** mavjud. Quyidagi ta'sirlardan ba'zilari:

1. **Yangi iqtisodiy sektorlar:** Iqlim o'zgarishi yangi iqtisodiy sektorlar yaratishga olib keladi. Misol uchun, yeniluvchan energiya sohasi, iqlim o'zgarishiga qarshi kurash va ekologik innovatsiyalar iqtisodiyotga yangi imkoniyatlar ochadi.

2. **Investitsiyalar:** Iqlim o'zgarishi bilan bog'liq qo'shimcha investitsiyalar oqibatida, energiya samaradorligini oshirish, energiya iste'moli va energiya saqlash texnologiyalariga investitsiyalar oshadi. Bu esa iqtisodiyotning rivojlanishini va innovatsiyalarini rag'batlantiradi.

3. **Yangi ish o'rinlari:** Iqlim o'zgarishi iqtisodiyotda yangi ish o'rinlarining yuzaga kelishiga olib keladi. Misol uchun, yeniluvchan energiya sohasi, iqlim o'zgarishiga qarshi kurash va ekologik texnologiyalar sohasida ish o'rinlari yaratiladi.

4. **Mahsulot va xizmatlar:** Iqlim o'zgarishi iqtisodiyotda mahsulot va xizmatlar sohasida o'zgarishlarga olib keladi. Misol uchun, energiya samaradorligini oshirish, quruqlikka qarshi kurash va ekologik texnologiyalar mahsulot va xizmatlar portfeli va talabini o'zgartirishi mumkin.

5. **Tariflar va to'lov tizimlari:** Iqlim o'zgarishi iqtisodiyotga tariflar va to'lov tizimlarida o'zgarishlarga olib keladi. Misol uchun, karbon narxlari, energiya to'lovlari va ekologik to'lovlar iqtisodiyotning tarif va to'lov tizimlarini o'zgartirishi mumkin.

6. **Risklar va mulklar:** Iqlim o'zgarishi iqtisodiyotga risklar va mulklar oqibatlarini keltirishi mumkin. Misol uchun, tabiiy qayta tiklanadigan energiya manbalariga bog'liq risklar, asbob-uskunalar va infrastruktura zararlarini iqtisodiyotga ta'sir qilishi mumkin.

Bu ta'sirlar iqtisodiyotning turli sohalarida turli shakllarda hisobga olinadi. Ularning barchasini birlashtirib o'rganish va boshqa iqtisodiyot sohalariga ta'sirini baholash uchun ilmiy tadqiqotlar va tahlillar kerak.

Global iqlim o'zgarishining iqtisodiyotga **salbiy ta'siri** ham mavjud. Bu ta'sirning bir nechta ko'rinishlari mavjud:

1. **Tabiiy resurslar:** Iqlim o'zgarishi tabiiy resurslarning sarflanishini oshirishi va qisqartirishi mumkin. Misol uchun, suv resurslarining kamayishi, quruqlikning oshishi, oqibatida tarim mahsulotlari, energiya iste'moli va boshqa sohalarida qimmatlashishi mumkin.

2. **Infrastruktura:** Iqlim o'zgarishi infrastruktura sohasiga ham salbiy ta'sir ko'rsatishi mumkin. Ekstrem ob-havo hodisalari, suv ta'mirlash tizimlarini va transport infratuzilmasini zarar berishi mumkin. Bu esa tikuvchilik, charm-poyabzal va boshqa sohalarida xarajatlarni oshirishi va tikuvchilik faoliyatini to'xtatishi bilan bog'liq muammolarni yuzaga kelishi mumkin.

3. **Moliyaviy oqibatlar:** Iqlim o'zgarishi moliyaviy sohada ham salbiy ta'sir ko'rsatishi mumkin. Misol uchun, tabiiy qayta tiklanadigan energiya manbalariga bog'liq risklar, energiya narxlari va investitsiyalar uchun qo'shimcha xarajatlar oqibatida moliyaviy oqibatlar yuzaga kelishi mumkin.

4. **Ish joylari va ishga kirish:** Iqlim o'zgarishi ish joylariga ham salbiy ta'sir ko'rsatishi mumkin. Misol uchun, turizm sohasida iqlim o'zgarishi turistlar sonini kamaytirishi va turizmga bog'liq sohalarida ish o'rinlarining yo'qolishi mumkin.

5. **Moliyaviy bozorlar:** Iqlim o'zgarishi moliyaviy bozorlarga ham salbiy ta'sir ko'rsatishi mumkin. Misol uchun, tabiiy qayta tiklanadigan energiya manbalariga bog'liq risklar, energiya narxlari va investitsiyalar oqibatida moliyaviy bozorlarda istiqbollarning va tartibotlar yuzaga kelishi mumkin.

Bu salbiy ta'sirlar iqtisodiyotning turli sohalarida turli shakllarda hisobga olinadi. Ularning barchasini birlashtirib o'rganish va boshqa iqtisodiyot sohalariga ta'sirini baholash uchun ilmiy tadqiqotlar va tahlillar kerak.



1-rasm. Iqlim o'zgarishining salbiy va ijobiy ta'siri.

Global iqlim o'zgarishining iqtisodiyotga salbiy ta'sirini pasaytirish uchun quyidagi yo'llarni maslahat berish mumkin:

1. **Yashil iqtisodiyotga o'tish:** Yashil iqtisodiyot prinsiplarini amalga oshirish iqtisodiyotga salbiy ta'sirni pasaytirishga yordam berishi mumkin. Bu prinsiplar, energiya samaradorligini oshirish, atrof muhitni saqlash, toqimachilik va ekologik innovatsiyalarga e'tibor berishni o'z ichiga oladi.

2. **Karbon emissiyasini kamaytirish:** Karbon emissiyasini kamaytirish uchun qo'shimcha chora-tadbirlar o'tkazish iqtisodiyotga salbiy ta'sirni pasaytirishga yordam berishi mumkin. Bu, energiya iste'moli effektivligini oshirish, yeniluvchan energiya manbalariga o'tish, transport sohasida ishlab chiqarish va yetkazish jarayonlarini optimallashtirish va karbon narxлари va to'lovlar bilan bog'liq qonunlar va siyosatlar qo'llashni o'z ichiga oladi.

3. **Teknologik innovatsiyalar:** Teknologik innovatsiyalar iqtisodiyotga salbiy ta'sirni pasaytirishga yordam berishi mumkin. Bu, energiya samaradorligini oshirish, qayta tiklanuvchi energiya manbalarini rivojlantirish, ekologik texnologiyalar va texnikalar ishlab chiqarish, iqtisodiyotni qayta tiklash va ish jarayonlarini optimallashtirishga imkon beradi.

4. **Samaradorlik va isitish:** Iqtisodiyotda samaradorlikni oshirish va isitishni qo'llash salbiy ta'sirni pasaytirishga yordam berishi mumkin. Bu, energiya iste'moli va ishlab chiqarish jarayonlarini optimallashtirish, texnologik innovatsiyalarni qo'llash, ishga kirish va ish o'rinlarini yaratish, ish haqini oshirish va ish bilan bog'liq qonunlar va siyosatlar qo'llashni o'z ichiga oladi.

5. **Energiya iste'moli va qayta tiklanish:** Energiya iste'molining samaradorligini oshirish va qayta tiklanuvchi energiya manbalariga o'tish iqtisodiyotga salbiy ta'sirni pasaytirishga yordam berishi mumkin. Bu, energiya samaradorligini oshirish, yeniluvchan energiya manbalariga o'tish, energiya

saqlash texnologiyalarini qo'llash, energiya to'lovlari va tariflar bilan bog'liq qonunlar va siyosatlar qo'llashni o'z ichiga oladi.

6. Investitsiyalar va innovatsiyalar: Iqtisodiyotga investitsiyalar va innovatsiyalar jalb qilish salbiy ta'sirni pasaytirishga yordam berishi mumkin. Bu, yeniluvchan energiya sohasi, iqlim o'zgarishiga qarshi kurash va ekologik innovatsiyalar sohasida investitsiyalar oshirish, innovatsion projeklarni rag'batlantirish va iqtisodiyotni rivojlantirishga imkon beradi.

Bu yo'llar iqtisodiyotning turli sohalarida salbiy ta'siri pasaytirish uchun foydalanilishi mumkin.

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IMPROVEMENT OF MANAGEMENT MECHANISMS OF MAHALLA INSTITUTIONS IN THE TRANSFORMATION PROCESS

Abstract. The article examines the role of the mahalla institution, which has been formed and developed over the centuries, in the implementation of democratic reforms in Uzbekistan today, as well as the scientific views and theories of scholars on the formation of mahallas. In addition, the work carried out on social support of the population in the mahallas, which have become the basis of human development, which has become the hearth of the mahalla, and which is called motherland within the homeland is covered.

Key words: Mahalla, social institute, transformation, solution, significance of theoretical developments, self-government, civil society.

Mahalla has always been the center of public opinion, the preservation of national values, and the solution of pressing life problems. President Shavkat Mirziyoyev rightly noted that the mahalla should be an abode of peace and tranquility, mutual respect and education. A necessary condition for the sustainable development of the country is the presence of a system of self-government, which is very important for Uzbekistan than for most foreign models of government.

In the modern understanding, local self-government is considered as a certain guarantee of a free regime. And the implementation of its principles based on the traditions of the national school not only guarantees the establishment of democratic positions in our society, but also ensures the sustainable socio-economic development of the country as a whole.

The transformation process is ensured by the widespread dissemination of institutional norms in society and the presence of mechanisms for enforcing their implementation. The significance of theoretical developments that can improve the understanding of the mechanisms of development of transformation processes and at least partially improve the quality of forecasts and the efficiency of managing systems.

Mahalla is the cradle of national values and good deeds. It was here that such traits characteristic of our people as humanism, mercy, mutual assistance and good neighborliness were formed.

The creation of a legal framework for the activities of self-government bodies, their improvement in accordance with the requirements of the time, served

as an important factor in strengthening the role of this unique system in the socio-political and spiritual life of society.

The activities of self-government bodies are unique and multifaceted. Currently, citizens' assemblies successfully perform more than 30 functions that were previously the responsibility of local government bodies. This is primarily social protection. At the same time, special attention is paid to targeted material and moral support for low-income families, people with disabilities, and single elderly citizens. A significant contribution to increasing the efficiency of the work carried out in this direction is made by the Mahalla Foundation, its regional divisions and about 10 thousand self-government bodies of citizens. The well-established activities of social support commissions operating at citizens' gatherings are important.

As the head of state notes, the role and significance of the mahalla, which is a mirror of the life of the people, in preserving our national values, traditions and customs, is truly enormous. It contributes to the implementation of the principle "from a strong state to a strong civil society", further strengthening of our spirituality, and educating the younger generation in the spirit of the times.

The solid legal basis for this great work is the decrees and resolutions of the head of state, government resolutions and other legal acts. In particular, in accordance with the law, small businesses, hairdressing salons, sewing shops, craft workshops, and consumer service points are open and operating effectively at citizens' gatherings. Currently, the mahalla promotes employment of the population by organizing home-based work.

As you know, handicrafts have developed on our land since ancient times. The secrets of pottery, blacksmithing, handicrafts, wood carving, gold embroidery, embroidery, as well as animal husbandry and agriculture are passed down from generation to generation. Currently, with the dynamic development of small businesses in the country and the growth of economic activity of the population, self-government bodies of citizens play a large role in involving citizens in entrepreneurship. In mahallas, the production of consumer goods, agriculture, folk crafts, trade, and the service sector are expanding, which helps ensure employment of residents, improve the well-being of families, and the level and quality of their life.

Today, citizens' self-government bodies have become reliable partners of entrepreneurs. The commissions of citizens' gatherings on the development of entrepreneurship and family businesses actively contribute to their work. Members of this commission help those wishing to create their own business in the mahalla, explain the procedure, assist in the allocation of land plots, access to utilities, and obtaining loans. Each mahalla has its own bakeries, sewing workshops, workshops for processing vegetables and fruits, and milk. Mahallas are also famous for their potters, carpenters, blacksmiths, and confectioners.

It should be noted that when organizing a family business, the characteristics and capabilities of each region are taken into account. For example,

in ancient historical cities, along with handicrafts, special attention is paid to the development of trade and the service sector. And in areas specializing in agriculture and livestock raising, there are more and more private agricultural enterprises.

The main goal of the reforms carried out in the country is to create conditions for a happy and prosperous life for every person. And the mahalla today, on the basis of the age-old principles of mercy, humanism, and unity, unites people in the socio-economic development of the territories and contributes to the growth of their well-being.

A modern mahalla is an association of residents of a certain territory within a kishlak, town, aul, or city. In a complex, it solves issues of everyday life. Today this applies to both spiritual and moral, political and economic aspects. It is the mahalla that bears the main burden associated with the implementation by citizens of the function of self-government. With the acquisition of independence, Uzbekistan, following the principles of the progressive development of democracy in order to provide citizens with opportunities to participate in the life of the country, legislated the historically established form of mahalla, which officially received the status of bodies of self-government of citizens. The authorities' desire to support this public institution on the path to building a strong civil society is fully justified.

Self-government bodies are important primarily as a structure in direct contact with the population. They must close the management chain and be the main source of information.

The current legislation entrusts the mahalla with solving many problems of important social significance. It ensures targeted and effective use of funds allocated as part of social support for families, resolves issues of providing financial assistance to the poor, assigning and paying benefits to families with minor children. Targeting is a fundamental factor. And we must not allow dependency among the adult working population.

The Mahalla is designed to facilitate the patronage of lonely elderly citizens in need of outside care at the expense of funds allocated from the State budget. Today, self-government bodies are entrusted with a number of powers in preserving marriages and reconciling conflicting parties.

In mahallas, issues of comprehensive socio-economic and cultural development of the territory under its jurisdiction are resolved. Here they can effectively mitigate the consequences of conflicts, provide assistance to less protected sections of the population, and improve general conditions and quality of life. Therefore, on a national scale, self-government of citizens solves problems of national importance, ensuring the protection of people's interests. It is this level that is the foundation of the national system of democracy.

Today, the practice of public administration has highlighted the importance of problems, which include issues of the institution of makhalla. The main task is to justify the political expediency of measures, the implementation of which will

make it possible to more effectively organize the structure and activities of state authorities and self-government of citizens.

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BOSHLANG'ICH SINIF O'QUVCHILARINING RAQAMLI SAVODXONLIK KO'NIKMLALARINI SHAKLLANTIRISH MAZMUNI

Annotatsiya. Ushbu maqolada boshlang'ich sinf o'qituvchilarining o'quv faoliyatini tashkil etishda raqamli texnologiyalardan foydalanishi, kichik maktab yoshidagi o'quvchilarning raqamli savodxonlik ko'nikmalarini shakllantirishda raqamli texnologiyalarning o'rni va ahamiyati, bugungi kunda o'quvchilar raqamli savodxonlik ko'nikmalarini shakllantirishda texnik vositalardan foydalangan holda o'quv faoliyatini olib borish usullari va mazmuni to'g'risidagi masalalar o'z aksini topgan.

Kalit so'zlar: Raqamli savodxonlik, texnologiya, texnik vositalar, o'qituvchi, kompyuter savodxonligi, o'quv faoliyati, media savodxonlik, mazmun, standart, mezon.

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CONTENT OF DIGITAL LITERACY SKILLS FORMATION IN PRIMARY CLASS STUDENTS

Annotation. In this article, the use of digital technologies by primary school teachers in the organization of educational activities, the role and importance of digital technologies in the formation of digital literacy skills of students of junior school age, and the importance of digital technologies in the formation of digital literacy skills of students today questions about the methods and content of educational activities using technical means are reflected.

Keywords: Digital literacy, technology, technical tools, teacher, computer literacy, learning activities, media literacy, content, standard, criteria.

Hozirgi davr taraqqiyoti shunday rivojlanish bosqichida ko'tarildiki, bunday madaniy o'zgarishlar surati shaxsdan juda ham qisqa muddatlarda katta hajmdagi axborotni qabul qilish, yangi faoliyat usullarini o'zlashtirish hamda ijtimoiy muammolarning yechimini o'z vaqtida topish malakasini talab qiladi. Respublikamiz hayotining ijtimoiy-iqtisodiy, ma'naviy – axloqiy va axborot kommunikatsiya sohalaridagi tizimli o'zgarishlari kishilarning hayot faoliyatini jiddiy o'zgartirmoqda.

Shuningdek, ta'lim-tarbiya jarayonida sog'lom va barkamol avlodni tarbiyalash yoshlarning o'z ijodiy va intellektual salohiyatini ro'yobga chiqarish bo'yicha qo'yilgan vazifalarda ta'lim jarayoniga zamonaviy axborot kommunikatsiya va pedagogik texnologiyalarni, elektron darsliklar, multimediya vositalarini keng joriy etish orqali mamlakatimiz maktabgacha ta'lim, umumta'lim maktablarida, litseylar va oliy ta'lim muassasalarida o'qitish sifatini tubdan yaxshilash samarali tizimini yanada rivojlantirish ko'zda tutilganligi dolzarb vazifalarimizdan biridir.

Raqamli savodxonlik - zamonaviy dunyoda hayot uchun, raqamli texnologiyalar va internet resurslaridan xavfsiz va samarali foydalanish uchun zarur bo'lgan bilim, ko'nikma va malakalar to'plamidir. Ushbu kerakli bilim va ko'nikmalarni shakllantirish borasida olib borilayotgan kompleks ishlar natijasida boshlang'ich sinf o'quvchilarida IT sohasiga bo'lgan qiziqish va kelajakda ushbu kasb egalari bo'lib yetib chiqishlarida mustahkam poydevor vazifasini o'taydi.

O'quvchilarda raqamli kompetensiyalarni tarkib toptirish o'qituvchining mutlaqo yangi, raqamli muhitda ishlashiga va o'quv jarayonining boshqa ishtirokchilari: bevosita o'quvchilar, boshqa o'qituvchilar, ma'muriyat va ota-onalar bilan o'zaro munosabatda bo'lishga majbur bo'lishi bilan bog'liqligini tushunish, ta'lim jarayoniga jalb qilingan uchinchi shaxslar sifatida juda muhimdir.

Ta'lim jarayonida o'qituvchi o'quvchilarda kompetensiyalarni shakllantirishda bir qancha texnik qurilmalardan foydalanadi. O'qituvchining bevosita ta'lim faoliyatida axborot texnologiyalaridan foydalanish maqsadlari turlicha bo'lib, ularning har biri o'ziga xos xususiyatga va mazmunga ega:

- ta'limni zamonaviy qilish (texnik vositalardan foydalanish nuqtai nazaridan);

- ta'lim faoliyatini zamonaviy o'quvchining dunyoqarashiga yaqinlashtirish, chunki u o'qish va gapirishdan ko'ra ko'proq qaraydi va tinglaydi;

- texnik vositalar yordamida olingan axborotdan foydalanishni ma'qul ko'radi;

- o'qituvchi va o'quvchi o'rtasida o'zaro tushunish, o'zaro yordam munosabatlarini tashkil etish;

- o'qituvchiga materialni hissiy va majoziy ravishda taqdim etishda ko'maklashish.

- o'qituvchining ham, o'quvchining ham vaqtini tejash, o'quv faoliyatining zichligini oshirish, uni yangi mazmun bilan boyitish.

Axborot kommunikatsiya texnologiyalardan foydalanish ma'lumotni bir vaqtning o'zida quyidagi shaklda ko'paytirish imkonini beradi: matn, grafik tasvir, tovush, nutq, video. Bularning barchasi o'qituvchiga o'quvchilar uchun bolalar rivojlanishining printsiplial jihatdan yangi vositalarini yaratishga imkon beradi.

Tadqiqotlar shuni ko'rsatdiki, axborot kommunikatsiya texnologiyalardan foydalanganda boshlang'ich sinf o'quvchilarning darslarga qiziqishi sezilarli darajada oshadi, bilim qobiliyatlari darajasi oshadi. Taqdimot katta hajmdagi

qog'oz ko'rgazmali qurollar, jadvallar, reproduksiya, badiiy albomlar, audio va video jihozlardan xoli bo'lgan katta hajmdagi namoyish materiallarini birlashtirishga yordam beradi. Shunday qilib, o'qituvchi o'quvchilarni tarbiyalash uchun kompyuter "xom ashyo" bo'lib xizmat qilishi mumkin degan xulosaga kelish mumkin.

Multimedia vositalari asosida boshlang'ich sinf o'quvchilarini o'qitishda quyidagi afzalliklarga ega:

1) berilayotgan bilimlarni chuqurroq va mukammalroq o'zlashtirish imkoniyati bor;

2) ta'limning boshlang'ich davridan ta'lim olishning yangi sohalari bilan yaqindan aloqa qilish imkoniyatiga ega bo'ladi va texnik qurilmalarga bo'lgan ishtiyoqi yanada ortadi;

3) ta'lim olish vaqtining qisqarish natijasida, vaqtni tejash imkoniyatiga erishish;

4) olingan bilimlar bola xotirasida uzoq saqlanib, kerak bo'lganda amaliyotda qo'llash imkoniyatiga erishiladi.

Ta'lim jarayonida axborot kommunikatsiya texnologiyalaridan foydalanish tarbiyaviy va ta'lim vazifalarini qo'yish va ularni hal qilish jarayonini boshqarish imkoniyatini oshiradi. Kompyuterlar turli ob'yektlar, holatlar va hodisalarning modellarini qurish va tahlil qilish imkonini beradi. Shu bilan birga, kompyuter kichik yoshda juda zarur bo'lgan hissiy insoniy muloqotning o'rnini bosa olmasligini unutmaslik kerak. U faqat o'qituvchini to'ldiradi, uning o'rnini bosmaydi.

Xulosa o'rnida shuni ta'kidlash kerakki, butun dunyo pedagogik hamjamiyatining katta e'tibori yangi raqamli kompetensiyalarni zudlik bilan shakllantirishga qaratilgan. O'tgan oylar tajribasi ko'rsatganidek, hozirgi sharoitda o'qituvchilar imkon qadar tezroq o'rganishlari, zamonaviy texnologiyalarni o'zlashtirishlari, o'qitishning yangi vositalari va o'zaro hamkorlikni o'zlashtirishlari, shuningdek, o'qitishning barcha samarali shakllarini kundalik faoliyatiga joriy etishlari zarur. Aytib o'tilgan ushbu ko'nikma va malakalar zamonaviy texnik vositalar orqali tashkil qilingan ta'lim jarayonida shakllanadi. O'qituvchining o'quv jarayonlarida kompyuter texnologiyalaridan foydalanish orqali ko'plab qiziqarli va yangi hamda animatsion vedioroliklar orqali dars sifati oshibgina qolmay, zamoniy metodikaga ega bo'lgan o'qituvchi metodikasi rivojlanib boradi. Shu bilan birgalikda o'quvchilarning raqamli savodxonligini shakllantirishga ham o'z hissasini qo'shgan bo'ladi. Zamonaviy axborot texnologiyalari orqali tashkil qilingan dars orqali o'quvchilarda kichik yoshdan IT sohasiga bo'lgan qiziqish va ishtiyoq shakllanishi ta'minlanadi.

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SMALL BUSINESS DEVELOPMENT-THE FOUNDATION OF TOMORROW

Annotation. This article provides information about the reforms being carried out for the development of small business in our country, the opportunities and facilities provided to young entrepreneurs, and the importance of small business in ensuring employment of the population, supporting local development and stimulating economic activity.

Key words: small business, market economy, macroeconomic indicators, economic growth, innovations, ensuring employment of the population, vacancies.

INTRODUCTION.

One of the main goals of establishing a socially oriented market economy in Uzbekistan is the priority development of small business. To realize this goal, economic reforms are being carried out step by step, large institutional frameworks have been created to increase the role of small business. Legal and regulatory documents guaranteeing the organization of small business activity, free operation, market infrastructure supporting small business have been formed. As a result, today, small business entities are active in all aspects of our country's economy, in the production of machine-building products, in the production of consumer goods, agriculture and food products, in the fields of service provision and tourism.

MATERIALS AND METHODS

Our experience in our country in a short period of time has proven that small business is an important factor of sustainable economic growth. Especially in the conditions of deep structural changes and diversification in the country's economy, small business serves as an important factor in the sustainable development of our national economy, increasing its competitiveness, and achieving high macroeconomic indicators. Small business is the lifeblood of any economy, and economic It plays an important role in stimulating growth, encouraging innovation and creating jobs. As we look to the future, it is clear that the success and sustainable development of small businesses will be an important factor in building a thriving economy. Small business development is truly the foundation of tomorrow as it drives economic growth, innovation and new jobs in communities around the world plays a decisive role in the creation of 'rins. Small business is often called the backbone of the economy due to its significant contribution to overall economic development and stability. These enterprises not

only bring diversity and competition to the market, but also develop entrepreneurship, creativity and resilience. In addition, small businesses are important in providing employment, supporting local development and stimulating economic activity. They are known for their agility and ability to quickly adapt to changing market conditions, making them key players in driving innovation and technological advancements. Small businesses also contribute to economic stability by reducing dependence on large corporations and promoting a more balanced distribution of wealth within society. Investing in small business development is critical to building a strong foundation for future economic growth and prosperity.

RESULTS AND DISCUSSIONS.

By supporting entrepreneurs and small business owners, governments, organizations and individuals can foster a culture of innovation, encourage job creation and create a more dynamic and inclusive economy. Small business development not only benefits the entrepreneurs themselves, but also has a ripple effect on the entire society and leads to sustainable growth and prosperity for all. Of course, small business development is crucial in shaping the future of our economy. Here is an article detailing the importance of small businesses as the foundation of tomorrow:

The importance of small business development:

Small businesses make a significant contribution to economic development by promoting competition, improving productivity and promoting local growth. These businesses are known for their ability to quickly adapt to changing market trends, create new products and services, and create ripple effects of economic activity in their communities. In addition, small businesses are critical to reducing unemployment, especially in times of economic uncertainty have By providing jobs and supporting the growth of a skilled workforce, small businesses play an important role in building a stable and dynamic economy.

Challenges and Opportunities:

Despite their importance, small businesses often face various challenges such as limited access to capital, regulatory burdens and market competition. However, with the right support and resources, small businesses can overcome these challenges and take advantage of opportunities for growth and expansion. and are the main factors that give it a chance to succeed. By investing in small business development, politicians, organizations and individuals can lay the foundation for a prosperous and sustainable economy for future generations.

In 2016, 31,766 new enterprises were implemented in our republic to further improve the business environment, to ensure reliable protection of small business and private entrepreneurship, to provide them with comprehensive support and to eliminate obstacles to their rapid development. made it possible to establish small business entities (except farmers and farms). As a result, the number of small business entities operating as of January 1, 2017 was 218,170 and increased by 11,066 compared to the same period last year.

As a result of creating more favorable conditions for small businesses and private enterprises, according to the preliminary results of January-December 2016, their share in the gross domestic product of our country was 56.9% (56.5% in January-December 2015). in industry - 45.0 percent (40.6 percent), in services - 60.5 percent (57.8 percent), in export - 28.5 percent (27.0 percent) and in employment - 78.1 percent (77.9 percent) in January-December 2016, small business and private business entities invested 19,963.2 billion soums in the economy. This is 40.3% of the total investments in the country. They also completed construction works worth 20,677.7 billion soums (70.7% of the total volume of construction works) or increased by 15.6% compared to the same period last year.

CONCLUSIONS.

In short, small business development is the cornerstone of tomorrow's economy. By supporting the growth and success of small businesses, we can unlock new opportunities, create more inclusive communities, and boost innovation and prosperity for generations to come. It is important that we continue to support and develop small businesses because they are a key driver of economic growth and development.

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OBTAINING OF EPOXIDIZED SUNFLOWER OILS AND THEIR RESEARCH

Abstract. This article is aimed at revealing the epoxidation process of different vegetable oils. It is noted that epoxidation was carried out with various physical and chemical parameters and various homogenous or heterogenous catalysts. Methods such as a mixture of dihydroxy and epoxy derivatives, molecular reaction affects the dynamics of various proportions, interaction, and the dynamics of molecules reaction, and conducting the dynamics of anti-molecules and substances, are illuminated by the molecular structure of epoxy oils, including molecular structures of epoxy oils, depending on the conditions of synthesis. It has been analyzed whether epoxidized oils can be used to improve the physicochemical properties of various polymers. Also, the interaction of epoxidized sunflower oil and its derivatives with tetrabutyl titanate has been studied. It has been shown that a mixture of dihydroxy and epoxy derivatives is formed in different proportions, depending on the synthesis conditions.

Keywords- Vegetables oils, epoxidation, heterogeneous catalysts, homogeneous catalysts, epoxidized vegetable oils, Prileschajew method, acetic acids, hydrogen peroxide, Soybean oil, Sunflower oil.

Introduction

Vegetables oils are a sustainable and renewable raw material resource extracted from plants and wood. These vegetables oils are used like starting material and they offers numerous advantages such as low toxicity and inherent biodegradability. In the last years, the epoxidation of vegetables oil received a great interest from industry. Thanks to the epoxidation reaction the unsaturations present in vegetables oils can be chemically modified to a value added product. The most important sources of these oils are palm, soybean, rapeseed and sunflower. In this chapter, vegetable oils are presented and in particular Soybean oil, Sunflower oil, Rapeseed oil will be analyzed. After introducing oils studied in this work, the focus will be shifted towards the epoxidation reaction, and above all on the biphasic reaction with a conventional method [1].

Epoxidation methods

Epoxidation is a reaction widely used to form oxirane rings from ethylenic unsaturations (C=C) [2]. The cyclical structure of oxirane rings has a bond angle of 60 °C, making them highly strained and highly reactive. Typically, the method to promote epoxidation of double bonds uses hydrogen peroxide and acetic acid as oxygen carriers in acid media (by mineral acid). Materials like vegetable oils, biodiesel and some rubber compounds belong in this class.

Classic methods employed for the oxidation of vegetable oils use homogeneous catalytic processes that generate a lot of waste, corrode equipment and require large amounts of reagents. Heterogeneous catalysts have the advantage of easy separation and recycling of the catalyst. For this reason, ion exchange resin has been studied to promote epoxidation of vegetal oils.

Biobased metal cutting fluid (MCF) is an important material that has wide use in industry as a substitute for cutting fluids based on fossil-derived hydrocarbons. MCFs can be made from vegetable oils, but some oils have low stability, mainly at high temperature. To solve this problem, epoxidation reactions are applied to convert unsaturations to oxirane rings followed by opening of the rings with water, to form the vicinal diol [2]. In some cases it is only necessary to convert a double bond with bis-allylic hydrogen (poly--unsaturated), which is more susceptible to the oxidation process, maintaining intact the double bond with allylic hydrogen only. This procedure should improve the oxidation stability but tends to maintain viscosity and the liquid state.

Several authors have investigated heterogeneous catalysts based on the sulfonation of incomplete pyrolyzed biomass, such as sucrose, glucose and biochar [3]. Some seeds have been suggested in recent years to produce biochar, but to the best of our knowledge, no studies have been carried out of biochar produced by low-temperature pyrolysis combined with sulfonation.

Catalysts based on biomass have advantages such as low cost and surface chemical properties that can be tailored appropriately. An additional advantage of this work was the use of cake from *Jatropha curcas*. This cake, left over after oil extraction for biodiesel production, has high toxicity and cannot be used as animal feed.

Among the desirable characteristics of the catalyst support are stability, inertness, reusability, high surface area, porosity and appropriate chemical structure. The process usually produces sulfonated carbon with low surface area and low acid site content.

Conventionally, the production of epoxidized vegetable oils is carried out by the Prileschajew method. It is a liquid–liquid reaction system, where there are several consecutive and parallel exothermic reactions [4]. The first step is the formation of percarboxylic acid in the aqueous phase from the reaction between hydrogen peroxide and the corresponding carboxylic acid. Then, the percarboxylic acid diffuses in the organic phase to epoxidize the unsaturated

groups of the vegetable oils. Due to the presence of several exothermic reactions, the risk of thermal runaway exists. As mentioned in the study of Dakkoune et al.

Hence, direct epoxidation of vegetable oils by oxygen and hydrogen peroxide is seen as the best option concerning thermal safety, waste treatment and selectivity. Scotti et al have shown that epoxidation of oleic acid by a cumene–O₂ system on CuO/Al₂O₃ presents good results of conversion and selectivity. Nevertheless, there is still the problem of organic waste, i.e., cumene.

Sepulveda et al, tested different alumina catalysts for the epoxidation of methyl oleate and soybean oil methyl ester by hydrogen peroxide in different organic solvents. epoxidation of methyl ricinoleate. As previously mentioned, the direct epoxidation of vegetable oils by hydrogen peroxide might be thermally safer than by the Prileschajew method. [5]. To the best of our knowledge, we did not find any study proposing such comparison. In the Prileschajew method, hydrogen peroxide might be more stable because of the acidity of the reaction mixture [6]. Such a comparison is not easy because the chemical systems are different. Figure 1 shows a typical reaction scheme for the Prileschajew epoxidation.

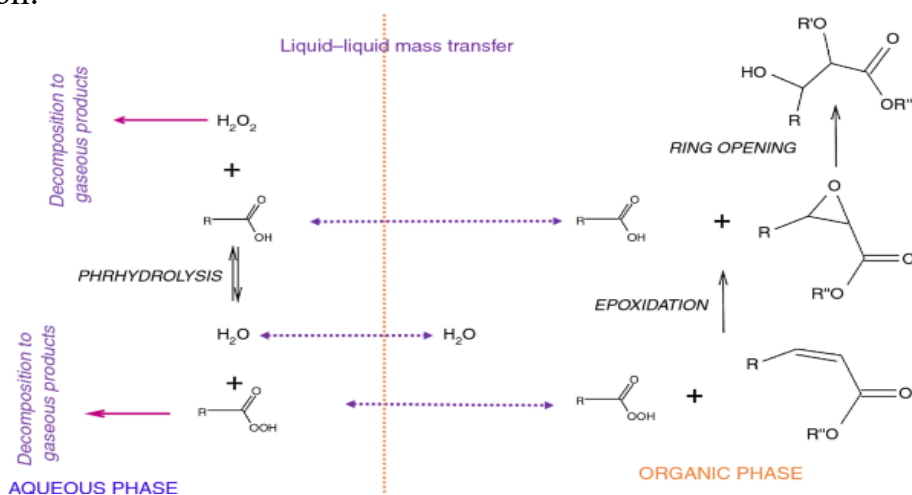


Figure 1. Reaction scheme for the Prileschajew epoxidation.

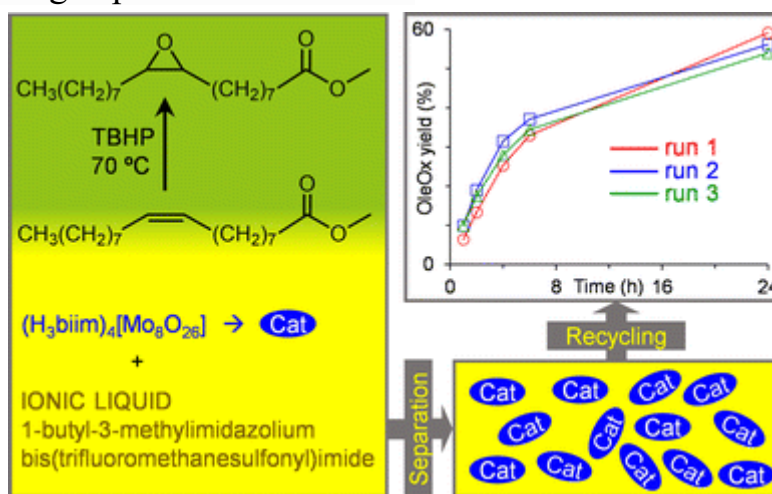
In this article describe methyltrioxorhenium (MTO)-CH₂Cl₂/H₂O₂ biphasic system for epoxidizing soybean oil. The reactions were optimized (reactant ratio, time, and temperature), which resulted in a better performance (higher conversion and selectivity) than those described in the literature. The rhenium-epoxidized soybean oil remained stable in the absence of stabilizers for up to 30 d when stored at mild conditions [7].

Compared to pure corn oil, the differential scanning calorimetry of both corn oil-based polyols displayed the absence of any detectable melting peaks. However, the epoxidized derivative had a higher thermal stability than the ozonated sample, as shown by thermogravimetric analysis.

. Hydroxyl groups are further classified based on their presence in polyols. Primary hydroxyl groups present in polyols hold the mechanical and thermal performance of final polyurethanes better. In this context, the recent

advancements in increasing the primary hydroxyl groups in bio-based polyols through different chemical transformation has been focused on here.

This study investigated the production of epoxidized soybean oil by conventional and ultrasound-assisted methods. Epoxidized soybean oil was synthesized by reacting soybean oil, hydrogen peroxide, and carboxylic acid (formic or acetic acid). Sulfuric acid was used as a peroxidation catalyst. The effects of sonication, the carboxylic acid (formic and acetic acid), peroxidation catalyst (H_2SO_4), and temperature (50, 60, and 80 °C) were evaluated on the yield and productivity of epoxidized soybean oil. In both conventional and ultrasound-assisted methods, soybean oil yields into epoxidized soybean oil surpassed 90% only when formic acid and sulfuric acid were applied. The conventional method occurred faster than the sonochemical method for yields of up to 90%. The ultrasound-assisted method was the best technological option to attain a product of high purity (98%). The sonochemical method could be considered a promising technology if the ultrasound equipment's limitations can be overcome [8]. The octamolybdate salt $(\text{H}_3\text{biim})_4 [\beta\text{-Mo}_8\text{O}_{26}]$ (**1**) has been prepared in good yield by hydrolysis of the complex $[\text{MoO}_2\text{Cl}_2(\text{H}_2\text{biim})]$ ($\text{H}_2\text{biim} = 2,2'$ -biimidazole). Compound **1** showed a good performance as a (pre)catalyst for the epoxidation of olefins using either *tert*-butylhydroperoxide (TBHP) or hydrogen peroxide as oxidant.



With the ionic liquid (IL) 1-butyl-3-methylimidazolium bis(trifluoromethanesulfonyl)imide) as co-solvent and TBHP as oxidant, the catalyst system could be reused several times without loss of activity for the epoxidation of the bio-olefin methyl oleate (Ole). Compound **1** is the first polyoxomolybdate used for the Ole/TBHP reaction in IL medium [9].

The epoxidation reaction was successfully carried out; with the GC-MS analysis indicating the formation of epoxidized esters derived from linoleic and oleic acids. The addition of the epoxidized esters to the EEF films caused an increase in film thickness, opacity, solubility in water, tensile strength and elongation, while the solubility in acid presented the same value as compared to

the blank sample. In the EEPHA samples, addition of filmogenic solution of epoxidized esters from corn and macauba presented a value exceeding the standard in the thickness, opacity, water solubility, water vapor permeability and tensile strength analyses. [10].

Conclusion.

The results of scientific works published in foreign and domestic publications on the development perspectives and fields of application of scientific research in the field of obtaining epoxidized vegetable oils are analyzed in detail. Vegetable oils in industry have been widely used as lubricant, as monomer for polymer production.

Based on the analysis of the data obtained as a result of studying the literature, it should be noted that it is necessary to scientifically base the technology of obtaining epoxidized vegetable oils with the range of catalysts, such as Octamolybdate Salt, methyl oleate over various amorphous Ti-SiO₂, HPW/TiO₂-SnO₂-ZrO₂, methyltrioxorhenium-CH₂Cl₂/H₂O₂ catalytic biphasic system and tetrabutyl titanate. In addition, it was explained that the epoxidation of vegetable oils, in addition to catalysts, is also an important factor, such as the temperature of the stream. Therefore, it was found that the technology for obtaining new epoxidized vegetable oils with tetrabutyl titanate catalyst was not studied.

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P-SI<NI> NAMUNALARNING ELEKTROFIZIK XUSUSIYATLARINI TADQIQ QILISH

Annotatsiya. Ushbu ishda kremniyda nikel diffuziyasi $T=1573$ K haroratda $t=2$ soat davomida SUOL-4M pechida amalga oshirildi. Ecopia HMS-7000 qurilmasi yordamida Xoll effekti usulidan foydalanib, kremniydagi nikel kirishma atomlarining konsentratsiyasini, hamda solishtirma qarshilikni haroratga bog'liqligini o'rganish natijalari keltirildi.

Kalit so'zlar. Nikel, kremniy, sovitish tezligi, kirishma atomlari, Xoll effekti, konsentratsiya, solishtirma qarshilik.

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STUDY OF THE ELECTRICAL PROPERTIES OF P-SI<NI> SAMPLES

Abstract. In this work, the diffusion of nickel into silicon was carried out in a SUOL-4M furnace at a temperature of $T=1573$ K for $t=2$ hours. Using the Hall effect method on the Ecopia HMS-7000 device, the results of studying the concentration of nickel atoms in silicon are presented and the temperature dependence of the resistivity is also given.

Keywords. Nickel, silicon, cooling rate, impurity atoms, Hall effect, concentration, resistivity.

Bugungi kunda hajmida noyob strukturaviy xususiyatlarga ega bo'lgan ko'p komponentli kirishma to'plamlari mavjud bo'lgan yarimo'tkazgichli materiallarni olish, shuningdek, ularning strukturaviy, elektrofizik va fotoelektrik xususiyatlarini o'rganish bo'yicha ilmiy izlanishlar olib borilmoqda [1-6]. Bu

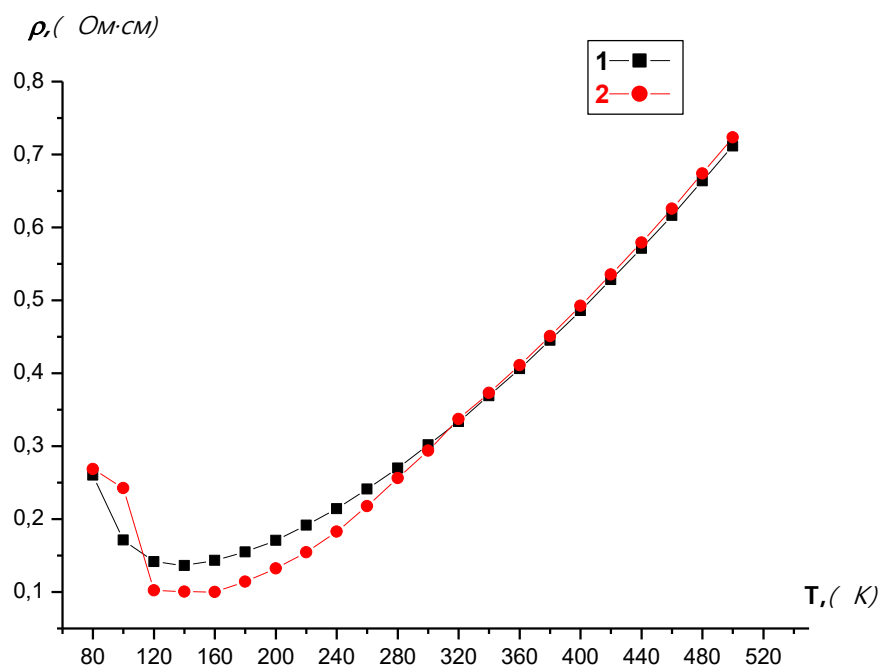
borada turli kirishmalar bilan diffuziya usulida legirlash orqali kirishma mikro- va nanobirikmalariga ega bo'lgan yarimo'tkazgichli materiallarni olish bo'yicha yangi texnologiyalarni ishlab chiqishga alohida e'tibor qaratilmoqda.

Ekspirimental usul

Tadqiqot uchun dastlabki namuna sifatida Choxralskiy usulida o'stirilgan, solishtirma qarshiligi $0,3 \text{ Om}\cdot\text{sm}$ bo'lgan KDB markali kremniy monokristalidan foydalanildi. To'g'ri burchakli parallelepiped shaklida tayyorlangan, o'lchamlari $13\times 6\times 2 \text{ mm}$ bo'lgan namunalarni kimyoviy usullarda tozalandi. Kremniyda nikel diffuziyasi $T=1573 \text{ K}$ haroratda $t=2$ soat davomida SUOL-4M pechida amalga oshirildi. Diffuziya harorati platina-platinarodiy termojufti yordamida nazorat qilindi. Diffuziyaviy tavlanişdan keyin namunalar tez ($v_{\text{sov}}=250 \text{ K/s}$) va sekin sovitish ($v_{\text{sov}}=0.1 \text{ K/s}$) usullari bilan sovitildi. Mazkur ishda Ecopia HMS-7000 qurilmasi yordamida Xoll effekti usulidan foydalanib, kremniydagi nikel kirishma atomlarining konsentratsiyasini, hamda solishtirma qarshilikni haroratga bog'liqligini o'rganish natijalari keltirildi. Xoll effekti usulida o'lchash uchun namunalarni $6\times 6\times 1,8 \text{ mm}$ parallelepiped shaklida kesib olindi. Tayyorlangan namunalarning elektrofizik kattaliklarini o'lchash jarayonida haroratni 80 K dan 500 K oralig'ida oshirib borildi.

Natijalar va munozaralar

Tajribalar natijasida $T=80\div 500 \text{ K}$ harorat oralig'ida tez va sekin sovitish usullari bilan olingan p-Si<Ni> namunalarning solishtirma qarshiligini haroratga bog'liqlik grafigi 1-rasmda keltirilgan. Unga ko'ra harorat 80 K da namunaning ρ qiymatlari mos ravishda $0.260 \text{ Om}\cdot\text{sm}$ va $0.268 \text{ Om}\cdot\text{sm}$ ni tashkil etadi. Haroratni 160 K ga qadar oshirib borilganda bu ko'rsatkichlar kamayib boradi va ular $0,143 \text{ Om}\cdot\text{sm}$, hamda $0,100 \text{ Om}\cdot\text{sm}$ ni tashkil etadi. Shundan so'ng haroratni 160 K dan 500 K ga qadar oshirib borilganda bu ko'rsatkichlar ortib boradi va ular yakunda $0.712 \text{ Om}\cdot\text{sm}$, hamda $0.724 \text{ Om}\cdot\text{sm}$ ni tashkil qiladi (1-rasm, 1- va 2- egri chiziqlar).

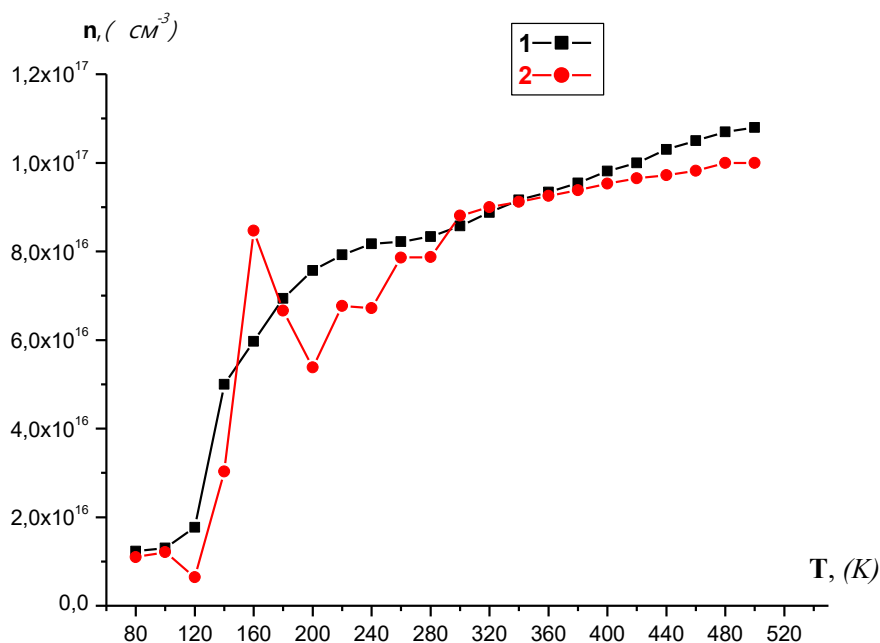


1-rasm. Solishtirma qarshilikning haroratga bog‘liqligi:

1 - tez sovitish ($v_{\text{sov}}=250$ K/s) usuli bilan olingan p-Si<Ni> namuna; 2 - sekin sovitish ($v_{\text{sov}}=0.1$ K/s) usuli bilan olingan p-Si<Ni> namuna.

2-rasmda $T=80\div 500$ K harorat oralig‘ida p-Si<Ni> namunalari uchun zaryad tashuvchilar konsentratsiyasi – n ni haroratga bog‘liqlik grafifi keltirilgan. Tajribalar natijasiga ko‘ra, harorat 80 K da tez sovitilgan namunadagi zaryad tashuvchilar konsentratsiyasi n ning qiymati $1.23 \times 10^{16} \text{ sm}^{-3}$ ni tashkil qiladi. Harorat 120 K ga ko‘tarilganda ushbu qiymati biroz ko‘tarilib, $1.77 \times 10^{16} \text{ sm}^{-3}$ ga tenglashadi. Shundan so‘ng haroratni 120 K dan 500 K ga oshirilganda n ning qiymati ko‘tarilib boradi va yakunda $1.08 \times 10^{17} \text{ sm}^{-3}$ ni tashkil etdi (2-rasm, 1-egri chiziq).

Diffuziyaviy tavlashdan so‘ng sekin sovitish usuli bilan olingan p-Si<Ni> namunaning n qiymati 80 K haroratda $1.1 \times 10^{16} \text{ sm}^{-3}$ ni tashkil etadi. Harorat 100 K ga ko‘tarilganda ushbu qiymati biroz ko‘tarilib, $1.21 \times 10^{16} \text{ sm}^{-3}$ ga tenglashadi. So‘ngra haroratni 120 K ga oshirilganda n ning qiymati pasayib, $6.44 \times 10^{15} \text{ sm}^{-3}$ ni tashkil etdi. Shundan so‘ng haroratni 160 K qadar oshirib borishdagi n ning qiymati birdan ko‘tarilib, $8.47 \times 10^{16} \text{ sm}^{-3}$ ni tashkil etadi. Haroratni 200 K ga qadar oshirib borilganda ushbu namunada n ning qiymati kamayib, $5.38 \times 10^{16} \text{ sm}^{-3}$ ni tashkil etadi. Shundan so‘ng haroratni 200 K dan 500 K ga qadar oshirib borilganda bu ko‘rsatkichlar asta-sekin ko‘tarilib boradi va yakunda $1.00 \times 10^{17} \text{ sm}^{-3}$ ni tashkil etadi (2-rasm, 2-egri chiziq).



2-rasm. Zaryad tashuvchilar konsentratsiyasining haroratga bog‘liqligi:
 1-tez sovitish ($v_{sov}=250$ K/s) usuli bilan olingan p-Si<Ni> namuna;
 2-sekin sovitish ($v_{sov}=0.1$ K/s) usuli bilan olingan p-Si<Ni> namuna.

Xulosa qilib aytganda, haroratning 80÷160 K oralig‘ida tez va sekin sovitish usuli bilan olingan p-Si<Ni> namunalarining solishtirma qarshiligi mos ravishda ~1.8÷2.6 barobarga kamayishi kuzatiladi. Mazkur harorat intervalida ulardagi zaryad tashuvchilar konsentratsiyasi deyarli ~4.8÷7.7 barobarga ortadi. Haroratni 160÷500 K oralig‘i namunalarining solishtirma qarshiligi mos ravishda ~1.8÷1.18 barobarga ortishi kuzatiladi. Mazkur harorat intervalida ulardagi zaryad tashuvchilar konsentratsiyasi deyarli ~4.9÷7.2 barobarga ortadi.

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**O‘ZBEKISTON RESPEBLIKASI HUDUDIDA ELEKTRON
PULLARNING BUXGALTERIYA HISOBI VA AUDITINI TASHKIL
ETISH**

Annotatsiya. Ushbu maqolada muallif tomonidan mamlakatimizda elektron tijoratning nazariy jihatlari, elektron pullarning hisobi va auditini tashkil qilish masalalari o‘rganilgan. Qolaversa, elektron pullarning buxgalteriya hisobini tashkil qilishning o‘ziga xos jihatlari bo‘yicha taklif va tavsiyalar ishlab chiqilgan.

Kalit so‘zlar: buxgalteriya hisobi, audit, elektron pullar, elektron tijorat.

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**ORGANIZATION OF ACCOUNTING AND AUDIT OF ELECTRONIC
MONEY IN THE TERRITORY OF THE REPUBLIC OF UZBEKISTAN**

Abstract. In this article, the author studied the theoretical aspects of electronic commerce in our country, the issues of accounting and auditing of electronic money. In addition, proposals and recommendations on specific aspects of the organization of electronic money accounting have been developed.

Key words: accounting, audit, electronic money, electronic commerce.

Bugun raqamli texnologiyalar iqtisodiyotimizning barcha tarmoqlariga jadal kirib bormoqda. Elektron tijoratning rivojlanishi, turli to‘lov xizmatlarini etkazib beruvchilar o‘rtasida raqobat muhitining shakllanishi va kuchayishi, chakana to‘lovlar bo‘yicha tranzaktsion xarajatlar qisqartirilishini, shuningdek, to‘lovlarni amalga oshirishda moliyaviy institutlarning vositachiligini talab etmaydigan innovatsion va jozibador to‘lov vositalarining joriy qilinishini taqozo etdi.

O‘zbekiston Respublikasining “To‘lovlar va to‘lov tizimlari to‘g‘risida”gi Qonunining qabul qilinishi elektron pullar muomalasini, jumladan, elektron pullarni chiqarish, foydalanish va ularni qoplash bo‘yicha amalga oshiriladigan faoliyatning huquqiy asosini yaratib berdi.

Ushbu qonun asosida “**O‘zbekiston Respublikasi hududida elektron pullarni chiqarilishi va muomalada bo‘lishi qoidolari**” ishlab chiqilib, Adliya vazirligida 2020 yil 29 aprelda 3231-son bilan davlat ro‘yxatidan o‘tkazildi.

Mazkur hujjat jahon tajribasiga tayangan holda, elektron pullar tizimi faoliyatini tashkil etish, elektron pullar muomalasi, elektron pullar tizimida risklarni boshqarish hamda tizimda xavfsizlikni ta'minlash maqsadida ishlab chiqildi. Unda elektron pullar tizimiga oid asosiy tushunchalar, shu jumladan, "ayirboshlash operatsiyasi", "bir va ko'p emitentli elektron pullar tizimi", "oldindan to'langan karta", "elektron pullar tizimining agenti", "elektron hamyon" va sohaga oid boshqa terminlarga batafsil tushuntirishlar berilgan.

Qoidaga ko'ra, emitent, operator, elektron pullar tizimining agenti, elektron pullar egasi, shuningdek, emitent bilan shartnoma tuzgan banklar, to'lov tashkilotlari, yakka tartibdagi tadbirkorlar va (yoki) yuridik shaxslar elektron pullar tizimining sub'ektlari hisoblanadi (1-rasm). Bunda elektron pullar tizimining ishlashini ta'minlaydigan bank va (yoki) tegishli litsenziyaga ega bo'lgan to'lov tashkiloti – elektron pullar tizimining operatoridir. Emitent yoki emitent bo'lmagan boshqa bank operator bilan tuzilgan shartnoma asosida elektron pullar tizimining hisob-kitob banki sifatida faoliyat yuritishi mumkin. Ta'kidlash joizki, emitent o'z faoliyatini boshlashi uchun, eng avvalo, elektron pullarni chiqarish va realizatsiya qilishi to'g'risida Markaziy bankka belgilangan shakldagi xabarnoma va unga ilova sifatida operator bilan tuzilgan shartnoma hamda elektron pullar tizimi sub'ektlari bilan tuziladigan shartnomalar namunalarini yuborishi zarur.

Hujjatga muvofiq, elektron pullarning chiqarilishi emitent tomonidan jismoniy shaxs yoki elektron pullar tizimining agentidan qabul qilingan pul mablag'lari doirasida elektron pullar tizimi qoidalari hamda elektron pullarni chiqarish, ulardan foydalanish va ularni qoplash to'g'risidagi shartnomaga asosan amalga oshiriladi.

Emitent tomonidan elektron pullarning chiqarilishi uchun jismoniy shaxs naqd pul yoki naqd pulsiz shaklda pul mablag'larini taqdim etishi zarur. Ushbu pul mablag'lari emitent tomonidan hisob-kitob bankida ochilgan maxsus hisobvaraqaqa kirim qilinishi ta'minlanadi.

Elektron pullarni jismoniy shaxsga va elektron pullar tizimining agentiga realizatsiya qilish elektron pullar tizimi tomonidan har bir elektron pullar egasi uchun shakllantiriladigan elektron hamyonga emitentdan sotib olingan elektron pullarni kirim qilish yo'li bilan amalga oshiriladi.

Emitent yoki operator bilan tuzilgan shartnoma asosida elektron pullar tizimining agenti elektron hamyonga ega bo'lgan jismoniy shaxslarga ushbu pullarni realizatsiya qilish yoki ularni qoplash maqsadida elektron pullarning nominal qiymati bo'yicha uning egasi bo'lgan jismoniy shaxsdan sotib olishi mumkin.

Ta'kidlash joizki, O'zbekiston Respublikasi hududida emitent tomonidan chiqariladigan elektron pullar faqat milliy valyutada nominallashtirilgan bo'lishi shart.

Emitent va elektron pullar tizimining agenti tomonidan elektron pullarni chiqarishda uning egasiga elektron pullarni realizatsiya qilinganligi va elektron

pullarning egasi elektron pullarni sotib olganligini tasdiqlovchi kvitantsiya yoki boshqa tasdiqlovchi hujjat qog'oz shaklda yoki elektron shaklda taqdim etiladi. Mazkur kvitantsiyada ko'rsatilishi majburiy bo'lgan rekvizitlar, xususan,

- agent, emitent va operatorning nomi;
- operatsiyaning amalga oshirilgan sanasi hamda vaqti;
- amalga oshirilgan operatsiyaning tartib raqami;
- realizatsiya qilingan elektron pullar summasi;
- elektron pullar egasiga tegishli elektron hamyonning identifikatsiya kodi;
- undiriladigan vositachilik haqi miqdori ko'rsatilishi shart.

Qoidaga ko'ra, elektron pullarning egasi bo'lgan jismoniy shaxs elektron pullardan to'lovlarni va elektron pullar tizimining qoidalarida belgilangan hamda O'zbekiston Respublikasi qonun hujjatlariga zid bo'lmagan shartlar asosida egasidan elektron pullarni mazkur tizimning boshqa ishtirokchisiga o'tkazish orqali boshqa operatsiyalarni amalga oshirish maqsadida foydalanadi.

Tijorat banklarining muhim operatsiyalaridan biri iqtisodiyotda faoliyat yuritayotgan xo'jalik sub'ektlarining o'zaro to'lovlarini o'tkazib berish hisoblanadi. Bunday tur operatsiyalar bankning hozirgi kunda asosiy daromad keltiruvchi operatsiyasi bo'lib hisoblanadi. Iqtisodiyotda amalga oshiriladigan pul aylanishining 80-90 foizi naqd pulsiz hisob-kitob shakllari asosida olib boriladi. Naqd pulsiz hisob-kitoblar korxonalar va tashkilotlarning tovarlar sotish, xizmat ko'rsatish va tovarsiz operatsiyalar bo'yicha majburiyatlarini pul mablag'larining hisobvaraqa dan ikkinchi hisobvaraqa ga o'tkazish orqali amalga oshirilishi bo'lib hisoblanadi. Naqd pulsiz pul aylanishi vlp i ijtimoiy mahsulotni ishlab chiqarish jarayonida sodir bo'ladigan munosabatlarini o'zida aks ettirishga ko'ra ikki qismga bo'linadi: Tovar operatsiyalari bo'yicha pul aylanishi. Moliyaviy majburiyatlar bo'yicha pul aylanishi. Birinchi guruxga tovarlarni sotish, xizmatlar ko'rsatish va ishlar bajarishdagi hisob-kitoblarni aks ettiruvchi pul aylanishi kiradi. Ikkinchi guruxga esa byudjetga to'lovlar, ya'ni foydadan to'lanadigan solik, qo'shilgan qiymat solig'i va boshqa majburiy to'lovlar hamda byudjetdan tashqari fondlar, bank ssudalarini qaytarilishi, kredit uchun foizlarning to'lanishi, sug'urta kompaniyalari bilan hisob-kitoblar kiradi.

Naqd pulsiz pul aylanishi pulli munosabatlar ishtirokchilarining joylashuviga qarab bir shahar ichidagi va shaharlararo pul aylanishiga bo'linadi. Bir shahar ichidagi pul aylanishi bir hisob markaziga qarashli banklar o'rtasidagi hisob-kitoblar majmuini bildiradi. Shaharlararo pul aylanishi esa turli hisob markazlariga qarashli banklar o'rtasida amalga oshiriladigan hisobkitoblar yig'indisidir. Lekin respublikamizda bank tizimining riyaojlanishi, «elektron to'lovlar» tizimiga o'tish natijasida hisob-kitoblarda ishtirok etuvchi sub'ektlarning joylashuviga qarab ikkiga bo'lish maqsadga muvofiq bo'lmay koldi. chunki hisob-kitoblarda qatnashuvchi sub'ektlar qaysi xududda joylashganidan qat'iy nazar, to'lovlar bir necha soatda, xattoki bir necha daqiqada o'tkaziladi. Naqd pulsiz hisob-kitoblarni tashkil etishda bir qator tamoyillarga asoslaniladi. Bu tamoyillar quyidagilar: har bir xo'jalik sub'ekti o'z pul

mablag'larini banklarda ochilgan depozit hisobvaraqlarda saqlashlari lozim. Korxonalar va tashkilotlar o'zaro hisob-kitoblarni bevosita bankdagi hisobvaraqlar orqali amalga oshirishlari shart. qaysi bankda hisobvaraqlar ochishni mijozlarning o'zlari tanlaydilar. hisob-kitoblarni to'lovchining roziligi bilan uning topshirig'iga asosan depozit hisobvaraqdagi mablag'i evaziga amalga oshiriladi. Korxonalar bank kreditidan foydalanish huquqiga ega bo'lsa, to'lovlar bank krediti hisobidan amalga oshiriliishi mumkin. Tovar yetkazib beruvchi korxonalar hisobvaraqlarida pul mablag'lari mazkur mablag'larning mol sotib oluvchi korxonalar hisobvaraqlaridan o'chirilgandan so'ng o'tkazib beriladi. To'lovni kafolatlash maqsadida etkazib berilishi lozim bo'lgan tovar yoki ko'rsatilishi lozim bo'lgan xizmat qiymatining 15 % oldindan to'langandan so'nggina tovarlar jo'natiladi yoki xizmatlar ko'rsatiladi.

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GEODEZIK USULLARDA QISHLOQ XO‘JALIGI YERLARINING CHEGARALARINI ANIQLASH

Annotatsiya. Ushbu maqolada bugungi kunda respublikamizda qishloq xo‘jaligi yerlarini topografik jihatdan o‘rganish va yer maydonlarining chegaralarini aniqlash hamda belgilash bo‘yicha keng ko‘lamli islohatli ishlar olib borilayotganligi, qishloq xo‘jaligi yerlarining chegara hududlarini aniqlash va belgilash borasida geodeziya, kartografiya va geoinformatika sohasining o‘rni muhim sanalishi, loyihani joyiga ko‘chirish asosida qishloq xo‘jaligi yerlarining chegara maydonlarini aniqlash va belgilab berishda yerdan va fazodan turib tadqiq etish ko‘lami ortib bormoqda va mazkur ishlar respublikamizda muhim o‘rin tutishi jahonda va uning turli mintaqalarida yerdan foydalanuvchilarning chegara hududlarini maxsus to‘siqlar yordamida himoyalashga alohida ahamiyat qaratilgan.

Kalit so‘zlar: Aerofotos’yomka, kosmosurat, deshifrlash, yaylov, pichanzor, loyiha, kontur, analitik usul, taxeometrik s’yomka.

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DETERMINATION OF THE BOUNDARIES OF AGRICULTURAL LAND USING GEODESIC METHODS

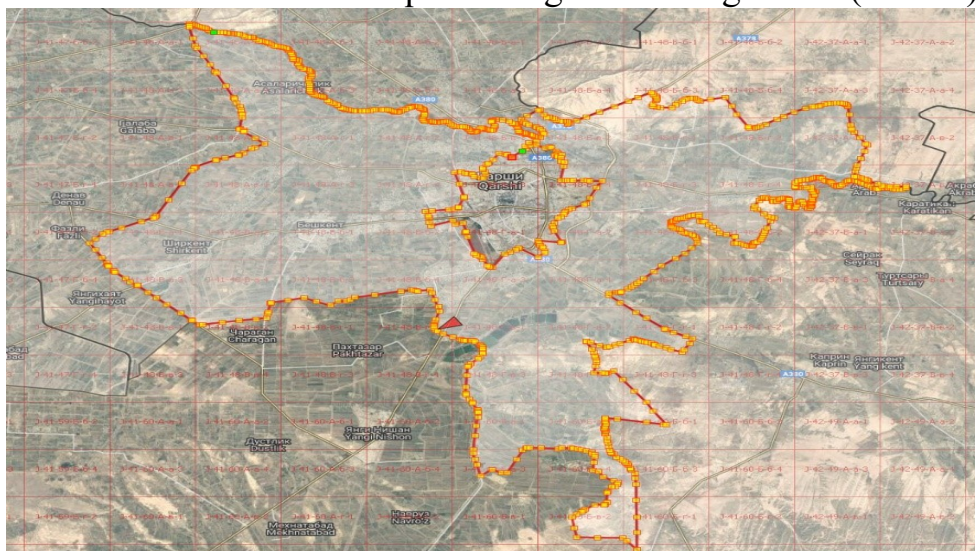
Abstract. In this article, today in the Republic of Kamiz, large-scale reform works are being carried out on the topographical study of agricultural lands and the determination and marking of the boundaries of land areas, geodesy, cartography and The role of geoinformatics is considered important, the scale of

research from the ground and space in determining and defining the border areas of agricultural land based on the relocation of the project is increasing, and the importance of these works in our republic is in the world and in its various regions. Special attention is paid to the protection of border areas of land users with the help of special barriers.

Keywords: Aerial photography, space photography, decoding, pasture, hayfield, project, outline, analytical method, tacheometric survey.

Agar yer maydonlarni loyihalash analitik usulda bajarilgan bo'lsa, unda loyihani joyga ko'chirish usulini tanlash planiy materialni hosil qilish uchun olib borilgan s'yomka turidan bog'liq bo'lmaydi. Agarda loyihalash mexanik yoki grafik usulda bajarilgan bo'lsa, unda loyihani joyga ko'chirishda tayanch sifatida ko'pincha joyda konturli nuqtalar qo'llaniladi.

Ushbu nisbatga doir aerofotos'yomka materiallari yer ustidagi s'yomka planlari oldida katta afzallikga ega, chunki ularda joydagi tafsilotlar to'la mukammal tasvirlangan bo'lib, loyihani joyga ko'chirishda chiziq o'lchash asboblari bilan o'lchashlar sonini ancha kamaytirishga va ushbu asboblarni faqat kalta masofalarni o'lchash uchun qo'llanishga imkon tug'diradi (1-rasm).



1-rasm. Kosmosurat yordamida ma'muriy-hududiy chegaralarini o'rnatish

O'lchashlar sonini maksimal qisqartirishi va o'lchashlar uzunligini kamaytirishi aerosuratlarni to'g'ri o'qilishi va shubhasiz tanla oladigan yaqin tayanch sifatida nuqталarni tanlash orqali amalga oshiriladi. Tajriba shuni ko'rsatadiki, konturli nuqtalarni tanlash uchun eng yaxshi fotomahsulot bo'lib, deshifrlanmagan kontaktli f aerosuratlar hisoblanadi, chunki aerosuratlarni transformatsiyalash yoki kattalashtirish jarayoni hamma vaqt tasvirning dag'alligini kamayadi, xususan joydagi mayda ob'ektlarda.

Deshifrlash belgilarni tushirishi bilan aerosuratlardagi tafsilotlar qisman yopiladi va konturli nuqtalarni tayanch sifatida qo'llanishi ko'p miqdorda kamayadi. Shuning uchun loyihalashda, ayniqsa loyihani joyga ko'chirishda,

loyihalashni bajariladigan deshifrlangan aerofoto-mahsulotlardan tashqari, ular yordamida ko‘p miqdorda joydagi mayda ob‘ektlarni osongina tanlab olishiga imkon beradigan deshifrlanmagan kontaktli aerosuratlarni mavjudligi foydali hisoblanadi. Ular bilan tomonlar parallelligi va perpendikulyarligini qattiq rioya qilishini talab qilinmaydigan uchastkalarni joyga ko‘chirishi qulay, masalan, yaylov, pichanzorlar va h.k. (2-rasm).



2-rasm. Kosmosuratlarni deshifrlash

Loyiha nuqtalarni joyga ko‘chirish usullari bilan birgalikda, qachonki loyiha nuqta ishonch bilan tanlanilgan konturli nuqta bilan mos keladi va joyda o‘lchashlarni bajarish talab qilinmaydi, yoki qachonki AB kontur chizig‘ida C loyiha nuqtaning o‘rni (3-rasm).



3-rasm. Loyiha nuqtalarini o‘rnatish

AC yoki BC o'lchashlar orqali aniqlanadi, aerofotos'yomka materiallarni qo'llashda loyiha nuqtalarni joyga ko'chirish uchun kerakli o'lchashlar uzunligini kamaytirishga imkon beradigan boshqa usullar ham keng qo'llaniladi.

Masalan, aerosuratlarning alohida qismlarini har xil masshtabligi sababli (xususan, agar u transformatsiyalanmagan bo'lsa) A va B uzoqda joylashgan nuqtalar bo'yicha C loyiha nuqtani hosil qilishi, aerosuratda AC va BS chiziqlarni o'lchashda katta xatolarga olib kelishi mumkin.

Bu holatda natija aniqroq bo'ladi, agarda C loyiha nuqtani <prtnida joylashgan E konturli nuqtadan foydalansa A-B chiziqqa C nuqtadan perpendikulyar tushirilsa va ushbu perpendikulyar asosidan joyda C loyihaviy nuqtani hosil qilish uchun aerosuratdan olingan CD o'lcham aniqlansa.

O'lchashlar uzunligini kamaytirishi uchun to'g'ri chiziqlarni kesishidan foydalanadilar, shunda aerosuratdagi to'g'ri chiziqlarni kesishtirish nuqtasi aerosuratni qiyaligi uchun noto'g'ri tasvirlanishiga qaramasdan joyida ushbu to'g'ri chiziqlarni kesishtirish nuqtasi bilan aniq mos kelishidan amal qiladilar. Shuning uchun K loyiha nuqtani joyga ko'chirishda, uning yaqinida joyda AR va BN chiziqlarning kesishida x nuqtani o'rni topiladi. Ushbu nuqtadan xL kesimi o'lchanadi va LK perpendikulyar bo'yicha K loyiha nuqtasini o'rni topiladi. Nazorat uchun joyida loyiha nuqtalar orasidagi (tomonlar) barcha chiziqlar o'lchanadi, natijalari aerosuratda yoki rejalash chizmasida yoziladi va aerosuratdagi muvofiq chiziqlar bilan solishtiriladi.

Tayyorgarlik ishlarni olib borishda, loyihalashda va loyihani joyga ko'chirishda aniqligini oshirish uchun joyda mahkamlangan, aniqlangan (opoznak) nuqtalaridan foydalaniladi (4-rasm).



4-rasm. Joyga o'rnatilgan opoznak nuqtalar

Aerofotomahsulotlar bo'yicha loyihani joyga ko'chirish aniqligi taxminan yer ustidagi s'yomka planlari bo'yicha loyihani joyga ko'chirish aniqligiga to'g'ri keladi.

Loyihani joyga ko‘chirishdagi xatoliklarining yer maydonlari yuzalarining aniqligiga ta‘sirini hisobga olish juda murakkab jarayon xisoblanadi, chunki joyga ko‘chirilgan maydon chegarasining bir qismi oldindan o‘tkazilgan teodolit yo‘llariga, bir qismi esa tafsilotlarning konturli nuqtalariga tayangan bo‘lishi mumkin, hamda, ayrim yer maydonlarning chegara qismlari bir usulda joyga ko‘chirilgan, qolganlari esa boshqa usulda va h.k. kuzatilishi mumkin.

Shuning uchun loyihani joyga ko‘chirishdagi xatolarni hisobga olish usullaridan eng oddiy usullarga to‘xtalib o‘tamiz.

Loyihani joyga ko‘chirish aniqligi ushbu jarayonning ikki asosiy bosqichini o‘tkazish jarayonidan bog‘liq:

- loyihani joyga ko‘chirish uchun geodezik qiymatlarni kameral aniqlash;
- loyihani joyga ko‘chirishda dala o‘lchashlar.

Geodezik qiymatlarni kameral aniqlashi loyihani faqat grafik va mexanik usullarda bajarish uchun kerak.

Analitik usulni qo‘llashda esa, geodezik qiymatlar loyihalash jarayonida hosil qilinadi va ularning aniqligi faqat joydagi o‘lchashlar xatolaridan bog‘liq bo‘ladi.

Agar loyihani faqat chiziq o‘lchash qurollari yordamida ko‘chirilsa, unda plandagi o‘lchashlar masshtab aniqligiga muvofiq (0,08 mm yoki yaxlit 0,1) xato bilan aniqlanadi.

Taxeometrik s‘yomka hozirgi kunda, optik geodezik asbob – teodolit-taxeometr(doiraviy taxeometr)lardan tashqari, asosan, elektron taxeometrlar yordamida bajarilmoqda. S‘yomka jarayonida kerakli o‘lchashlarni amalga oshirish uchun optik asbobning gorizont va vertikal doiralari hamda ko‘rish trubasidagi ipli dalnomer chiziqlari xizmat qiladi.

Shu bois, quyida hozirgi kunda ishlab chiqarishda keng qo‘llanilayotgan hamda yangi ishlab chiqarilayotgan elektron taxeometrlarning tuzilishi, texnik tavsiflari va ular imkoniyatlariga batafsil urg‘u beriladi.

Hozirgi paytda ishlab chiqarilayotgan elektron taxeometrlar (elektron taxeometrik stansiyalar) o‘lchash-hisoblash majmuasidan iborat bo‘lib, unga ixcham masofa o‘lchash elektron dalnomeri, gorizont va vertikal burchaklarni o‘lchab, natijasini ekran(display)ga chiqarib va birdaniga xotiraga yozib qayd qiluvchi elektron moslama, hamda natijalarni dastlabki ishlab chiqish uchun kichik kompyuterlar kiradi.

Elektron taxeometrlar eng ommaviy bo‘lib, bugungi kunda ko‘p chet el firmalar tomonidan ishlab chiqarilmoqda va ular tizimli hamda kundalik s‘yomkalarda ishlatiladigan asboblarga bo‘linadi va bir-biridan aniqligi, imkoniyatlari xamda avtomatlashtirilgan darajasiga qarab farq qiladi.

Bugungi kunda elektron taxeometrlar ma‘lum aniqlik diapazonini qamrab oladigan bir avlod asboblarining seriyali qilib chiqarilmoqda. Har bir seriyada ko‘rsatilgan diapazon doirasida aniqligi, avtomatlashtirish darajasi va qo‘shimcha funksiyalarning har xil to‘plami bo‘yicha farqlanadigan bir necha modifikatsiyasi bo‘ladi.

Elektron taxeometrlarni ishlab chiqaruvchi ilg'or firmalar bo'lib, "Leica" (Shveysariya), "Trimble" (AKSH), "SOKKIA" (Yaponiya), UOMZ (Rossiya) va boshqalarni qayd etish mumkin.

"Carl Zeiss" (Germaniya) tomonidan ishlab chiqilgan Elta S10, S20 tizimli taxeometrlar hamda kundalik ishlatiladigan Elta R55 lar to'g'risida yetarli ma'lumot keltirilgan. Quyida "Leica" (Shveysariya), Trimble" (AKSh) firmalari tomonidan ishlab chiqarilgan elektron taxeometrlar to'g'risida to'xtalib o'tamiz.

"Leica" (Shveysariya) tomonidan ishlab chiqilgan TPS seriyali elektron taxeometrlar asosan topografik, kadastr, qurilish s'yomkalarini bajarishga mo'ljallangan bo'lib, quyidagi rusumlarda ishlab chiqarilmoqda:

TSM – motorlashtirilgan taxeometrik stansiyalar;

TSR – qaytargichsiz o'lchashlarni bajariladigan taxeometrlar;

TSMR – qaytargichsiz o'lchashlarni bajariladigan motorlashtirilgan taxeometrlar;

TSA – motorlashtirilgan qaytargichni avtomatik tarzda kuzatadigan taxeometrlar.

TPS 400, TPS 800, TPS 1100 seriyali elektron taxeometrlar qator afzalliklarga ega bo'lib, bir - birlaridan o'lchash aniqligi va ayrim imkoniyatlari bilan farq qiladilar.

TPS seriyali elektron taxeometrlarda quyidagi afzalliklar mujassamlashgan:

Uch sinfli aniqligi - o'lchash aniqligiga qarab mavjud seriyaning qatorida kerakli modelini tanlash mumkin. Masalan, TPS 802 - 2□, TPS 803 - 3□, TPS 805 - 5□;

10000 ta o'lchashlar - ishonchli o'rnatilgan xotira 10000 ta bloklar ma'lumotini saqlash qobiliyatiga ega;

Uzluksiz qaratish vinti - nishonga qaratishda vintni maxkamlash va bo'shatish hojati yo'q;

Lazer shovuni - lazer shovun tufayli asbobni optik markazlashtirgichga nisbatan ancha tez markazlashtirish mumkin;

Elektron ko'rsatkichi - rejalash ishlarini bajarishda juda qulay, reykali elektron ko'rsatkichi bo'yicha stvorga qaytargichni aniq qo'yish imkoniyatiga ega bo'ladi.

TPS 400 seriyali elektron taxeometrlar (3.5– rasm) topografik s'yomka va qurilish ishlariga mo'ljallangan bo'lib, bazis chiziqlarni hosil qilish, rejalash ishlari, balandliklarni uzatish, yuzalarni hisoblash, borib bo'lmas nuqtalar balandligini aniqlashda qo'llash mumkin.

TPS 800 seriyali elektron taxeometrlar bilan esa yuqorida qayd etilgan ishlardan tashqari orientirlash, teskari geodezik masalani yechish, loyihani joyga ko'chirish, ko'rinmaydigan nuqtalarni o'lchash va boshqa ishlarni amalga oshirishi mumkin.

TRS 1100 seriyali elektron taxeometrlar qo‘shimcha amaliy dasturlar bilan ta‘minlanganligi tufayli, ular yuqori unumli hisoblanadi va alohida masalalarni yechishga, shuningdek asboblarning ishlash qobiliyatini oshirishga qaratilgan.

TPS seriyali elektron taxeometrlarda bir qator geodezik o‘lchashlarni bevosita joyda bajarish uchun dasturlar o‘rnatilgan, chunonchi:

-rejalash dasturi ma‘lum koordinatalari bo‘yicha uch o‘lchamli rejalash elementlarini hisoblashga imkon beradi.

-orientirlash. Balandlikni uzatish dasturi orqali boshlang‘ich direksion burchaklarni hisoblash va koordinatalari ma‘lum bir yoki bir necha borib bo‘lmas nuqtalarning kuzatish natijalari bo‘yicha balandliklarni uzatish mumkin.

- doiraviy qabullar dasturi yordamida bir necha qabullardan iborat o‘lchangan burchaklarda o‘rtacha yo‘nalishlarni aniqlash mumkin.

Keyingi yillarda “Leica Geosistem” (Shveysariya) firmasi tomonidan yanada ham yuqori unumli, avtomatlashgan Leica FlexLine TS rusumli elektron taxeometrlar ishlab chiqarilmoqda. Bu rusumli elektron taxeometrlar qator afzalliklarga ega bo‘lib, ulardan haqiqiy sifat, moslashuvchanlik, qulaylik va samaradorlik xossalarini ta‘kidlab o‘tish mumkin.

Shuningdek, Leica FlexLine TS02 plus elektron taxeometri texnik va o‘rtacha aniqlikda s‘yomka ishlarning barcha standart vazifalari uchun ishonchli, tezkor va qulay asbob hisoblanadi. Bu asbob katta grafik oq–qora displey, harfli-raqamli klaviatura, bluetooth simsiz aloqa bilan jihozlangan va SmartWorx Viva dasturiy ta‘minoti orqali yanada moslashuvchanlikka erishish mumkin.

Leica FlexLine TS06 plus elektron taxeometri o‘rtacha aniqlikda kundalik s‘yomka ishlarning barcha standart vazifalari uchun ishonchli, tezkor va qulay asbob hisoblanadi. Unda katta grafik oq–qora displey, harfli – raqamli klaviaturadan tashqari, yangi o‘rnatilgan Leica FlexFildplus dasturi va yangi rangli sensor displey bilan jihozlangan.

Leica FlexLine TS09 plus elektron taxeometri Leica FlexLine plus asboblari turkumida yetakchi model bo‘lib, yuqori aniqlikdagi ishlar uchun ideal asbob hisoblanadi. TS09 plusning kengaytirilgan konfiguratsiyasi uni favqulodda moslashuvchan asbobga aylantiriladi, chunki u bilan nafaqat kundalik s‘yomka ishlarni, balki har qanday murakkab masalalarni katta ishonch bilan bajarish mumkin. Yangi o‘rnatilgan Leica FlexFildplus dasturi va yangi rangli sensor displey bajarilayotgan ishlar samarasini yanada oshirishiga imkon beradi.

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DEVELOPMENT OF CHILDREN WITH COVID-19

Abstract. The Coronavirus pandemic significantly affects individuals of any age all over the planet. Youngsters, specifically, have confronted exceptional difficulties because of the infection, including interruptions to their schooling, social associations, and by and large prosperity. In this exposition, we will investigate the advancement of kids with Coronavirus, zeroing in on the physical, profound, and mental impacts of the infection on youthful people.

Keywords: kids, Covid-19, development process, medical aids, interconnections, diagnoses, statistics.

Introduction: The effect of Coronavirus varies for youngsters at various formative stages. This is on the grounds that kids are not little grown-ups. They have various ways of behaving and thinking relying upon their age and development, both intellectually and actually. Youth, ages 3-6 years, is known as a period for creating coordinated movements and social collaboration with others. Young, 6-12 years, is a period for mastering new abilities and progressing to complex mental reasoning. Pre-adulthood is supposed to have more mind-boggling thinking and exercises. Whether a kid becomes ill or is presented to terrible information about Coronavirus from the web or grown-up discussions, it brings adverse consequences. These youngsters might change their ordinary ways of behaving, for example, decreasing games and open-air exercises, insufficient day to day rest, expanded screen time, and turning out to be handily irritated and close to home.

Youngsters with exceptional medical services needs or formative problems are impacted in an unexpected way. The restricted admittance to web data implies that kids with cerebral paralysis, chemical imbalance range turmoil, or ADHD can't get exceptional treatment during the pandemic. There have been reports of breaks in oxygen treatment for kids with cerebral paralysis because of clinic asset redistribution. The demise of a parent with a youngster on a ventilator machine can be a horrendous encounter for more established kids. This present circumstance has a critical effect, and there is no assurance that the effect is reversible.

It is sensible that youngsters with serious side effects, comorbidities, and debilitated resistant frameworks become ill effectively because of openness to the patient and the climate. This applies to a wide range of sicknesses, including Coronavirus. The rate of Coronavirus in kids is simply around 1.7% of the all-out

cases, however it is as yet a danger since youngsters can possibly be infection transporters and spread it to other people. This is on the grounds that kids have less attention to cleanliness and are socially dynamic. Studies have recommended that there are no racial contrasts, yet youngsters from dark, Latino/Hispanic, and non-Hispanic white races or nationalities are overrepresented among hospitalized kids with Coronavirus. In another review, youngsters with extreme side effects of Coronavirus were viewed as the same as different ailments like flu or respiratory diseases. They typically have past medical issue and present side effects like fever and hack, expanded respiratory help, and lab and radiographic discoveries.

These youngsters are owned up to the clinic, and some of them need care in the emergency unit. There have additionally been reports of Coronavirus related multisystem provocative disorder in youngsters (MIS-C) or Kawasaki-like illness. MIS-C is an interesting however difficult condition where different body parts can become excited, including the heart, lungs, kidneys, mind, skin, eyes, and gastrointestinal organs. This illness happens all the more as often as possible in kids matured 5-17 years who are Latino/Hispanic or dark, and it has a higher death rate contrasted with normal Coronavirus in youngsters. This extreme state of the infection expands the gamble for youngsters and distinctively affects their turn of events.

Covid sickness 2019 (Coronavirus) began in Wuhan, China and has spread universally. The World Wellbeing Association (WHO) pronounced it a worldwide wellbeing crisis and later proclaimed it a pandemic. It spreads quietly and causes asymptomatic to seriously sick disease, particularly in the old and those with comorbidities. In any case, it additionally influences youngsters, who have various sorts of effect. A few kids have asymptomatic or gentle side effects, while others with extreme side effects need hospitalization. It has likewise been accounted for that a couple of youngsters have kicked the bucket from Coronavirus. This article will talk about the general effect of Coronavirus on youngsters, including the signs and side effects, the gamble or weakness to the sickness, and the effect on kids' turn of events, both genuinely and intellectually.

Outline of Coronavirus in Kids

Coronavirus, the sickness brought about by the SARS-CoV-2 infection, first arose in Wuhan, China in December 2019 and has since been pronounced a pandemic by the World Wellbeing Association. Coronavirus has impacted people, everything being equal, notwithstanding, the contamination rates in youngsters remain lower contrasted with grown-ups. As per information from February 2020 to July 2021, kids under 18 years old record for a simple 14% of Coronavirus cases revealed in the US. Coronavirus disease rates have changed in youngsters in view old enough and patterns in everybody. Following the 14% of complete cases among youngsters, there were times where kids represented under 10% of Coronavirus cases, while in December 2020 there was where kids represented 20% of Coronavirus cases.

Information in a few nations where Coronavirus was common show that contamination rates among kids were essentially less contrasted with grown-ups. This is reflected by information from Israel, where a seroprevalence concentrate on saw as just 28% of kids matured 0-9 years had antibodies against SARS-CoV-2 contrasted with 82% of people ≥ 50 years. Measures like limitations on in-person tutoring and exercises, and immunization of grown-ups before starting mass inoculation of kids, have unintentionally prompted lower openness rates in youngsters contrasted with grown-ups.

Effect of Coronavirus on Kid Improvement

School terminations and social removing measures have adversely impacted the day-to-day schedules of kids and teenagers. In a worldwide review of guardians, 94% detailed dropped school, 76% revealed childcare office terminations, and 53% announced terminations of colleges and other advanced education foundations. With instructive feasibility being a critical calculate a young's movement, vulnerabilities in regards to deficient screen time, admittance to stages, and calm learning space put kids as of now in a difficult spot further behind. As this pandemic endures, particularly in emerging countries with restricted assets, there is a higher probability that numerous youngsters may not get back to school. In the previously mentioned review, one-fifth of the respondents said that they were "not in any way shape or form certain" about their kids getting back to school. A drawn-out length of diminished instructive access or early end of learning can prompt expanded dropout rates with financial ramifications for high-risk youth and families.

For teenagers, the pandemic and exorbitant screen time might have other significant long haul physical and psychological wellness suggestions all at once of life in which they are molding themselves into the youthful grown-ups that they will respect companion gatherings, energizing ways of behaving, propensities, and leisure activities. In a pre-pandemic cross-sectional investigation of US secondary school youth, the utilization of screen gadgets for at least five hours daily was related with weight, unfortunate rest, and lower physical activity.⁶ In an imminent partner review from the Juvenile Mind Mental Turn of events (ABCD) Investigation of 11,633 kids matured 9-11 years, higher screen time was related with higher chances of detailing self-destructive ways of behaving in follow-up.

This finding brought up worries about unreasonable screen time, which was enhanced during the pandemic, and dangers to mental health.⁷ In one more investigation of offspring of comparative age in the ABCD companion, screen time including computer games and watching recordings was related with the advancement of over the top enthusiastic disorder.⁸ Obviously, offspring of various ages, particularly with elevated screen gadget use during the pandemic, are in danger for, or may as of now be encountering the impacts of unnecessary screen time on their psychological and actual wellbeing. It is significant for pediatricians, juvenile trained professionals, and other medical care suppliers to

get some information about absolute screen time, actual work open doors, and sustenance, and to give directing on empowering ways of behaving. Ideally, with the re-visitation of in-person school, social open doors, sports, and understudy interest clubs, youngsters and youths will return to their lower pre-pandemic screen utilization. Notwithstanding, unnecessary screen use might be a new "propensity" of youth during the pandemic that might be difficult to break.

Infants, just naturally introduced to the world during the pandemic, had their initial valuable encounters modified. For some's purposes, children were promptly isolated away from their birthing mother because of maternal SARS-CoV-2 disease, until rehearses changed, and we got familiar with the dangers of contamination in children. For various mother-newborn child coordinates, this probably impacted bosom taking care of progress and span, and other significant components of maternal baby bonding.⁹ Many infants had decreased openness to relatives and family companions beyond their nearby families, and an absence of openness to more established ages of their loved ones.

Human countenances might have been noticed half-veiled, rather than gaining from full-face grins to which children are normally drawn.¹⁰ Maternal melancholy and family stress might have likewise modified the home climate during early basic years.⁹ Review have shown that birth during the pandemic and with openness to a mother with SARS-CoV-2 in pregnancy might build the gamble for lower formative achievement accomplishment in infancy.¹¹⁻¹³ A few families, nonetheless, report a few advantages of the pandemic, like a sensation of more fellowship, so there might be positive encounters that happened for families too.¹⁴ With childcares and preschools shut, numerous families had additional time together than they might not have had because of working environment commitments and youngsters at school. A few secret advantages to groups of the pandemic may in this way be available on a deeper level.

While the likely circuitous impacts of the Coronavirus pandemic are beyond any reasonable amount to name and completely examine in the limits of this publication, the aberrant impacts highlight a significant future course and important help for progressing pediatric examination. The age of youngsters with their age-explicit experience of the Coronavirus pandemic should be followed and surveyed for consequences for their neurodevelopment, instructive fulfillment, social turn of events, physical and emotional wellness, and for the effect on their future work, terminal instructive accomplishments, and deep rooted mental and actual wellbeing. Examiners of kid improvement of any pediatric condition and of controls need to incorporate the likely effect of the Coronavirus pandemic on their companions and what that might be a component meaning for various components of youngster result. Presently like never before, pediatricians and other medical services experts should be careful in giving formative, social, and emotional wellness screening at any open door when in touch with a youngster or adolescent.¹⁵ Extension of rehabilitative treatments for kids with language and

other formative deferrals and for kids/youths with psychological well-being issues are expected to help the expanded necessities of this age of youngsters.

Conclusion

All in all, the improvement of youngsters with Coronavirus is a complicated and diverse issue that requires cautious thought and consideration. It is fundamental for guardians, parental figures, instructors, and medical services experts to cooperate to screen and support youngsters' physical, close to home, and mental advancement during and after the pandemic. By figuring out the different impacts of Coronavirus on kids and giving suitable mediations and assets, we can assist with guaranteeing that youthful people can flourish and arrive at their maximum capacity regardless of the difficulties presented by the infection.

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IMPROVING TAX AUDITS IN THE CONTEXT OF THE DIGITAL ECONOMY

Annotation. The article covers the issues of developing scientific proposals and practical recommendations aimed at improving tax audits in the context of the digital economy. The essence of the tax audit norm, which is included in the new tax code of the Republic of Uzbekistan, is revealed. Experience in organizing and conducting tax audits in foreign countries has been cited.

Keywords: financial control, tax audits, audits, tax audits, international standards of Audit, Act, conclusion, decision.

In scientific research conducted in the World, tax audits are being studied as a service that helps taxpayers to correctly present calculations before tax authorities. As part of the research, scientific research is carried out on such issues as limiting the growth of tax failure of taxpayers, studying the impact of tax inspection on tax legislation, introducing legislative reforms that facilitate tax administration, studying the impact of tax inspection on the efficiency of revenue collection, assessing factors affecting the effectiveness of tax inspection, introducing tax inspection models and electronic technologies.

In order to ensure economic stability in our country, to increase the practical outcome of reforms, it is important to form a digital economy and widely introduce it into practice.

In the conditions of the development of digitalization of its economy in our country, the need arises to improve the tax system and modernize tax control in order to reduce the tax base, prevent the occurrence of tax evasion.

In the context of digitization of the economy, tax control is based on the extensive introduction and application of various digital information and communication technologies by taxpayers, which allow them to levy additional payments to the budget in the form of additional taxes, fines and pensions, and by this, prevent or minimize violations of tax legislation. The implementation of control activities of tax authorities are forms of tax control carried out by officials of tax authorities within their competence.

Based on the above, the following proposals can be made: foreign partners are proposed to make an appropriate amendment to the banking legislation to temporarily limit the implementation of the next payment until this debt is completely eliminated by economic entities heading towards expired receivables on Import operations.

Digitization is the process of integrating digital technologies that contain reliable and systematized information on events and phenomena in society, and is

of great importance in fiscal policy in timely access to information and decision-making on economic realities. However, when developing, maintaining and evaluating tax policies, there is not always the possibility of having, using actual and reliable information. Digitization serves to improve the level of compliance with tax legislation by increasing the possibility of operational analysis of data on taxpayer transactions.

This means that currently there is a network with the possibility of electronic communication between citizens, economic entities and states, and this makes it possible to generalize and mutually use information. In the last 20 years, there has been significant development in the collection, storage, processing, monitoring and dissemination of electronic data.

Governments are becoming more electronic from year to year. Almost all government agencies have their own official website and automated systems. Digitization provides the tax authorities with the opportunity to offer the filling of electronic reports to taxpayers, provide electronic services and conduct control over the Customs and economic activities of taxpayers. This in turn extends the level of compliance with tax legislation, real-time monitoring of tax revenues, conducting tax audits, and the use of extensive and large-scale data in determining tax risks. Alternatively, electronic data also provides the ability to link transactions with data on indirect taxes, and provides the ability to track data consistency. Developed countries have already achieved a number of successes in the process of digitization. Alternatively, positive progress in this direction can be observed in the experience of some developing countries.

The development of information and Communication Technologies is also leading to the renewal of models of doing business. Processes for the sale of products or the provision of services are carried out electron using computer systems (e-commerce). These processes, in turn, increase the likelihood of the occurrence of new tax risks. Risk factors that occur with the development of digitization include:

The fact that there is no physical location of some sources of income, which makes it possible to determine the right tax jurisdiction;

The inability to apply mechanisms to control the physical measurement of their flow in the provision of goods and services;

Trading Spaces are located anywhere, in any state, due to the remote control of organized websites;

Internet of goods and services that do not have a material appearance application of new business models on realization through;

The presence of payment systems valid outside banking systems.

These factors require tax administrations to associate risk analysis tools with the digital economy to carry out tax risk management. This new approach brings to the surface the concept of electronic tax administration, based on the widespread introduction and use of information and communication technologies, requiring the following systematic implementation:

According to the organization for Economic Cooperation and development, tax administrations should carry out the following activities to adapt to the difficulties of the digital economy:

Maintaining the ability to use reliable information necessary for tax administration;

Acceptance of international-level normative for obtaining electronic records, their format, the use of third-party data, and the duration of record keeping;

Improvement of websites that store data on tax legislation, tax revenues and reporting forms.

Tax risk management is based on the ability of tax authorities to analyze data from various sources. Based on the possibility of data analysis, a tax risk management strategy is defined. Effective data analysis cannot be done without information technology tools.

The plan of measures to implement the strategy for the development of information and communication technologies of the state tax committee and the strategy for the development of information and communication technologies of the state tax committee was approved.

The following are the priorities for the implementation of the strategy:

-transfer of interaction between state tax service bodies and taxpayers into a remote way, full automation of relations between all participants through the widespread use of information and communication technologies and expansion of the number of interactive public services; i.e., increase the number of remote interactive services to taxpayers by the widespread introduction of information and communication technologies due to the;

- effective organization of information exchange through electronic cooperation with information systems of state bodies and other organizations, as well as elimination of existing problems in this regard; that is, electronic communication with the responsible office and organizations providing the correct information of individuals and legal entities with a tax obligation to the state tax service and elimination of existing settlements;

- organize the storage, processing and efficient use of large amounts of data; that is, the storage, processing and organization of the effective use of this information in large capacities;

- wide implementation of information and communication technologies in the activities of tax authorities in order to reduce the number of non-profit activities in the economy, increase the level of transparency and create an equal competitive environment for entrepreneurship; that is, by reducing the hidden, non-profit, uncontrolled and criminal economy while adhering to the principles of taxation, introducing innovation information and communications in tax authorities;

- introduction of mechanisms for the development of skills to master advanced and innovative technologies in the field of taxation and their effective

implementation in practice using modern information and communication technologies and distance learning methods; that is, the use of the latest Russian information and communication technologies and the introduction of ways to further increase their effectiveness in practice;

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STUDY OF THE FIRE RESISTANCE AND THERMOPHYSICAL PROPERTIES OF WOODEN CONSTRUCTIONS

Abstract. The article will see some connections, it is advisable to conduct a comprehensive study of the thermophysical properties of woods, taking into account the influence of temperature and humidity factors. Recommendations are given for their use in the calculations of drying, wood impregnation and fire resistance of wooden structures.

Key words: fire resistance; heating engineering; thermophysical properties; specific heat capacity; heat transfer coefficient; wood moisture; density; according to the parabolic law; extractive substances; nodes; heat flow; along the fibers.

It is necessary to know the thermophysical properties of wood when applying the methods of drying, curing and calculating fire resistance of wooden structures, in particular, when solving the problem of thermal engineering of fire resistance. In domestic and foreign literature on the study of wood and wooden structures, there is very scattered information about the thermophysical properties of various types of wood. When calculating the fire resistance of wooden structures, different values of indicators are used, which negatively affects the reliability of the obtained calculation data.

When calculating the fire resistance of wooden structures, the relative heat capacity (C) and thermal conductivity coefficient (λ) of wood of different densities at temperatures corresponding to fire conditions are mainly taken into account, taking into account the moisture content of the wood is used.

The article discusses literature data on the values of C and λ properties of pine wood; The results of experimental determination of these properties for pine and larch are also presented.

In QMQ 2.01.04 (Heat technology in construction), pine and spruce timber in the dry state in transverse and longitudinal directions (wood density 500 kg /

m3) 2.30 kJ / (kg,) heat provides strength.. With the increase of wood moisture and its temperature, C increases according to the parabolic law. Several equations have been proposed for dry wood to describe the dependence of C kJ/(kg, °C) on temperature (T, °C):

$$C=1.33+0.0046 T \quad C=1.57+0.00277T$$

$$C=1.11+0.0049T \quad (T=0+112 \text{ at } 0 \text{ } ^\circ\text{C})$$

$$C=1.11+0.0042T \quad (\text{at } T=60-140 \text{ } ^\circ\text{C})$$

It is noted that the average value of dry wood in the temperature range from 0 to 100 °C is 1.68 kJ/(kg, °C). An equation was proposed to determine kJ/(kg, °C) taking into account wood moisture (pH) and temperature (T, °C)

$$C=1.08+0.0041 \varphi+ 0.0025T+0.00006 \varphi T.$$

A nomogram is used to determine the value of C in wood at different humidity and temperature. Using this nomogram, for example, at 12% humidity and a temperature of 20 ° C, it is equal to 2.0 kJ / (kg, ° C) in wood.

The thermal conductivity of wood depends on its moisture density, humidity and temperature, the direction of the fibers, the content of extraction substances and the presence of structural inhomogeneities (cracks, knots, etc.) in the wood.

QMQ 2.03.08-98 (Wooden constructions) T.DAQQ 1998 gives the following values of thermal conductivity coefficients in the dry state (500 kg / m³) for pine and spruce wood transversely and along the fibers: 0.09 and 0.18 Bt / (m, °C), respectively, the equation to determine λ is proposed: $\lambda = \lambda_n K_r K_p$, where λ_n is the nominal value of λ at the given temperature and humidity;

K_r - the value of the coefficient taking into account the conditional density of wood;

K_p coefficient is a value that takes into account the direction of heat flow.

As noted, the thermal conductivity of wood in the radial direction is slightly greater than in the tangential direction to the annual layers, and in the longitudinal direction, the coefficient of thermal conductivity is significantly greater. The thermal conductivity of wood along the fibers is 1.63-2.96 times along the fibers, and in the radial direction it is on average 15% higher than in the tangential direction.

Contains comparative quantitative data on the change of λ depending on the fiber direction: in the tangential direction, this coefficient is 0.90-0.95 of its value in the radial direction; in the longitudinal direction is 1.75-2.25 times greater than in the transverse direction. The literature data on the heat transfer coefficient λ of dry wood (pine) at a temperature of 20 ° C were studied.

Coefficient of thermal conductivity of a pine tree in directions (Bt/(m, °C))		
Longitudinal	Radial	Tangential
-	0.15	-
0.31	0.16	0.14
-	-	0.12
0.38	-	0.12
0.25	-	0.09

0.18	-	0.09
0.34	-	0.15

Results shows that of wood heat conductivity to the temperature proportionate increased goes.

With an increase in humidity (φ , %) the coefficient of thermal conductivity of wood increases $W/(m, ^\circ C)$ and can be calculated using the equations

$$l = (2 + 0.0406 \varphi) \gamma * 10^{-4} + 0.0238 \quad (\varphi \text{ at } < 40\%);$$

$$l = (2 + 0.0544 \varphi) \gamma * 10^{-4} + 0.0238 \quad (\varphi \text{ at } > 40\%).$$

For wet wood, the increase in thermal conductivity with increasing temperature occurs more than for dry wood. A nomogram was compiled to determine the thermal conductivity coefficient λ of wood (pine) at variable humidity at temperatures up to $100^\circ C$. When using correction factors, this nomogram can be used to determine factor λ of other types of wood.

Experimental determination of the properties of heat transfer along the fibers of wood (pine and larch) was carried out using the pulse method of a constant power linear heat source.

The choice of the method was determined by the possibility of obtaining all the heat transfer properties necessary for solving thermophysical problems of wood drying, impregnation and fire resistance of wooden structures from one experiment. The general diagram of the installation for determining the heat transfer properties of wood using the heat shock method is shown in Fig.

The test specimen consists of three wooden plates with dimensions of $100 \times 100 \times 40$ mm and $100 \times 100 \times 7$ mm. The average density of wood samples: pine - $359 \text{ kg} / \text{m}^3$ and larch - $694 \text{ kg} / \text{m}^3$. The moisture content of the samples during the test was 3%.

14 composite samples from each wood type were tested. The values of heat capacity and thermal conductivity coefficients of the obtained wood were determined.

A review of literature data on the thermal conductivity of wood and test results, the specific heat capacity C values of the data available in the literature and the thermal conductivity of qa ragai wood allows us to conclude that the data on the coefficient of permeability varies sufficiently. In this regard, it is desirable to comprehensively study the thermophysical properties of wood, taking into account the influence of temperature and humidity factors. It is recommended to use them when drying, impregnating wood and calculating the fire resistance of wooden structures.

Wood	Density kg/m^3	Internal capacity C , $\text{kJ}/(\text{kg}, ^\circ C)$	Thermal conductivity coefficient, $\text{Bt}/(\text{m}, ^\circ C)$
Pine	359	1.68	0.10
lisvennitsa	694	1.35	0.12

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STUDYING THE CHEMICAL COMPOSITION OF THE BASIL

Abstract. In this article discusses about common basil-named *Ocimum basilicum*, herbal properties, use in medicine, food processing, disadvantages and advantages.

Key words: estragole, vanillic acid, liver cancer, basil.

Basil has been around for over 4,000 years. Throughout history, basil was believed to have almost magical powers. It was used as an antidote for snake bites, and was believed to give strength during religious fasting.

It was found in mummies in Egypt because used this herb for embalming. In Greece, basil was a symbol of mourning. The herb was referred to as *Basileus phuton*, meaning magnificent, royal or kingly herb.

Today basil is frequently referred to as the '**King of Herbs**'. It was also known as the 'herb of poverty' because it was believed to provide protection to the poor. In India, this herb was considered a powerful protector. They planted it around their temple and placed it with the dead to protect them in the poor.

Common basil mainly used for its attractive aroma. But overuse of herbs can be dangerous just like this over intake of basil is also harmful. It has been used as a food ingredient for flavoring, in cosmetics, and in traditional medicine for treating coughs, inflammations, and pain. Basil essential oil has been possessed high antioxidant, antimicrobial, antibacterial, anticancer.

Common basil, *Ocimum basilicum* is a culinary herb of the family Lamiaceae. More than 150 species of this genus have been recognized. It is a tender plant and is used in worldwide cuisines. Mainly basil is used in western cuisines. Basil is grown in central Africa to Southeast Asia. In temperate climates basil is treated as an annual plant. But it can be biennial or perennial in warmer horticultural zones.

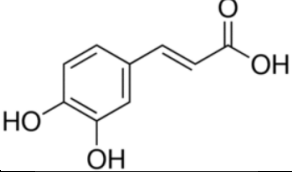
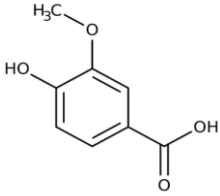
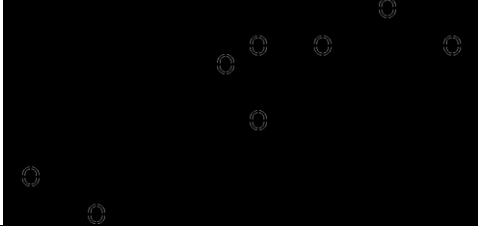
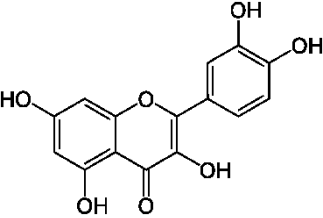
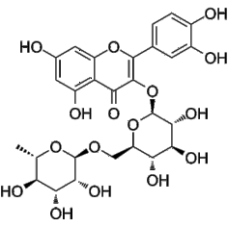
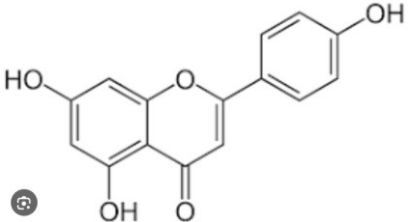
Basil has been used as a remedy for common health problems for thousands of years. This herb is believed to help with: poor digestion, headache, common cold, flatulence, improve memory, vomiting, anxiety, motion sickness, high cholesterol, treatment for burns.

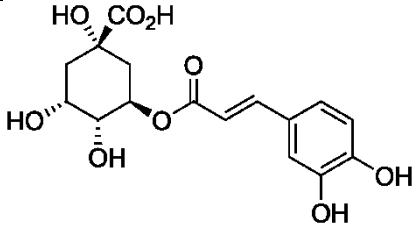
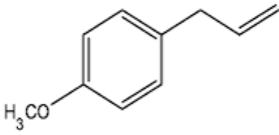
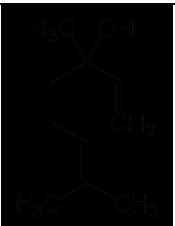
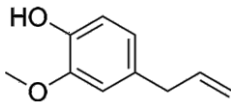
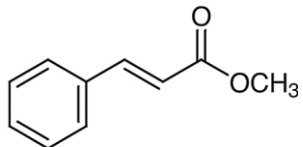
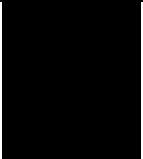
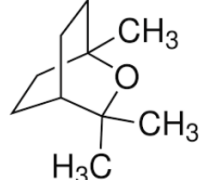

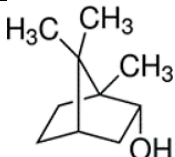
More than 200 chemicals in basil oil have been reported. The chemical constituents include monoterpenes, sesquiterpenes, triterpenes, flavonoids, and aromatic compounds. Major components in basil oil include linalool, estragole (methyl chavicol), anethole, eugenol, and methyl eugenol, varying by chemotype.

Three major components in sweet basil commonly cultivated in the United States are linalool (7–59%), estragole (5–29%), and eugenol (2–12%). Linalool,

a monoterpene, showed a wide range of biological activities such as sedative, stress relief, and neurological effects. Estragole is sweet, herbaceous anise–fennel type odour. It is used in fragrance compositions and gives a nice fruity and anise aromatic note. Eugenol is used in perfumeries, flavourings, and as a local antiseptic medicine.

Table 1. Chemical composition of common basil

№	Name of chemical compounds	Structure of compounds	Uses
Leaves composition			
1	Caffeic acid		Antioxidant, anti-inflammatory, anticarcinogenic
2	Vanillic acid		Flavoring agent
3	Rosmarinic acid		Rosmarinic acid is an ester of caffeic acid with 3,4-dihydroxyphenyllactic acid
4	Quercetin		Potent antioxidant flavonoid and flavanol
5	Rutin		A citrus flavonoid glycoside
6	Apigenin		Flavonoid present in basil

7	Cholorogenic acid		Glucose regulation
8	Methyl chavicol or estragole		To release muscle pain, and tension
9	linalool		Manufacturing of soap, flavorings, insecticides
3	Eugenol		Antioxidant, antibacterial
4	Methyl cinnamate		Food additives
Flower composition – essential oil			
1	β -pinene		Deals with skin issues and closing skin pores
2	1,8-cineole or eucalyptol		Antioxidant, anti-inflammatory
3	Ocimene		Anti-fungal, antiviral
4	Borneol		Improved digestion, blood circulation

Basil is commonly used as a fresh or dried herb in cooking and is popularly used in beverages in southeast Asia. Essential oil can be extracted from the leaves and used in cosmetics, dental products and perfume.

It is also used for stomach problems such as spasms, loss of appetite, intestinal gas, diarrhea, constipation and many other conditions. In foods, basil is used for flavor.

The dried sweet basil leaves have a sweet, fragrant odour, and their taste is aromatic, warm, and slightly pungent. Basil is considered as the finest of all aromatic herbs and is widely used to flavour cooked vegetables, tomato-paste products, and fish. It is sometimes used with, or as a substitute of, oregano to flavour pizza and spaghetti sauce and is employed together with other spices in the manufacture of vinegar, mustard, and sausages.

Basil proves to be an effective antimicrobial agent for *Staphylococcus aureus*, *Escherichia coli*, *B. subtilis*, *Pasteurella multocida*, and some pathogenic fungi. Additionally, basil contains moderate levels of antioxidants.

As we have discussed above common basil is a very useful plant with lot of features. It can be used for various medical conditions. Common basil is mainly used for its attractive aroma. But overuse of herbs can be dangerous just like this over intake of basil is also harmful. It has been used as a food ingredient for flavoring, in cosmetics, and in traditional medicine for treating coughs, inflammations, and pain. Basil essential oil has been possessed high antioxidant, antimicrobial, antibacterial.

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LEVEL OF STUDY OF THE LANDSCAPE AND ECOLOGICAL CONDITIONS OF THE AREAS OF INFLUENCE OF RESERVOIRS

Annotation. Anthropogenic water structures are an important factor in the formation, transformation and emergence of new types of natural landscapes. Reservoirs are one of the water structures that have the greatest impact on changes in natural landscapes on a local and regional scale, and the study of their impact on the natural environment is one of the most pressing issues in natural geography, especially landscape science.

Key words: landscape, reservoir, dam, hydraulic engineering, hydroelectric power station, reconstruction.

Large water structures (reservoirs, canals, dams, etc.) have been built on Earth since ancient times, their impact on the landscape and environmental conditions is different, they were one of the main factors in the development of the economic and social conditions of different regions and countries.

An important issue is the study of the geography of hydraulic structures, their distribution in space and time, all processes and events associated with their activities, the definition, analysis and assessment of their characteristics with the geographical environment, the determination of their practical and scientific nature. meaning.

Reservoirs have been built in many regions of the globe, mainly to make full use of the water and energy resources of rivers. The construction of reservoirs began very early: Ancient Egypt (3000 BC), Babylon (2500 BC), Iran (600 BC), small reservoirs - ponds in the countries of Central Asia 3 BC. - was built in the 5th century and the beginning of the new era.

In the Middle Ages (500-1500 AD), large and small reservoirs were built in different regions of the world (South Asia, Central Asia, China, Central and South America). In Europe, they were created much later and mainly to manage river beds and water regimes. In most cases they were used to generate mechanical energy. In Europe, the construction of reservoirs is also associated with the development of river water transport (England, Germany, Russia).

The construction and use of reservoirs became widespread in the 20th century and rose to a planetary level. This was due mainly to the economic and social nature of their use. On the one hand, reservoirs are one of the factors of economic development (the population's need for water, energy sources,

agriculture, transport), on the other hand, they have become one of the landscape-ecological factors and have had a negative impact on nature (swamping, salinization, flooding large areas, diseases, changes in flora and fauna). This is due to geography, water content, area and shape of reservoirs.

The construction of reservoirs and the management of river flow radically change its natural hydrological regime and, as a result, affect the flow of other natural phenomena and create different conditions. These changes may be different in upstream and downstream water uses, and can be completely different in areas controlled by water management, i.e. in areas where river flow is used. Reservoir areas affecting the environment can be identified as follows:

- Reservoir and surrounding areas;
- The lower reaches and delta of the river are exposed to water, runoff, their chemical and biological properties are controlled by the reservoir;
- Valley area, which uses water taken from the river and returns it to it;
- The area is irrigated by river water;

The degree and direction of environmental changes in the upper part of a reservoir are influenced, first of all, by its size, shape, morphology of the reservoir, the rocks that form its bottom and banks, the operating mode of the reservoir and the climatic conditions of the region., shows. The natural regime of river flow is regulated and changes over many years, seasonally and even within a day, reducing the amount of water flowing from the river bed, adding water from its tributaries, as well as the physiographic characteristics of the river valley. The change will affect the bottom of the tank.

One of the largest reservoirs in the world is the Owen Falls Reservoir (Victoria), built on the Nile River in the state of Victoria, located in Kenya, Tanzania and Uganda. It has a water volume of 205 km³ (including Lake Victoria) and is designed to regulate the flow of the Nile River. More than 130 very large reservoirs have been built in Europe, Asia, Africa, North and South America, Australia and Oceania. The Daniel Johnson Reservoir in Canada (water volume 142 km³), Bratsk in the Russian Federation (169 km³) are examples and are considered the largest reservoirs in the world.

In Central Asia, reservoirs were built mainly to irrigate crops and improve energy and water supplies. There are 75 reservoirs in the region, their total volume is about 50 billion cubic meters. According to archaeological data, among the large reservoirs built in the Middle Ages (XVI century), Abdulla Khanbandi, built near the village of Okchob, Samarkand region, Gishband (XII century), built on the Omondara stream flowing from the Zeravshan ridge, the dams of some reservoirs have survived to this day, one of them is the Sultanband reservoir in Osmonsoy (volume 65 million m³). By the second half of the 19th century, the Russian Empire paid special attention to the repair of irrigation stations and the construction of new ones for more efficient use of the lands of Central Asia. For these purposes, in Central Asia in 1910-1911, the Murgob and Iolatan reservoirs

were built in the valley of the Murgob River in the territory of the neighboring Republic of Turkmenistan.

The 20th century also required the development of new lands and the application of new methods of their use. In this regard, the development of agriculture throughout the world, including Russia, especially in its southern parts, and the republics of Central Asia, is represented primarily by the development of extensive forms. That is, plantations are established over very large areas, and rainfed and irrigated agriculture is developed on them. The main branch of agriculture in Central Asia is cotton growing, and in all countries located here, cotton growing occupies the main sown areas. This, of course, has a great impact on the development of new irrigation networks. As a result of the development of cotton growing in Central Asia in the second half of the 20th century, the development of irrigated agriculture over large areas required a large amount of water resources. Therefore, much attention is paid to new irrigation structures, canals and reservoirs, and their construction in this region.

The area of irrigated land in Uzbekistan increased significantly in the 20th century (1809.5 thousand hectares in 1914; 4238.6 thousand hectares in 2014). In subsequent decades, much attention was paid to irrigation and reclamation work. The area of irrigated arable land per capita decreased from year to year as a result of the growth rate of the republic's population exceeding the rate of expansion of irrigated land. Land Code of the Republic of Uzbekistan (April 1998, from July 1, 1998) in order to create conditions for the rational use of land, their protection, restoration of soil fertility, preservation and improvement of the natural environment, development of all forms of economic activity. management on the basis of equality is carried out) is regulated. To this end, it has long been known that the construction of reservoirs on large rivers and canals is one of the most important issues.

In the second half of the 20th century, reservoirs were built on almost all major rivers of Central Asia, and many hydraulic structures were built and are being built. The largest of them are the Tokhtagul reservoir in the Syrdarya basin, the hydrotechnical system of the Fergana Canal, the Chordara reservoir, the Tollymarjon and Tuyamoyin reservoirs in the Amudarya basin. A number of reservoirs have been designed and built, and new ones are still under construction. is being built in the region. This can be clearly seen from the table below (Table 1).

Table 1

The largest reservoirs of water in Central Asia

Reservoirs	River	Quantitative indicators		
		Water capacity, mln m ³	Area, km ²	Average depth m
Toxtagul	Norin	19500	284,0	68,7
Rogun	Vaxsh	12400	160,0	77,5
Norak	Vaxsh	10500	98,0	107,0
Tuyamoyin	Amudarya	7300	790,0	9,2
Chordara	Syrdarya	5700	900,0	7,9
Qayroqqum	Syrdarya	4200	513,0	8,2
Charvak	Chirchiq	2000	40,3	50,0
Andijan	Karadarya	1750	60,0	29,1
Tallimarjan	Amudarya	2530	77,4	19,8
Sardaba	South Mirzachol	922	58,7	17,2
Todakol	Zarafshan	875	225,0	3,8
Kattakorgan	Zarafshan	845	83,6	10,1
South Surkhan	Surkhandarya	800	65,0	12,3

In the second half of the twentieth century, many reservoirs of various sizes were built in Uzbekistan, which are mainly used to regulate the water regime of river waters and generate energy. Their construction and operation today are aimed at providing the population with drinking water, using water in agriculture and energy, and leading to the design and construction of new reservoirs.

In 2018-2019, President Sh.M. Mirziyoyev gave a number of clear instructions on measures to develop irrigation and improve the reclamation of irrigated lands, and 4,487 kilometers of irrigation system canals and 5,259 kilometers of irrigation networks were laid in our country. noting the need for reconstruction and construction of 3,636 hydraulic structures, 495 pumping stations and 1,500 vertical irrigation wells, as well as 7,500 kilometers of collector-drainage stations, 13 reclamation pumping stations and 185 vertical drainage wells.

Conclusion

As a result of reservoirs and their construction, it is observed that the landscape-ecological condition of many river valleys changes, the processes here have an impact not only within the direct influence of the reservoir, but also on the natural conditions tens or even hundreds of kilometers away from them. As a result of the construction and operation of reservoirs natural landscapes are changing, their new types, human-controlled hydrotechnical structures (dams, canals, dams, etc.), hydrogen landscapes associated with flooding, saline, swampy areas, natural-anthropogenic types of natural landscapes are observed

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NATURAL ISHLAB CHIQARISHDAN TOVAR ISHLAB CHIQARISHGA O‘TISH VA UNING RIVOJLANISHI

Annotatsiya. Ushbu maqolada natural ishlab chiqarishdan Tovar ishlab chiqarishga o‘tish davri va uni rivojlanishi haqida so‘z yuritilgan.

Kalit so‘zlar: Natural ishlab chiqarish, Tovar ishlab chiqarish, Ijtimoiy xo‘jalik, Tovar xo‘jaligi, Tovar ikki xususiyatga ega, Tovar qiymatining miqdori, Almashuv qiymati.

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TRANSITION FROM NATURAL PRODUCTION TO PRODUCT PRODUCTION AND ITS DEVELOPMENT

Annotation. This article talks about the period of transition from natural production to commodity production and its development.

Key words: Natural production, Commodity production, Social economy, Commodity economy, Commodity has two characteristics, Quantity of commodity value, Exchange value.

Natural ishlab chiqarishdan tovar ishlab chiqarishga o‘tish va uning rivojlanishi rivojlanishda katta ahamiyatga ega jarayonlardir. Asosan, bu o‘tkazishlarning maqsadi sanoat sektori va iqtisodiyotning o‘zini rivojlantirish va kengaytirishidir. Bundan tashqari, bu jarayonlar korxonalarda yaratilayotgan foyda va harajatlarning nisbiy qulaylik darajasi, mahsulotlarning sifati, korxonalar o‘rtasida raqobat va boshqa ko‘rsatuvlarni ham o‘z ichiga oladi.

Natural ishlab chiqarishdan tovar ishlab chiqarishga o‘tish va uning rivojlanishi tadbirkorlik sohasining kuzatilgan bosqichi bo‘lib, quyidagi muhim nuqtalarga ega:

1. Mahsulot qo‘llanish talablarining o‘zgarishi: Tabiiy vositalar orqali mahsulot ishlab chiqarish jarayonlariga o‘tish korxonalarini talablarga mos mahsulotlar ishlab chiqarishga ko‘maklashadi. Bu esa mahsulotlarning sifatini oshirib, ommaviy sohalar uchun zarur ko‘rsatuvlarga ega mahsulotlarni yaratishga olib keladi.

2. Ishlab chiqarish samaradorligini oshirish: Tabiiy ishlab chiqarishdan tashqi tavsiyalar va innovatsiyalar yordamida kelib chiqadigan mahsulot ishlab chiqarish jarayonlariga o'tish va o'zlashtirish samaradorligini oshiradi. Bu esa korxonalarining operatsion faoliyatini rivojlantirish, foyda darajasini oshirish va raqobat qiliishga imkoniyat yaratadi.

3. Xarajatlar va muddatlarni sezilarliroq qilish: Tadbirkorlik tizimida mahsulotlar ishlab chiqarishga o'tish korxonalarida tovar ishlab chiqarishga o'tish, mahsulotlarni tayyorlash va yetkazib berish jarayonlarida xarajatlar va muddatlarni sezilarliroq qilish uchun qo'llangan innovatsion texnologiyalar va yangiliklar korxonalar tovar ishlab chiqarish jarayonlarini tezlashtiradi.

4. Bozorlarga kirishning tashqi darajasi: Tabiiy ishlab chiqarishdan tovar ishlab chiqarishga o'tish va uning rivojlanishi bozorlar va mijozlar bilan o'zaro munosabatlarni rivojlantirish maqsadida ham muhim ahamiyatga ega. Bozorlarga kirish imkoniyatlarini rivojlantirish, yangi bozor segmentlari va ommaviy sohalarda niyobalarda ro'yxatdan o'tish tadbirkorlik sohasining rivojlanish jarayonida muhim rol o'ynaydi.

Ulardek, natural ishlab chiqarishdan tovar ishlab chiqarishga o'tish va uning rivojlanishi tadbirkorlik sohasida innovatsion yondashuvlar va rivojlanish uchun keng imkoniyatlarni ochadi. Bu bosqichlar korxonalarining faoliyatini, samaradorligini va rivojlanishini kengaytirishda katta ahamiyatga ega.

Natural ishlab chiqarishdan tovar ishlab chiqarishga o'tish va uning rivojlanishi.

Kishilik jamiyatining rivojlanishida ijtimoiy xo'jalikni tashkil etishning ikkita umumiy iqtisodiy shakli ajralib turadi. Umumiy iqtisodiy shakllarning tarixan birinchisi natural ishlab chiqarish hisoblanadi. Ijtimoiy xo'jalikning bu shaklida yaratilgan mahsulotlar ishlab chiqaruvchining o'z ehtiyojlarini qondirish uchun, xo'jalik ichki ehtiyojlari uchun mo'ljallangan. Iste'mol hajmi va tarkibi ko'rincha ishlab chiqarish hajmi va tarkibiga mos kelgan, ularning bir-biri bilan bog'lanishi bir xo'jalik doirasida amalga oshganligi sababli juda oson kechgan. Bunday munosabatlar eng avvalo hamma zarur narsani o'zi uchun tayyorlagan ibtidoiy jamoada hukm surgan. 'atriarxal dehqon xo'jaligi va feodal 'omestyalari asosan natural xo'jalik bo'lgan. Natural ishlab chiqarish sharti ijtimoiy mehnat taqsimotining rivojlanmaganligi oqibati sifatida vujudga kelgan, u vaqtda ijtimoiy mehnatdan uning u yoki bu turi endigina ajrala boshlagan edi. Bunday sharoitda biqiq yoki o'z ehtiyojlarini o'zi qondiradigan ishlab chiqarish organizmlari 'aydo bo'lgan. Mehnat ularning tor doirasidagina ijtimoiy xususiyatga ega bo'lgan. Natural ishlab chiqarish shakli barcha iqtisodiy jarayonlarni bir xo'jalik doirasida qat'iy cheklab qo'yadi, tashqi aloqalar uchun yul ochilmaydi. Ishchi kuchi muayyan xo'jalikka juda qattiq biriktirib qo'yiladi va ko'chib yurish imkonidan muhrum bo'ladi. Natural xo'jalik shakllarining xuddi shu ko'rsatkichlari qishloq xo'jalik jamoalari ming yillar davomida barqaror yashovchi bo'lib qolganligining «siri»ni ochib beradi. Natural xo'jalik ishlab chiqarish maqsadlarini nixoyat cheklab qo'yadi, ishlab chiqarish hajm jihatidan juda oz va turi jihatidan kam xil

bo'lgan ehtiyojlarini qondirishga bo'ysungan. Shuning uchun ham jamiyat asta-sekinlik bilan tovar ishlab chiqarishga, o'tadi.

Tovar ishlab chiqarish, ya'ni tovar xo'jaligida kishilar o'rtasidagi iqtisodiy munosabatlar buyum orqali, ular mehnati mahsulini oldi-sotdi qilish orqali namoyon bo'ladi. Tovar ishlab chiqarishning natural ishlab chiqarishdan farqi shundaki, bunda tovar yoki xizmat o'zining iste'moli uchun emas, balki bozorga sotish uchun yaratiladi. Natural va tovar xo'jaliklarining bir-biridan farqini 1-jadval orqali ko'rish mumkin.

Asosiy jihatlar	Natural xo'jalik	Tovar xo'jaligi
1. Moddiy ne'matlarni ishlab chiqarish maqsadi	Shaxsiy ehtiyojlarni qondirishda foydalanish	Boshqa tovarlarga ayirboshlash, bozorda oldi-sotdi qilish
2. Ishlab chiqariladigan mahsulot tarkibining aniqlanishi	Ehtiyojlar va imkoniyatlardan kelib chiqqan holda oldindan aniqlanadi	Bozordagi muayyan talab va ishlab chiqaruvchining xususiy manfaati asosida aniqlanadi
3. Iste'molchini o'ziga jalb etish uchun kurash	Bunday kurash mavjud emas	Bunday kurash mavjud va tovar xo'jaligining rivojlanishi bilan kuchayib boradi
4. Ishlab chiqarilgan mahsulotning iste'mol qilinishi darajasi	Barcha ishlab chiqarilgan mahsulotlar to'laligicha iste'mol qilinadi	Ishlab chiqarilgan mahsulotlar ayrim turlari va <u>qismlarining sotilmay qolishi</u> , ya'ni iste'mol kilinmasligi
5. Ishlab chiqarish jarayonida ishchi kuchining ishtirok etish tamoyillari	Ishlab chiqarish jarayonida faqat o'zining va oila a'zolarining ishchi kuchidan foydalaniladi	Ishlab chiqarish jarayonida yollanma ishchi kuchidan ham foydalanish mumkin

Natural va tovar xo'jaligining bir-biridan farqlanishi. Tovar ishlab chiqarish ishlab chiqaruvchilar bilan iste'molchilar o'rtasidagi munosabatlarning, mehnatni o'lchash va uni jamiyatning jami mehnati tarkibiga kiritishning o'ziga xos usulidir. Natural xo'jalikni siqib chiqarish va tovar ayirboshlashning rivojlanish jarayoni mehnat taqsimotining chuqurlashuvi, ishlab chiqarishning ixtisoslashuvi, xususiy mulkning vujudga kelishi va rivojlanishi asosida individual xo'jaliklarning tovar ayirboshlashga, oldi-sotdiga o'tish yo'li bilan boradi. Ayrim turdagi mahsulotlarni ishlab chiqarishga ixtisoslashuv, ularni turli xil ishlab chiqaruvchilar o'rtasida ayirboshlashni zarur qilib qo'yadi. Ixtisoslashuv esa mehnat unumdorligining oshishiga olib keladi, demak tovar ayirboshlash faqat zarurgina emas, balki foydali bo'lib boradi. Vaqtni va moddiy resurslarni tejash tovar xo'jaligini rivojlantirishning harakatlantiruvchi kuchi

bo'lib chiqadi. Ayirboshlash jarayoniga tortiladigan ishlab chiqaruvchilar bir-biriga tobora ko'roq bog'liq bo'lib qola boshlaydi. Dastlabki davrlarda tovar xo'jaliklari jamoalar, quldor latifundiyalari, feodal va dehqon xo'jaliklari o'rtasida aloqalar o'rnatilishiga yordam berib, ishlab chiqarishning va umuman jamiyatning rivojlanishi uchun qo'shimcha imkoniyatlar ochgan. Ma'lum tarixiy davrlarga kelib tovar munosabatlari jamiyat iqtisodiyotining barcha tomonlarini keng va chuqur qamrab oladi.

Tovar xo'jaligining va umuman ayirboshlash vujudga kelishi va amal qilinishining ijtimoiy-iqtisodiy asoslari hamda shart-sharoitlari qanday? Bu, birinchidan, ijtimoiy mehnat taqsimotidir, bunda ishlab chiqaruvchilar u yoki bu aniq mahsulotni ishlab chiqarishga ixtisoslashadi. Ixtisoslashuv, o'z navbatida, qiyosiy ustunlik tamoyili bo'yicha, ya'ni mahsulotni nisbatan kam muqobil qiymatda ishlab chiqarish layoqati bilan aniqlanadi. Ikkinchidan, ishlab chiqaruvchilar xususiy mulk munosabatlari tufayli iqtisodiy jixatdan bir-biridan muayyan tarzda alohidalashib qoladi, bunda ular o'z mehnat natijalarini o'zlari tasarruf qiladilar. Iqtisodiy alohidalik nima ishlab chiqarish, qanday ishlab chiqarish zarurligi va yaratilgan mahsulotlarni qaerda va kimga sotishni faqat ishlab chiqaruvchining o'zi hal qilishini bildiradi. Xuddi shu ikki holat tovar ishlab chiqarishni zarur qilib qo'yadi va bozor vujudga kelishining shart-sharoiti hisoblanadi. Mehnat mahsuli tovarga, ya'ni bozorda ayirboshlash uchun, sotish uchun tayyorlanadigan narsaga, ishlab chiqaruvchilar esa tovar ishlab chiqaruvchilarga aylanadi. uchinchidan, bozor vujudga kelishining muhim shart-sharoitlaridan biri erkin ayirboshlash hisoblanadi. Chunki ijtimoiy mehnat taqsimoti, ixtisoslashuv va iqtisodiy alohidalik nima, qancha va kim uchun ishlab chiqarishni mustaqil aniqlash imkonini beradi.

Tovar ishlab chiqarish natural ishlab chiqarishga nisbatan ishlab chiqarish kuchlarining rivojlanishiga, ishlab chiqarish samaradorligining o'sishiga ko'roq darajada imkon yaratadi, chunki:

- tovar ishlab chiqarish ijtimoiy mehnat taqsimotiga asoslanib, mehnat samaradorligining oshishiga xizmat qiladi;
- tovar ishlab chiqaruvchi katta daromadga ega bo'lishi uchun mehnat unumdorligini o'stiruvchi hamda tovar ishlab chiqarish sarflarini qisqartiruvchi fan-texnika taraqqiyoti yutuqlarini tatbiq etishi lozim;
- tovar ishlab chiqaruvchilar natural xo'jalik yurituvchilarga nisbatan ishlab chiqarish natijalaridan ko'roq manfaatdordirlar, agar ular daromad olmasalar xonavayron bo'ladilar;
- tovar ishlab chiqaruvchilar xonavayron bo'lmasligi va daromad olishlari uchun o'z faoliyatlarini xaridorlarga zarur bo'lgan tovarlarni ishlab chiqarishga yo'naltira olishlari lozim, ular o'zlarining raqiblari ustidan g'alaba qozonishi uchun tadbirkorlik qobiliyatiga ega bo'lishlari kerak. Natural xo'jalik yurituvchilar oldida bunday vazifa mavjud emas;

- tovar ishlab chiqaruvchi uchun iste'molchini o'ziga jalb qilish, o'z tovarini sotib daromad olish imkoniga erishish vositasi bo'lib yangi, nisbatan sifatli va jozibador tovarlarni ishlab chiqarish hisoblanadi.

Tovar ishlab chiqarishning mohiyatini yanada kengroq tushunish uchun uning asosiy unsuri bo'lgan tovarning xususiyatlarini ko'rib chiqish maqsadga muvofiq hisoblanadi

Tovar va uning xususiyatlari. Tovar-pul munosabatlarini tushunishda tovarning mazmunini, uning xususiyatlarini bilish muhim ahamiyatga egadir. Tovarga ta'rif berishda ham iqtisodchilar tomonidan turlicha yondoshuvlar mavjud. Jumladan, E.F.Borisov ta'rifiga ko'ra «Tovar – bu bozorda boshqa tovarga ekvivalent asosida ayirboshlashga mo'ljallangan, mehnat orqali yaratilgan ijtimoiy naflikdir». Bundan ko'rinadiki, u tovarga inson mehnati mahsuli sifatida qaraydi. V.I.Vidya'in va boshqalar tahriri asosida tayyorlangan darslikda «ne'mat» va «tovar» tushunchalariga keng izoh berilgan. Unda tovar iqtisodiy ne'matning maxsus shakli bo'lib hisoblanishi ko'rsatib berilgan: «Tovar – bu ayirboshlash uchun ishlab chiqarilgan maxsus iqtisodiy ne'mat». Bu va boshqa qator olimlarning fikrlari asosida ta'kidlash mumkinki, **tovar** - bu biron-bir naflilikka va qiymatga ega bo'lgan ayirboshlash uchun yaratilgan mehnat mahsuli. Yoki, boshqacha aytganda, **tovar** biron-bir naflilikka (iste'mol qiymatga) va almashuv qiymatiga ega bo'lgan, bozor uchun ishlab chiqariladigan mahsulot yoki xizmatlardir. Demak, tovarning ikki xususiyati bor: birinchidan, u kishilarning qandaydir ehtiyojini qondiradi: ikkinchidan, u o'zida ijtimoiy mehnat sarflarini mujassamlashtiradi. Tovar boshqa buyumga ayirboshlana oladigan buyum bo'lib, u iste'mol qiymatga va almashuv qiymatlariga ega. Buyumning iste'mol qiymati shundan iboratki, u kishilar uchun foydali, naflidir. U shaxsiy iste'mol buyumi yoki ishlab chiqarish vositalari sifatida kishilarning biron–bir ehtiyojini qondiradi. Naflilikni aniqlashda ham turlicha yondoshuvlar mavjud. Masalan, marjinalizm maktabi asoschilari ham, ularning keyingi davomchilari ham tovarlar naflilikini aniqlashda alohida olingan individning hayolidagi 'sixologik yondoshuv bilan, ya'ni hech kim bilan aloqasi bo'lmagan o'rmondagi cholning yoki kimsasiz orolda bir o'zi qolib ketgan Robinzonning hayoli bilan aniqlash usulini qo'llaydilar. Xolbuki, tovar ayirboshlash jamiyat a'zolari o'rtasida, gavjum bozor qatnashchilari o'rtasida sodir bo'ladi. Ular naflilikning negizida ob'ektiv iqtisodiy jarayon borligini, naflilik tabiat ashyosi bilan jonli mehnatning birikishi natijasida, to'g'rirog'i naflilik aniq mehnat bilan tabiat ashyosining xususiyatlari o'zgartirilishi natijasida vujudga kelishini o'ylab ham o'tirmaydilar. Albatta, tabiatda mavjud bo'lgan yoki inson mehnati bilan yaratilgan har qanday narsa ham naflilikka ega bo'lavermaydi. Masalan, jamiyatga 100 dona soat zarur bo'lgani holda, 120 dona soatning ishlab chiqarilishi uning 20 donasining nafsiz bo'lishiga olib keladi. Ya'ni, jamiyat uchun zarur bo'lgan 100 dona soatgina naflilikka ega bo'ladi. Shuning uchun iqtisodiyot nazariyasida ijtimoiy zaruriy naflilik degan tushuncha ishlatiladi va bozor mana shu ijtimoiy zaruriy naflilikni tan oladi.

Ijtimoiy zaruriy naflilik deb talab miqdoriga mos keladigan miqdordagi naflilikka aytiladi. Har bir tovar ma'lum bir naflilikka ega, lekin bu naflilik uni yaratuvchining o'z ehtiyojlarini emas, balki ayirboshlash orqali boshqa kishilar talabini qondiradi, ya'ni tovarning ijtimoiy nafliligi hisoblanadi. Bozor har qanday naflilikni emas, ijtimoiy naflilikni hisobga oladi. Agar bu fikrni yanada rivojlantirsak, bozor ijtimoiy zaruriy naflilikni, ya'ni jamiyat uchun (xaridorlar uchun) zarur miqdordagi naflilikni hamda shu ijtimoiy zaruriy miqdordagi naflilikni ishlab chiqarish uchun sarflangan ijtimoiy zaruriy mehnatni hisobga oladi. Ijtimoiy naflilik tovarlarning boshqa tovarlarga ayirboshlanish qobiliyatiga ega bo'lganligi uchungina o'zining yaratuvchisini qiziqtiradi. Tovarning ayirboshlanuvchanlik xususiyati almashuv qiymati nomini oladi. Tovarlarni sotishda ularning narx ko'rsatkichi almashuv qiymatini yaqqol ko'rsatadi. Inson mehnati bilan yaratilmagan ko'lab ne'matlar masalan, buloq suvlari, yovvoyi daraxt mevalari ma'lum naflilikka ega bo'ladi. Lekin ular har doim ham tovar bo'lavermaydi. Masalan, bu ne'matlar o'sha joyning o'zidan olinib, iste'molchi tomonidan iste'mol qilinsa tovar hisoblanmaydi. Ne'matlar tovar bo'lishi uchun, ular ayirboshlashga mo'ljallangan, ma'lum mehnat sarflangan, bozorga sotishga chiqarilgan bo'lishi zarur. Shunga ko'ra, tovar mahsulotdan farqlanadi. Tovar, eng avvalo, o'z iste'moli uchun emas, balki boshqalarning iste'moli uchun bozorga sotish maqsadida tayyorlanadigan mahsulotdir. Tovarning natural–buyum va ijtimoiy–iqtisodiy tomonlari, xususiyatlari ana shundan kelib chiqadi.

Xulosa qilib aytadigan bo'lsak: Tovar, eng avvalo, o'z iste'moli uchun emas, balki boshqalarning iste'moli uchun bozorga sotish maqsadida tayyorlanadigan mahsulotdir. Tovarning natural–buyum va ijtimoiy–iqtisodiy tomonlari, xususiyatlari ana shundan kelib chiqadi. Tovarning almashuv qiymati – bu biror turdagi naflilikning boshqa turdagi naflilikka ayirbosh qilinadigan miqdoriy nisbatidir.

Foydalanilgan adabiyotlar:

1. "Understanding the Transition from Natural to Manufactured Capital: Implications for Investors" - Bu adabiyot, ekologiya, iqtisodiyot va sarmoyadorlik sohasidagi o'zgarishlarni tahlil qiladi va tabiiy resurslar ishlab chiqarishidan o'tib, mahsulot ishlab chiqarishga yo'nalishni o'z ichiga olgan o'zgarishlarni o'rganishda yordam beradi.

2. "Economic Development and the Transition from Natural Capital to Produced Capital" - Bu kitob, iqtisodiy rivojlanish va sanoatga o'tishning konseptual o'zgarishlarini, korxonalar va tadbirkorlik sohasidagi o'zgarishlarni o'rganishga yordam beradi.

3. "The Role of Innovation in Transitioning from Natural Production to Manufactured Goods" - Bu adabiyot, innovatsiyalar va yangi texnologiyalar bilan qanday ko'plab korxonalar uchun foyda va samaradorlik yaratishni tushuntiradi.
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IN SECONDARY SCHOOLS SEPARATELY TO CHILDREN IN NEED NATURAL THE SCIENCES PEDAGOGICAL OF TEACHING TERMS AND CONDITIONS

Abstract. In this article, specific pedagogical, psychological and organizational aspects of teaching natural sciences in inclusive education, specific principles and factors of teaching sciences in the conditions of inclusive education are determined. Also, the importance of methodical technologies in mastering subjects in the conditions of inclusive education of students of inclusive classes is revealed.

Key words: inclusive, development, technology, current, process, natural sciences, environment, teaching.

Taking place in the economic, social, political and cultural spheres of the state depend on the educational system, which determines its mental capabilities and is considered the main condition for its development. Also, the growth of intellectual ability, the development of our society at a high level affects not only the increase in the efficiency of the educational system, but also the growth of the educational sector. Therefore, we should now consider the development of innovative activities of educational institutions as the main factor. It is important to understand the need to update the educational system, to ensure that educational institutions join the innovative processes in practice. There is such a form of education, which is called inclusive education, in which children with special needs receive education together with healthy peers.

Includes preschool, general secondary education, secondary special vocational and higher education institutions. The purpose of these educational institutions is to create a comfortable environment for children to receive education and training and prepare for a profession. Among them, primary education is the main basis of general secondary education, the main stage that creates the foundation for students to become perfect human beings in the future. In primary education, mathematics, mother tongue, and natural sciences contribute to the development of children's speech, thinking, and worldview.

All round education and training of students is to form a scientific worldview in them. In the implementation of this task, the teaching of natural sciences in primary classes and its proper organization play an important role. In this case, the study of the environment enriches the personal experience of young childrens, creates conditions for gathering knowledge about the phenomena and processes occurring in the animate and inanimate nature around us.

We should form a whole idea about nature, its habitat and natural resources, and the right to protect it. Students should be introduced to how people use natural resources in their labor activities. In such conditions, we must show children that human labor and their actions are directly related to nature. In this regard, students of younger age:

the interrelated animate and inanimate nature;

the human body and its health, its preservation;

them to improve their knowledge and skills by conducting observations in nature;

get acquainted with the work of a person who constantly strives to use natural resources rationally and increase its wealth;

beloved nature, the desire to preserve and protect it.

The main task of natural sciences is to provide a complex of scientific and practical knowledge about the events and phenomena occurring in nature, the development of living organisms, and the influence of mankind on nature. The degree to which the children's internal motivation is formed, his interest in natural sciences, his understanding of environmental problems and his ability to make important decisions to solve them, and the impact on the natural and social environment play an important role. In the process of teaching natural sciences, we should help children to understand nature as a whole being, a single view of the universe, and to realize that they themselves are a part of nature. At the same time, students will learn the impact of human activities on nature, the current global environmental problems and a sense of responsibility in solving them, as well as the ability to follow a healthy lifestyle and the skills of rational use of natural resources, the development of nature and society. Aims to educate a contributing member of society.

Teaching of natural sciences is carried out from the first grade. The educational material includes the topics of natural objects, flora and fauna, animate and inanimate nature, seasonal phenomena of animate nature, natural resources and ecology. All this is aimed at improving children's knowledge, the natural phenomena they may encounter during their life, how to behave and protect themselves, and how to use natural resources wisely. In the process of teaching natural sciences, attention is paid to explaining the topic of each lesson in creating and developing pupils' scientific and natural worldviews, teaching logical and analytical thinking. When pupils perform tasks independently, their cognitive activity is engaged, confidence in their knowledge, strength and abilities is strengthened. As a result, each pupil develops at the level of their potential. Among the pupils, there are children who are physically, mentally, psychologically lagging behind their healthy peers, and there are also children who have certain deficiencies and defects in the process of development. Psychologist LMKrijanovskaya explained in detail the ways of using different methods of education and individual work in education through psychological correction methods in the inclusive education system of children with disabilities.

In his opinion, the cooperation of school psychologist, pedagogue and parents should be inextricably linked in order to be effective in the inclusive education system and to achieve good results. In this case, pupils' cognitive activity should be organized individually while passing lessons using modern pedagogical new technologies of education.

The quality and effectiveness of the lesson largely depends on the correct and accurate selection of educational methods. Therefore, study methods, like science itself, are constantly evolving. The methods should be chosen in such a way that they should allow students to think freely, independently, clearly and express their personal opinions.

The methods encourage each member of the group to be active, ensure the free expression of personal opinions by them, develop the skills of listening to the opinions of other members of the group, the ability to summarize and defend several ideas put forward. Should be taught.

For the mental development of children in primary grades, the primary grade teacher should know the level and capabilities of the mental activities of the pupils and take them into account. In the teaching of natural sciences, it is necessary to solve various methodological issues that arise in the process of using theoretical knowledge in practice.

Teaching natural sciences in primary grades should include the following goals:

pupils to independently solve the problems encountered in everyday life using the knowledge they have acquired during the lesson, to teach them to solve practical aspects specially designed to form and strengthen the skills of pupils to get out of various arithmetical situations,

formation of skills in the use of various tools and visual aids in the teaching of natural sciences. The main focus is on using different experiences with pupils. For example, the eruption of a volcano, the germination of a seed.

pupils to acquire natural knowledge about nature independently.

Allow for deep understanding of the studied subject, formation of skills and competences. Such methods include oral and written exercises, laboratory work, activities performed on the school grounds, in the corner of living nature, outside the classroom. Examples of the types of practical methods are that pupils can make various things with the help of distributed didactic materials, describe natural phenomena through pictures, observe and record phenomena, and conduct various experiments. The pupils should answer the question, problem, issue with its results before starting the practical work.

For example, the "Brainstorming" method is a widely used method for solving problems on a specific topic. This method helps pupils to think broadly and comprehensively about this topic, as well as to develop certain skills and abilities to use their imaginations and ideas positively. The main purpose of using this method is to help pupils to think broadly and deeply about the problem, to be able to get out of this problematic situation.

In conclusion, it can be said that grades 1-4 of general secondary education are considered an important period in a child's life and the most important period in the growth of the pupil's imagination for the next level of study. Along with the teaching of each subject, it is necessary to pay attention to the formation of vital competencies of pupils in the course of natural sciences and in the process of each corrective and educational activity, as well as to pay attention to individual work in working with children with disabilities.

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ELEKTRON TA'LIM MUHITINI SHAKLLANTIRISHDA BULUTLI TEKNOLOGIYALARNING AHAMIYATI

Annotatsiya. Ushbu ishda oliy ta'lim muassasalarida elektron axborot ta'lim muhitini shakllantirishda bulutli hisoblash servislarining imkoniyatlaridan foydalanish masalasi qaralgan.

Kalit so'zlar: virtual ta'lim makoni, bulutli hisoblash, bulutli texnologiya, bulutli xizmatlar.

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THE IMPORTANCE OF CLOUD TECHNOLOGIES IN THE FORMATION OF AN E-LEARNING ENVIRONMENT

Abstract. This paper examines the issue of using the capabilities of cloud computing services in the formation of an electronic information educational environment in higher educational institutions.

Keywords: virtual educational space, cloud computing, cloud technologies, cloud services.

Hozirgi vaqtda axborotlashtirishni faol rivojlantirish jarayoni kuzatilmokda, bu birinchi navbatda ta'lim jarayonida zamonaviy axborot texnologiyalarini keng joriy etilishi bilan tavsiflanadi. Davlat ta'lim standartlarining yangi avlodiga muvofiq, zamonaviy insonning muvaffaqiyati bilimga va yangi texnologiyalardan, shu jumladan Internetdan faol foydalanishga yo'naltirilganligini aniqlaydi.

Ushbu jarayonlar ta'lim faoliyatining yangi shakllarini shakllantirish va rivojlantirish uchun yangi ilmiy-texnik asosni yaratdi, Internetda ishlaydigan virtual o'quv muassasalarining paydo bo'lishiga olib keldi. Virtual ta'lim makonini yaratish pedagogikaning vazifalaridan biri, ya'ni o'quv jarayonini tashkil etishning samarali shakllarini ishlab chiqish vazifasini hal qilishdir.

“Bulutli hisoblashlar” rivoji internet tarmog‘ining jadal rivojlanishiga imkon berdi, ularning o‘tkazish qobiliyatining o‘shishi, apparat ta‘minotining takomillashishi, ko‘p yadroli protsessorlarning yaratilishi va axborot to‘plovchilar sig‘imining oshishi, virtuallashtirish texnologiyalari (xususan virtual infratuzilmani yaratish uchun dasturiy taminotni) uchun imkon yaratib berdi.

Ta‘lim jarayonida bulutli texnologiyalarni joriy qilish axborot-kommunikatsiya texnologiyalari vositalari, interaktiv jihozlar, elektron ta‘lim resurslaridan foydalanish samaradorligini ta‘minlaydi. U bilimlarni o‘zlashtirish darajasini oshirish imkonini beradi, ta‘lim oluvchilarning o‘qishga motivatsiyasini oshiradi, talim jarayoni barcha ishtirokchilarining axborot-kommunikatsiya texnologiyalar bo‘yicha madaniyatini rivojlantiradi.

Bulutli hisoblashning mashhurligi ularning quyidagi afzalliklari bilan izohlanadi: "hisoblash moslashuvchanligi" - mavjud bo‘lgan resurslar ta‘minotidan hisoblash resurslarini avtomatik ravishda o‘lchash qobiliyati; "resurs hisob-kitobi" - foydalanuvchilar tomonidan hisoblash resurslaridan foydalanishni hisobga olish qobiliyati; "talab bo‘yicha foydalanuvchi o‘ziga xizmat ko‘rsatishi" - foydalanuvchining iltimosiga binoan avtomatik rejimda konfiguratsiyani o‘rnatish bo‘yicha ko‘plab odatiy vazifalarni bajarish qobiliyati.

An’anaviy texnologiyalar bilan taqqoslaganda, bulutli hisoblash: foydalanish, harakatchanlik, moslashuvchanlik, ishonchlilik, yuqori texnologiyalar, ijara va iqtisod bir qator muhim afzalliklarga ega, chunki ular ilmfan va texnikaning ko‘plab sohalarida keng qo‘llaniladi.

Bugungi kunda bulutli texnologiyalar inson faoliyatining turli sohalarida jumladan, bank, tibbiyot, biznes va boshqalarda qo‘llaniladi. Ta‘lim ham bundan mustasno emas. Ta‘limda bulutli xizmatlaridan nafaqat masofaviy ta‘limda, balki an’anaviy o‘qitish usullarida ham foydalanilmoqda.

Bulutli texnologiyalar nafaqat masofaviy va real ta‘lim uchun qo‘llaniladi. Bulutli hisoblash turli xil ichki tizimlarni birlashtirish va nafaqat o‘qituvchilar va talabalarning o‘zaro ta‘sirini ta‘minlaydigan virtual muhitni yaratish vositasi sifatida ishlatiladi, balki quyidagi jarayonlarni amalga oshiradi: yangiliklar va voqealar e‘lonlarini nashr etish; foydalanuvchilar o‘rtasida elektron xabarlar almashinuvi. talabalar bilan masofaviy hamkorlik qilish, shu jumladan elektron o‘quv va uslubiy materiallar bilan ta‘minlash, test o‘tkazish, dars jadvali haqida ma‘lumot berish.

Elektron ta‘lim bilan guruhli loyihani tayyorlash amalda qanday amalga oshirilishini ko‘rib chiqamiz. Talabalar guruhlariga bo‘linadi va o‘z loyihalari uchun mavzularni olishadi. O‘qituvchi har bir alohida guruh uchun kerakli hujjatlarni yaratadi va ularga guruhning barcha a‘zolari uchun kirish imkoniyatini yaratadi (elektron pochta orqali). Xizmatni ishlab chiquvchilarning fikriga ko‘ra, bulutli texnologiyalar quyidagi harakatlar sxemasini ta‘minlashi kerak: kompyuterda, noutbukda ishlashni boshlagan odam uydan chiqib ketayotganda, yo‘lda telefonida yozishni davom ettirishi va uni planshetdan yuborishi mumkin. Taxminan bir xil uslubda, talabalar o‘z loyihalari bo‘yicha uyda, oliy ta‘lim

muassasalarida va boshqa joylarda ishlashlari mumkin. O'qituvchi talabalarni moslashtirish uchun hujjatlarga sharh berish qobiliyatiga ega bo'lishi kerak. Shu bilan birga, har bir talaba bu ishga qanday hissa qo'shganligini aniqlash mumkin.

Talabalar bilan ishlashdan tashqari, o'qituvchi o'zi uchun bulut texnologiyalaridan faol, ya'ni maslahatlar jadvalini tuzishda, loyihalar, amaliy va kurs ishlarni bajarish muddatlarini ko'rsatishda, talabalarga mashg'ulotlar haqida ma'lumot berishda foydalanish mumkin.

Guruhlarda birgalikda loyihalarni amalga oshirish: matnli fayllar va taqdimotlarni tayyorlash, hujjatlardagi tahrirlarni real vaqt rejimida boshqa hammualliflar bilan muhokama qilish, har xil turdagi axborot obyektlarini qayta ishlash bo'yicha amaliy vazifalarni bajarish: matnni formatlash va tahrirlash, matn muharririda jadval va diagrammalar yaratish.

LearningApps.org - bu o'quv vazifalarini yaratish uchun dasturiy ta'minotni taklif etadigan bulutli xizmatlardan biri bo'lib hisoblanadi.

LearningApps xizmati- bu har xil turdagi o'quv yurtlarida o'quv jarayonlarini qo'llab-quvvatlash uchun Web 2.0 ilova bo'lib hisoblanadi. Bu oliy ta'lim muassasalarida audlitoriya va auditoriyadan tashqari mashg'ulotlarda foydalanish uchun turli xil fanlardan interfaol topshiriqlarni ishlab chiqish uchun konstruktor. Ushbu ilova interfaol modullar orqali o'qitish uchun mo'ljallangan. Ushbu xizmatdan foydalanib, talabalarning mustaqil ishlashlari uchun interfaol o'quv topshiriqlarini yaratish mumkin. LearningApps-da ko'plab vazifalar shablonlari mavjud (jumboq, krossvord, tushunchalar o'rtasida ketma-ketlik yoki yozishmalarni o'rnatish, tushunchalarni tasniflash, audio va video tarkibidagi vazifalar) va bir nechta tillarni qo'llab-quvvatlaydi.

Ushbu ilovada yaratilgan vazifalar trening tarkibiga kiritiladi va kerak bo'lganda o'zgartiriladi. LearningApps-dan foydalanish talabaga umumiy foydalanish imkoniyati bo'lgan interfaol bloklarni yaratish, fikr va tajriba almashish uchun o'qituvchilar bilan birgalikda o'quv vazifalarini ishlash uchun imkon yaratadi. Shuning uchun mashqlar aniq ssenariylarga kiritilmagan va bir-biri bilan qattiq bog'liq emas.

Xizmatda har kuni turli mamlakatlar o'qituvchilari tomonidan yaratilgan yangi materiallar bilan yangilanadigan ommaga taqdim etiladigan interfaol vazifalar galereyasi mavjud. Shuni ta'kidlash kerakki, topshiriqlarning to'g'riligi darhol tekshiriladi.

Yuqorida qayd etilganlardan, ta'limda bulutli texnologiyalardan foydalanish dolzarb va istiqbolli ekanligi ayon bo'ladi. Zamonaviy bozorda taqdim etilayotgan bulutli xizmatlar oliy ta'lim muassasalari o'qituvchilari uchun katta imkoniyatlar ochadi va o'quv jarayonini o'tkazish uchun vaqt va mehnat sarfini sezilarli darajada kamaytiradi.

Ta'kidlash joizki, o'quv jarayonida bulutli texnologiyalardan foydalanish xarajatlarni sezilarli darajada kamaytiradi, shuningdek hisoblash resurslaridan foydalanish samaradorligini oshiradi. Bundan tashqari, bulutda saqlanadigan

ma'lumotga dunyoning istalgan burchagidan Internetga ulangan kompyuter yoki mobil qurilmaga ega har qanday foydalanuvchi kirish huquqiga ega.

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SOME GEOGRAPHICAL ASPECTS OF TOURISM FORMATION IN UZBEKISTAN

Abstract. The article examines some of the country's potential as a tourism destination. The issues of organizing international (pilgrimage, mountain, ecological, etc.) tourism in Uzbekistan are highlighted. Also, recommendations on the development of tourism are given.

Key words: tourism, pilgrimage tourism, mountain tourism, ecological tourism, historical tourism, sanatorium, resort, mineral water, mud.

Enter. Countries of the world are paying great attention to international tourism in order to effectively use the available natural resources. Tourism has become an important source of income for the economy of many countries in the world. Effective use of tourist resources and, first of all, the organization of a developed tourist industry and recreation is one of the important directions in solving the problems of socio-economic development of the country. At the same time, the problem of employment of labor resources in the country can be solved positively. Development of tourism paves the way for the expansion of socio-economic relations between countries and nations and allows for the improvement of skills for various professions. Therefore, conducting research and developing recommendations aimed at the development of various types of tourism in different regions of Uzbekistan has an important scientific and practical significance.

The main part. The modern tourism industry is one of the large sectors of the economy that bring high income and are rapidly developing, and it serves as a practical dialogue in the field of culture of the peoples of the world. Tourism is one of the main areas of income in many countries of the world. Globally, tourism is one of the fastest growing sectors, and in recent years, more than 10 percent of the world's labor resources are directly engaged in the tourism sector. However, one of the sectors that has suffered the most from the crisis caused by the coronavirus is the tourism sector, information about this is presented below (Table 1). Before the pandemic, the number of international tourists reached 1.5 billion people, but in 2020, this figure was equal to 381,000 people, a decrease of 74 percent.

Table 1**Number of people involved in international tourism activities**

Years	1950	1980	2000	2015	2019	2020	2030
Number of tourists, million	25	278	674	1,2	1,5	381	1,8

Source: UNWTO, 2016:1, Worldometers, 2017. 2 UNWTO, 2016

Due to the impact of the COVID-19 pandemic on aviation, according to the International Air Transport Association (IATA), the number of people employed in the sector fell from 46 million to 41.7 million in 2020, leading to a loss of 52.5% of jobs, while tourism reduced to 58 percent.

In particular, in 2019, when the pandemic began in Uzbekistan, the number of foreign tourists who visited our country was 6.7 million. made up 1.9 million people in 2021. From 2022, the situation began to improve somewhat, but it is still at a level much lower than the indicators of the period before the pandemic (Table-2).

Table 2**Visit of foreign tourists to Uzbekistan in 2019-2021**

Years	2018	2019	2020	2021	2022	2023
Number of tourists, million	53	6,7	1,5	1,9	5,9	6,5

In 2020, 4.5 times less foreigners and stateless persons visited Uzbekistan than in 2019.

The tourism potential of countries is directly related to the level of socio-economic development of the region, natural complexes, that is, natural conditions, development of technical infrastructure, service system, development of culture, art, science, that is, in a word, with the natural and economic-geographical location of the country. depends. In particular, Uzbekistan is fundamentally different from many countries of the world in terms of its opportunities in the field of international tourism.

In recent years, Uzbekistan has been active in taking high places in the field of tourism along with other leading countries of the world. In particular, according to many international publications, our country has become one of the most attractive tourist destinations in 2020. And again, in the list of cities that should be visited by The Telegraph newspaper of Great Britain, information is given about the city of Tashkent, the heart of our country. By the end of 2019, 6,748 million people visited Uzbekistan, which is 125% more than the statistics of 2018, i.e. 5,346 million people. At the same time, the export of tourism services amounted to 1.313 billion dollars, and in 2018 it was equal to 1.041 billion dollars. After the pandemic in Uzbekistan, the number of foreign citizens has increased

since 2022. In the table below, we can see the analysis of the purpose of tourists coming to Uzbekistan (Table 3).

Table 3

Purpose of visiting foreign nationals

To see relatives	To relax	For treatment	Regarding the service	Тижорат учун	For study purposes
2,2 million people	169,8 thousand people	44,4 thousand people	38,8 thousand people	9,1 thousand people	2,4 thousand people

Compiled by the author based on the data

Source: *Statistics Agency.*

It is known from the table that most of the tourists visited Uzbekistan to see their relatives and to relax.

Diagram 1 below shows which countries' citizens visited Uzbekistan the most for tourist purposes in 2023.

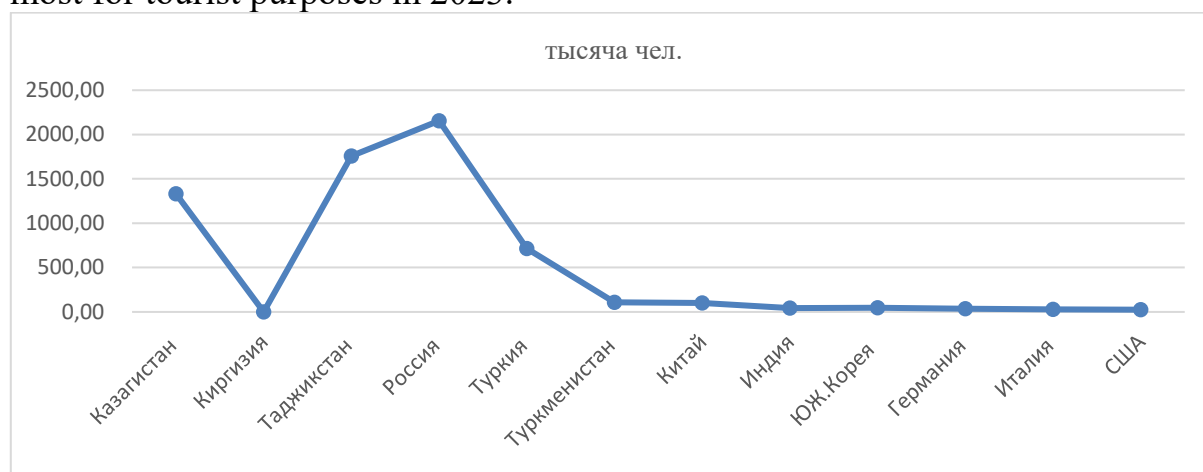


Diagram 1. The number of foreign citizens visiting Uzbekistan by country (per thousand people). Source: *Statistics Agency. Tourism Committee under the Ministry of Ecology, Environmental Protection and Climate Change*

In Uzbekistan, especially in the post-pandemic period, the number of tourists visiting such directions as mountain tourism, health tourism and ecological tourism has increased. It is no secret that our country is one of the mountainous regions, that mountains occupy 31.3 percent of the territory of Uzbekistan and that more than 10 percent of the country's population lives here. The mountain climate, clean and clear water, the wide distribution of fir groves, wonderful natural landscapes, different forms of relief, rock formations created during weathering attract the attention of tourists [1; 321. 6; 81-83]. A lot of snow in winter and it does not melt for a long time. The number of tourists increases mainly in the spring and autumn months in the direction of mountain tourism. In order to attract tourists in the mountain regions in winter and summer, increasing the number of holiday homes in the heart of nature and improving the conditions will increase the tourist capacity. The existence of water basins of rivers, foothills,

desert and hilly regions with natural-territorial regions is an impetus for the development of hunting tourism in our republic [4; 243-245. 5; 97-100].

A trip to spas and health centers is not only a treatment, but also a planned activity for recovery and treatment of chronic diseases in thermal medical facilities. The mountainous regions of Uzbekistan have precious and so far little-studied healing mineral water sources, climatic features and sports-health facilities. Mountain and sub-mountain regions are very rich in mineral waters, and there is a large reserve of sulfur, iodine, radon and weakly mineralized, alkaline, thermomineral waters used in medicine [3; 69-71]. On the basis of these sources, physiotherapeutic hospitals, sanatoriums and other health care facilities were established in the country [2;133-135]. More than 200 healing underground mineral water and mud sources have been identified in different regions of Uzbekistan. These underground waters are different according to their chemical composition, medical-biological and other properties. Today, the number of sanatoriums and resorts in Uzbekistan and their capacity are not enough for the use of the local population. It should be noted that the territory of Uzbekistan is a country with contrasting nature with plains and deserts located between mountains (Chirchik-Ohangaron, Fergana valley, Kitab-Shakhrisabz bog, etc.). Uzbekistan has many rivers (Chirchik, Zarafshan, Sokh, Isfara, Kashkadarya, Surkhandarya, etc.), lakes (Arashon Lake, etc.) and healing mineral springs (Turon, Chortoq, Abu Ali ibn Sina, Amonkhona, etc.). Today, there are more than 57,318 special sanatorium, prophylactic and rest houses in our country, which are important for the expansion of the domestic and foreign tourism network. This direction of tourism leads to the development of internal and external tourism in the regions, and increases the level of employment of the local population. For this, it is necessary to establish sanatoriums and spas with a large capacity.

To increase the attractiveness of the region, its historical and cultural potential plays a major role in the development of tourism. It includes historical monuments, architectural shrines and other spiritual and cultural monuments, folk crafts, museums. There are more than 7,400 cultural heritage sites in Uzbekistan, 209 of which are included in the list of UNESCO World Heritage Sites. In addition, the republic has 11 national parks and state reserves, 12 nature reserves, 106 museums and many other tourist attractions. For example, in order to develop tourism of historical monuments, it is appropriate to organize a trip to historical monuments in the cities of Bukhara, Khiva, Samarkand, Shahrisabz, Tashkent and various regions and districts of our republic. The development of tourism, the construction of additional roads, the creation of tourist routes, creates environmental challenges: although these resources can add additional value to the development of the region and the country, it is necessary to protect them from damaging the natural and cultural heritage.

Summary. Today, in order to develop tourism in Uzbekistan, to expand the service system for tourists and to create all conditions for them, a lot of money is allocated for the construction of new tourist complexes, hotels, campsites and

restaurants, bars. For the development of tourism, there are great tasks related to the creation of new jobs, new types of tourism, and the organization of tourist services. In particular, in the following years, the increase in the number of countries using the simplified visa regime, and the introduction of the system of issuing and issuing electronic entry visas greatly contributed to the development of the sector. This, without a doubt, will increase the level of well-being of the population in our country. At the moment, we must focus all our efforts on the development of domestic (local tourism and pilgrimage) and foreign tourism. It is also of practical importance to attract foreign investments to tourism organizations, to establish new tourist destinations, to improve the training of qualified personnel at a high level in the regions, and to make the service equal to world standards. If the tourism sector is developed in the republic, it will have a significant impact on the country's economic development and can increase foreign exchange earnings.

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EFFECTS OF IRRIGATION REGIMES ON HIGH AND QUALITY YIELD OF REPLANTED SOYBEAN CULTIVARS. (IN THE CONDITIONS OF MEADOW GRAY SOILS OF ANDIJAN REGION)

Annotation. This article highlights the scientific research of modern factors about the seed production system for growing and multiplying the gross potato product and increasing yields, as well as the introduction of irrigation regime.

Key words: irrigation regime, vegetation period, irrigation technique, irrigation technologies, irrigation methods, irrigation duration, irrigation rate, water flow, water use coefficient.

The total water reserve on our planet is 1454.3 million cubic kilometers, and only 3 percent of it is fresh water. Of this 3% water, only 0.3% can be used. Therefore, using it carefully and sparingly is the most important task.

80% of plants, and 90% of some agricultural crops, are made up of water. 4-5 g of water is needed to form 1 g of dry matter. From this point of view, it seems that the plant has an excess of water, but when we consider the water consumption of different crops, we come to a different opinion. Winter wheat is a plant that consumes water very sparingly, it consumes 450-600 g of dry matter, spring wheat - 340-500 g, barley - 300-350, and sorghum - 200-300 g of water. Water consumption of red clover is 310-900 g, but it consumes water slowly. A rice plant consumes 600-800 g even if it is constantly in water.

So, plants use only 0.2% of the water they receive for the formation of organic matter, and the remaining 99.8% goes to evaporation and transpiration.

It should be noted that transpiration is the main means for plants to obtain the necessary nutrients from the soil. Therefore, it is necessary to selectively plant crops in different soil conditions according to the level of water supply.

In order to meet the population's demand for agricultural products, it is necessary to obtain a high yield from crops, at the same time, to achieve low-cost and high-quality raw materials, as well as efficient use of water and nutrients used for their cultivation.

Despite the above-mentioned water problems in the agriculture of our Republic, in the following years, the methods of watering the soybean plant, which have a favorable effect on soil fertility among repeated crops, and the water balance have not been fully studied. However, we considered it appropriate to present the results of scientific research conducted in soil and climate conditions of other countries.

ChDNS – limited field moisture capacity is the most important of soil water properties. ChDNS refers to the maximum amount of water that can be accumulated and retained in the soil for a long period of time due to suction power. This indicator depends on the mechanical and mineralogical composition of the soil, the amount of humus, the state of granularity, porosity and density. Field moisture capacity is of great importance in practical reclamation and irrigated agriculture. It is only when ChDNS is determined that irrigation rates, salt leaching rates, and transpiration rates of highly waterlogged soils can be determined. The best time to determine ChDNS is spring, when the soil has not yet compacted after autumn plowing. Therefore, we determined the ChDNS ability of the soil of the experimental field after wheat (Table 1).

It should be noted that in both varieties of soybeans, irrigation standards and periods were determined according to the same soil moisture. According to the data, the average of the samples taken from 6 points in the 0-30 cm layer was 23.7%. At 30-50 cm, this indicator was 23.8%, at 50-70 cm - 22.6%, at 0-50 cm - 23.9%, and at 0-70 cm - 24.4%. These indicators were used as a basis for determining the watering norms of soybean varieties at specified soil moisture levels (70-70-60; 70-75-70 and 70-75-75% compared to ChDNS).

Table 1

Limited field moisture yield (ChDNS) of grassland gray soils, in % (2021)

Soil layer, cm	Moisture detection points						Average
	1	2	3	4	5	6	
0-30	23,0	23,4	23,5	23,6	23,5	25,2	23.7
30-50	23,7	23,8	23,0	23,9	23,0	25,1	23.8
50-70	21,9	22,9	22,5	22,8	22,5	22,8	22.6
70-100	20,9	22,9	21,4	21,8	21,7	24,7	22.2
0-50	23,6	23,4	23,8	23,5	23,8	25,7	23.9
0-100	25,3	22,8	22,8	22,9	22,8	26,8	24.0

It should be noted that the duration of watering soybeans planted in repeated cropping conditions mainly depends on the actual moisture content of the soil. This can change depending on the climatic conditions of the year in relation to the mechanical composition of the soil, the organic part and the salinity level.

In our research on crop irrigation, irrigation rates were calculated based on S. N. Ryzhov's formula.

$$M = (W_n - W_m)100\lambda h, \text{ m}^3/\text{га}$$

In this case: W_n is the field moisture capacity in relation to the weight of the soil, %, we wrote about this indicator of the experimental field in section 3.1.1,

and ChDNS in the 0-50 cm and 0-70 cm layers was 23.6 and 23.2%, respectively.

W_m – soil moisture before irrigation, %

λ – volume weight of soil, g/cm³

h – considered soil layer, cm

The second irrigation was carried out on August 11, and the irrigation rate was 1100 m³/ha, and the period between irrigations was 27 days. Soil pre-moisture was 70-75-70 in relation to ChDNS. (from 900-650 and 930 m³/ha) seasonal irrigation rate was 2489 m³/ha.

To sum up, in the conditions of meadow gray soils of Andijan region, near the seepage waters, if the seeds of soybean varieties planted as a repeated crop are treated with rhizotorphin at the specified rate and the irrigation system is 1-1-1, the soil moisture before irrigation is 70-75-70% compared to ChDNS. it was observed that optimal conditions were created for the growth and development of plants.

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“LAYLI VA MAJNUN” DOSTONIDAGI ANTROPONIMLAR

Annotatsiya. Maqolada Alisher Navoiyning “Layli va Majnun” dostonidagi antroponimlarning leksik xususiyatlari yoritildi. Dostonning onomastik ko‘lami, ya’ni atoqli otlarning qo‘llanilish masalalari tahlil etildi.

Kalit so‘zlar: o‘zbek tili, onomastika, antroponimlar, ism, laqab, taxallus, “Layli va Majnun” dostoni.

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ANTHROPONYMS IN THE EPIC POEM "LAYLI AND MAJNUN"

Abstract. The article describes the lexical features of anthroponyms in Alisher Navoi's epic "Layli and Majnun". The onomastic scope of the epic poem, especially, the issues of using proper nouns, was analyzed.

Key words: Uzbek language, onomastics, anthroponyms, name, nickname, "Layli and Majnun" epic poem.

KIRISH VA DOLZARBLIGI.

Qadimiy tarixiy nomlar xalq tarixining o‘ziga xos darakchilaridir. Atoqli otlar, o‘zida lisoniy xususiyatlardan tashqari, qimmatli tarixiy, etnografik, geofizik, etikaviy va hattoki arxeologik ma’lumotlarni ham mujassam qilgan bo‘ladi. Atoqli otlar qadimiy ajdodlarimiz bizga qoldirgan buyuk madaniy lisoniy merosdir. Bu merosda xalqimizning tarixiy xotirasi o‘z ifodasini topgan. Shu sababli keyingi yillarda o‘tmish davrlarga oid tarixiy nomlarni tiklash va asrashga doir harakatlarning kuchayganligi seziladi. Shu jihatdan oliy qadriyat hisoblanmish tilimizni har tomonlama o‘rganish, uni yanada takomillashtirish dolzarb vazifalardan biriga aylandi.

So‘z mulkining sultoni – Alisher Navoiyning asarlari necha asrlar o‘tsa hamki, o‘z qiymatini hamda ahamiyatini yo‘qotmay kelmoqda. Xalqimiz orasida, nafaqat xalqimiz, balki butun dunyoda uning ijodi katta qiziqish bilan o‘rganilib kelinmoqda. Bunga sabab esa Navoiy asarlari qamrovining kengligi, har davr uchun muhim sanalgan ma’naviy-ma’rifiy mavzularga boyligi va shu bilan birga, ulkan iste’dod namunasi ekanligidir. Ijodkorning ko‘plab asarlari mashhur hisoblanib, ularning orasida, ayniqsa, “Layli va Majnun” dostoni o‘zining dolzarbligi va ahamiyatligi bilan alohida ajralib turadi. Biz o‘z maqolamizda

Alisher Navoiyning “Layli va Majnun” dostonining onomastik ko‘lamini, ya’ni atoqli otlarning qo‘llanilish masalalarini o‘rganishga harakat qildik.

METODLAR VA O‘RGANILISH DARAJASI.

Navoiy asarlari tili leksikasi, uning har bir asarlari alohida-alohida ilmiy tadqiqot mavzusi sifatida o‘rganilgan bo‘lsa-da [1;2;3;4], tarixiy leksikologiya yo‘nalishida kompleks tadqiq etilmagan. Bu esa mutafakkir asarlari tilini, xususan leksikasini leksik-semantik, leksik-stilistik, leksikografik, onomasiologik nuqtayi nazardan tadqiq etish zaruriyatini keltirib chiqaradi.

Alisher Navoiy asarlaridagi onomastik birliklarning etimologiyasi, semantikasini aniqlash hamda grammatik xususiyatlarini hisobga olishda qadimgi etnonimlar, antroponimlar, o‘simlik, hayvonlarning o‘sha davrdagi nomlari, toponimlarning grammatik tuzilishiga doir mulohazalar g‘oyat katta ahamiyatga egadir. Sh.Yoqubov “Navoiy asarlari onomastikasi” mavzusidagi dissertatsion tadqiqotida o‘zbek nomshunoslari o‘zbek tili atoqli otlari tizimini o‘rganish bo‘yicha jiddiy ishlarni amalga oshirganini e’tirof etish bilan birga bu sohada qilinishi kerak bo‘lgan bir qator ishlar mavjudligini aytadi. Ayniqsa, o‘zbek adabiy onomastikasi yoki badiiy onomastika deb yuritiluvchi atoqli otlar tizimining deyarli tadqiq qilinmaganligini qayd etish o‘rinlidir” – deydi tadqiqotchi. Bu jihatdan “Layli va Majnun” dostoni nihoyatda boy material beradi.

TADQIQOT NATIJALARI.

Antroponim – shaxs (inson)ning atoqli otidir. Antroponimiya biror tildagi shaxs atoqli otlarining majmuidir. Antroponimlar makroko‘lamiga kiradigan nomlar quyidagi atoqli otlardan tashkil topadi: 1) ismlar; 2) laqablar; 3) familiyalar; 4) otasmlar; 5) taxalluslar; 6) shaxsni nomlashning boshqa xil tarixiy shakllari.

Sh.Yoqubov “Navoiy asarlari onomastikasi” mavzusidagi dissertatsion tadqiqotida 1103 dan ortiq antroponim mavjudligini ta’kidlaydi [5: 6].

“Layli va Majnun” dostonidagi antroponimlar makroko‘lamiga kiradigan ismlar, laqablar, taxallus va shaxsni nomlashning boshqa xil tarixiy shakllari yuzasidan qilingan tadqiqot ishlariga suyangan holda tadqiq qildik.

Ism – yakka shaxsni o‘zgalardan oilada (avlodda va umuman jamiyatda) farqlash uchun unga go‘daklik davrida beriladigan atoqli ot.

Ismlarning etnografik ma’nosi muayyan ismning paydo bo‘lishi, tanlanishi va chaqaloqqa berilishiga asos, sabab bo‘lgan tushunchalarning ifodalanishidan iboratdir.

Alisher Navoiy asarlari onomastikasini o‘rgangan Sh.Yoqubov ismlarni 3 guruhga ajratadi:

1. Tarixiy nomlar;
2. Afsonaviy nomlar;
3. To‘qima nomlar [5: 6].

Shu asosda “Layli va Majnun” dostonida qo‘llanilgan ismlarni quyidagi guruhlariga ajratdik:

- 1) real, ya'ni hayotiy shaxslar atoqli oti;
- 2) obrazlarning to'qima atoqli oti;
- 3) afsonaviy (mifologik) shaxslar atoqli oti.

1. Real, ya'ni hayotiy shaxslar atoqli oti. *Navoiy asarlarida o'zi bilan zamondosh bo'lgan ko'plab tarixiy shaxslarning nomlarini keltiradi.* Sh.Yoqubov Navoiy "Majolisun nafois" asarida 459 nafar shoirning nomini tilga olganligini qayd etadi [5: 7].

“Layli va Majnun” dostonida ham bir necha tarixiy shaxslar, ularning faoliyati va sarguzashtlari tasvir etiladi. Bular shohlar, viloyat hokimlari, din namoyondalari, ilm-fan, san'at va adabiyot ahillari va boshqa ijtimoiy guruhdagi lavozim va kasbkordagi kishilardir.

Filotun (Aflotun) – qadimgi yunon (grek) faylasuflaridan bo'lib, Suqrotning shogirdi va Arastuning ustozidir. Eramizdan ilgari 427 yilda tug'ilib, 347 yilda vafot etgan.

Ot solsa jahon eliga Majnun,
Bir kuyguchi bo'lg'usi *Filotun*.

Sulton Husayn Boyqaro – Temur ko'ragon naslidan bo'lib Mirzo Manmur binni Mirzo Boyqaroning o'g'lidir. U 1438 yili tug'ilgan, 1469 yili Hirot taxtiga o'tirib, 37 yil hukmronlik qilgan. Navoiyning bolalikdagi do'sti bo'lgan. U Husayniy taxallusi bilan she'rlar yozgan. Bizgacha uning devoni yetib kelgan. Uning qalamiga nasriy «Risola» ham mansub. U 1506 yilda Hirotida vafot etdi. Husayn Boyqaro imkon boricha mamlakatda ilm-ma'rifatni, madaniyatni taraqqiy ettirishga intildi.

Bor edi shahi sipehr tamkin,
Ya'niki, muizzi davlatu din.
Din nusratining alam tirozi,
Ya'ni *Sulton Husayni* g'ozi

G'oziy – Husayn Boyqaroning unvoni bo'lib «*Shohi G'oziy*» deb ham yuritiladi.

Sulton Badiuzzamon Mirzo – Husayn Boyqaroning katta o'g'li. Astrobod viloyatining hokimi, otasi vafotidan so'ng ukasi Muzaffar Mirzo bilan birga mamlakatni boshqaradi. Navoiy «Majolis un-nafois»da u haqda shunday deydi: «Husni surat va husni sifat bila orasta va jamoli zohiriy va kamoli botiniy bila piqrosta yigitdur. Razm atvoridin otar-tutarda dilpisand va bazm asbobidan ichmak va bag'ishlamoqda bemonand. Tab'i hach nazm uslubida muloyimdur». (Navoiy, Asarlar, 12-tom, 174-bet).

Olam eli ichra qahramon ul,
Ya'niki, *Vadiuz-zamon* ul

Shahzoda Uvays – Sulton Husayn Boyqaroning akasining o'g'li. Navoiy dostonning XXXVII bobida shunday deydi: "Shahzodai sipehr janob va sipehri xurshed intisob, ya'ni Sulton Uvays Bahodir madhida so'z intihosi va nasoyih bisotida ko'p la'l va durri maknun va mavoiz xonida favoqih va niami guno-gun ul hazratqa quloqqa olmoq va og'ziga solmoqning salosi".

To so‘zda falak nishonlig‘ aylay,
Axtar kibi durfishoilig‘ aylay.
Topqach duri bahru la'li koni,
Shahzoda nisori aylay oni.
Shahzodai ma'dalatshior ul,
Yetti ato shohu shahriyor ul.
Sultoni zamon, **Uvays** ul shoh,
Kim, charx anga keldi xoki dargoh.

Iskandar – Dostonda Iskandar tomonidan temirga sayqal berib yaratilgan oyina haqida gap boradi. Go‘yo unda Jamshidning jomidagidek, shu asnoda bo‘layotgan narsalarni ko‘rsa bo‘lar ekan. Iskandar (356-323) eramizdan avval yashagan makedoniyalik Filippning o‘g‘li. Yoshligidan harbiy salohiyat paydo qilib, Eron, Arabiston, Hindiston kabi mamlakatlarni ishg‘ol qilgan. Badiiy adabiyotda Iskandar qudratli hukmdor timsoliga aylangan.

Ul oyinakim **Skandar** etti,
Po‘loddin o‘yla paykar etti.
Kim, Rum aro chekib manori,
Boqturdi ani Farang sori.

Uvays – Shayx Uvays Qaraniy, Alisher Navoiy«Nasoim ul-muhabbat» asarida Uvays Qaraniy to‘g‘risida, jumladan shularni yozadi: «*Goh-goh Xojai olam muborak yuzin Yaman sori qilib der edikim, men xudoning taxtini Yaman tomonidan topdim*». Yuqoridagi talmih orqali ana shu haqiqatga ishorat qilingan.

Yo‘q, yo‘qki, **Uvays** ko‘ngli tobi,
Qilg‘ay qora tunni mohtobi.

Taxallus – (arabcha – o‘zini o‘zi qutqarish, ozod qilish, xolos bo‘lish) biror ijodkor (shoir, yozuvchi, rassom, olim va sh.k.) yoki siyosiy arbobning o‘zi uchun tanlab olgan boshqa, ikkinchi nomi [6: 14].

Alisher Navoiyning "Layli va Majnun" dostonida juda ko‘plab taxalluslarni uchratish mumkin. Jumladan, *Xusrav Dehlaviy, Nizomiy, Jomiy, Suhayliy, Navoiy* kabi.

Anqo gar emas nedin hamisha,
So‘z Qofida uzlat etti pesha.
Nazm ahlining afsahul-kalomi,
So‘z durrig‘a muntazim **Nizomiy**

Afsonalari jahonda nomiy,
Nazm aylab **Xusravu Nizomiy**.

Abdurahmon Jomiy – (1414 yil Jom viloyatining Xargarda dahasida tug‘ilib 1492 yili Hirotda vafot etgan) fors-tojik adabiyotining yirik namoyandasi genial shoir mutafakkir olim, Navoiyning yaqin do‘sti va ustozidir.

Abdurahmondin oti nomiy,
Lekin topib ishtihor **Jomiy**.

Suhayliy – Shayx Ahmad Suhayliy – XV asrning II yarmida yashab ijod etgan forsigo‘y shoir. 1465-1469 yillarda Navoiy Samarqanddalik vaqtlarida Shayximbek Suhayliy ham u bilan birga bo‘lgan. 1469 yilda Navoiy bilan Hirotga kelgan va Sulton Husayn Boyqaro xizmatiga kirgan. Navoiy uni ardoqlab yori aziz der edi.«Suhayliy» taxallusi qilur uchun, Sayxim Suhayliy derlar erdi», – deb yozadi Bobur.

Suhayliyning «Layli va Majnun» dostoni o‘z davrida mashhur bo‘lgan.

Kim, ishq so‘zin rivoyat aylab,

Ham bu ikidin hikoyat aylab.

Andoqki bo‘lub demakka mayli,

Nazm avjining axtari **Suhayli**.

2. Obrazlarning to‘qima atoqli oti. Dostondagi obrazlarning to‘qima atoqli otlariga quyidagilarni keltrish mumkin:

Majnun – Qaysning laqabi bo‘lib, telba, devona, jinni demakdir. «Sharqdagi eng mashhur qahramonlardan. Qadimiy arab manbalarining shahodat berishicha, Majnun tarixiy shaxs bo‘lib, Arabistondagi Bani Omir qabilasiga mansub bo‘lgan. Majnunning oshiqlik qismati haqida Sharqda juda ko‘p rivoyatlar to‘qilgan. U Nizomiy, Dehlaviy, Navoiy kabi ulug‘ san'atkorlarning ijodida fojiviy qahramon sifatida o‘rin egallagan» [7: 235].

Ey kimniki aylabon parivash,

Majnun anga yuz asiri g‘amkash,

Ey kimni qilib parig‘a Majnun,

Ashki suyini oqizib jigargun.

Qays – Majnunning asl nomi.

So‘z darsini ulki berdi ta'lim,

Bu nav' etti fasona taqsim.

Kim, **Qaysg‘a** ilm uchun murag‘g‘ib,

Har yon chu tilattilar muaddib.

Layli arab manbalarida kichik epizod obraz – ko‘rinishga ega bo‘lgan. Ibn Qutayba o‘zining «Kitob ush-she'r vash-shuaro» nomli asarida Layli haqida so‘zlash Majnunni gapirtirish uchun asosiy kalit edi, deganmuhim fikr bildiradi. Nizomiydan boshlab, bu fikr mahorat bilan rivojlantirildi va Layli dostonida mukammal, etuk, barkamol ayol obraziga – sevgi va vafo ramziga aylantirildi. Ayni vaqtda dostonida Navoiy Layli va Majnunlar obrazi orqali majozni oshiqma'shuqlar timsolini gavdalandirgan.

Ey oniki **Layli** aylab otin,

Majnun qilmoq qilib sifotin,

Ey Majnunung xiraddin ozod,

Ohi beribop xiradni barbod,

Ey aql sening yo‘lungda g‘ofil

Kim, telba sening yo‘lungda oqil.

Navfal – Arab qabilalaridan birining boshlig‘i, dostonida Majnunning holatini tushungan, uning xaloskori sifatida bayon etilgan. I.Y.Krachkovskiyning fikriga ko‘ra Navfal ham tarixiy shaxsdir.

Navfal garchi davlatmand bo‘lsa-da, inson qadri-qimmatini, uning ichki kechinmalarini chin yurakdan tushunib, yuqori baholandi. Navfal Majnunning ishqini tushunib, yordamlashsa ham, lekin uning odamlardan uzoqlashib, tog‘- dashtlarda, yovvoyi hayvonlar orasida yurishini qoralaydi.

Navfal qoshida surub hikoyat,

Ul qissani qildilar rivoyat.

Navfal dag‘i ishq ko‘rgan erdi,

G‘am dashti aro yugurgan erdi.

Zayd – Laylining qabiladoshi. U ikki oshiq-ma‘shuqqa hamdard» ularga xat etkazib turadi. Layli va Majnun sevgisini, ular xarakterini to‘laqonli chiqishida vositachi obraz sifatida dostonidagi o‘rni muhimdir.

Yuz uzr ila *Zayd* sori boqib,

Hasrat suyi ko‘zloridin oqib:

«Key tan aro jon berib kaloming,

Jisming‘a ravon berib payoming!

Yusuf – Sharq xalqlari adabiyotida mashhur bo‘lgan «Yusuf va Zulayxo» afsonasining bosh qahramoni. Ya‘qub payg‘ambarning o‘g‘li, akalari tomonidan ko‘p aziyat chekkan – chunonchi, cho‘lda adashtirilib, quduqqa tashlangan, qul qilib sotilgan va hokazo. Bu yerda Qaysning yo‘qolishi Yusuf bilan bog‘liq o‘sha voqealarga o‘xshatilmoqda. Sharq adabiyotida Yusuf obrazi go‘zallik va poklik ramziga aylanib ketgan.

Andin bo‘lub ul guruh afgor,

Itgon *Yusuflarin* talabgor.

Parvez – Xusrav Parvez – Sharq xalqlari og‘zaki ijodi va yozma adabiyotida keng tarqalgan obraz. Uning tarixiy ildizi sosoniy podshohlaridan Xusrav Parvez (VI asr oxiri) faoliyatiga borib taqaladi. Badiiy adabiyotda, chunonchi, Firdavsiyning «Shohnoma»si, Nizomiyning «Xusrav va Shirin»ida ideal shoh, Navoiyda esa Xusrav mutlaqo salbiy qahramon sifatida talqin etiladi.

Sahroda ne lola bo‘lsa barbod,

Parvez kulohidin berur yod.

Jamshid – Eronning qadimgi podshohlaridan biri. Jamshid jomi – Jamshid yasattirgan tilsimli jom. (Navoiyning ta‘rificha, Jamshid hakimlarga buyurib, ikkita jom yasattirgan, birining oti Jomi ishratfizoy – bu jomdagi may ichgan bilan tugamas, to‘liq turaverar va qiyshaytirilsa ham to‘kilmas ekan. Ikkinchisining oti Jomi gitiynamoy — bu jomda dunyoda yuz bergan hodisalar ko‘rinib turar ekan. Bu jomni – Jomi jahonbin ham deydilar).

Har sharbat ayog‘i jomi *Jamshed*,

Har sadqa fatiri qursi xurshed

3. Afsonaviy (mifologik) shaxslar atoqli oti.

Jibril – Jabrail so‘zining qisqargan shakli. Xudo bilan payg‘ambar o‘rtasida vositachi, vahiy keltiruvchi farishta nomi.

Nomang vale andakim bo‘lub fosh,
Xattidin Ulus ko‘tarmayin bosh.
Ey po‘yada markabingg‘a ta‘jil,
Olingda haqir payki **Jibril**.

Sulaymon – islomda payg‘ambar va shon-shavkatli podshoh hamdir. Rivoyatlarga ko‘ra, unga eru osmon, shamol, devu pari, barcha hayvonot olami bo‘ysungan. Unish taxtini devlar ko‘tarib shamol uchirib, qushlar esa boshiga soyabon bo‘lishar ekan. Bir Kun Hudhud Sulaymonga Sabo shahri va uning malikasi Bilqis haqida xabar keltiradi. Bu ikki baytda shunga ishora qilib talmeh orqali Jabrailning Muhammad payg‘ambarga xabar yetkazib turishini Hudhudning Sulaymonga xabar yetkazishiga qiyos etilmoqda.

Hudhudg‘a ne moya, qadru somon,
Sayr aylasa er uza **Sulaymon**
Ey zumrai anbiyo shaffi,
Olam eli buyrug‘ung mutii.

Qorun – behisob boylikka ega bo‘lgan diniy afsonaviy shaxs. Navoiy o‘zining «Tarixi anbiyo va hukamo» asarida Qorunni Muso payg‘ambar qarindoshlaridan ekani, ilmu fazilatda o‘tkir, ayniqsa, kimyo fanida mohir, qobiliyatli kishi bo‘lganini yozadi.

*So‘z gavhari vasfidakim, gavhar so‘zi aning qoshida gavhar olida bir qatra suvdek bo‘la olg‘ay, bir necha so‘z surmoq va Ganja hakimi ta‘rifidakim, ganji **Qorun** aning «Panj ganji» qoshida ganj olida vayronadek ko‘rungay – ganjfishonliq qilmoq va Hind sohirinikim, Kashmir jodulari aning olida ip esha olmaslar — aning gavhari silkiga tortmoq va o‘z nazmining churuk rishtasin va uzuk torin ham alarg‘a ulamoq.*

Xizr – Afsonaga ko‘ra«obi hayvon» (tiriklik suvi)ni izlab topgan va undan ichib doim tirik yurgan – bir payg‘ambarning nomi. Kishilarga hamrohlik qilishi bilan mashhur. Baytda shunga ishora qilinadi.

Yo‘q, yo‘qki, shubonliq ichra Muso,
Ilgingda aso ham ajdaroso.
Muso neki, **Xizri** rohim o‘ldung,
G‘am zulmatida panohim o‘ldung.

XULOSALAR.

Xulosa qilib aytganda, “Layli va Majnun” dostonidagi antroponimlarni o‘rganish so‘z qo‘llash tarixini mukammalroq yoritishga, so‘zlarning tarixiy-etimologik qiyofasini aniqlashga, so‘zlarning diaxronik o‘zgarishlari va sinxron holatdagi shaklini, o‘rganilayotgan tilga qardosh va qardosh bo‘lmagan tillarning leksik jihatidan ta‘sirini baholashga, so‘zlarning leksik-semantik, semantik-uslubiy xususiyatlarini kengroq yoritishga imkoniyat beradi.

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MINERAL O'G'ITLARNING G'ALLA EKINLARINI PARVARISHLASHDA XISILDORLIK VA DON SIFATIGA TA'SIRI

Annotatsiya. Maqolada kuzgi bug'doyni sug'oriladigan yerlarda hosildorlik va don sifatiga o'g'itlash me'yorlari, tuproqni ishlash va boshqa omillarni ta'siri bo'yicha ma'lumotlar keltirilgan. Kuzgi bug'doy doni tarkibidagi oqsil va kleykovina miqdorini oshirish bo'yicha xulosalar qilingan. Hamda kuzgi bug'doy don sifatini oshirishi bug'doy yetishtirishda iqtisodiy samaradorlikka bevosita ta'sir etishi ko'rsatilgan.

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THE INFLUENCE OF MINERAL FERTILIZERS ON PRODUCTIVITY AND GRAIN QUALITY IN THE CULTIVATION OF CEREAL CROPS

Abstract. The article provides information on the influence of fertilization standards, soil management and other factors on the yield and grain quality of winter wheat in irrigated lands. Increasing the amount of protein and gluten in winter wheat grain conclusions have been made. It was also shown that the improvement of the quality of winter wheat grain has a direct effect on the economic efficiency of wheat production.

Qishloq xo'jaligida iqtisodiy islohotlarning izchil o'tkazilishida, aholining turmush farovonligini tubdan yaxshilashda g'allachilik ravnaqi, xususan g'alladan mo'l va sifatli hosil yetishtirish g'allakorlarimiz oldida turgan muhim masalalardan biridir. Hozirgi kundagi asosiy vazifalardan biri kuzgi bug'doyning don hosildorligi bilan birga donining sifat ko'rsatkichlarini ham oshirishdan iborat. Bu esa, olimlarimiz fikricha har bir nav o'ziga mos tuproq iqlim sharoitida, alohida oziqlanish me'yorlari, sug'orish tartiblari asosida parvarishlanishini taqozo etadi.

Bu esa, g'allachilik sohasida mamlakatimizda zamonaviy ilm-fan yutuqlari va xalqimizning qadimiy dehqonchilik madaniyati asosida o'ziga xos agrotexnika maktabi shakllanib, bugungi kunda o'zining yuksak samarasini berayotganligi taqsiinga sazavordir. Bunda mahalliy yaratilgan yangi bug'doy navlarini resurstejamkor hamda donning hosildorlik va sifat ko'rsatkichlarini oshiruvchi

texnologiyalarni ishlab chiqish talab etiladi. Shuning uchun sifatli non va non mahsulotlari tayyorlashga yaroqli bug‘doy donlarini yetishtirish lozim. Bug‘doy hosildorligini oshirish davr talablaridan kelib chiqmoqda. Shu bois ham oziqlantirish me‘yorining hosildorlik va sifat ko‘rsatkichlarini o‘rganish tadqiqotimizning asosiy maqsadi qilib qo‘yidik.

Respublikada yetishtiriladigan qishloq xo‘jaliklari maxsulotlarining salmoqli qismi respublikaning janubi-sharqiy viloyatlarida yetishtiriladi. Ushbu hududning iqlim sharoitlariga ko‘ra markaziy qismi Qashqadaryo viloyati Qarshi cho‘li mintaqasi hisoblanganligibois bug‘doy navlarining o‘g‘itlashga ta‘sirini o‘rganish bo‘yicha tajribalarimiz Qarshi tumanidagi Don va dukkakli ekinlar ilmiy tadqiqot instituti Qashqadaryo filialining tajriba dalasida olib borildi. Tadqiqotlarimizda, yumshoq bug‘doyning istiqbolli navlari G‘ozg‘on, Elomon va Yaksart, navlari qo‘yidagi variantlarda 1) Nazorat (o‘g‘itsiz); 2) N₉₀P₆₀K₃₀ 3) N₁₃₅P₇₅K₄₅ 4) N₁₈₀P₉₀K₆₀ kg/ga variantlar uch qaytariqli qilib, tegishli yarusda izchillik asosida joylashtirildi. Paykalchalarning umumiy yuzasi 11,6m², hisobga olinadigan yuzasi 10m² tashkil etdi. Tajriba dalasini shudgorlash TS-60-70 haydov traktori “PYa-3-35” plugida o‘tkazildi. Ekish oldidan haydalgan va o‘g‘itlangan maydonlarda LTZ-60-AB-10 traktoriga tirqalgan ChKU – 4 rusumli chizel - kultivator, so‘ngra mola va borona bilan ikki yo‘nalishda ishlov berildi. Mahalliy sharoitni nazarda tutgan holda tajribalarda ekish me‘yori bir gektar maydonga 4,5 mln. unuvchan urug‘ hisobida 2013-2014 yillarda 15 oktyabr kunlarida amalga oshirildi.

Tajribalardan olingan natijalarga ko‘ra hosildorlik bo‘yicha eng past ko‘rsatkich barcha navlar bo‘yicha nazorat (o‘g‘itsiz) paykalchalarda kuzatildi. Tajribada navlarga va qo‘llanilgan ma‘dan o‘g‘itlar me‘yorlariga bog‘liq holda boshqning uzunligi, 1 ta boshqdag don vazni va donlar soni ham o‘zgarib bordi.

Ma‘dan o‘g‘itlar N₉₀P₆₀K₃₀ kg/ga qo‘llanilganda N₁₃₅P₇₅K₄₅ kg/ga nisbatan standart Krasnodar-99 navida hosildorlik 11,1 s/ga, G‘ozg‘on navida 9,5 s/ga, Elomon navida 10,9 s/ga, Yaksart 7,3 s/ga, oshganligi aniqlandi.

Tadqiqot natijalarining ko‘rsatishicha o‘rganilgan navlar azotli o‘g‘itlarga standart Krasnodar-99 naviga nisbatan ta‘sirchanroq ekanligi ham namoyon bo‘ldi. Ammo N₁₈₀, P₉₀, K₆₀ oziqlantirilgan variantga nisbatan esa boshqa variantlarda natija past bo‘lishi kuzatildi. Bunda Krasnodar-99 navida 58,2 s/ga, G‘ozg‘on navida 69,7 s/ga, Elomon navida 64,5 s/ga, Yaksart navida 60,7 s/ga bo‘ldi. Ushbu variantda navlar hosildorligi o‘rtacha nazorat (o‘g‘itsiz) variantga nisbatan 31-50 s/ga, N₉₀, P₆₀, K₃₀, N₁₃₅, P₇₅, K₄₅ oziqlantirilgan variantlarga nisbatan esa 6-14 s/gacha past bo‘ldi.

**Bug‘doy navlarining o‘g‘itlashga ta’sirchanligini o‘rganish tajribasida
bug‘doy navlari hosildorligi va sifat ko‘rsatkichlari
(2019-2021 yillar).**

T/R	Variantlar	Navlar nomi	Don hosil dor- ligi, s\ga	Oqsil miqdori, %	Kleykovina miqdori,%	Don natur- asi, gr/l
1	Nazorat (o‘g‘itsiz)	Krosnadar-99	22,2	12,8	20,7	764
2		G‘ozg‘on	25,1	12,5	20,4	755
3		Elomon	24,7	12,6	18,5	774
4		Yaksart	24,1	12,6	20,6	778
5	N90, P60, K30	Krosnadar-99	44	13,5	22,3	768
6		G‘ozg‘on	52	13,8	21,8	765
7		Elomon	47,3	13,0	19,0	780
8		Yaksart	45,5	13,9	22,8	780
9	N135, P75, K45	Krosnadar-99	47,1	14,0	26,5	770
10		G‘ozg‘on	60,2	14,1	23,5	768
11		Elomon	53,6	14,5	21,7	782
12		Yaksart	53,4	14,4	24,4	788
13	N180,P90, K60	Krosnadar-99	58,2	14,5	27,7	782
14		G‘ozg‘on	69,7	14,9	25,4	775
15		Elomon	64,5	14,8	24,8	786
16		Yaksart	60,7	15,0	25,0	790

Yuqoridagilardan kelib chiqib, quyidagi xulosalarga kelish mumkin. O‘rganilgan kuzgi bug‘doy navlari Qashqadaryo viloyatining issiq, quruq iqlim sharoitida standart Krasnodar-99 naviga ma’dan o‘g‘itlarga nisbatan ta’sirchan ekanligi aniqlandi. Ma’dan o‘g‘it me’yori N₁₈₀P₆₀K₃₀ kg/ga qo‘llanilganda N₁₃₅P₆₀K₃₀kg/ga nisbatan hosildorlik Krasnodar-99 navida hosildorlik 11,1 s/ga, G‘ozg‘on navida 9,5 s/ga, Elomon navida 10,9 s/ga, Yaksart 7,3 s/ga yuqori bo‘ldi. Kuzgi bug‘doy o‘g‘itlash sharoitida yetishtirilganda yuqori hosil berishligi ma’lum bo‘ldi.

Respublikada yaratilgan mahalliy kuzgi yumshoq bug‘doy navlarning o‘g‘itlashga ta’sirini o‘rganish maqsadga muvofiqdir. Qishloq xo‘jalik ekinlari hosildorligini yuqori bo‘lishida ma‘dan o‘g‘itlarning ahamiyati katta ekan. Ma‘dan o‘g‘itlar o‘z navbatida tuproq unumdorligiga ham ta’sir qilar ekan. Respublikaning janubiy hududlarida suv bilan kam ta‘minlangan maydonlarda mahalliy yaratilgan navlarni joylashtirish maqsadga muvofiq, suv ta‘minoti yetarli darajada bo‘lgan hollarda oziqlantirish me‘yori sof holda azot (N) 180 kg/ga berilgan holatda Rossiyadan keltirilgan navlardan 60 s/ga, mahalliy navlarda esa 68-75 s/ga hosil olish imkoniyati mavjud.

Bug‘doydan yuqori xosil va sifatli don yetishtirishda ekish me‘yori 4,5 mln unuvchan urug‘/ga va o‘g‘it me‘yori va moddiy resurslar (azot) ni iqtisod qilish maqsadida N₁₈₀, P₉₀, K₆₀ kg\ga qo‘llash, ijobiy samara berish bilan bir qatorda g‘allachilikda yuqori iqtisodiy rentabellikka erishishni ta‘minlaydi.

Foydalanilgan adabiyotlar ruyxati:

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BOSHLANG'ICH VA MAKTABGACHA YOSHDAGI BOLALARNI O'QITISHDA REALIYADAN FOYDALANISH VA UNING TA'LIMIY AHAMIYATI

Annotatsiya: ushbu maqola tilni o'qitish jarayonini tasvirlash uchun yozilgan, odatda realia deb nomlanuvchi ba'zi ta'lim usullaridan foydalangan holda, maktabgacha yoshdagi o'quvchilarga so'zlarni haqiqiy ob'ektlardan foydalangan holda va ularning yordami bilan topilgan muammolarni hal qilishda qiyinchiliklarni aniqlash, o'qitish va o'qitish jarayonini ancha yaxshilash uchun yozilgan. Bundan tashqari, ushbu maqolada o'quv darslarida haqiqiy ob'ektlardan foydalanishning afzalliklari va ulardan qanday foydalanish haqida ma'lumotni topish mumkin.

Kalit so'zlar: o'rganish uslublari, teginish, ko'rinadigan, realizm.

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USE OF REALITY AND ITS EDUCATIONAL SIGNIFICANCE IN EDUCATION OF PRIMARY AND PRE-SCHOOL CHILDREN

Abstract. This article was written to describe the process of teaching language especially initial vocabulary source, using some educational ways which are usually known as realia, to find out the difficulties of teaching words to the pre-school students by using real objects and with the help of them to solve the problems found out in order to make the teaching and learning process much better. In addition, in this paper one can see information about benefits of using real objects in teaching classes and how to use them.

Key words: learning styles, touchable, visible, realism.

Maktabda va bog'cha yoshidagi o'quvchilarni o'qitishda ularning qanday o'rganish turiga mansub ekanligini bilish juda muhim hisoblanadi. Shu bois, dastlab o'rganish turlari haqida qisqacha ma'lumotga ega bo'lish afzaldir. Buni turli xildagi harakatli o'yinlar va drslarda uyga vazifa berish orqali aniqlab olish mumkin.

O'rganish turlari sezgi a'zolarining ishlatilishiga ko'ra 3 asosiy guruhga bo'linadi va pedagog ularni o'rgangan holda darslarni oson tushuniladigan va esda qolarli qila oladi. Tadqiqotlarga qaraganda, 65%dan ortiqroq o'quvchilar ko'rib o'rganuvchilar hisoblanadi. Bundan kelib chiqadiki, realia ya'ni sinf

xonada real obyektlardan foydalanish o'quvchilarning o'rganish jarayonini bir muncha osonlashtiradi.

Garchan, o'zbek tili bizga ona tili hisoblansada, bog'chadagi va boshlang'ich sinf o'quvchilarida yangi so'zlarni eslab qolish ular uchun haqiqiy sinov bo'ladi. Shu holda, realia tilni o'rganishda zamonaviy va effektiv vosita sifatida xizmat qiladi. Umumiy olganda, tilning ahamiyati juda potentsial shuning uchun o'qitish usullari va texnikasi ham bu jarayonda katta rol o'ynaydi.

Ko'pgina o'qituvchilar o'quvchilarni mavzuga o'rab olish uchun turli xil yondashuvlar va qiziqarli, jozibali tadbirlardan foydalanadilar. Eng ko'p ishlatiladigan narsalar: Hangman, Simon says, taxta poygasi, so'z zanjiri. Ammo kichik o'quvchilar yoshiga ko'ra, bunday tadbirlar mos kelmaydi. Maktabgacha yoshdagi bolalar eshitish va ko'rish orqali o'rganadilar. Yosh avlod orasida biz har bir o'quv uslubini ko'rishimiz mumkin: bunga ko'ra ona tili va umuman olganda boshlang'ich sinf o'qituvchilari o'z malakalarini o'rgatish va takomillashtirish, turli xil o'quv uslublarini qabul qilish uchun qandaydir uslubiy vositalarni topishlari kerak.

Ko'p yillardan boshlab, haqiqiy o'qituvchilar realia deb nomlanuvchi mashhur vositasi foydalanish.

O'z navbatda realiya nima, realia tilni o'rganish uchun qanday foydalikabi savollar o'rinli.

Realia-til ko'nikmalarini kuchaytiradi va har qanday yoshdagi vizual va kinestetik o'quvchilarga mos bo'lishi mumkin, shuningdek, bolalar bog'chasi o'quvchilari uchun eng mos keladi. Aksariyat o'qituvchilar lug'at so'zlarining ma'nosini namoyish qilish uchun realiadan foydalanadilar. Bir so'z bilan aytganda, realia-bu o'quvchilarga ko'rsatish orqali haqiqiy ob'ektlardan foydalangan holda lug'at manbasini yaxshilaydigan vosita va bu takrorlanadigan so'zlar yoki so'z birikmalari orqali tilni eslatma yoki grammatika olmasdan osongina o'rganish mumkin.

Indoneziyalik o'qituvchi sifatida NINGTYAS ORILINA ARGAVATI uning loyihasida aytib o'tilganidek, realiadan foydalanish ikki xil bo'lishi mumkin. Ular:

1. O'rganilayotgan haqiqiy ob'ekt va u talabaga ko'rsatishi mumkin:

- Statatsionerlar (kitob, qalam, silgi, sumka, qalam, o'lchagich va boshqalar) kabi narsalar

- sinf xonasi (stol, stul, doska, rasm, bo'r va boshqalar), uning qismlari

- tana (qo'l, soch, ko'z, burun, quloq, og'iz, oyoq va boshqalar) va boshqalar.

2. Haqiqiy ob'ektlarni olib kelishning iloji bo'lmasa, ob'ektning nusxasi sinf, masalan,

- hayvonlar (sigir, echki, qurbaqa, mushuk, sher, it va boshqalar),

- avtomobillar (avtobus, poezd, samolyot, mototsikl va boshqalar),

• kasblar (shifokor, askar, boshqaruvchi, politsiyachi, Baliqchi va hokazo) va shu kabilarning o'rnini bosuvchi sifatida haqiqiy obyekt, qo'g'irchoqlar yoki o'yinchoqlardan foydalanishi mumkin. [1;21].

Realiadan qanday foydalanish o'qituvchiga bog'liq, u haqiqiy narsalarni yoki narsalarning modulini ko'rsatishi mumkin.

Realiyadan foydalanishning afzalliklari-bu sinfga olib kelingan haqiqiy obyektlar jozibali bo'ladi va o'quv tajribasini o'quvchi uchun esda qolarli qiladi. Misol uchun, agar o'qituvchi meva va sabzavotlarning so'z boyligini o'rgatmoqchi bo'lsa, ular yangi so'zni eshitish bilan bir vaqtda narsalarga tegishi, hidlashi va ko'rishi mumkin bo'lsa, bu talabalar uchun ancha ta'sirchan bo'lishi mumkin. Bu meva yoki sabzavot bo'lagining oddiy flesh-karta rasmidan ko'ra kengroq o'quvchilar uslubiga murojaat qiladi. Bu talabalarga narsalarni tanib olishga va ismlarni osongina eslab qolishga yordam berishi mumkin.

Realia ham darsga bo'lgan qiziqishini oshirishi va zerikishdan qochishi mumkin.

Aytish mumkinki, realiadan foydalanish o'quvchilarni yanada faollashtirishga qaratilgan. Bundan tashqari, realia o'quv jarayonida ma'lumot olishda ham ishlatiladi va darsni qo'llab-quvvatlash uchun ham muhimdir.

Bu Maykl Makkarti tomonidan aytilgan: "biz sinfda lug'at taqdimotiga juda ko'p e'tibor qaratdik. O'qituvchining nuqtai nazari, lekin lug'at darsidagi muvaffaqiyat juda muhim. O'qituvchi va o'quvchilar o'rtasidagi o'zaro ta'sir va o'quvchining o'zi ishlaydigan ish yangi so'zlarni assimilyatsiya qilish va mashq qilish."(Mc Carthy, 1990: 121).

Biroq, bolalar bog'chasida realiadan foydalanishda qiyinchiliklar bo'lishi mumkin. Masalan, lug'at mavzulari juda xilma-xildir. Mavzular ularning haqiqiy namunasini keltirish uchun tartibsizlik bo'lishi mumkin: ulkan hayvonlar, binolar yoki mavhum tushunchalar. Shuningdek, bu usullar boshqalarga qaraganda shovqinli.

Yuqorida aytib o'tilganidek, realia yordamida tilni va umuman olganda fanni o'rgatish ancha zavqli va oson ish berishi mumkin

Maktabgacha yoshdagi bolalar so'zlarni yanada samarali o'rganadi. Materialni sinfga olib kirishda realia o'quv tajribasini o'quvchilar uchun esda qolarli qilishi mumkin. O'quvchilar, shuningdek, o'quv jarayonida ma'lumot olishda faolroq bo'lishadi, chunki realia, haqiqatdan ham, juda samarali o'qitish uslubidir.

Jarayon, albatta, juda ajoyib va qiziqarli bo'lishi mumkin va bu o'qituvchilarning e'tiboriga va mavzuga tegishli materiallarni olishga bog'liq.

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SHAHAR KO'CHALARIDA SODIR ETILGAN YO'L-TRANSPORT HODISALARINING TAHLILI

Annotatsiya. Transport vositalari sonining ko'payishi, shuningdek, tezlik va transport intensivligining oshishi yo'l harakati xavfsizligi muammosining yanada dolzarb bo'lishiga olib keladi. YTHning o'sishi bilan yaxshi ilashishi asosiy ko'rsatkichi-bu ilashish koeffitsienti bo'lib, u avtomobilning barqarorligi va boshqarilishiga tahsir qiladi. Maqolada shinalarning yo'l sirtiga ilashish koeffitsienti qiymatiga tahsir yetuvchi sharoit va sharoitlar o'rganiladi.

Kalit so'zlar: avtomobil, sekinlashuv, adgeziya koeffitsienti, yo'l yuzasi, yo'l sinovlari, pnevmatik shina, iqlim sharoiti.

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ANALYSIS OF TRAFFIC INCIDENTS ON CITY STREETS

Abstract. An increase in the number of vehicles, as well as an increase in speed and intensity of traffic, makes the problem of road safety more urgent. The main indicator of the good handling of YTH with growth is the coefficient of friction, which affects the stability and control of the car. The article examines the conditions and conditions that affect the value of the coefficient of adhesion of tires to the road surface.

Key words: car, deceleration, adhesion coefficient, road surface, road tests, pneumatic tire, climatic conditions.

Butun dunyoda avtomobillashtirish jarayonining o'sib borishi bilan YTHning o'sishi kuzatilmoqda. Biroq bularning barchasi to'g'ridan-to'g'ri qoidabuzarlik bilan bog'liq bo'lgan. Chet el davlatlarida YTHlarining absolyut qiymatini kamaytirishga yerishilmoqda. Bunda o'zlarining umumiy transport tizimiga, avtomobillar va ularning xavfsiz harakatini tashkil etishga, yo'l tarmog'ini takomillashtirishga bo'lgan chora-tadbirlar muhim ahamiyat kasb etmoqda.

Bugungi kunda Respublikamizda jumladan shahrimizda ham aholi sonining ortishi natijasida transport vositalarining miqdori ortishi, ya'ni avtomobillashtirish darajasining o'sishi kuzatilmoqda.

Yo'l-transport hodisalarining oldini olish uchun ko'rilayotgan qator tadbirlarga qaramasdan, ularning miqdori kamayishiga yerishib bo'lmayapti. Bu esa, yo'l harakati xavfsizligini oshirish va yo'l-transport hodisalarining oldini olish muammolariga o'ta jiddiy yondoshish zarur ekanligini mutaxassislar oldiga vazifa YTH quyidagi vazifalarni hal qilish maqsadida tahlil qilinadi: -harakat xavfsizligiga taalluqli «Avtomobil-haydovchi-yo'l-piyoda-muhit» tizimiga kiruvchi har bir omilning faoliyatiga tegishli tadbir va choralar ishlab chiqish uchun;

- biron-bir boshqaruv hududidagi, vazirliklardagi va ularning korxonalaridagi falokatlar ahvolini, o'zgarish mohiyatini hamda istiqboldagi o'zgarishini bashorat qilish maqsadida;

-YTHning kelib chiqish sabablarini va ularni bartaraf qilish borasida tuziladigan ko'rsatmalarni ishlab chiqish uchun;

- YTH ko'p qaytariladigan yo'l bo'laklarini aniqlash maqsadida;

- bitta yoki bir nechta bir xil YTHning vujudga kelish sabablarini aniqlash uchun;

-YTHni tahlil qilish uchun univyersal dastur tuzish maqsadida. Maqsad va vazifalariga qarab YTHni tahlil qilishning miqdoriy, sifat va topografik usullari mavjud. YTHni miqdoriy usul bilan tahlil qilishda halokatlarning absolyut, nisbiy va solishtirma ko'rsatkichlari o'rganiladi. Nisbiy halokatlilik ko'rsatkichlarini hisoblashda bitta absolyut ko'rsatkich boshqa absolyut ko'rsatkichga nisbatan olinadi. Bunda nisbiy ko'rsatkichni umumiy ko'rinishda quyidagi formula orqali hisoblash mumkin:

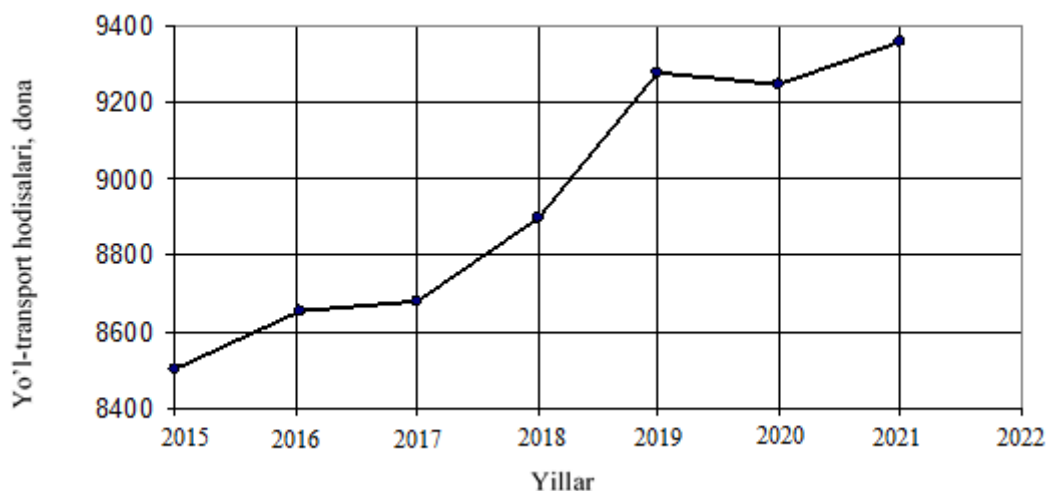
$$O = KA/ B(1)$$

bu yerda: O - nisbiy ko'rsatkich; A/ B - biron-bir absolyut ko'rsatkichlar; K- masshtabli koeffitsient.

Masalan: A - YTH soni, B - transport vositalari soni bo'lsa va $K = 104$ olinsa, bunda juda ko'p ishlatiladigan nisbiy ko'rsatkich YTH sonining 10 ming transport vositasiga to'g'ri keladigan hisobi kelib chiqadi. Xuddi shuningdek, 10 ming aholi soniga va boshqa hisoblar olinishi mumkin. Yo'l sharoitlarini hisobga olishda ko'pincha nisbiy halokatlilik koeffitsientidan foydalaniladi.

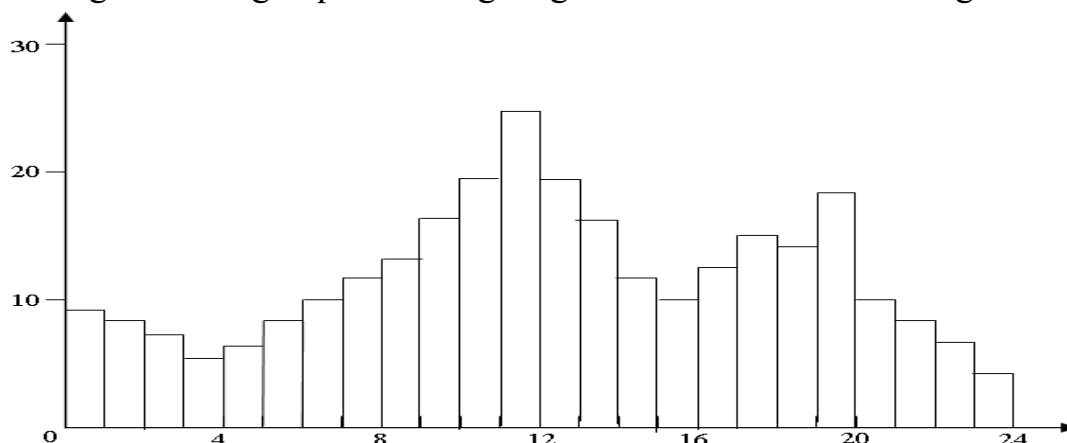
Uzun bir xil geometrik elementga ega yo'l bo'laklarini hisoblashda YTH sonini 1 million avtomobil-kilometr bilan o'lchanishi qabul qilinib, bu yerda: Z - bir yillik halokatlar soni; N - bir sutkadagi o'rtacha yillik harakat miqdori, avt/sutka; L - yo'l uzunligi, km. Juda qisqa masofada (ko'prik, yo'l o'tkazgich, chorraha va h.k.) yo'l sharoiti

bilan farqlanadigan bo‘laklarda nisbiy halokatlilik koeffitsienti odatda quyidagi formula bo‘yicha aniqlanadi:



1-rasm. Haydovchilar aybi bilan sodir etilgan YTH ning yillar davomida o‘zgarishi.

O‘zbekiston Respublikasi umumfoydalanuvdagi avtomobil yo‘llarida sutka soatlaridagi YTHning taqsimlanish gistogrammasi 2-rasmda keltirilgan.



2-rasm. Sutkadagi YTHning taqsimlanish gistogrammasi.

Bugungi kunda aholining tez suratlarda bilan o‘tib borishi avtomobil transportiga bo‘lgan ehtiyojni yanada ortirdi. Bu esa avtomobil yo‘llarida, shahar ko‘cha va maydonlarida transport vositalari normal rejimining buzilishiga, yo‘ltransport hodisalarining vujudga kelishiga olib kelmoqda. YTH xalq xo‘jaligida material sarfiga, transport vositalari va inshootlariga ziyon etishiga, insonlarning jarohatlanishiga yoki halok bo‘lishiga olib kelishi mumkin. Evropa davlatlarining transport xavfsizligini ta‘minlovchi soha statistika xizmatining 2012 yilda avtomobil yo‘llarida halok bo‘lganlar to‘g‘risidagi ma‘lumoti 1.2-jadvalda keltirilgan. 1.2-jadvaldagi ko‘rsatkichlarning tahlili shuni ko‘rsatadiki, bir yil ichida eng ko‘p halok bo‘lganlar Xitoyda bo‘lib 98740 kishini tashkil etadi.

Bu ko'rsatkich bo'yicha ikkinchi o'rinda Hindiston davlati bo'lib, unda 34000 kishi har yili hayotdan ko'z yumishi kuzatiladi. YTHda 100 ming aholiga halok bo'luvchilar soni bilan solishtirilsa, unda Rossiya davlati eng yuqori ko'rsatkichga ega bo'lib, 23,7 miqdorni tashkil etadi.

1-jadval

Dunyo mamlakatlarida avtomobil yo'llarida halok bo'lganlar to'g'risidagi ma'lumoti

Davlatlar	YTH jami halok bo'lganlar soni (ming kishi)	100 ming aholiga YTH da halok bo'lganlar soni
Rossiya	34,00	23,70
Braziliya	34,00	18,24
AQSH	43,44	14,69
Avstriya	0,77	9,41
Hindiston	94,97	8,79
Avstraliya	1,64	8,16
Xitoy	98,74	7,56
Daniya	0,33	6,07
Yaponiya	6,87	5,39
Angliya	3,20	5,29

Lekin Yaponiya, Angliya davlatlarida har 100 000 kishiga halok bo'luvchilar soni 5,39–5,29 tani tashkil etib, Rossiya davlatidagi ko'rsatkichdan 4,4 marotaba kichikdir. Statistik ma'lumotlarda ko'plab zararlanishni haydovchi va piyodalar tashkil etadi. Umumiy YTHlarning yarmi atrofida shaharlarda sodir etilishi kuzatiladi.

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IMPROVING THE STRUCTURAL CONDITION OF THE SOILS OF THE SOUTHERN REGIONS BY DIFFERENT METHODS

Annotation. In this article, the structural structure of the soil of Kashkadarya region is presented.

Keywords. Soil, water, plants, siderate crops, biological, structural condition.

Introduction. Kashkadarya oasis is located in the south of Uzbekistan and differs from other oases of our republic due to its soil and climate conditions. First of all, the existence of different climatic regions in this oasis is the presence of complex soil cover depending on it (1). In fact, dry and irrigated agriculture in the oasis begins with mountain brown soils and ends with sandy desert and brown soils. Of course, the development of agriculture in such diverse soil types first requires a complete knowledge of the properties and characteristics of the soil cover in one or another region.

Research goals and objectives. First, the arable layer was created due to the morphogenetic, i.e., turf and sub-turf layer, which is typical for light gray soils. Irrigation, in turn, instead of the yellow, slightly brownish color typical for these soils, a gray color appeared; secondly, the regime of water-air, water-food, water-salt exchange in the vertical soil profile has changed; Thirdly, the development (evolution) of the soil cover changed, that is, the light-colored gray soil that developed under automorphic conditions began to evolve under the conditions of the semi-hydromorphic regime - it began to pass to gray meadow soils. Such a change in the process of soil formation will certainly lead to the emergence of a special regime characteristic of improving New soils.

Discussion. In this place, first of all, the mechanical composition of the soil, its change according to the profile is observed, and this can be seen from the data of Table 1. According to the above data, the pale gray soils in the conservation state usually have a light mechanical composition (5) and it can be seen that the loess parent rock that forms the soil is also light sandy.

One of the important physico-chemical indicators of soils is their absorption capacity, and it has a low index in the studied capacities, and its mechanical composition, depending on the amount of humus, is 5-8 mg/eqv per 100 g of soil in the upper (turf and sub-turf or sub-turf and sub-turf) layers. Absorption capacity is based on absorbed calcium (Table 2).

The data show that the pale gray soils of the reserve may be slightly saline (up to 0.9% dry residue) in some cases, especially in geomorphological areas with almost no seepage (Section 1, 1978). In such cases, it can also be seen on newly

irrigated pale gray soils (section 5, 1978). However, due to proper organization of irrigation and all reclamation activities, by 2004, that is, it was possible to reduce it by almost 2 times. (Sections 5RB and 6RB, 2004 Table 3). Lenkin, it should always be remembered that in the areas where light gray soils are spread, due to the fact that the internal slope is very small, there are conditions for the formation of the secondary salinization process. The content of $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ gypsum does not change in a very large range even in dry or irrigated conditions of the studied soils. The pale gray (gray meadow) soils common in the Kashkadarya region are arable lands. But their current state of humus, according to the level of preservation of all nutrients, and finally their current state of land reclamation, especially the extreme tendency of these soils to cyclical salinity, creates specific general and specific problems in the management of the fertility of these soils. Among the common problems are the fact that the ditches and collectors are unusable in all existing farms, as a result of which mineralized seepage water accumulates to one degree or another, the most regrettable part of them is involved in physical decomposition, the decrease in the rotation system of cotton and safflower in all farms, etc. private problems include lack of adequate supply of cultivated areas, unplanned and excessive use of irrigation water, ability to choose agricultural crop varieties according to soil and climate conditions, etc.

Conclusions. Based on the obtained data, it can be said that the current soil melioration and ecological condition of gray meadow soils widely used by oasis farms is satisfactory. In order to improve the humus and ameliorative-ecological condition of these soils, first of all, measures should be taken to reduce the filtration of runoff from irrigation networks, to improve the humus condition of the soil, the wide use of local fertilizers, the preparation and wide use of non-traditional fertilizers (composts) by using various effective fertilizers, inter-farm or cleaning of the collector-zovors of the farm, proper use of existing agricultural machinery and several other activities.

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BAZALT TOLASINING BETONNING MUSTAXKAMLIGIGA TA'SIRINI TADQIQOTLASH

Anatatsiya. Ushbu tadqiqotda bazalt tolasining betonning mustahkamlik xususiyatlariga ta'sirini ko'rib chiqildi, va mustahkamlikka sinovlar o'tkazildi. Bazalt tolasini (uzunligi 6 mm va 12 mm) 0,5 va 1% (hajmida) uch xil beton aralashmalarida qo'shishning ta'siri o'rganildi va fibrasiz namunalari bilan taqqoslandi. Tajriba natijalari shuni ko'rsatdiki, uzunligi 6 mm bo'lgan bazalt tolasidan 0,5% hajmda foydalanish betonning siqilish mustahkamligini sezilarli darajada oshiradi.

Kalit so'zlar: Yuqori mustahkamli beton, tolali beton, bazalt tolasini, elastik moduli, mustahkamlash foizi, fibrobetonlar.

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RESEARCH ON THE EFFECT OF BASALT FIBER ON THE VISCOSITY OF CONCRETE

Abstract. This study looked at the effect of Basalt Fiber on the strength properties of concrete, and tests were carried out on sustainability. The effect of adding Basalt Fiber (6mm and 12mm in length) in three different concrete mixtures of 0.5 and 1% (in volume) was studied and compared with non-fibrous samples. The results of the experiment showed that the use of Basalt Fiber with a

length of 6 mm at a volume of 0.5% significantly increases the compressive strength of concrete.

Keywords: high strength concrete, fiber concrete, Basalt Fiber, elastic module, reinforcement percentage, fibrobetons.

Qurilish sohasidagi zamonaviy ilmiy tadqiqotlarning asosiy vazifalaridan biri qurilish materiallarining mustahkamlik xususiyatlarini yaxshilashdir. Bugungi kunda eng keng tarqalgan qurilish materiallaridan biri betondir. Biroq, ushbu material va uning mustahkamlik xususiyatlari xom ashyo, texnologiyasi va beton aralashmani yaratish va yotqizish bosqichida yuzaga keladigan boshqa ko'plab omillarga juda bog'liq. Dunyo bo'ylab tadqiqotchilar beton aralashmasining mukammal tarkibini qanday tanlashni qiziqarmoqdalar, natijada hosil bo'lgan material eng yaxshi xususiyatlarga ega va eng mas'uliyatli dizaynlarda qo'llanilishi mumkin. Kimyoviy qo'shimchalar va tolalardan foydalanish tufayli bugungi kunda ulkan yuklarni ko'taradigan qo'shma inshootlarni qurishda faol foydalaniladigan yuqori mustahkamli va o'ta kuchli betonlarni olish mumkin bo'ldi.

Yuqori mustahkamlarga 60-100 MPa betonlar kiradi. 100 MPa dan ortiqdari esa uta yuqori mustahkam betonlar deb ataladi.

Bazalt tolali fibrobetonlar

Fibrobeton-beton aralashmasiga qisqa tolalarni (basalt tolalar) qo'shish orqali olingan kompozitsion material bo'lib, u beton hajmida teng taqsimlanadi. Bunday material oddiy betondan yuqori egilish va cho'zish kuchi, yorilishga chidamliligi va zarba kuchiga bardoshlilik bilan farq qiladi. Betonga tolalar qo'shilishi qattiqlashuv jarayonida mikroplastik qisqarish va yorilishni kamaytirishga yordam beradi. Ushbu ta'sirlarga nisbatan bazalt tolalar matritsasi orqali erishiladi. Beton matritsaga ta'sir qiluvchi yuklar tolalar bo'ylab harakat qiluvchi teginish kuchlari orqali tolalarga uzatiladi va agar tolaning elastik moduli beton matritsaning elastik modulidan oshsa, qo'llaniladigan kuchlanishlarning aksariyati tola tomonidan qabul qilinadi.

Dispers armatura sifatida ma'lum xususiyatlarga ega basalt tolalar ishlatilishi mumkin.

Odatda diametri 0,1 dan 0,5 mm gacha bo'lgan, uzunligi 10 dan 50 mm gacha bo'lgan bazalt tola sifatida ishlatiladi. tolaning diametri 0,6 mm dan oshganda, tarqalgan armatura bilan betonning mustahkamligiga mustahkamlash samaradorligining keskin pasayishi kuzatiladi.

Shunga ko'ra beton va temirbeton konstruksiyalarida an'anaviy po'lat tolalardan tashqari, betonni mustahkamlash uchun turli o'lchamdagi basalt tolali fibralardan foydalanish mumkin.

Turli tolalarning texnik xususiyatlari

1-jadval

Texnik xususiyatlari	Bazalt tolalar	Shishatolali fibra	Poliamid fibra	Uglerod fibra	Metal fibra
Siqilishdagi mustaxkamligi, МПа	3000–4840	3100–4650	2900–3450	3500–6000	380-850
Elastiklik moduli, ГПа	79,3–93,1	72,5–86	70–140	230–600	20,6
Uzilish paytida uzayishi, %	3,1–6,0	4,7–5,3	2,8–3,6	1,5–2,0	10-25
To'laq vazn, Н/М ³	2,65–2,8	2,46–2,62	1,44	1,75–1,95	78
Tolalar razmeri, МКМ	6–21	6–21	5–15	5–15	5-15
Erish nuqtasi, °С	1450	1120–1550	250	Erimaydi	1200
Zichligi, г/М ³	2,65	2,6	0,95	2,0	7800

Bazalt tolali beton po'lat tolali betondan farqli o'laroq korroziyaga kamroq moyil bo'ladi. Bu past holat bazalt tolalari har qanday tajovuzkor salbiy muhitga mukammal qarshilik ko'rsatadi.

Bazalt tolali fibra boshqa turdagi har qanday fibralarga yaxshi alternativ bo'lishi mumkin. Yuqori fizik-mexanik xususiyatlar va agressiv muhit va kimyoviy moddalarga yuqori qarshilik bilan u uglerod tolalariga nisbatan raqobatbardosh narxga ega. Bazalt tolasini ishlab chiqarish quyidagi bosqichlarni o'z ichiga oladi:

Magmatik (Vulkanik) tog ' jinslari (bazalt) 512 mm fraksiya bilan parchalanmaguncha maydalanadi. Olingan maydalanish 1500 ° C haroratda pechda tozalanadi va eritiladi, shundan so'ng eritma tortish moslamasiga o'rash orqali uzluksiz iplarga aylanadi.

Tadqiqot maqsadlari

Ushbu tadqiqotning asosiy maqsadi bazalt tolasining betonning mustahkamlik xususiyatlariga ta'sirini aniqlash, shuningdek, ularning foiz nisbati va betonning umumiy hajmiga bog'liqligini kuzatishdan iborat.

Ushbu ish hajmi 0,5% bo'lgan tolali beton aralashmalar uchun natijalarni taqdim etadi

% (12 mm tolali namunalar) va 1,0 % (6 va 12 mm tolali namunalar). Sinovlar 10x10x10 sm o'lchamdagi kublar ko'rinishidagi namunalarda o'tkazildi.

Beton aralashmaning tarkibiy qismlari:

* Portland sement PC500 ishlab chiqaruvchisi “DJIZZACH CEMENT” qo'shma korxonasi, Jizzax viloyati, Forish tumani;

* 1:1 nisbatda 5-10 mm fraksiya va 10-20 mm fraksiya chaqiq tosh;

* suv;

* MB 10-50C kompleks modifikatori;

* Mikrokremnezem MK-85 tu 14-106-709-2004 "MEGO INDUSTRIAL" MCHJ tomonidan ishlab chiqarilgan;

* qum.

1 m3 uchun beton tarkibi2-jadval

Markirofkalash	Sement, кг	Qumli aralashmali Chaqiq Tosh, кг	Portlad sement, кг	Suv кг	Modifikator, кг	MK-85, кг	Fibra 6 мм, кг	Fibra 12 мм кг
M1	450	1060	850	235	75	50	-	-
M2	445,5	1049,4	841,5	232,65	74,25	49,5	24	-
M3	447,75	1054,7	845,75	233,825	74,625	49,75	-	12
M4	445,5	1049,4	841,5	232,65	74,25	49,5	-	24

3-jadvaldan: ko'rinib turibdiki, eng yaxshi natijalar 6 mm uzunlikdagi bazalt tolasi qo'shilgan yuqori mustahkam betondan olingan namunalar shuni ko'rsatdiki: 1% bazalt tolasi qo'shilganda namunaning siqilishga bulgan qarshiligi 14% ga, 0,5% tola qo'shilganda esa 4% ga oshdi.

Xulosa

Eksperimental tadqiqotlar natijasida basalt fibrani o'z ichiga olgan namunalar fibrasiz tarkibli namunalariga nisbatan yuqori mustahkamlikka ega ekanligi aniqlandi, 1% hajmdagi 12 mm tolali namunalardan tashqari – ularning natijalari etalon namunalaridan ham yomonroq edi. Bazalt fibra beton namunalarini bir-biri bilan taqqoslab, shuni ta'kidlash mumkinki, 2 (6 mm fibratolali, 0,5%) bo'lgan namunalar ko'proq siqilish kuchiga ega.

Eksperimental ma'lumotlarga asoslanib, biz quyidagi xulosalar chiqarishimiz mumkin:

* * Betonda bazalt tolasidan foydalanish an'anaviy betonga nisbatan uning siqilish kuchini oshiradi.

* 6 mm uzunlikdagi tolali bazaltbeton namunalari 12 mm uzunlikdagi tolali namunalarga qaraganda yuqori quvvatni ko'rsatadi.

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QUYOSH PECHINING DIZAYNI OSONGINA IMPROVIZATSIYA MATERIALLARDAN TAYYORLASH

Annotatsiya. Quyosh energiyasini issiqlik energiyasiga aylantirish materiya atomlarining elektromagnit nurlanishni yutish qobiliyati bilan ta'minlanadi. Bunda elektromagnit nurlanish energiyasi atom va molekulalarning kinetik energiyasiga, ya'ni issiqlik energiyasi. Ushbu jarayonning natijasi tana haroratining oshishi hisoblanadi.

Kalit so'zlar: quyosh pechi, qutili pechlar, quyosh nuri, issiqlik energiyasi, konstruktsiya.

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THE DESIGN OF THE SOLAR FURNACE IS EASILY MADE FROM IMPROVED MATERIALS

Anotation. The conversion of solar energy into thermal energy is ensured by the ability of atoms of matter to absorb electromagnetic radiation. In this case, the energy of electromagnetic radiation is converted into kinetic energy of atoms and molecules, that is, into thermal energy. The result of this process is an increase in body temperature.

Key words: solar oven, chamber ovens, sunlight, thermal energy, construction.

Masalan, issiq quyoshli kunda quyoshda isitiladigan toshlar. Biroq, boshqa ob-havo sharoitida yoki tana harorati yuqori qiymatlarga yetishi uchun uni qo'lga olish kerak katta miqdor quyosh nuri, ularni jamlang va ularni isitiladigan yuzaga yo'naltiring [1-2]. Bu quyosh issiqlik inshootlari (yoki quyosh pechlari) bilan amalga oshirilishi mumkin.

Bugungi kunda an'anaviy issiqlik manbalariga muqobil - quyosh energiyasi mavjud. Kunduzi bu qurilmaning quvvati 1,5 kVt ga etadi, isitish harorati esa 150 darajaga etadi. Birinchi quyosh pechkasi VII-asrning ikkinchi yarmida Shveysariyada Horace de Saussure tomonidan qurilgan.



1-rasm

Ma'lumki, quyosh tomonidan bizga yuborilgan issiqlik oqimi juda katta, ishlamasdan shunchalik ko'p energiya sarflash gunohdir. Yozda, o'rta bo'lakda, u osongina kvadrat metrga bir kilovattga etadi (bir kilovatt, taxminan, elektr pechka yondirgichi kabi) [3-5].

Bunday pechlar kichik qutidan birlikgacha bo'lgan o'lchamlari jihatidan farq qiladi, ammo ehtiyojda bir xil. Ularning vazifasi har qanday ehtiyojlar uchun issiqlikni saqlashdir. Quyosh pechining ishlash printsipti quyosh nurining issiqlik energiyasini o'zlashtirishga asoslangan bo'lib, buning natijasida gaz va elektr energiyasidan foydalanmasdan ovqat pishirish va uni issiqlik izolyatsiyalangan kamerada saqlash mumkin [6-8]. Dizaynlarni do'konda sotib olish mumkin yoki siz o'z qo'lingiz bilan quyosh pechlarini yasashingiz mumkin.

Quyosh pechining dizayni osongina improvizatsiya materiallardan tayyorlanishi mumkin.

Quyosh pechining afzalliklari:

1. Foydalanishning arzonligi (yoqilg'i talab qilmaydi).
 2. Pishirish xavfsizligi.
 3. Ishlash va saqlash oson.
 4. Mobillik.
 5. Atrof-muhitga do'stlik.
 6. Qaynatish, chekish, pishirish va qovurish imkoniyati.
 7. Kuyish imkoniyatisiz, aralashtirishni talab qilmasdan bir xilda pishirish.
- Qurilish turiga qarab, quyosh pechlarining uchta asosiy turi mavjud:

1. Qutili pech.
2. Kombinatsiyalangan pechlar.
3. Ko'zgu konsentratori bilan.

Xulosa

Quyosh pechining vazni engil, uni bir necha daqiqada chamadon kabi yig'ish mumkin va xuddi shunday tez ish holatiga ochiladi - bu ideal sayohat vositasidir. Sanoat miqyosida ishlab chiqarilgan pechlar parabolik silindrsimon quyosh konsentratorlarining barcha ijobiy xususiyatlarini, shuningdek, vakuum naychalarini birlashtiradi [9]. Buning yordamida isitish harorati 300 daraja Selsiyga etadi.

Haroratni nazorat qilish uchun uskunaga termometr ham o'rnatilgan - bu boshqaruv blokining ajralmas qismidir. Shuningdek, pechda ish haroratining

ma'lum bir sozlamasiga ega termostat, shuningdek, ko'zgularni aylantirish tizimi o'rnatilgan.

Zamonaviy qurilmaga taymer o'rnatilgan bo'lib, u ma'lum vaqtdan keyin quyosh pechining ichidagi ko'zgularni yopishni boshlaydi [10]. Belgilangan vaqt kelganda, taymer ham sizga taom tayyorligini bildirish uchun signal beradi.

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GEOGRAFIK KENGLIKLARNI O‘RGANISHDA KOMPYUTER DASTURLARIDAN FOYDALANISH

Annotatsiya. Ushbu maqolada geografik kengliklarni o'rganishda kompyuter dasturlaridan foydalanish masalalari ko'rib chiqiladi. Tadqiqot davomida GIS texnologiyalari va masofaviy zondlash usullarining afzalliklari va kamchiliklari tahlil qilinadi. Shuningdek, ArcGIS, QGIS, ENVI kabi dasturiy ta'minotlarning imkoniyatlari o'rganiladi. Tadqiqot natijalari shuni ko'rsatadiki, kompyuter dasturlari geografik kengliklarni o'rganishda muhim ahamiyatga ega bo'lib, tadqiqotchilar uchun katta imkoniyatlar yaratadi.

Kalit so'zlar: geografik kengliklar, kompyuter dasturlari, GIS, masofaviy zondlash, ArcGIS, QGIS, ENVI.

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THE USE OF COMPUTER PROGRAMS IN THE STUDY OF GEOGRAPHIC LATITUDES

Abstract. This article examines the use of computer programs in the study of geographic latitudes. During the study, the advantages and disadvantages of GIS technologies and remote sensing methods are analyzed. The capabilities of software such as ArcGIS, QGIS, ENVI are also studied. The results of the study show that computer programs are important in the study of geographic latitudes, providing great opportunities for researchers.

Keywords: geographic latitudes, computer programs, GIS, remote sensing, ArcGIS, QGIS, ENVI.

KIRISH

Geografik kengliklar Yer yuzasining ma'lum bir qismini o'rganishda muhim ahamiyatga ega. Ular tabiiy resurslarni baholash, ekologik monitoringni amalga oshirish, shahar infratuzilmasini rejalashtirish kabi ko'plab sohalarda qo'llaniladi [1]. Geografik kengliklarni o'rganish uchun an'anaviy usullar, jumladan, dala tadqiqotlari va xaritalardan foydalanish qo'llanilgan. Biroq, so'nggi yillarda kompyuter texnologiyalarining rivojlanishi bilan geografik kengliklarni o'rganishda yangi imkoniyatlar paydo bo'ldi [2]. Kompyuter dasturlari geografik ma'lumotlarni to'plash, qayta ishlash, tahlil qilish va vizuallashtirishda katta yordam beradi.

Ushbu maqolaning maqsadi geografik kengliklarni o'rganishda kompyuter dasturlaridan foydalanish masalalarini ko'rib chiqishdan iborat. Tadqiqot davomida GIS texnologiyalari va masofaviy zondlash usullarining afzalliklari va kamchiliklari tahlil qilinadi. Shuningdek, ArcGIS, QGIS, ENVI kabi dasturiy ta'minotlarning imkoniyatlari o'rganiladi.

USULLAR VA ADABIYOTLAR TAHLILI

Geografik kengliklarni o'rganishda kompyuter dasturlaridan foydalanish bo'yicha ko'plab tadqiqotlar olib borilgan. Ushbu bo'limda ularning ayrimlari ko'rib chiqiladi.

Masalan, Burrough va McDonnell [3] GIS texnologiyalarining geografik kengliklarni o'rganishdagi ahamiyatini ta'kidlaydilar. Ular GISning asosiy afzalliklarini sanab o'tadilar, jumladan, ma'lumotlarni saqlash, boshqarish, tahlil qilish va vizuallashtirish imkoniyatlari. Shuningdek, mualliflar GISning kamchiliklarini ham ko'rsatib o'tadilar, masalan, dasturiy ta'minotning qimmatligi va foydalanish murakkabligi.

Boshqa tadqiqotchilar, Chang va Tsou [4], masofaviy zondlash usullarining geografik kengliklarni o'rganishdagi rolini o'rganadilar. Ular sun'iy yo'ldosh tasvirlaridan foydalanishning afzalliklarini ta'kidlaydilar, chunki bu usul katta hududlarni qamrab olish va takroriy kuzatishlar o'tkazish imkonini beradi. Shu bilan birga, mualliflar masofaviy zondlash ma'lumotlarini qayta ishlashda qiyinchiliklar mavjudligini ham ko'rsatib o'tadilar.

Yao va Peng ArcGIS dasturidan foydalanib shaharsozlik sohasida tadqiqot olib boradilar [5]. Ular ArcGISning shahar infratuzilmasini rejalashtirish va boshqarishdagi imkoniyatlarini ko'rsatib beradilar. Tadqiqotchilar dasturning afzalliklarini, jumladan, ma'lumotlarni kiritish, saqlash, tahlil qilish va vizuallashtirish qulayligini ta'kidlaydilar.

Boshqa tadqiqotchilar, Neteler va Mitasova [6], QGIS ochiq kodli dasturining imkoniyatlarini o'rganadilar. Ular QGISning keng funkcionalligi va o'rganish uchun qulayligini ta'kidlaydilar. Shuningdek, mualliflar dasturning ochiq kodli ekanligi tufayli tadqiqotchilar uchun arzon alternativa ekanligini ham ko'rsatib o'tadilar.

Xulosa qilib aytganda, adabiyotlar tahlili shuni ko'rsatadiki, geografik kengliklarni o'rganishda kompyuter dasturlari muhim rol o'ynaydi. GIS texnologiyalari va masofaviy zondlash usullari tadqiqotchilar uchun katta imkoniyatlar yaratadi.

NATIJALAR

Tadqiqot davomida geografik kengliklarni o'rganishda qo'llaniladigan bir qator kompyuter dasturlari o'rganildi. Ularning orasida ArcGIS, QGIS va ENVI kabi dasturlar bor.

ArcGIS dasturi geografik kengliklarni o'rganishda keng qo'llaniladi. U vektor va raster ma'lumotlarini qayta ishlash, tahlil qilish va vizuallashtirish uchun keng imkoniyatlarga ega [7]. Dasturning afzalliklari orasida foydalanish uchun qulay interfeys, keng funkcionallik va ishonchlilikni ta'kidlash mumkin.

Biroq, ArcGIS litsenziyasi nisbatan qimmat bo'lib, ba'zi tadqiqotchilar uchun to'siq bo'lishi mumkin.

QGIS ochiq kodli alternativa sifatida tobora ommalashib bormoqda. U ham geografik ma'lumotlarni qayta ishlash va tahlil qilish uchun keng imkoniyatlarga ega [8]. QGISning asosiy afzalliklari orasida bepul va ochiq kodli ekanligi, keng funktsionalligi va o'rganish uchun qulayligini ta'kidlash mumkin. Biroq, ba'zi tadqiqotchilar uchun ochiq kodli dasturlardan foydalanish qiyinchilik tug'dirishi mumkin.

ENVI dasturi esa masofaviy zondlash ma'lumotlarini qayta ishlash uchun mo'ljallangan. U sun'iy yo'ldosh tasvirlarini tahlil qilish, tasniflash va vizuallashtirish uchun keng imkoniyatlarga ega. ENVIning asosiy afzalliklari orasida ishonchlilik, keng funktsionallik va ma'lumotlarni samarali qayta ishlash imkoniyatini ta'kidlash mumkin. Biroq, dastur litsenziyasi ham nisbatan qimmat bo'lib, bu ba'zi tadqiqotchilar uchun to'siq bo'lishi mumkin.

Umumiy qilib aytganda, har bir dasturning o'z afzalliklari va kamchiliklari bor. Tadqiqotchilar o'z ehtiyojlari va imkoniyatlaridan kelib chiqib, mos dasturni tanlashlari lozim. Tadqiqot natijalari kompyuter dasturlarining geografik kengliklarni o'rganishdagi ahamiyatini ko'rsatadi. ArcGIS, QGIS va ENVI kabi dasturlar turli sohalarda, jumladan, ekologiya, gidrologiya va o'simlik qoplamini o'rganishda muhim rol o'ynaydi.

MUHOKAMA

Tadqiqot natijalari shuni ko'rsatadiki, kompyuter dasturlari geografik kengliklarni o'rganishda muhim rol o'ynaydi. Ular tadqiqotchilarga katta hajmdagi ma'lumotlarni samarali qayta ishlash va tahlil qilish imkonini beradi. Shu bilan birga, dasturlardan foydalanishda ba'zi muammolar ham mavjud.

Birinchi muammo dasturiy ta'minotning qimmatligi bilan bog'liq. ArcGIS va ENVI kabi dasturlar yillik litsenziya uchun bir necha ming dollarni talab qilishi mumkin. Bu ko'plab tadqiqotchilar, ayniqsa, rivojlanayotgan mamlakatlarda faoliyat yuritayotganlar uchun to'siq bo'lishi mumkin.

Ikkinchi muammo dasturlardan foydalanish uchun maxsus ko'nikmalar talab qilinishi bilan bog'liq. Geografik axborot tizimlaridan samarali foydalanish uchun tadqiqotchilar ma'lumotlar bazasi, kartografiya va dasturlash kabi sohalarda bilimga ega bo'lishlari kerak. Bu esa qo'shimcha o'qitish va malaka oshirishni talab qiladi. Muammoni hal qilish uchun foydalanuvchilar uchun qulay interfeysga ega va o'rganish uchun resurslar bilan ta'minlangan dasturlardan foydalanish tavsiya etiladi.

Uchinchi muammo kompyuter dasturlariga haddan ziyod ishonish bilan bog'liq. Ba'zi tadqiqotchilar dasturlarning imkoniyatlarini mutlaqlashtirishi va natijalarning ishonchliligini so'zsiz qabul qilishi mumkin. Biroq, har qanday dastur ma'lum xatoliklarga ega bo'lishi va natijalarni noto'g'ri talqin qilishga olib kelishi mumkin.

XULOSA

Xulosa qilib aytganda, geografik kengliklarni o'rganishda kompyuter dasturlari muhim rol o'ynaydi. Ular tadqiqotchilarga katta hajmdagi ma'lumotlarni samarali to'plash, qayta ishlash, tahlil qilish va vizuallashtirish imkonini beradi. ArcGIS, QGIS va ENVI kabi dasturlar turli sohalarda, jumladan, ekologiya, gidrologiya va o'simlik qoplamini o'rganishda keng qo'llaniladi.

Shu bilan birga, dasturlardan foydalanishda ba'zi muammolar ham mavjud. Bular qatoriga dasturiy ta'minotning qimmatligi, maxsus ko'nikmalar talab qilinishi va natijalarga haddan ziyod ishonish kabilar kiradi. Ushbu muammolarni hal qilish uchun tadqiqotchilar ehtiyojlari va imkoniyatlaridan kelib chiqqan holda mos dasturni tanlashlari, qo'shimcha o'qitish va malaka oshirish tadbirlarini o'tkazishlari hamda dasturlarning imkoniyatlari va natijalarini tanqidiy baholashlari lozim.

Kelajakda geografik kengliklarni o'rganishda kompyuter dasturlarining roli yanada oshishi kutilmoqda. Yangi texnologiyalar, jumladan, sun'iy intellekt va bulutli hisoblash tizimlari tadqiqotchilar uchun yangi imkoniyatlar yaratadi. Shu bilan birga, dasturiy ta'minotni yanada takomillashtirish, foydalanuvchilar uchun qulaylikni oshirish va ochiq kodli alternatalarni rivojlantirish muhim vazifalar bo'lib qoladi.

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BRIDGING THE GAP: THE ROLE OF SOCIAL NETWORK SEGMENTATION IN TEAM MANAGEMENT

Abstract. In the evolving landscape of organizational management, the segmentation of social networks into cohesive teams has emerged as a strategic approach to enhance collaboration, communication, and overall efficiency. This article delves into the concept of social network segmentation, wherein the intricate web of relationships within an organization is analyzed and divided into manageable teams based on various factors such as function, expertise, and social ties. By aligning team structures with the natural social organization, managers can leverage the inherent strengths of their workforce, fostering a more dynamic and adaptable environment. The article further explores the practical applications of this approach in various organizational settings, highlighting its benefits in improving team collaboration, streamlining communication, and facilitating innovation. Challenges such as maintaining cohesion, balancing diversity, and managing conflicts are also addressed, providing insights into effective implementation and management. The article concludes by emphasizing the significance of social network segmentation in shaping the future of team management, offering a roadmap for organizations seeking to optimize their performance in an increasingly interconnected world.

Keywords: Social Network Segmentation, Team Management, Organizational Efficiency, Collaboration, Communication, Innovation, Diversity, Conflict Management, Organizational Dynamics, Workforce Optimization.

Introduction: In the contemporary business landscape, the concept of dividing social networks into teams has emerged as a potent tool in the realm of management. This approach, grounded in the principles of social network analysis, offers a nuanced understanding of the intricate web of relationships within an organization. By segmenting social networks into distinct teams, managers can foster collaboration, enhance communication, and drive organizational efficiency. This article explores the application of this concept in management, highlighting its benefits, challenges, and practical implications.

Understanding Social Network Segmentation:



Social network segmentation is a process that involves analyzing the complex web of relationships within an organization and dividing it into smaller, more manageable groups or teams. This segmentation is based on various factors, including functional roles, expertise, social connections, and communication patterns. The aim is to create a structure that mirrors the natural social organization of the workplace, facilitating more effective collaboration and communication.

Key Aspects of Social Network

Segmentation:

1. **Identifying Key Nodes:** In any social network, certain individuals serve as key nodes or hubs of activity. These individuals often have a wide-reaching influence and are central to the flow of information. Identifying these key nodes is crucial in understanding the structure of the network and determining how to segment it effectively.

2. **Analyzing Relationships:** Social network segmentation involves examining the nature and strength of relationships between individuals. This can include formal relationships, such as reporting lines or project teams, as well as informal connections, such as friendships or mentorship ties.

3. **Mapping Communication Flows:** Understanding how information flows within the network is essential for effective segmentation. This involves mapping out communication channels and identifying potential bottlenecks or areas where communication is lacking.

4. **Grouping Based on Similarities:** Once the network has been analyzed, individuals can be grouped into teams based on similarities in their roles, expertise, or social connections. The goal is to create groups that are cohesive and can work together effectively.

5. **Considering Overlapping Memberships:** In many organizations, individuals may belong to multiple teams or groups. Social network segmentation should take into account these overlapping memberships to ensure that individuals are not overburdened and that teams remain balanced.

6. **Dynamic Nature:** Social networks within organizations are dynamic, with relationships and communication patterns evolving over time. Effective social network segmentation must be adaptable, allowing for re-evaluation and adjustment as the organization changes.

Benefits of Social Network Segmentation:

1. **Enhanced Collaboration:** By aligning teams with the natural social structure of the organization, social network segmentation can lead to more effective collaboration and teamwork.

2. Improved Communication: Segmented teams often have clearer communication channels, leading to more efficient information exchange and decision-making.

3. Increased Innovation: When teams are formed based on complementary skills and expertise, it can foster a more creative and innovative environment.

4. Better Resource Allocation: Understanding the social network structure allows managers to allocate resources more effectively, ensuring that teams have the support they need to succeed.

Social network segmentation is a powerful tool for managers looking to optimize the performance of their teams. By understanding and leveraging the natural social dynamics of their organization, managers can create a more cohesive, collaborative, and efficient workplace.

Applications in Management:

1. Enhanced Collaboration: By dividing social networks into teams, managers can create focused groups that are better equipped to collaborate on specific projects or tasks. This targeted approach facilitates the pooling of skills and knowledge, leading to more innovative solutions and efficient problem-solving.

2. Improved Communication: Segmented teams tend to have clearer communication channels, as members are more closely connected and share a common purpose. This can lead to quicker decision-making and a reduction in misunderstandings or information bottlenecks.

3. Increased Flexibility: In a rapidly changing business environment, the ability to adapt is crucial. Dividing social networks into teams allows for greater flexibility, as each team can respond more swiftly to changes in their respective areas, without disrupting the entire network.

4. Enhanced Employee Engagement: When individuals are part of a well-defined team, they are more likely to feel a sense of belonging and commitment. This can lead to higher levels of engagement, motivation, and job satisfaction.

Challenges and Considerations:

1. Maintaining Cohesion: While dividing social networks into teams can enhance collaboration within groups, it is essential to ensure that it does not lead to silos or fragmentation between teams. Managers must foster inter-team communication and collaboration to maintain overall organizational cohesion.

2. Balancing Diversity: Creating teams based on social networks can sometimes lead to homogeneity, where members have similar backgrounds or perspectives. Managers should strive to balance diversity within teams to encourage creativity and prevent groupthink.

3. Managing Conflicts: As with any team structure, conflicts can arise. Managers need to be adept at conflict resolution to ensure that team dynamics remain positive and productive.

4. Monitoring Performance: Regular monitoring and assessment of team performance are crucial to ensure that the division of social networks is yielding the desired results. Managers should be prepared to make adjustments as necessary to optimize team effectiveness.

Let's take a look at how different organizations can use social media segmentation in real-world scenarios:

1. Technology Start-Up:

- Situation: A fast-growing tech start-up is experiencing communication breakdowns and inefficiencies as it scales.

- Application: The company uses social network analysis to identify natural clusters of employees who frequently collaborate and share knowledge. These clusters are formalized into cross-functional teams, each focused on a specific aspect of product development. By aligning teams with existing social networks, the start-up enhances communication and accelerates innovation.

2. Healthcare Organization:

- Situation: A large hospital is struggling with interdepartmental coordination, leading to delays in patient care.

- Application: The hospital conducts a social network segmentation analysis to map out the relationships between different departments. Based on the findings, it establishes interdisciplinary teams comprising members from various departments who often work together on patient cases. These teams meet regularly to discuss patient care, streamline processes, and share best practices, improving overall efficiency and patient outcomes.

3. Consulting Firm:

- Situation: A consulting firm is facing challenges in knowledge sharing and collaboration across its global offices.

- Application: The firm uses social network segmentation to identify key individuals who act as knowledge brokers between different offices. It then creates global practice groups centered around these individuals, focusing on specific areas of expertise. This structure facilitates the flow of information and best practices across the firm, enhancing the quality of client solutions.

4. Manufacturing Company:

- Situation: A manufacturing company is experiencing bottlenecks in its production process due to poor communication between teams.

- Application: The company employs social network analysis to uncover the informal networks that exist on the production floor. It then reorganizes its teams to mirror these networks, ensuring that individuals who naturally collaborate are officially grouped together. This reorganization leads to smoother communication, quicker problem-solving, and more efficient production.

5. Educational Institution:

- Situation: A university is seeking to improve interdisciplinary research and collaboration among its faculty.

- Application: The university conducts a social network segmentation analysis to identify clusters of faculty members who share research interests but are spread across different departments. It then forms interdisciplinary research groups based on these clusters, providing them with resources and support to pursue collaborative research projects. This approach fosters innovation and strengthens the university's research capabilities.

These examples illustrate how social network segmentation can be applied in various organizational contexts to enhance team management, improve communication, and drive efficiency. By understanding and leveraging the natural social dynamics within their organizations, managers can create a more cohesive and effective workforce.

Conclusion:

The application of dividing social networks into teams in the field of management presents a dynamic approach to enhancing organizational performance. By fostering focused collaboration, streamlining communication, and promoting flexibility, this strategy can significantly contribute to the success of an organization. However, it requires careful implementation and ongoing management to address potential challenges and ensure that the benefits are fully realized. As businesses continue to navigate an increasingly complex and interconnected world, the strategic segmentation of social networks will undoubtedly play a pivotal role in shaping the future of management practices.

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DESIGN OF A 4 FLOOR PUBLIC BUILDING MADE OF REINFORCED CONCRETE PANELS ON THE BASIS OF ENERGY EFFICIENCY REQUIREMENTS

Abstract. In this article, in order to create and maintain a moderate climate in the rooms for the winter season in a 4-floor reinforced concrete panel public building located in the city of Jizzakh, the overall heat transfer resistance of its external wall structures is increased based on the requirements of Building Codes 2.01.04-18 "Construction thermal engineering"., accounting works and their solutions are shown.

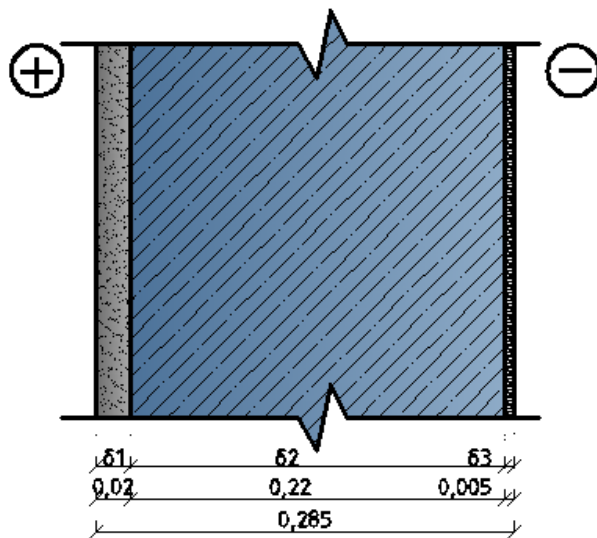
Key words: reinforced concrete panel, winter season, moderate climate, energy efficient, basalt slab, thermal inertia, heat absorption coefficient.

49% of all energy consumed in 1 year in the Republic of Uzbekistan is accounted for by oil equivalent buildings. This indicator leads to spending a lot of energy and money not only for the state, but also for people. Energy loss in buildings. The loss of heat energy through external barrier constructions differs depending on the number of floors in buildings, the material of the surrounding walls, the year of construction, service life, and the quality of construction works.

We consider energy loss in buildings in relation to the total percentage depending on the number of floors in residential buildings: Through external walls: it is 30 – 35% in one and two – floor buildings; up to 42% in five- floor buildings; and in nine- floor buildings it is up to 49%. Through the window: in one – two – floor buildings, it is 25%; five – floor makes up 32%; 35% in nine – floor buildings; 10 to 20% of heat is lost through the foundation of the building, the basement covering and the roof construction. Also, residential buildings in operation in the territory of the Republic and our regions make up 50-60% of the total buildings. Thermal protection of such buildings does not fully meet current modern requirements. This leads to excessive consumption of electricity and gas in buildings that are being operated. This is one of the urgent problems of today.

MAIN PART

Thermal-physical calculation of external wall structure of 4-floor public buildings located in Jizzakh city area. The external wall structure of the building is made of reinforced concrete panels and the external surface is covered with ceramic tiles. When calculating its total heat transfer resistance, we determine the necessary information provided for thermal-physical calculations in Building Code 2.01.01-22 and 2.01.04-18. The city of Jizzakh is located in the dry zone in terms of humidity; The calculated outdoor air temperature of the city of Jizzakh is the average temperature of the coldest day with a guaranteed value of 0,98: $t_o^1 = -22$ °C; 0,92: $t_o^1 = -19$ °C; the average temperature of the coldest five days is 0,92: $t_o^5 = -19$ °C; The average temperature of the coldest three days is 0,92: $t_o^3 = t_o^1 + t_o^5 / 2 = -19 - 19 / 2 = -19$ °C; July: $t_o = +28$ °C; maximum amplitude of daily fluctuations of outdoor air temperature in July: $A_{tO} = 23,1$ °C; $J_{max} = 746$ vt/m², $J_{mid} = 172$ vt/m²; $V = 1,9$ m/c; $t_{in} = 20$ °C; $\varphi_{in} = 50$ %; humidity mode of the room - moderate; operating conditions of the wall – A; the thickness of the reinforced concrete panel is 220 mm, it is covered with 20 mm thick lime-sand plaster from the inside, and from the outside with ceramic tiles 5 mm thick. We determine their volumetric weight, heat transfer coefficient and heat absorption coefficient. Reinforced concrete panel: $\gamma = 2500$ kg/m³, $\lambda = 1,92$ Vt/(m · °C), $S = 17,98$ Vt/(m² · °C); lime-sand plaster: $\gamma = 1600$ kg/m³, $\lambda = 0,7$ Vt/(m · °C), $S = 8,69$ Vt/(m² · °C); ceramic tile: $\gamma = 2000$ kg/m³, $\lambda = 1,5$ Vt/(m · °C), $S = 14$ Vt/(m² · °C).



1st figure. Calculation scheme of the wall construction made of reinforced concrete panel. 1st layer (δ_1) lime - sand plaster, 2nd layer (δ_2) reinforced concrete panel, 3rd layer (δ_3) ceramic tile.

$$\Delta t_{nor} = 4^{\circ}\text{C}; \alpha_{in} = 8,7 \frac{\text{Vt}}{\text{m}^2} \cdot ^{\circ}\text{C} \text{ and } \alpha_o = 23 \frac{\text{Vt}}{\text{m}^2} \cdot ^{\circ}\text{C}; n=1; \rho = 0,8.$$

Heat-physical calculation of reinforced concrete outer wall construction for winter. Determine the total heat transfer resistance of the reinforced concrete panel structure: $R_{tot} = R_{in} + R_{con} + R_{out} = \frac{1}{\alpha_{in}} + \frac{\delta_1}{\lambda_1} + \frac{\delta_2}{\lambda_2} + \frac{\delta_3}{\lambda_3} + \frac{1}{\alpha_t} = \frac{1}{8,7} + \frac{0,02}{0,7} + \frac{0,22}{1,92} + \frac{0,005}{1,5} + \frac{1}{23} = 0,304 \text{ m}^2 \cdot ^{\circ}\text{C}/\text{Vt}$. Determine the thermal inertia of the structure:

$$D = \frac{\delta_1}{\lambda_1} \cdot S_1 + \frac{\delta_2}{\lambda_2} \cdot S_2 + \frac{\delta_3}{\lambda_3} \cdot S_3 = \frac{0,02}{0,7} \cdot 8,69 + \frac{0,22}{1,92} \cdot 17,98 + \frac{0,005}{1,5} \cdot 14 = 0,3$$

Since $4 > D = 0,3$, we

take the calculated temperature of the outside air as $t_{mid}^1 = -19,0^{\circ}\text{C}$. Required value of resistance to heat transfer for the structure:

$$R_{tot}^D = \frac{(t_{in} - t_{out}) \cdot n}{\Delta t^n \cdot \alpha_{in}} = \frac{(20 - (-19)) \cdot 1}{4 \cdot 8,7} = 1,12 \text{ m}^2 \cdot ^{\circ}\text{C}/\text{Vt}$$

$R_{tot} \geq R_{tot}^D$ we check the

fulfillment of the condition: $R_{tot} = 0,304 > R_{tot}^D = 1,12 \text{ m}^2 \cdot ^{\circ}\text{C}/\text{Vt}$ the condition was not met. Therefore, it is necessary to adapt the public building made of reinforced concrete panels to the 3 levels of heat protection specified in the Construction Code 2.01.04 - 18 and increase its thermal protection. First of all, the heating period and its degree day should be determined: $D_d = (t_i - t_{mid.gr.}) \cdot Z_{h.p.}$;

$$t_{mid.gr.} = \frac{1,7+3,6+9,1+8,3+3,0}{5} = 5,14^{\circ}\text{C}; D_d = (20^{\circ}\text{C} - 5,14^{\circ}\text{C}) \cdot 143,5 =$$

2132,4 ^o sutka. We will check the fulfillment of the condition on 3 levels

$R_{tot} \geq R_{tot}^D$ given in Building Code 2.01.04-18: For level 1:

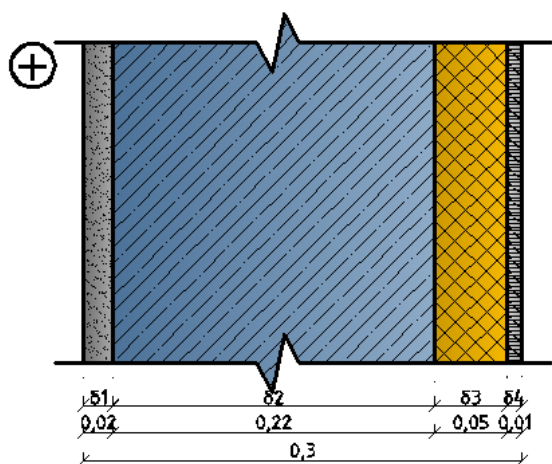
$R_{tot} = 0,304 > R_{tot}^D = 1,5 \text{ m}^2 \cdot ^{\circ}\text{C}/\text{vt}$ the condition was not met. For level 2:

$R_{tot} = 0,304 > R_{tot}^D = 2,2 \text{ m}^2 \cdot ^{\circ}\text{C}/\text{vt}$ the condition was not met. For level 3:

$R_{tot} = 0,304 > R_{tot}^D = 2,6 \text{ m}^2 \cdot ^{\circ}\text{C}/\text{vt}$ the condition was not met.

Therefore, the external density of the public building wall is $\gamma = 100 \text{ kg}/\text{m}^3$, thickness is 50 mm, $\lambda = 0,022 \text{ Vt}/(\text{m} \cdot ^{\circ}\text{C})$, $S = 0,37 \text{ Vt}/(\text{m}^2 \cdot$

°C) (heat absorption of penoplex was assumed to be equal to the coefficient) covering the basalt facade slab, its density $\gamma = 1200 \text{ kg/m}^3$, thickness 10 mm, $\lambda = 0,41 \text{ Vt/(m} \cdot \text{°C)}$, $S = 6,01 \text{ Vt/(m}^2 \cdot \text{°C)}$, we increase its heat protection by covering facade gypsum boards: $R_{tot} = R_{in} + R_c + R_o = 2,6 \text{ m}^2 \cdot \text{°C/Vt}$



2nd figure. Calculation scheme of the wall construction made of reinforced concrete panel covered with heat insulating material. 1st layer (δ_1) lime - sand plaster, 2nd layer (δ_2) reinforced concrete panel, 3rd layer (δ_3) basalt facade plate, 4rd layer (δ_4) facade gypsum tile.

We will check the fulfillment of the condition on 3 levels $R_{tot} \geq R_{tot}^D$ given in Building Code 2.01.04-18: For level 1: $R_{tot} = 2,6 > R_{tot}^D = 1,8 \text{ m}^2 \cdot \text{°C/vt}$ the condition is met. For level 2: $R_{tot} = 2,6 > R_{tot}^D = 2,2 \text{ m}^2 \cdot \text{°C/vt}$ the condition is met. For level 3: $R_{tot} = 2,6 > R_{tot}^D = 2,6 \text{ m}^2 \cdot \text{°C/vt}$ the condition is met.

From the results of the above-mentioned theoretical thermal-physical calculations, it can be concluded that the external wall structure of the public buildings built from reinforced concrete panels with 4 and above floors in operation in the city of Jizzah, by covering the basalt facade plates with a thickness of 50 mm from the outside, its total heat transfer resistance is Building Code 2.01.2018. It is possible to increase according to the requirements of 3 levels of heat protection given in Building Code 2.01.04-18.

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ENERGY EFFICIENCY SOLUTION FOR A 4-FLOOR PUBLIC BUILDING CONSTRUCTED FROM PRE-CAST REINFORCED CONCRETE PANELS

Abstract. This article shows thermal and physical calculations of external wall constructions of public buildings made of 4-floor reinforced concrete panels operated in Jizzakh city area. This solution is aimed at increasing heat resistance for summer conditions in accordance with the requirements of QMQ 2.01.04-18 "Construction thermal engineering".

Key word: 4-floor public building, reinforced concrete panel, energy efficient, basalt facade slab, thermal inertia.

49% of all energy consumed in 1 year in the Republic of Uzbekistan is accounted for by oil equivalent buildings. This indicator leads to spending a lot of energy and money not only for the state, but also for people. Energy loss in buildings. The loss of heat energy through external barrier constructions differs depending on the number of floors in buildings, the material of the surrounding walls, the year of construction, service life, and the quality of construction works. We consider energy loss in buildings in relation to the total percentage depending on the number of floors in residential buildings: Through external walls: it is 30 – 35% in one and two – floor buildings; up to 42% in five- floor buildings; and in nine- floor buildings it is up to 49%. Through the window: in one – two – floor buildings, it is 25%; five – floor makes up 32%; 35% in nine – floor buildings; 10 to 20% of heat is lost through the foundation of the building, the basement covering and the roof construction. Also, residential buildings in operation in the territory of the Republic and our regions make up 50-60% of the total buildings. Thermal protection of such buildings does not fully meet current modern

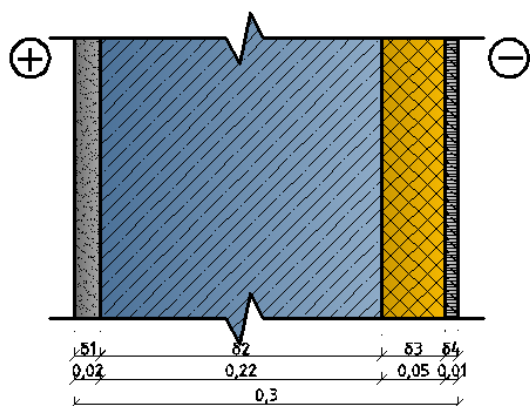
requirements. This leads to excessive consumption of electricity and gas in buildings that are being operated. This is one of the urgent problems of today.

MAIN PART

Thermal-physical calculation of external wall structure of 4-floor public buildings located in Jizzakh city area. The external wall structure of the building is made of reinforced concrete panels and the external surface is covered with ceramic tiles. When calculating its total heat transfer resistance, we determine the necessary information provided for thermal-physical calculations in Building Code 2.01.01-22 and 2.01.04-18. The city of Jizzakh is located in the dry zone in terms of humidity; July: $t_o = +28^\circ\text{C}$; maximum amplitude of daily fluctuations of outdoor air temperature in July: $A_{tO} = 23,1^\circ\text{C}$; $J_{\max} = 746 \text{ vt/m}^2$, $J_{\text{mid}} = 172 \text{ vt/m}^2$; $V = 1,9 \text{ m/c}$; $t_{\text{in}} = 20^\circ\text{C}$; $\varphi_{\text{in}} = 50\%$; humidity mode of the room - moderate; operating conditions of the wall – A; the thickness of the reinforced concrete panel is 220 mm, it is covered with 20 mm thick lime-sand plaster from the inside, and from the outside with ceramic tiles 5 mm thick. We determine their volumetric weight, heat transfer coefficient and heat absorption coefficient. Reinforced concrete panel: $\gamma = 2500 \text{ kg/m}^3$, $\lambda = 1,92 \text{ Vt/(m} \cdot ^\circ\text{C)}$, $S = 17,98 \text{ Vt/(m}^2 \cdot ^\circ\text{C)}$; lime-sand plaster: $\gamma = 1600 \text{ kg/m}^3$, $\lambda = 0,7 \text{ Vt/(m} \cdot ^\circ\text{C)}$, $S = 8,69 \text{ Vt/(m}^2 \cdot ^\circ\text{C)}$; ceramic tile: $\gamma = 2000 \text{ kg/m}^3$, $\lambda = 1,5 \text{ Vt/(m} \cdot ^\circ\text{C)}$, $S = 14 \text{ Vt/(m}^2 \cdot ^\circ\text{C)}$. $\Delta t_{\text{nor}} = 4^\circ\text{C}$; $\alpha_{\text{in}} = 8,7 \frac{\text{Vt}}{\text{m}^2} \cdot ^\circ\text{C}$ and $\alpha_o = 23 \frac{\text{Vt}}{\text{m}^2} \cdot ^\circ\text{C}$; $n = 1$; $\rho = 0,45$.

Heat-physical calculation of reinforced concrete external wall construction for the summer season.

During the renovation of a 4-floor reinforced concrete panel public building in operation, it was planned to cover the exterior wall structure with 5 cm thick basalt facade tiles. We will consider the calculations of heat resistance of this wall structure.



1st figure. Calculation scheme of the wall construction made of reinforced concrete panel covered with heat insulating material. 1st layer (δ_1) lime - sand plaster, 2nd layer (δ_2) reinforced concrete panel, 3rd layer (δ_3) basalt facade plate, 4rd layer (δ_4) facade gypsum tile.

Thermal inertia of structural layers is determined according to the following formula: For the first layer: $D_1 = \frac{\delta_1}{\lambda_1} \cdot S_1 = \frac{0,02}{0,07} \cdot 8,69 = 2,48$, for the second layer:

$$D_2 = \frac{\delta_2}{\lambda_2} \cdot S_2 = \frac{0,22}{1,92} \cdot 17,98 = 2,06, \text{ for the third layer: } D_3 = \frac{\delta_3}{\lambda_3} \cdot S_3 = \frac{0,005}{1,5} \cdot 14 = 0,05, \text{ for the fourth layer: } D_4 = \frac{\delta_4}{\lambda_4} \cdot S_4 = \frac{0,05}{0,022} \cdot 0,37 = 0,84, \text{ for the fifth layer: } D_5 = \frac{\delta_5}{\lambda_5} \cdot S_5 = \frac{0,01}{0,41} \cdot 6,01 = 0,15.$$

In accordance with the values of D_1, D_2, D_3, D_4, D_5 , we determine the heat absorption coefficients of the outer surfaces of the layers. Since $D_1=0,37 < 1$, determining the value of Y_1 using the following formula

$$Y_1 = \frac{R_1 \cdot S_1^2 + \alpha_{in}}{1 + R_1 \cdot \alpha_{in}} = \frac{0,028 \cdot 8,69^2 + 8,7}{1 + 0,028 \cdot 8,7} = \frac{10,81}{8,94} = 1,21 \text{ Wt/m}^2 \cdot ^\circ\text{C}, \text{ since } D_2=2,06 < 1, \text{ the heat}$$

absorption coefficient of the surface is equal to the following: $Y_2=S_2=17,98$, since $D_3=0,05 < 1$, determining the value of Y_3 using the following formula:

$$Y_3 = \frac{R_3 \cdot S_3^2 + Y_2}{1 + R_3 \cdot Y_2} = \frac{0,003 \cdot 14^2 + 17,98}{1 + 0,003 \cdot 17,98} = \frac{18,56}{18,03} = 1,03 \text{ Wt/m}^2 \cdot ^\circ\text{C}, \text{ since } D_4=0,84 < 1,$$

determining the value of Y_4 using the following formula:

$$Y_4 = \frac{R_4 \cdot S_4^2 + Y_3}{1 + R_4 \cdot Y_3} = \frac{2,27 \cdot 0,37^2 + 1,03}{1 + 2,27 \cdot 1,03} = \frac{1,34}{3,36} = 0,39 \text{ Wt/m}^2 \cdot ^\circ\text{C}, \text{ since } D_5=0,15 < 1, \text{ determining}$$

the value of Y_5 using the following formula:

$$Y_5 = \frac{R_5 \cdot S_5^2 + Y_4}{1 + R_5 \cdot Y_4} = \frac{0,024 \cdot 6,01^2 + 0,39}{1 + 0,024 \cdot 0,39} = \frac{1,26}{0,4} = 3,15 \text{ Wt/m}^2 \cdot ^\circ\text{C}$$

Determining the heat transfer coefficient of the outer surface for summer conditions: $\alpha_H = 1,16 \cdot (5 + 10 \cdot \sqrt{v}) = 1,16(5 + 10\sqrt{1,9}) = 21,8 \text{ Wt/m}^2 \cdot ^\circ\text{C}$. determining the attenuation of the amplitude of temperature changes when passing through the structure:

$$\begin{aligned} v &= 0,9e^{\frac{D}{\sqrt{2}}} \cdot \frac{(S_1 + \alpha_B) \cdot (S_2 + Y_1) \cdot (S_3 + Y_2) \cdot (S_4 + Y_3) \cdot (S_5 + Y_4) \cdot (\alpha_H + Y_5)}{(S_1 + Y_1) \cdot (S_2 + Y_2) \cdot (S_3 + Y_3) \cdots (S_n + Y_n) \cdot \alpha_H} = \\ &= 0,9 \cdot 2,7182^{\frac{5,58}{\sqrt{2}}} \cdot \frac{(8,69 + 8,7) \cdot (17,98 + 1,21) \cdot (14 + 17,98) \cdot (0,37 + 1,03) \cdot (6,01 + 0,39) \cdot (21,8 + 3,15)}{(8,69 + 1,21) \cdot (17,98 + 17,98) \cdot (14 + 1,03) \cdot (0,37 + 0,39) \cdot (6,01 + 3,15) \cdot 21,8} = \\ &= 46 \cdot \frac{17,39 \cdot 19,9 \cdot 21,98 \cdot 1,4 \cdot 6,4 \cdot 24,95}{9,9 \cdot 35,96 \cdot 15,03 \cdot 0,76 \cdot 9,16 \cdot 21,8} = \frac{17004305}{8120437} \cdot 46 = 2,09 \cdot 46 = 96,32 \end{aligned}$$

Determining the calculated amplitude of changes in outdoor air temperature:

$$A_{t_{out}}^{accoun.} = 0,5 A_{t_{out}} + \frac{\rho(J_{max} - J_{mid})}{\alpha_{out}} = 0,5 \cdot 23,1 + \frac{0,45 \cdot (746 - 172)}{21,8} = 11,55 + 11,85 = 23,4^\circ\text{C}. \text{ The}$$

calculated amplitude of temperature changes on the inner surface of the barrier structure is determined using the following formula: $A_{\tau_B} = \frac{A_{t_H}^{pacq}}{v} = \frac{23,4}{96,32} = 0,24^\circ\text{C}$

Determine the required value of this amplitude using the following formula:

$$A_{\tau_B}^{TP} = 2,5 - 0,1(t_H - 21) = 2,5 - 0,1(28 - 21) = 16,8^\circ\text{C}. \text{ Let's check if the condition is}$$

met: $A_{\tau_B} \leq A_{\tau_B}^{TP} : A_{\tau_B} = 0,24^\circ\text{C} < A_{\tau_B}^{TP} = 16,8^\circ\text{C}$ the condition is met.

Therefore, From the results of the above-mentioned theoretical thermal-physical calculations, it can be concluded that during the repair of the external

wall structure of the 4-floor reinforced concrete panel public building in operation in the city of Jizzah, it is possible to increase its heat resistance by covering it with a 5 cm thick basalt facade plate.

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ОЗИҚ-ОВҚАТ САНОАТИ КЛАСТЕРЛАРИ РИВОЖЛАНИШИНИНГ МИНТАҚАВИЙ ХУСУСИЯТЛАРИ

Аннотация. миллий иқтисодиётимизнинг жаҳон хўжалигига интеграциялашиши шароитида озиқ-овқат саноати кластерини таъкил этиши ва уни ҳудудий таркибини такомиллаштириши бўйича тавсиялар ишлаб чиқилган.

Калит сўзлар: Саноат кластери, ҳудудий мужассамлашув, маҳаллийлаштириши, бойитилган маҳсулотлар, модернизациялаш, қорамолчилик комплекси, гўшт консерваси, музлатгичли омборлар.

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REGIONAL RECUILIARITIES OF THE DEVELOPMENT FOOD INDUSTRY CLUSTER

Annotation. recommendations on creating a food cluster and improving its regional structure in the context of integrating our national economy into the global economy.

Key words: industrial cluster, regional integration, localization, enriched products, modernization, livestock complex, canned meat, refrigerated warehouses.

Кириш. Миллий иқтисодиётнинг рақобатбардошлигини ошириш мақсадида саноат кластерини шакллантириш жуда муҳим ва айнан Хоразм вилояти озиқ-овқат саноати унинг асоси бўлиши мумкин. Лекин озиқ-овқат саноати салоҳиятини тўлиқ амалга ошириш учун ушбу мажмуа тармоқларини, биринчидан, етиштириладиган қишлоқ хўжалик хомашё маҳсулотларини самарадорлигини ошириш; иккинчидан, вилоятнинг ўзида қайта ишланадиган озиқ-овқат хом ашёсининг улушини ошириш; учинчидан, ташқи иқтисодий омилдан янада самарали фойдаланиш мақсадида тармоқдаги тайёр маҳсулотнинг рақобатбардошлигини ошириш йўналишида кўтариш ва модернизация қилиш зарур. Шу билан бирга, ҳукумат томонидан озиқ-овқат саноати тармоқларининг

рақобатбардошлигини ошириш мақсадли дастурининг ишлаб чиқилиши ва амалга оширилиши зарур, нафақат вилоят иқтисодиётида, балки миллий иқтисодиётимизга, жаҳон хўжалигига интеграциялашиш, аҳоли фаровонлигини ошириш, мамлакатимизнинг миллий нуфузини кўтариш ва миллий давлат манфаатларига жавоб берадиган сиёсатни амалга ошириш имконини беради.

Ишнинг мақсади ва вазифалари. Озиқ-овқат саноати ҳудудий кластерини барпо этишда «хомашё – қайта ишлаш – тайёр маҳсулот» шаклида иқтисодий-географик жиҳатдан ишлаб чиқаришни самарали ташкил этишни такомиллаштириш.

Асосий қисм. Вилоят озиқ-овқат саноати кластерининг ҳудудий таркибини ривожлантиришда қуйидаги ҳолатлар мавжуд бўлиб:

– бозор иқтисодиёти шароитида жойларда йирик ишлаб чиқариш барҳам топди;

– аста-секинлик билан саноат тармоғининг аксарият соҳаларида (ун-ёрма, ёғ-мой, шакар, алкогольли ичимликлар ишлаб чиқаришдан ташқари) ишлаб чиқариш кичик бизнес соҳасида йиғила бошланди;

– ишлаб чиқаришнинг айрим тармоқларида эски технологиялардан фойдаланилиш ҳолатлари кузатилади;

– ишлаб чиқаришда марказлашув кучайди, тармоқнинг асосий ишлаб чиқариш қувватлари Урганч шаҳри ва Урганч туманида тўпланиб қолди;

– саноат тармоқлари ишлаб чиқариш ҳажми қисқарган бўлса-да, ассортимент кенгайди;

– маҳаллий хомашё билан боғлиқ бўлмаган ишлаб чиқариш қувватлари юзага келди.

Озиқ-овқат саноатининг қатор тармоқлари, хусусан, ёғ-мой, ун-ёрма, алкогольли ва ноалкогол маҳсулотларини ишлаб чиқариш юқори даражадаги ҳудудий мужассамлашуви иқтисодий жойлаштириш омиллари нуқтаи-назаридан қонуний ҳолдир. Айни вақтда, саноат тармоғини ривожлантиришнинг ҳозирги босқичида ички истеъмол нуқтаи назаридан ёндашиш ҳам лозим.

Юқоридагилардан келиб чиққан ҳолда, вилоятда озиқ-овқат саноати кластерини босқичма-босқич ривожлантириш талаб этилади. Ҳозирда давом этаётган босқичда республика аҳолиси ички истеъмолини маҳаллийлаштиришни давом эттириш лозим. Ушбу босқични 2022 йилларга бориб яқунлаш керак. Ушбу даврда вилоят саноат тармоғига йилига ўртача 50-100 млн АҚШ доллари миқдорида сармоя киритиш ва бунга асосан кичик бизнес секторида имтиёзли кредитлаш асосида амалга ошириш мақсадга мувофиқ.

Ушбу **биринчи** босқичда (2017-2022 йиллар) озиқ-овқат саноатини ривожлантиришнинг мева-сабзавот ва полиз маҳсулотларидан турли консерва, шарбат маҳсулотларининг ташқи бозорга йўналтирувчи қувватларини барпо этиш тавсия этилади. Ушбу соҳаларни тараққий

этириш республика тармоқ дастурида ҳам ўз аксини топган бўлиб, маҳсулотлар сифатини ошириш ҳам кўзда тутилган. Хусусан, темир моддасига бойитилган ун, қора ун маҳсулотлари, йодланган туз ишлаб чиқаришни рағбатлантириш шулар қаторига киради. Ушбу масалаларнинг айримлари, хусусан, 2017-2022 йилларда амалга оширилган дастурлар доирасида маълум даражада ҳал қилинди [4].

Тармоқ ривожланишининг **иккинчи** босқичида (2023-2027 йиллар) вилоятда озиқ-овқат саноатини экспортга йўналтиришга катта аҳамият бериш лозим. Хусусан, сут ва гўшт саноати озиқ-овқат маҳсулотларига тенглаштирилган ярим маҳсулот ҳамда таркиби бойитилган маҳсулотлар ишлаб чиқаришни такомиллаштириш асосий ўрин тутиши лозим. Айтилган пайтда озиқ-овқат маҳсулотларини ишлаб чиқаришда табиий маҳсулотлар тайёрлаш анъанаси кучаяётган бўлса-да, аҳолини хилма-хил эҳтиёжини қондириш ёки янги эҳтиёжларини яратишда озиқ-овқатга тенглаштирилган маҳсулотларни ишлаб чиқариш ҳам катта аҳамият касб этади.

Тармоқ саноатини ривожлантиришнинг **учинчи** босқичида (2028-2032 йиллар) ички истеъмолни маҳаллий қишлоқ хўжалиги озиқ-овқатлари билан тўла таъминлашга эришиш ҳамда вилоятда етиштирилаётган қишлоқ хўжалик хом ашёсини қайта ишлашни тармоқларда 25 фоиздан 75 фоизгача етказиш, озиқ-овқат маҳсулотларига тўла товар хусусият берувчи амалиётларни жорий этиш талаб этилади [3].

Озиқ-овқат саноатини ривожлантириш бевосита қишлоқ хўжалик хом ашёсини сақлаш, қадоқлаш, тозалаш каби вазифаларни ўзида қамраб олган тизимни шакллантириш билан ҳам боғлиқдир. Ушбу тизимни биринчи босқичининг ўзидаёқ шакллантириш катта аҳамиятга эга. Чунки, ишлаб чиқаришда уларни эътиборга олмаслик йирик йўқотишларга олиб келган кўпгина мисолларни келтириш мумкин.

Вилоятда етиштирилаётган барча қишлоқ хўжалик озиқ-овқат маҳсулотларини бутунлай қайта ишловга тортиш тўғри келмайди. Чунки, дунёнинг ҳеч қайси мамлакатада бундай амалиёт кузатилмайди (техник озиқ-овқат хом ашёси, ун маҳсулоти бундан мустасно), яъни қатор озиқ-овқат маҳсулотлари истеъмолчилар дастурхонига фақат қадоқланган ёки тозаланган ҳолда софлигича етказиб берилади [1].

Тармоқда аҳамияти жиҳатидан биринчи ўринда турадиган ун саноати ишлаб чиқариши корхоналарини тўла модернизациялаш, хомашё сақлаш, элеватордан ўтказиш тизимларини яхшилаш бугунги куннинг долзарб масалаларидан саналади. Ҳозирги вақтда вилоятда тўртта йирик ун комбинати фаолият юритмоқда. Шовот ун-ёрма комбинати ёрма маҳсулотлари ишлаб чиқарувчи санокли корхоналар қаторига киради. Саноат тармоғининг ҳозирги ҳолати қониқарли аҳволда эмас, яъни тармоқ корхона 70-75 фоиз қувват билан фаолият юритмоқда. Корхоналар асосан маҳаллий хомашё негизида ишлайди. Вилоят бозорларида хориждан, асосан

Қозоғистондан келтирилган ун маҳсулотлари аҳоли истеъмолининг 10-15 фоизини ташкил этади [3].

Ун саноатини ривожлантириш бевосита унга ишлов берувчи саноат тармоқлари нон, қандолат, макарон ишлаб чиқаришни тараққий эттириш билан ҳам боғлиқдир. Келажакда бутун республикада бўлгани каби буғдой етиштириш ҳажми камайиб бориши кутилади. Чунки, ишлаб чиқаришнинг барча турларини бирдай маҳаллийлаштириб бўлмайди, бу ҳудудий меҳнат тақсимотидаги салбий ҳолатларни келтириб чиқаради. Шу боис, республикада маълум даражада ғалла импортини тиклаш (қаттиқ буғдой) ички бозордаги ун маҳсулоти етишмовчилигини, яъни тайёр маҳсулот импортини чеклаш имконини беради. Бу эса ўз навбатида, ун хом ашёсини қайта ишловчи тармоқлар ривожланишини таъминлайди.

Вилоятда айрим йиллари ёғ-мой саноати хом ашёнинг (соя) 10-15 фоизи четдан келтирилган. Чунки, пахта етиштиришнинг камайтирилиши юқоридаги ҳолатни келтириб чиқарди. Айни вақтда аҳоли сонининг ўтган асрнинг 90- йилларга нисбатан 1,5 баробарга ортганлиги, аммо ишлаб чиқариш ҳажмининг 2 мартадан ортиқ камайганлиги соҳада қатор ислохотларни ўтказишни талаб этади. Тўғри, вилоятда ўсимлик ёғи етиштириш ҳозирда ички истеъмолдан 1,5 марта юқори ихтисослашган соҳа саналади, аммо республикада хориждан ёғ маҳсулотлари импорт қилинмоқда. Шу боис, вилоятнинг ерлари кучли ва ўртача шўрланган бошқа экин турлари яхши ҳосил бермайдиган ҳудудларида кунгабоқар экинни кўпайтириш хомашё базасини такомиллаштириш баробарида маҳсулот ассортиментини кўпайтириш имконини беради. 1 гектар ердан 30 центнер кунгабоқар олиниши ва 1 тонна кунгабоқардан 180-200 кг ёғ чиқишини ҳисобга олсак, вилоятда ўртача 7-8 минг га маргинал ерда ушбу экин турини етиштириш лозимлиги аён бўлади.

Вилоятнинг чап қирғоқ қисмида 30 минг гектардан ортиқ захира (маргинал) ерлар мавжуд. Қўшқўпир, Шовот ва Гурлан туманларидаги ўртача ва кучли шўрланган ерларида кунгабоқар экин турларини етиштириш мақсадлидир. Фақатгина Хонқа ва Боғот туманларида бундай ерларнинг улуши 30 фоиздан кам, холос [3].

Вилоят чорвачилик тармоғида маҳсулот етиштиришни таҳлил қиладиган бўлсак, тармоқда гўшт, сут тайёрлаш ҳажми йилдан йилга ортиб бормоқда, унинг аҳоли жон бошига йиллик ўсиш нисбати анча юқори (2018 йил 1991 йилга нисбатан мос ҳолда 10,3 ва 14,6 марта) ўсган бўлиб уларга саноат усулида ишлов бериш эса пастлигича қолиб келмоқда. Тайёрланаётган гўшт ва сут маҳсулотлари ички истеъмолдан анча ортиқ (1,6 ва 1,4) бўлишига қарамасдан, унинг мос равишда атиги 1 фоизига яқини саноат усулида қайта ишланади, холос. Ушбу ҳол вилоятнинг соҳа тармоқларида янги қувватларни ташкил этишни талаб этади. Айни вақтда гўшт маҳсулотлари сифатини яхшилаш вилоятда чорва наслчилиги борасидаги ишларни яхшилаш марказий транспорт ўқи бўйлаб

бўрдоқчилик комплексларини ташкил этишни талаб этади. 2015 йилда Шовот туманида 1000 бош қорамол боқиладиган бўрдоқчилик мажмуаси ташкил этилди. Бу муаммони ечишдаги дастлабки амалга оширилган ишлардан бири саналади [5].

Сабзавот ва узум вилоятда ички истеъмолдан мос ҳолда 2,0 ва 2,6 марта ортиқдир. Дон маҳсулотлари ҳам (шоли ҳисобига) 1,3 марта ортиқдир. Аммо, уларнинг қайта ишлов берилиши даражаси анча паст [5]. Ушбу ҳол турли сок, мураббо, джем каби қимматбаҳо маҳсулотлар ишлаб чиқаришни маҳаллийлаштириш имкони юқори эканлигини кўрсатади. Айни вақтда вилоятдаги туман марказларида қуввати бир неча минг тонна мева, сабзавот ва бошқа озиқ-овқат хом ашёсини сақловчи омборхоналар, совутгичларни барпо этиш рақобатбардош озиқ-овқат хом ашёси ва ярим тайёр маҳсулотини сақлаш ва экспортга чиқаришга имкон беради [5].

Бизнингча, озиқ-овқат саноатини ривожлантиришнинг биринчи босқичида вилоятдаги ўз фаолиятини тўхтатган консерва ишлаб чиқариш корхоналари фаолиятини тиклаш, шиша, қоғоз идиш ҳамда пакетлар ишлаб чиқаришни ташкил этиш лозим. Шовот тумани Дўстлик, Боғот тумани Деҳқонбозор фуқоралар йиғини ҳудудидаги ўз фаолиятини тўхтатган томат паста ва консерва корхоналарини қайта тиклаш, барча туманларда консерва маҳсулотлари ишлаб чиқарувчи корхоналарни барпо этиш, жойларда йирик иссиқхоналар фаолиятини қайта тиклаш, туман фермер ва деҳқон хўжаликлари сабзавот ва полиз товар хўжалигини тиклаш лозим.

Вилоят ҳудудида ҳозирда аҳоли истеъмолидан ортиқча 200-220 минг тонна сабзавот маҳсулотлари етиштирилади. Ҳозирги кунда ушбу миқдорнинг бор йўғи бир неча юз тоннасигина қайта ишланади, холос. Шу боис, вилоятда бутун республикадаги каби турли сабзавот ва томатлар уй шароитида консерваланилади. Истеъмолдан ортиқча 220-230 минг тонна сабзавот ва томатлардан 560,0 минг шартли банка (сок, шарбат, паста, пюре, кетчуп ва соус) маҳсулотларининг ишлаб чиқариш қувватларини барпо этиш имкониятлари мавжуд. Консерва ишлаб чиқаришни барча туманларда ташкил этиш лозим. Энг янги технологиялар асосида кимёвий консервантсиз маҳсулотлар тайёрлаш ва тоза, табиий ва ҳалол маркалар рекламасини ташкил этиш лозимки, у ҳозирги даврда халқаро бозорда, масалан, республикамизда етиштирилаётган сабзавот, полиз ва мева, узум каби юқори баҳоланишидан ҳам кўрсак бўлади [3].

Гўшт ва сут маҳсулотлари ишлов бериш технологияси ўзининг комбинациялашув жараёни юқорилиги билан ажралиб туради. Шу боис тармоқда ишлаб чиқаришни маълум даражада йирик корхоналарда тўплаш лозим. Чунки, кичик корхоналарда тор ихтисослашув бўлади ҳамда комбинацион зина кўп эмас ёки мавжуд бўлмайди. Ўрта ва йирик гўшт комбинатларида гўшт, колбаса маҳсулотлари, қайнатилган гўшт консерваси, қон ва қолдиқ суюқлардан турли чорвачилик концентратлари ҳайвонларнинг махсус емишлари, елим каби ўнлаб турдаги маҳсулот ишлаб

чиқаришни маҳаллийлаштириш мумкин. Яқин келажакда собиқ Урганч гўшт комбинати (ҳозирги «Урганч гўшт» МЧЖ) қувватларини тўлиқ тиклаш лозим [2].

Худуд саноатлашуви ва урбанизациялашиб бориши баробарида ярим ва тайёр озиқ-овқат маҳсулотларига талаб ортади. Туман марказларида ва ҳудудларида иккинчи босқичда ҳам гўшт комбинатларини барпо этиш учун шарт-шароитлар яратилади. Бу босқич вилоятнинг темир йўл ўтган марказий ривожланиш ўқи доирасида бўрдоқчилик мажмуалари ва гўшт комбинатларини барпо этиш мақсадга мувофиқ (1-жадвал).

1-жадвал

Хоразм вилояти озиқ-овқат саноати кластерини ривожлантириш босқичлари

Саноат тармоқлари	Саноат корхоналарини барпо этиш босқичи		
	I – босқич (2017-2022 йиллар)	II – босқич (2023-2027 йиллар)	III – босқич (2028-2032 йиллар)
Гўшт саноати	Урганч шаҳри, Урганч тумани	Туман марказлари	Фермер хўжаликлари қошида йирик қишлоқ хўжалик корхоналари
Сут саноати	Урганч шаҳри ва туман марказлари	Туман марказлари	Фермер хўжаликлари қошида йирик қишлоқ хўжалик корхоналари
Конверва (сабзавот)	Урганч шаҳридаги фаолиятини тўхтатган собиқ корхоналар базаси	Туман марказлари (Шовот, Хонқа, Боғот, Ҳазорасп, Хива)	Туман марказлари
Узум консерва	Боғот, Урганч, Ҳазорасп,	Хива, Хонқа, Гурлан	Янгибозор, Шовот, Қўшқўпир

Жадвал муаллифлар томонидан ишланган.

Сут саноати гўштга нисбатан узоққа ташиб бўлмаслиги билан фарқланади. Аини ҳолат ушбу саноат корхоналарини 30-50 км радиусга қулай иқтисодий-географик ўринга эга бўлган барча ҳудудларда барпо этиш лозим. Гўшдан фарқли ўлароқ, сутни 100 фоиз қайта ишлаш лозимки, бу аҳоли саломатлигини яхшилаш ҳамда минтақада экспорт салоҳиятини ошириш имконини беради.

Маълумки, сут ва гўшт маҳсулотлари тез бузилувчан бўлганлиги сабабли уни узоқ вақт сақлаш имконияти чегараланган. Шу боис бозорлар расталарида уларни сотиш истеъмол талабларини тўла қаноатлантира олмайди. Бунинг учун қуйидагиларни амалга ошириш лозим бўлади:

– сут ва гўшт маҳсулотларини сақловчи музлатгичли омборларни замонавий технологик ускуналар билан қайта жиҳозлаш, яъни модернизация қилиш;

– аҳолига сут ва гўшт топширганликлари учун тўлов тизимини намунали ташкил этиш, яъни кунлик тўловларни жорий этиш;

– сут ва гўшт савдосини амалга оширувчи шоҳобчаларда санитар меъёрларга риоя қилиши ва сифатли хизмат кўрсатишини назорат қилиш шулар жумласидандир.

Тармоқда мева-сабзавот маҳсулотларини етиштириш ва қайта ишлашда ҳам ўзига хос муаммолар мавжуд. Яъни, мева-сабзавот маҳсулотларини йиғиб-териб олиш, ташишдаги нобудгарчиликлар 20-25 фоизни ташкил этмоқда. Агар маҳсулотларни сақлаш омборларининг йўқлиги ёки омборларнинг талабга жавоб бермаслигидан келиб чиқадиган йўқотишларни ҳам ҳисобга оладиган бўлсак, бу кўрсаткич 35-40 фоизгача бориб етади. Шундан келиб чиққан ҳолда, Хоразм вилоятидаги мавжуд маҳсулотларни сақлаш омборларини талаб даражасига келтирилиши ва замонавий талабларга жавоб берувчи омборларни куриш мақсадида ҳорижий инвестицияларни жалб қилиш лозим [3].

Хулоса. Умуман олганда, ҳозирги кунда вилоятда озиқ-овқат саноатини ривожлантириш учун имкониятлар катта. Фақат ушбу саноат тармоғини ривожлантириш учун сармоялар йўналтириш кичик ҳудудий ишлаб чиқариш кластерини шакллантириш лозим. Аҳоли сони ҳамда даромадлари йилдан йилга ортиб бораётган ҳозирги даврда соҳа қувватларини кучайтириш, имкон даражасида маҳаллийлаштириш катта аҳамиятга эга. Айниқса, Хоразм вилоятининг келгуси иқтисодий тараққиёти асосий йўналишларидан бири озиқ-овқат саноати ривожланиши билан боғлиқдир. Ҳозирги кунда вилоятда 200-250 минг тонна сабзавот, 35-40 минг тонна гўшт, 160-170 минг тонна сут, 3,5-4 минг тонна узум маҳсулотларини қайта ишлаш қувватларини барпо этиш имконияти мавжуд. Айни вақтда ушбу қувватларни иқтисодиётга жорий этиш давомида бевосита ишлаб чиқаришда 45-50 минг янги иш ўринлари ҳам яратилади.

Хоразм вилоятида саноат ишлаб чиқаришини ривожлантириш борасида, белгиланган мақсад ва вазифаларнинг амалга оширилиши, хизматлар соҳасининг ривожланишига маълум даражада ўзининг ижобий таъсирини ўтказди. Бундай ўзгаришлар тармоқ мутахассисларини тайёрлаш ва маҳсулот ишлаб чиқариш ва сотишни илмий-иқтисодий ташкил этиш билан ҳам боғлиқдир. Ушбу ҳол Урганч шаҳрида ташкил қилиниши таклиф этилаётган республика Кимё технологиялари университети филиали ёки вилоят кластерига хизмат қилувчи махсус политехник ва иқтисодий билимлар берувчи олий даргоҳ барпо этишни талаб этади ва ҳудудий кластер бўғинини яратишнинг асосий шартлари саналади.

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СОЯНИНГ СЕРКОСПОРИОЗ КАСАЛЛИГИГА ҚАРШИ ФУНГИТСИДЛАР САМАРАДОРЛИГИ

Аннотация. Ушбу мақолада соя экини замбуругли касаллиги булган серкоспориоз касаллигилиги хақида келтирилган ва касаллига қарши фунгитсидлар синовдан утқазилганланги бўйича натижалар берилган.

Калит сўзлар: Соя, замбуруг, фунгитсид, биологик самарадорлик, Cercospora soja.

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EFFICACY OF FUNGICIDES AGAINST CERCOSPORIOS DISEASE OF SOY

Аннотатион. Ин тхис артисле, серсоспоросис, а фунгал дисеае оф сойбеан, ис пресентед анд тхе ресултс оф фунгисиде триалс агаинст тхе дисеае аге гивен.

Кей вордс: сойбеан, фунгус, фунгисиде, биологисал эффисиенсй, Cercospora soja.

Кириш. Ҳозирги кунда дунёнинг дуккакли мойли экинларни етиштириш бўйича катта тажрибага эга бўлган мамлакатлари қаторига: АҚШ, Хитой, Бразилия, Канада, Сербия, Украина ва Россия каби давлатларида Соя ва соя етиштириш, уларнинг касалликларини тарқалиш қонуниятларини ва зарарини аниқлаш ҳамда самарали кураш чораларини ишлаб чиқиш кенг йўлга қўйилган. Хорижий мамлакатларда Соянинг замбуруғли патогенларини 70 дан ортиқ тури, сояда эса 102 дан ортиқ турлари аниқланган. Соя экинларида кенг тарқалган ва ўта хавфли касаллик

қўзғатувчилари қаторига сохта ун-шудринг, илдиз чириш, доғланиш, ун-шудринг киради.

Ўзбекистонда соя микобиотаси бўйича алоҳида илмий тадқиқотлар ўтказилмаган. Минтақавий микологик ва фитопатологик манбалар бўйича Ўзбекистон шароитида соя касалликлари тўғрисидаги маълумотлар мавжуд эмас, замбуруғлар қўзғатган касалликларни аниқлаш, патоген турларининг културал-морфологик, биологик хусусиятларини аниқлаш, уларга қарши кураш чораларини ишлаб чиқиш бўйича илмий изланишлар долзарб бўлиб ҳисобланади.

Тадқиқот материаллари ва услуби. Соя навларининг асосий касалликларини ўрганиш ва уларга қарши самарали кураш чораларини ишлаб чиқиш бўйича республикамизни Андижон вилоятида, Жалақудук туманида жойлашган ғалла дон етиштириш бўйича фермер хўжаликларида илмий тадқиқот ишлари олиб борилди. Тажриба давомида фенологик кузатувлар, дала ва лаборатория таҳлиллари Фитопатологик ва микологик услубиятлар асосида амалга оширилмоқда.

Таҳлил ва натижалар. Тажриба ишларини Жалақудук тумани янги сорлик пахтакор фермер хўжалигида олиб борилди. Тажрибани биз сояни такрорий экин сифатида экиб серкоспориоз касаллигига қарши фунгитсидларнинг турли сарф меёрида синалдик.

Тажриба 8 та вариант ва 3 қайтариқдан иборат. Тадқиқот ўтказилаётган майдони умумий ҳажми 403.2 м² ташкил этади. Битта делянка майдони 14 м². Қаторлар сони 32 та 8 та вариант ва 3 та қайтариқ схемасида бўлиб, ҳар бир вариант 4 та қатордан иборат. Вариантлар икки чека қатори ҳимоя ҳисобланиб оралик икки қатордан ажратилган.

Cercospora sojina - Касаллик соя экиннинг ривожланиши босқичларнинг барглари, пояси, дуккаклари ва уруғларида намоён бўлади. Кучли зарарланганда багрлар эртароқ қарийди, ўсимликни юқори қисмидаги барглар тўкилади. Қуйи қаватлардаги яшил барглар зарарланганда ҳам ранги ўз рангини ўзгармайди. Касалликнинг ривожланиши учун иссиқ ва нам ҳаво қулай шароит бўлиб, замбуруғ иссиқ, қуруқ ҳавода ҳам ўзини намоён қилади олади ҳам касаллик белгилари сезиларли даражада оширади. Уруғ палласида жигар рангли доғлар ёки тўқ қунғир яралар ҳосил қилиб, уларнинг атрофи ҳам тўқ қунғир, тор чамбараклар билан ажралиб туради. Баргларида эса, думалоқ, оқиш кулрангли доғлар бўлиб, уларнинг чеккалари жуда техник, жигар рангли чамбарак билан чегараланган. Касал ўсимликларнинг поясида чўзинчоқ шаклли сансар-қизқич доғлар ҳосил бўлади. Доғларнинг ўрта қисми кулранг бўлиб, атрофи жигар рангли жияк доғлар пайдо бўлиб, кейинчалик улар қорайиб қолишади.

Уруғларида нотекис-думалоқ бироз юқори кўтарилган кулранг жигар рангли доғлар ҳосил бўлади. Доғларнинг чеккалари тўқ жигар ранг жиякли. Баргларнинг пастки томонида тўқ кулрангли ғуборлар ҳосил бўлиб,

уларнинг тепа қисмида бир жойда тутам каби оқ жигар рангли оддий, шоҳланмаган конидиябандлари хосил бўлади. Конидиябандларининг юқори қисмида рангсиз, тўнағичсимон конидиялар ўсиб чиқади.

Тадқиқотлар давомида соянинг серкоспориоз касаллигига қарши тажриба варианты сифатида Амистар Топ 32,5% сус.к. 0,5-0,6 л/га сарф меёрда, Бродер 30% эм.к.0,2 - 0,3 л/га сарф меёрда ва Аканто Плюс 28% сус.к. 0,3 -0,5 сарф меёрда қўлланилди, этолон сифатида Тилтазол 500 к.э.к. 0,2 л/га миқдорда қўлланилди. Назорат вариантыда сувдан фойдаланилди.

Тажрибанинг Амистар Топ 32,5% сус.к. 0.5 л/га меёрларда қўлланилганда биологик самарадорлик 7 –кун 82.5 %, 15- кундан сўнг 87.9 % ни ва 21 кун 83.5 % ташкил этганлиги қайд этилди. Худди шу препаратнинг 0.6 л/га сарф меёрида қўлланилганда биологис самарадорликмос равишда 82.5%, 91.4 % ни ва 82.8 % ташкил этди. Кейинг тажриба вариант Бродер 30% эм.к. 0.2 л/га меёрда қўлланилганда 7 –кун 78.7 %, 15- кундан сўнг 88.6 % ни ва 21 кун 84.9 % ташкил этганлиги қайд этилди. Бродер 30% эм.к. препаратнинг 0.3 л/га сарф меёрида қўлланилганда биологис самарадорликмос равишда 92.4 %, 92.1 % ни ва 82.1 % ташкил этди. Аканто Плюс 28% сус.к. 0.3 л/га меёрда қўлланилганда 7 –кун 84.8 %, 15- кундан сўнг 83.6 % ни ва 21 кун 81.5 % ташкил этганлиги қайд этилди. Бу препаратнинг 0.5 л/га сарф меёрида қўлланилганда биологис самарадорликмос равишда 87.1 %, 86.5 % ни ва 85.6% ташкил этди. Эталон сифатида синалган Тилтазол 500 к.э.к 0.2 л/га қўлланилганда 7- кун 81.0 %, 15-кун 81.5 % ни ва 21-куни 80.1% биологик самарадор ташкил этди. Олинган натижалардан шуни айтиш мумкинки Амистар Топ 32,5% сус.к 0.6 л/га сарф меёрида қўлланилган ва Бродер 30% эм.к. 0.3 л/га сарф меёрида қўлланилган вариантларнинг биологик самарадорлик энг юқори кўрсаткичларда қайд этилди.

Хулоса. Соянинг серкоспориоз касаллигига қарши Амистар Топ 32,5% сус.к 0.6 л/га 0.6 л/га сарф меёрида қўлланилганда биологик самарадорлик 7- кунда 82.5%, 15 – кунда 91.4 % ни ва 21-куни 82.8 % ва Бродер 30% эм.к. 0.3 л/га сарф меёрида қўлланилган вариантларнинг биологик самарадорлик мос равишта 92.4 %, 92.1 % ни ва 82.1 % ташкил этди.

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**ПОСЛЕОПЕРАЦИОННАЯ АНАЛЬГЕЗИЯ У ДЕТЕЙ ПОСЛЕ
АНЕСТЕЗИИ ПРОПОФОЛОМ В СРАВНЕНИИ С АНЕСТЕЗИЕЙ
СЕВОФЛУРАНОМ**

Резюме.

Цель. Послеоперационная анальгезия остается проблемой, особенно у детей. Мы предполагаем, что пациенты, кому была проведена анестезия севофлураном, испытывают более сильную послеоперационную боль, чем пропофолом.

Пропофол оказывает неспецифическое действие на уровне липидных мембран нейронов ЦНС. Не оказывает первоначального возбуждающего действия. Выход из анестезии обычно не сопровождается головной болью, послеоперационной тошнотой и рвотой. У большинства пациентов общая анестезия наступает через 30–60 с.

Дизайн: рандомизированное, проспективное, двойное слепое исследование.

Ключевые слова. Пропофол; севофлюран; послеоперационная анальгезия; дети.

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**POSTOPERATIVE ANALGESIA IN CHILDREN AFTER ANESTHESIA
WITH PROPOPHOL COMPARED WITH ANESTHESIA WITH
SEVOFLURANE**

Summary.

Target. Postoperative analgesia remains a challenge, especially in children. We hypothesize that patients anesthetized with sevoflurane experience greater postoperative pain than with propofol.

Propofol has a nonspecific effect at the level of lipid membranes of CNS neurons. Does not have an initial stimulating effect. Recovery from anesthesia is usually not accompanied by headache, postoperative nausea or vomiting. In most patients, general anesthesia occurs within 30–60 seconds.

Design: Randomized, prospective, double-blind study.

Keywords. Propofol; sevoflurane; postoperative analgesia; children.

Введение. За последние десятилетия сфера педиатрической боли сильно изменилась. Однако количество детей, испытывающих послеоперационную боль от умеренной до сильной остается значительной, даже при применении анальгетиков [1,2]. Необлегченная боль у ребенка в детстве может повысить уязвимость к боли в дальнейшей жизни [3].

Лечение боли комплексное и включает предоперационный, периоперационный и послеоперационный периоды. Настоящее исследование было сосредоточено на влиянии периоперационных анестетиков на послеоперационную боль у детей. Недавние исследования показали, что общие анестетики активируют ноцицептивные нейроны и участвуют в послеоперационном восприятии боли. Ингаляционные анестетики, включая севофлюран, могут вызывать гипералгезию и усугублять периферическую и центральную сенсбилизацию в ответ на тепло, давление или хирургический разрез [4,5]. Пропофол – внутривенный анестетик короткого действия с быстрой индукцией и выходом, широко используемый в общей анестезии. Пропофол оказывает различное действие на боль, подавляет ноцицептивную передачу в нейронах и уменьшает продолжающийся ноцицептивный барьер. Показано, что пропофол связан со значительно меньшей частотой болей в раннем послеоперационном периоде [6,7].

Наша гипотеза заключалась в том, что анестезия пропофолом снижает восприятие боли в раннем послеоперационном периоде по сравнению с севофлураном у детей, перенесших один тип хирургических процедур - герниопластику. Первичным результатом этого исследования была интенсивность послеоперационной боли, оцененная с помощью шкалы боли Faces Pain Scale (FPS) [8] через 2 часа после операции.

Методы исследования. Это проспективное рандомизированное двойное слепое исследование было одобрено комитетом по этике нашего учреждения, и от родителей каждого участника было получено письменное информированное согласие. Исследование проводилось в 2022-2023 гг. и в отделении детской хирургии и АРИТ Андижанского областного многопрофильного медицинского центра. Объектами исследования были 88

детей в возрасте от 3 до 6 лет, *физического состояния* пациента перед операцией I или II по Американскому обществу анестезиологов (ASA). (рис. 1). Дети были случайным образом распределены в одну из двух групп с использованием таблицы случайных чисел, сгенерированной компьютером. Для одного вида хирургического вмешательства - пластики паховой грыжи они получали либо пропофоловую (группа П, N = 46), либо севофлюрановую (группа S, N = 42) анестезию. Пациенты исключались из исследования, если у них была известная аллергия на какой-либо из препаратов, участвовавших в исследовании, если у них наблюдались какие-либо признаки предоперационной тревоги или послеоперационного возбуждения, или если у них был физический статус по ASA выше II. Каждому ребенку проводилась премедикация пероральным мидазоламом (0,3 мг/кг) за 30 минут до индукции анестезии. Внутривенный катетер был установлен обеим группам детей до индукции анестезии. Пациенты были случайным образом распределены в одну из двух групп: группу пропофола (группа P) с индукцией и поддержанием пропофола и группу севофлурана (группа S) с индукцией и поддержанием севофлурана. В группе P после ударной дозы пропофола 2,5 мг/кг следовали инфузии 15 мг/кг/ч в течение первых 15 минут, 13 мг/кг/час в течение 15-20 минут, 11 мг/кг/час в течение 20 минут, 9 мг/кг/ч с 30 минут до конца операции, и смесь 50:50 N₂O и O₂. В группе S масочную индукцию проводили севофлюраном (4-6%), а затем 1,5-2% севофлюраном в смеси 50:50 N₂O и O₂. Во время индукции каждый ребенок также получал фентанил внутривенно (3 мг /кг). Все дети перед хирургическим разрезом получали парацетамол в дозе 40 мг/кг ректально. Дыхательные пути были защищены ларингеальной маской. На протяжении всей операции проводилась искусственная вентиляция легких с контролем давления. В конце операции и перед окончательным ушиванием кожи края раны инфильтрированы 0,5% раствором бупивакаина. Анестезия была прекращена после наложения последнего шва. У каждого ребенка ларингеальную маску снимали при самостоятельном дыхании (на 100% кислороде) и восстановлении рефлексов дыхательных путей. В каждом случае мы регистрировали частоту сердечных сокращений, артериальное давление, насыщение артериальной крови O₂ и концентрацию CO₂ в конце выдоха (Compac 5XL, Medical EONET, Марл, Германия) через фиксированные промежутки времени на протяжении всей операции. Глубину гипноза контролировали с помощью BIS A-2000 (Aspect Medical System, Норвуд, Массачусетс, США) с целью 40-60.

Первичным результатом была интенсивность боли в состоянии покоя, оценка с помощью FPS (по пяти рисункам лиц: 0 = нет боли, 5 = сильная боль) в течение 2 часов в отделении после анестезиологического ухода. Оценку боли регистрировали в момент времени 0 и каждые 10 минут в течение 2х часов. Вторичными исходами были время восстановления и

нежелательные явления. Время восстановления определяли как время до открытия глаз по команде или время первой реакции на команду после анестезии.

В каждом случае анестезиолог, не знакомый с техникой анестезии, непрерывно записывал оценку боли в течение 2 часов после восстановления в отделении интенсивной терапии. Для каждого ребенка проводилась оценка боли. Детей считали имеющими боль, если у них был балл > 2 .

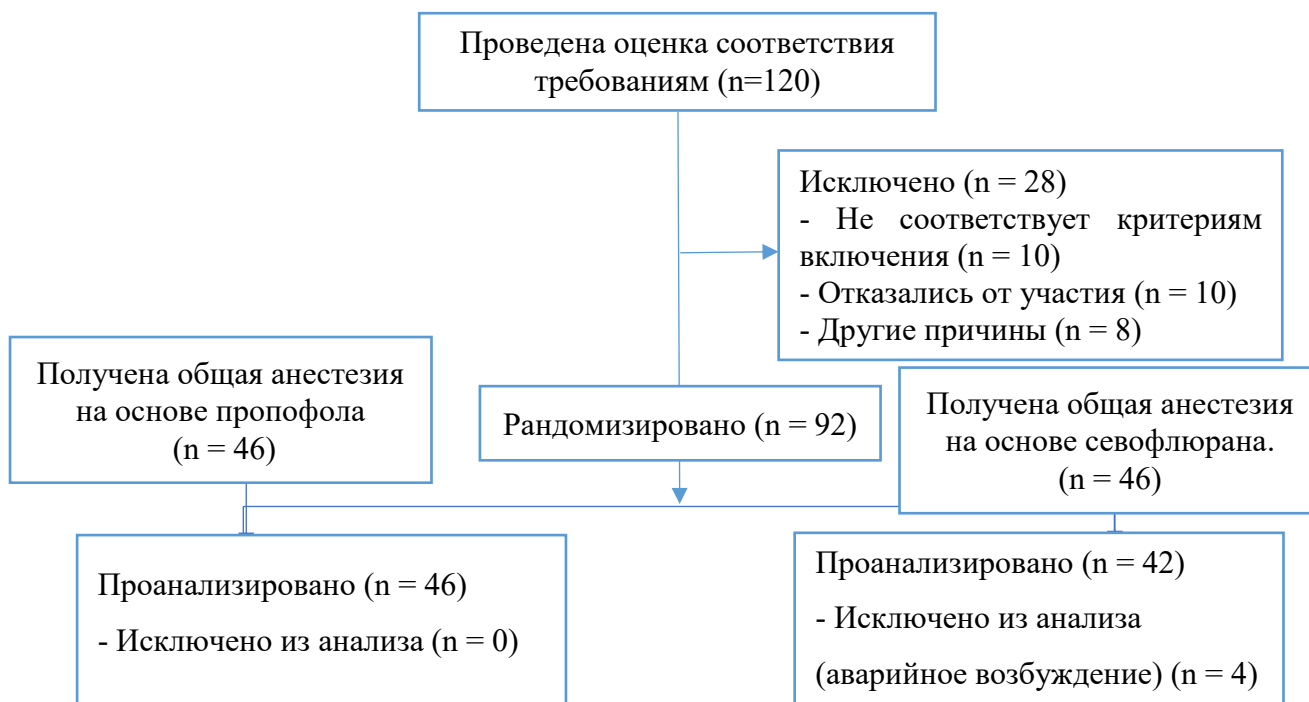


Рисунок 1. Схема пациентов, включенных в исследование.

Таблица 1

Демографические данные, продолжительность операции и анестезии, время восстановления и результаты оценки боли с использованием шкалы боли в лице (FPS) и заболеваемость в группах пропофола и севофлурана (группы Р и S)

Признак	Группа Р (N=46)	Группа S (N=42)	Значение P
Возраст (лет)	4,0 ± 1,5	4,0 ± 1,6	0,872
Вес (кг)	15,7 ± 4,3	15,4 ± 5,1	0,928
Пол (Ж/М)	21/25	22/20	0,945
ASA (I/II)	23/23	22/20	0,905
Длительность операции (мин)	41 ± 12	38 ± 18	0,785
Длительность анестезии (мин)	68 ± 23	59 ± 28	0,756
Время восстановления (мин)	16,5 ± 5,4	10,1 ± 1,3	< 0,001*
Баллы FPS	1,2 ± 0,6	4,3 ± 1,5	< 0,001*
Боль (%)	4,5	24,3	< 0,05*

* *Значительный.*

ASA = Физический статус Американского общества анестезиологов (ASA).

Побочные эффекты после восстановления включали брадикардию, сильный кашель, гиперсаливацию, ларингоспазм, тошноту и рвоту. Чтобы исследование было двойным слепым, в каждом случае привлекались два

отдельных анестезиолога. Первый анестезиолог собрал следующие данные: возраст, вес, премедикация, тип анестезии, продолжительность операции и анестезии. В отделении интенсивной терапии второй анестезиолог наблюдал и собирал следующие данные: время восстановления, боль и нежелательные явления.

Расчет размера выборки был основан на первоначальном пилотном исследовании, в котором стандартное отклонение внутри каждой группы составляло примерно 1,0. Чтобы иметь мощность 0,80 при уровне $\alpha = 0,01$ и обнаружить разницу не менее 1,0 балла FPS, нам потребовалось 42 пациента в каждой группе. Мы добавили 10%, затем включили по 46 пациентов в каждую группу. Демографические данные (возраст, пол и вес), продолжительность операции, среднее время восстановления и интраоперационные данные представлены как средние, а различия между двумя группами анализировались с использованием парных t -тестов. Оценка боли и частота нежелательных явлений анализировались с использованием критерия ранговой суммы Уилкоксона, точного критерия Фишера и критерия χ^2 теста. $P < 0,05$ считалось значимым.

Полученные результаты. Группа P ($N = 46$) составляла 52% от общего числа детей в исследовании, а группа S ($N = 42$) – 48%. Достоверных различий между двумя группами исследования по возрасту, полу, весу, доле пациентов с физическим статусом ASA I и II или типу операции не было ($P > 0,05$, таблица 1). Среднее время восстановления в группе S было значительно короче, чем в группе P ($10,1 \pm 1,3$ и $16,5 \pm 5,4$ минуты соответственно, $P < 0,01$). В Таблице 1 показаны результаты по скорости выхода из наркоза. В группе S была значительно более высокая доля пациентов, у которых наблюдалась боль, чем в группе P (24,3% против 4,5%, $P < 0,05$). Показатель FPS был выше в группах севофлурана ($3,4 \pm 1,5$ против $1,2 \pm 0,6$ соответственно, $P < 0,001$) (таблица 1) (рисунок 2). Первый анальгетик вводили сразу после операции и повторяли в соответствии со шкалой боли в группе S. В первые 120 минут в группе P не было необходимости давать анальгетик (рисунок 2).

В таблице 2 приведены частоты различных побочных эффектов, отмеченных в двух группах. У двух пациентов (4,3%) в группе P и у 9 (21%) в группе S развилась послеоперационная тошнота. Эти различия были существенными. У детей, находящихся под наркозом севофлураном, частота рвоты была выше (31%), чем у остальных пациентов. Эти различия были существенными.

Обсуждение. В нашем исследовании дети, получившие анестезию пропофолом и фентанилом, сообщали о меньшей боли в раннем послеоперационном периоде, чем дети, анестезированные севофлураном и фентанилом. В группе севофлурана наблюдалась значительно более высокая частота пациентов, у которых наблюдалась боль, чем в группе пропофола (24,3% против 4,5%, $P < 0,05$). Показатель FPS также был выше

у пациентов, анестезированных севофлураном и фентанилом, чем прополом и фентанилом ($P < 0,001$).

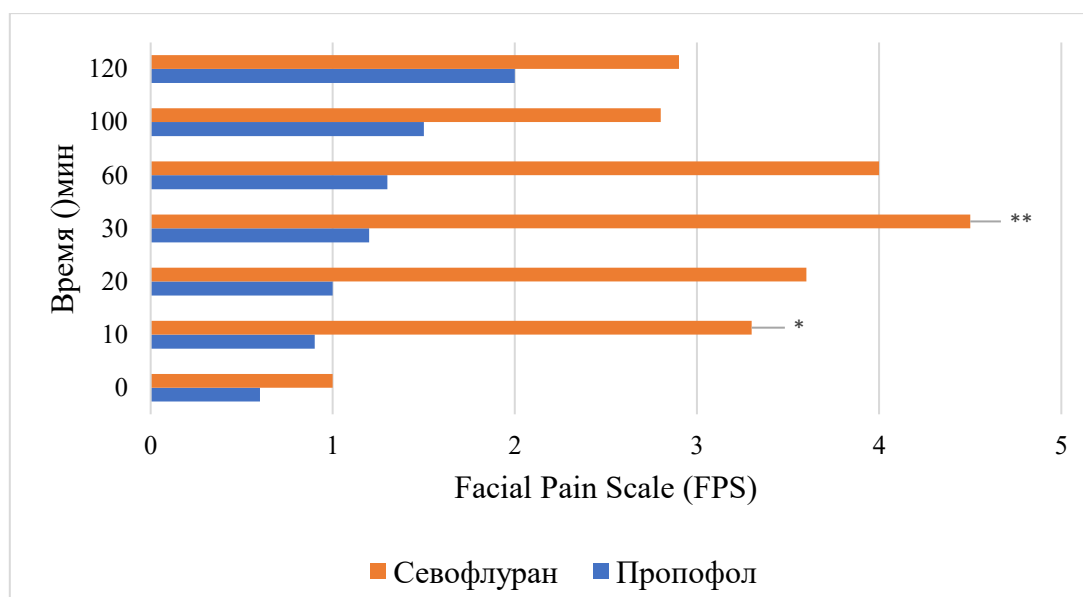


Рисунок 2. Шкала боли в лице (FPS) в группах пропофола и севофлурана (группы P и S).

* Впервые введен дополнительный анальгетик.

** Введен второй дополнительный анальгетик.

Таблица 2.

Побочные эффекты, отмеченные в двух исследовательских группах

Побочный эффект	Пропофол (N=46)	Севофлуран (N=42)	Значение P
Гипотензия	6	5	0,924
Брадикардия	7	5	0,864
Кашель	6	5	0,924
Ларингоспазм	0	0	-
Гиперсаливация	3	4	0,924
Послеоперационная тошнота	2	9	< 0,001*
Послеоперационная рвота	2	13	< 0,001*

* Значительный.

Анальгетические свойства пропофола были впервые описаны на культурах нейронов или экспериментальных моделях животных [9-10]. Пропофол потенцирует ГАМК – опосредованную передачу за счет взаимодействия с рецепторным комплексом ГАМК и ингибирует полисинаптические возбуждения, возможно, за счет ингибирования высвобождения возбуждающих нейромедиаторов. Однако считается, что эти экспериментальные модели не могут быть экстраполированы на человека и не обеспечивают надежного подтверждения анальгетического эффекта пропофола в клинической практике.

В нескольких исследованиях изучались обезболивающие свойства пропофола у здоровых добровольцев с экспериментально вызванной острой болью. Анкер-Моллер и др. обнаружили, что у здоровых людей пропофол повышает болевой порог и уменьшает амплитуду вызванного потенциала,

когда повреждающий раздражитель создается аргонлазерной стимуляцией. Недавно Bandschapp et al. [11] продемонстрировали кратковременные анальгетические свойства пропофола, но не его растворителя.

В литературе по оценке послеоперационной боли не рассматривается возможное влияние общих анестетиков на послеоперационную боль. Недавние исследования Cheng et al. [6] и Тан Т и др. [7] показали, что анестезия пропофолом уменьшает послеоперационную боль, но в этих исследованиях величина эффекта и степень статистической значимости были небольшими ($P < 0,01$). Ченг и др. обнаружили, что пациенты, анестезированные изофлураном, сообщали о большей послеоперационной боли, чем те, кто был анестезирован пропофолом ($P < 0,01$), а послеоперационное использование опиоидов было выше у тех, кто был анестезирован изофлураном ($P < 0,05$). В другом исследовании Тана и др. женщины, перенесшие гистерэктомию или миомэктомию, подвергались анестезии изофлураном и сообщали о более высокой интенсивности боли ($P < 0,01$) и потребляли больше морфина в течение первых 24 часов по сравнению с женщинами, анестезированными пропофолом ($P < 0,05$). Наше исследование подтверждает выводы двух недавних исследований. С помощью простого дизайна мы продемонстрировали более значительную разницу ($P < 0,001$) в восприятии боли в течение первых 2 часов после операции между группами пропофола и севофлурана.

Пропофол с опиоидными анальгетиками или барбитуратами оказывает антиноцицептивное действие [11]. В исследовании влияния пропофола на гипералгезию, индуцированную ремифентанилом, пропофол мог уменьшать гипералгезию, индуцированную ремифентанилом [12].

Напротив, некоторые исследования на животных показали, что летучие анестетики оказывают двухфазное воздействие на болевую чувствительность. Они повышают чувствительность к боли при более низких концентрациях, возникающих при выходе из наркоза. Это усиление боли опосредовано модуляцией центральной адренергической и холинергической передачи. Однако летучие анестетики в более высоких концентрациях, близких к анестезирующим, могут облегчить боль [5].

Анальгетический эффект пропофола может быть обусловлен его действием на рецепторы G-аминомасляной кислоты (ГАМК) типа A [8], тогда как ингаляционные анестетики действуют на различные рецепторные системы, в том числе на ГАМК- A, N-метил-D-аспаратат (NMDA). и рецепторы ацетилхолина. Таким образом, пропофол, по-видимому, действует преимущественно на один рецептор, а ингаляционные анестетики действуют на многие рецепторы, но неясно, какие из этих действий важны. Однако данные, свидетельствующие о том, что пропофол обладает анальгетической активностью, остаются неопределенными [13].

Наше исследование отличалось от предыдущих исследований, поэтому мы выбрали пациентов детского возраста, перенесших один вид

хирургического вмешательства – герниопластику. Мы измеряли боль в раннем послеоперационном периоде, в первые 120 минут во время и после выхода из наркоза, поскольку интенсивность боли считается большей у детей в этот период. Детям из группы пропофола на тот момент не требовалось никаких дополнительных анальгетиков. Время восстановления было короче в группе пропофола, а частота тошноты и рвоты была ниже.

Использованная нами тотальная внутривенная анестезия пропофолом и опиоидами стала популярной в нашей стране, особенно при коротких хирургических вмешательствах. Дополнительные преимущества этого вида анестезии включают: отсутствие необходимости использования испарителя для введения ингаляционных препаратов, быстрое время восстановления и снижение частоты послеоперационной тошноты и рвоты. Значительное уменьшение послеоперационной боли и снижение употребления опиоидов обеспечивают более раннюю мобилизацию, уменьшение побочных эффектов наркотиков и более раннюю выписку из стационара.

У этого исследования было несколько ограничений. Во-первых, боль оценивалась только в течение первых 2 часов после операции, но не позже. Данные об интенсивности боли следует представлять за первые 24 часа в дальнейшем. Во-вторых, мы не оценивали влияние анестезии пропофолом на послеоперационную боль у пациентов, перенесших другие хирургические процедуры, а наши пациенты проходили герниопластику. В-третьих, использование биспектрального (BIS) мониторинга. Мониторинг BIS может сократить использование ингаляционных анестетиков, и пациенты получают более легкую анестезию, чем при отсутствии мониторинга BIS [14]. Исследование без мониторинга BIS может оказаться полезным.

Заключение. Мы пришли к выводу, что дети, анестезированные пропофолом во время операции по герниопластике, испытывают меньшую боль, чем пациенты, анестезированные севофлураном. Механизм действия при послеоперационной боли у детей, находящихся под анестезией пропофолом, требует дальнейшего выяснения.

Использованные источники:

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ИСПОЛЬЗОВАНИЕ ДЕРЕВЯННЫХ КОНСТРУКЦИЙ В СТРОИТЕЛЬСТВЕ В СТИЛЕ ХАЙ-ТЕК

Аннотация. В статье рассматривается использование деревянных конструкций в современном строительстве в стиле Хай-тек, так дерево издревле считался самым превосходящий строительным материалам по своим химическим, физическим и эстетическим свойствам.

Ключевые слова: деревянные конструкции, Хай-тек, новейшие технологии, функциональность, геометричность, архитектура.

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USE OF WOODEN STRUCTURES IN HI-TECH STYLE CONSTRUCTION

Annotation. The article discusses the use of wooden structures in modern construction in the high-tech style, since since ancient times wood was considered

the most superior building material in its chemical, physical and aesthetic properties.

Keywords: wooden structures, High-tech, latest technologies, functionality, geometricity, architecture.

Современный мир диктует свои правила, и одно из них — постоянная гонка за новейшими технологиями. Это коснулось и архитектуры. Хай-тек — стиль, который появился в 70-х годах XX века. Для него характерны прямые линии, геометричность, функциональность и использование современных технологий. Неудивительно, что такой стиль часто выбирают для своих проектов современные архитекторы.

Деревянные конструкции в строительстве использовались ещё много веков назад. Но сегодня они обрели новую жизнь. Дерево — экологичный материал, который способен «дышать», поддерживая естественный микроклимат в помещении. Кроме того, оно обладает отличными звукоизоляционными свойствами. При этом дерево легче камня, поэтому строить из него проще.

Сегодня в мире существует несколько видов деревянных конструкций. Среди них клеёные, цельнодеревянные, а также CLT-панели. Последние производятся путём склеивания нескольких слоёв древесины перпендикулярно друг другу. Такие панели обладают высокой прочностью и способны выдерживать большие нагрузки.

CLT-панели стали основой для проекта Mjøstårnet — самого высокого деревянного здания в мире. Его высота составляет 85,4 метра. Башня построена в Норвегии и включает в себя 18 этажей. В здании располагаются офисы, ресторан и смотровая площадка. Ещё одна особенность строения — использование экологичных технологий. Так, здание оборудовано системой сбора дождевой воды, а также солнечными панелями.

CLT-панели (Cross Laminated Timber) — это современный строительный материал, представляющий собой многослойный деревянный блок, полученный путем склеивания между собой нескольких слоев древесины под прямым углом. Каждый слой состоит из пиломатериалов, которые укладываются перпендикулярно друг другу.

На рисунке 1. Приведён внешний вид CLT-панели (Cross Laminated Timber).



Рис.1. CLT-панели (Cross Laminated Timber)

Сначала бревна распиливаются на доски нужной толщины, которые затем сушатся и сортируются. Далее доски собираются в пакеты, где они укладываются слоями таким образом, чтобы направление волокон каждого последующего слоя было перпендикулярно предыдущему. Это делается для увеличения прочности и стабильности панели. Затем пакеты склеиваются под прессом.

Панели CLT обычно имеют толщину от 60 до 300 мм и могут достигать длины до 24 метров. Они широко используются в строительстве для создания несущих конструкций, таких как стены, полы и крыши. Панели CLT обладают высокой прочностью и устойчивостью к нагрузкам, а также хорошей звукоизоляцией и теплоизоляцией. Кроме того, они легкие и быстрые в монтаже, что делает их привлекательным материалом для строительства.

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ЭКОНОМИЧЕСКИЙ ПОТЕНЦИАЛ: КАК РАЗВИВАЮЩИЕСЯ СТРАНЫ ВЛИЯЮТ НА МИРОВУЮ ЭКОНОМИКУ

Аннотация. Существенной чертой развивающихся стран является их место в мировой экономике и политике. В настоящее время эти страны являются частью глобальной капиталистической системы и в определённой степени подчиняются общим экономическим законам и тенденциям развития мировой экономики. Оставаясь частью глобальной экономики, эти страны, как правило, становятся более экономически и политически зависимыми от развитых экономик. В данной статье мы рассмотрим ключевые аспекты их роли в мировой экономике.

Ключевые слова: развивающиеся страны, развитые страны, уровень экономического развития, дешёвая рабочая сила.

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ECONOMIC POTENTIAL: HOW DEVELOPING COUNTRIES INFLUENCE THE GLOBAL ECONOMY

Abstract. An essential feature of developing countries is their place in the global economy and politics. Currently, these countries are part of the global capitalist system and, to a certain extent, are subject to general economic laws and trends in the development of the world economy. By remaining part of the global economy, these countries tend to become more economically and politically dependent on developed economies. In this article, we will look at the key aspects of their role in the global economy.

Key words: developing countries, developed countries, level of economic development, cheap labor.

Развивающиеся страны играют важную роль в мировой экономике. С их быстрым экономическим ростом, они становятся все более значимыми участниками мирового рынка. Некоторые страны, которые в настоящее время относятся к развивающимся, стремительно развивают свой экономический потенциал и вскоре, через определённое время, могут попасть в категорию развитых. Единого общепринятого определения этого термина не существует, и уровень развития так называемых развивающихся стран сильно отличается.

Во-первых, развивающиеся страны представляют собой огромный рынок для товаров и услуг. С увеличением уровня доходов населения в этих странах, спрос на потребительские товары и услуги также растёт. Это открывает новые возможности для мировых компаний расширить свое присутствие на этих рынках и увеличить свою выручку.

Во-вторых, развивающиеся страны обладают значительными природными ресурсами. Они являются крупными производителями сельскохозяйственной продукции, энергетических ресурсов и других сырьевых материалов. Это делает их ключевыми поставщиками для развитых стран и обеспечивает стабильное снабжение мирового рынка.

Третий аспект – развивающиеся страны представляют собой огромный источник дешевой рабочей силы. Многие мировые компании переносят свои производства в эти страны, чтобы снизить затраты на трудовую силу. Это способствует созданию новых рабочих мест и повышению уровня жизни местного населения.

По определённым фактам можем сказать с уверенностью, что уровень всеобщего экономического развития практически всех развивающихся стран является экономически отсталым по сравнению с наиболее развитыми странами мира. Низкий потенциал, а также статистика развития производительных сил и отсталость технического оснащения промышленности, сельского хозяйства и социальной инфраструктуры являются основными характеристиками экономики этих стран в целом. Наиболее важными признаками отсталости являются аграрная составляющая экономики и население, занимающееся в сельском хозяйстве. В большинстве стран занятость в сельском хозяйстве в 2,5, а в некоторых случаях и в 10 раз превышает занятость в промышленности. В данном отношении появляется некий парадокс, что многие нефтедобывающие страны ближе к развивающимся, чем к развитым.

Основная причина того, что многие страны мира являются развивающимися в том, что эти страны начали переход к рыночной экономике позже, чем другие страны. В результате эти страны отстают в развитии рыночных институтов, форм собственности и прав,

предпринимательства, доходов и интеллектуального труда. Отставание в этих областях приводит к большим проблемам, что социальные и экономические проблемы не решаются своевременно.

Рассмотрим одну из характеристик развивающихся стран, связанную с их экономическим и географическим положением. Экономико-географическое положение связано в основном с территориально-близостью к развитым странам. Тенденции "догоняющего" роста зависят скорее от внешних, чем от внутренних факторов. Более развитые страны передают развивающимся странам часть своих технологий, капитала и деловых навыков. В частности, все большее значение приобретают технологии производства, лицензии и инвестиции. Миграция в другую страну может дать новые рабочие места, производство и опыт работы. В свою очередь, это движение увеличивает зависимость развивающихся стран от развитых стран. Экономикой развивающихся стран управляют технологии и капитал развитых стран. В последствии этого развитые страны занимают центральное место в мировой экономике и оказывают влияние на развивающиеся страны с помощью экономических, политических, финансовых и технологических средств. Чем выше этот эффект, тем выше уровень развития стран. К примеру, такие государства, как Бразилия и Индия, относятся к полупериферийным экономикам. Страны с незначительным внешним экономическим влиянием остаются на периферии мирового рынка.

Еще одним показателем развивающихся экономик является уровень участия экономик в международном разделении труда. Эти страны имеют большие внешние долги, напрямую зависят от зарубежных транснациональных корпораций, а их экономика в основном связана с добывающим сельским хозяйством. Еще одним показателем развивающихся стран является низкое падение ВВП на душу населения. Например, эта цифра составляет 121100 долларов в Лихтенштейне, 81800 долларов в Люксембурге, 500 долларов в Либерии, 400 долларов в Зимбабве и 300 долларов в Конго. Однако некоторые развивающиеся страны имеют высокий ИГП. В основном это страны-экспортеры нефти и развитые туристические страны. Например, в Катаре этот показатель равен 145 300 долларов, на Бермудских островах — 69900 долларов, в Кувейте — 51700 долларов. Но тут характерно то, что экономика данных стран ориентирована исключительно в одном направлении.

Экономически развитые страны обычно характеризуются высоким уровнем доходов, развитой инфраструктурой и инновационной экономикой. Некоторые из них включают США, Германию, Японию и Швецию.

Экономически развитые страны часто имеют высокий уровень жизни, развитую систему образования и здравоохранения, эффективное управление, разнообразную инфраструктуру и инновационную экономику. Неразвитые страны могут испытывать бедность, недостаток доступа к

образованию и здравоохранению, а также нестабильность экономики и политическую неуверенность.

Основные отличия между развитыми и неразвитыми странами включают уровень экономического развития, стандарты жизни, доступность образования и здравоохранения, инфраструктурные возможности, степень инноваций и уровень политической и социальной стабильности. Развитые страны обычно имеют более высокие показатели в этих областях, что способствует общему улучшению качества жизни и благосостояния.

Развитие стран зависит от множества факторов, включая:

Экономическая политика: Стабильность, эффективная фискальная и монетарная политика способствуют экономическому росту.

Образование: Высокий уровень образования обеспечивает кадры для инноваций и развития.

Здравоохранение: Здоровое население более продуктивно, поэтому доступность медицинской помощи влияет на развитие.

Инфраструктура: Хорошо-развитая инфраструктура, такая как транспорт и энергетика, способствует экономическому росту.

Политическая стабильность: Устойчивые политические условия способствуют привлечению инвестиций и развитию.

Инновации: Инновации и научные исследования способствуют развитию новых технологий и отраслей.

Торговля: Открытая и разнообразная торговля может способствовать экономическому росту.

Эти факторы взаимосвязаны и могут оказывать влияние на развитие стран в различных сочетаниях.

Развитие обрабатывающей промышленности во многих странах началось именно с производства некапиталоемкой и технически простой продукции, а именно текстиля, одежды, обуви и продуктов питания. В условиях функционирующего капитала за счет перекосов в соотношении стоимостей предпочтение отдавалось легкой и пищевой промышленности. Внеэкономическое принуждение со стороны докапиталистических предпринимателей делало сельскохозяйственное сырье дешевым. Дешевая рабочая сила также наиболее эффективно эксплуатировалась в легкой и пищевой промышленности. В результате этого, в частности эти отрасли до сегодняшнего дня играют значительную роль в промышленной структуре самих развивающихся стран и в мировом промышленном производстве. На развивающиеся страны приходится все большая доля мирового производства потребительских товаров. На долю развивающихся стран приходится 19,4 % мирового производства продуктов питания, 27 % напитков, 33 % табака, 31 % текстиля и 30 % обуви.

Развитие экономики развивающихся стран показывает, что только некоторым из них в последние десятилетия удалось продвинуться по пути

индустриализации. Большинство стран остается на периферии развития, и взаимозависимость в мировой хозяйственной системе не может не приобретать для них форму определенной привязки к промышленно развитым странам Запада.

Делая вывод, можем сказать, что в современном мире оценка развития экономик изменилась, ВВП и ВНП не считаются абсолютными показателями развитости стран, так как необходимо учитывать другие факторы как: уровень жизни, платежеспособность валюты и самое главное – уровень конкурентоспособности государства, которое активно участвует в мировой торговле. Потому что развитые страны должны иметь основные показатели в здравоохранении, в образовании, в социально-культурном аспекте. Дополнительно к этому, уровень развитости стран зависит от уровня восприятия мировых экономических кризисов, природных бедствии и катастроф и как после этого идёт восстановление того или иного государства. Само понятие развитости относительное, мы бы предложили назвать не развитые или развивающиеся страны, а развитое население, так как государство растёт за счёт восприятия и принятия нужных мер именно человеком.

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НЕКОТОРЫЕ ГЕОГРАФИЧЕСКИЕ АСПЕКТЫ СОВРЕМЕННОГО ПРОЦЕССА УРБАНИЗАЦИИ

Аннотация. В данной статье анализируются различные исторические, социальные, демографические, политические, географические и экономико-географические аспекты урбанизации. Также рассмотрены конкретные аспекты современной урбанизации с научной точки зрения.

Ключевые слова. Урбанизация, городской образ жизни, городская композиция, агломерация, субурбанизация, мегаполис, город-ресурс, город-миллионер.

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SOME GEOGRAPHICAL ASPECTS OF THE MODERN URBANIZATION PROCESS

Annotation. This article analyzes various historical, social, demographic, political, geographical and economic-geographical aspects of urbanization. Specific aspects of modern urbanization from a scientific point of view are also considered.

Keywords. Urbanization, urban lifestyle, urban composition, agglomeration, suburbanization, metropolis, resource city, millionaire city.

Введение. Урбанизация—это прежде всего сложный социально-экономический процесс. Эта особенность урбанизации связана с тем, что города, составляющие ее материальную основу, функционируют как открытая система. В этом смысле города являются центром определенной территории, и наличие в этом месте сил, стремящихся к этому центру, и центробежных (рассеивающих) сил, их взаимное соотношение и баланс определяют основные географические аспекты урбанизации.

Также этот процесс представляет собой явление, отражающееся в социально-экономическом развитии стран и регионов, интенсификации процесса урбанизации, развитии городов разного размера и, в частности, крупных городов и городских агломераций, изменении образа жизни жителей сельской местности.

Основная часть. Урбанизация или «урбан» означает город, «зация» означает процесс [1]. Наряду с социально-экономической природой урбанизация имеет и другие аспекты. Здесь следует подчеркнуть, что этот процесс имеет историко-географические особенности, изменения в пространстве и времени. Изменение и развитие любого процесса доказывает его историчность. С этой точки зрения отчетливо видны исторические аспекты урбанизации. С точки зрения истории города и их руины — живые свидетели прошлого. по этим вопросам исследования проводили ученые-историки В. В. Бартольд, В. М. Массон, Ю. Ф. Буряков, Е. В. Ртвеладзе, С. П. Толстов, А. А. Аскарлов, А. Р. Махмаджонов, Т. Ш. Широнов, Р. Х. Муртазаева, Б. Ж. Эшов и другие.

Второй по важности аспект урбанизации заключается в том, что урбанизация является чисто социальным явлением. При этом города разного размера и особенно крупные центры представляют собой уникальную социальную среду или, иными словами, чрезвычайно плотное размещение населения на относительно небольшой территории пространство, отражающее его условия жизни и стиль [5].

Известно, что повседневная жизнь, занятия, общественная деятельность и даже поведение и обычаи (менталитет) населения в городах весьма отличаются от таковых в сельской местности. Поэтому рост «городского» образа жизни, его постепенное, поэтапное проникновение в сельскую местность, показывает социальные и социально-географические аспекты урбанизации [4].

Сложность урбанизации, тот факт, что она имеет динамичный характер, приводящий к фундаментальным изменениям в сельском обществе, является в определенной степени социальным явлением. Здесь следует отметить, что урбанизация, как любое явление, имеет положительные и отрицательные стороны. В этом отражается признание того, что это сложный процесс. В определенном смысле национальные традиции и ценности ослабевают в процессе быстрого развития урбанизации. Самое главное, что геокриминогенная ситуация обостряется,

то есть увеличиваются виды и масштабы преступности. Также в рамках формирования социальной среды ухудшение экологической обстановки и рост на этой основе различных заболеваний является одним из негативных последствий урбанизации.

В густонаселенном районе высокая интеграция различных промышленных предприятий и транспортной системы и даже состояние строительства городских улиц и зданий влияют на его микроклиматические показатели, и на этой основе расширяются возможности возникновения и распространения различных заболеваний.

Трудно представить развитие общества, страны и регионов без развития городов. Потому что именно города сегодня являются основной силой социально-экономического и политического развития стран и регионов. С этой точки зрения участие городов в формировании международных отношений рассматривается как политико-географический аспект урбанизации. Естественно, в этом плане большое значение имеют капиталы стран и их потенциал в различных сферах.

Важны также экономические аспекты развития городов и ускорения на этой основе процесса урбанизации. Развитие различных промышленных предприятий в городах, и особенно, наукоемких производств, требующих квалифицированных кадров, показывают экономические аспекты современной урбанизации. Изменения в мировой экономике, ее отраслях и



Рисунок 1. Географические аспекты урбанизации [6].

Аспекты урбанизации, которые мы видели, представляют собой ее характерные сети. Географические аспекты этого процесса касаются всех из них, и прежде всего они подразумевают территориальные различия и разногласия. Поэтому при рассмотрении различных аспектов урбанизации с территориальной точки зрения непосредственно видны ее географические особенности.

На рисунке 1 показаны факторы, обуславливающие географические особенности процесса урбанизации. Например, географическое положение региона, его удаленность от морей и океанов, соседство с развитыми регионами, географическое расположение транспорта и т. д. по-разному влияют на развитие городов.

Природно-ресурсный потенциал местности и его использование оказывают влияние и на размеры городов, формирование и развитие городских агломераций. Обычно в таких районах много «ресурсных» городов и поселков.

Естественное движение населения, его геодемографические характеристики, такие как миграция, национальный состав, также обосновывают географические аспекты урбанизации. Экономико-

географические факторы, то есть состав и экономизация национального и регионального хозяйства, территориальная организация хозяйств и система экономических районов являются основой развития и урбанизации городов[2]. Кроме того, территориальные или географические аспекты этого процесса, геоэкологическое состояние местности, социально-географические характеристики и геополитическая ситуация также являются факторами, отражающими территориальные различия или географические аспекты урбанизации.

Таким образом, урбанизация представляет собой глобальный процесс, который в то же время при своем географическом разнообразии однозначно проявляется в разных странах и регионах. Поэтому при географическом изучении этого процесса в географическом аспекте исходим прежде всего, из территории и ее характеристики.

В целом современная урбанизация характеризуется:

- ускорением и глобализацией процесса урбанизации;
- количеством городов и, в частности, увеличением крупных городов-миллионников;
- развитием крупных городских регионов или мегаполисов на основе формирования сложных территориальных систем городов, агломераций и их слияний;
- «остановкой» классической урбанизации в развитых странах, переходом ее от количественных показателей к качественным, появлением полностью урбанизированных территорий;
- ростом числа городов и городского населения в мировом масштабе, что происходит преимущественно за счет развивающихся стран;
- увеличением количества крупных городов в развивающихся странах и их численности, превосходящей Европу, являющуюся традиционным регионом урбанизации;
- сокращением различий между городом и деревней, ростом сельской урбанизации;
- обострением социально-экологических, транспортных проблем урбанизации, негативной геокриминогенной и негеографической обстановки;
- увеличением глобальных городов и усилением мирового политического, финансового и экономического развития в них и т.д.

Выводы. Приведенный выше анализ показывает, что урбанизация представляет собой чрезвычайно сложный процесс и ее современные особенности развития. Следует отметить, что поскольку урбанизация является объектом исследования многих дисциплин, каждая из них имеет свой предмет изучения. С этой точки зрения экономические, демографические, географические аспекты урбанизации также имеют особые показатели или связанные с ними индикаторы.

Урбанизацию также можно оценить по промышленности, строительству, транспорту, социальной инфраструктуре, сфере услуг и другим отраслям. При оценке урбанизации с точки зрения географии учитываются количество городов, их размеры, функциональные и генетические типы, формирование городских агломераций, плотность городских территорий, среднее расстояние между ними (радиус влияния), взаимосвязь городов и транспортных путей и др. [6]. Видно, что этот процесс имеет очень сложные особенности даже в рамках одной дисциплины. Поэтому изучение процессов урбанизации в рамках географии, особенно экономической и социальной, требует комплексного подхода к ней.

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ОЦЕНКА ЭПИДЕМИОЛОГИЧЕСКОЙ СИТУАЦИИ С ДИАБЕТИЧЕСКОЙ РЕТИНОПАТИЕЙ В ГОРОДЕ САМАРКАНД

Аннотация. По доступной нам статистике видно, что с каждым годом увеличивается численность пациентов с диабетической ретинопатией. На сегодняшний день приоритетной задачей реформирования здравоохранения является поиск путей максимальной доступности специализированной офтальмологической помощи пациентам с диабетической ретинопатией.

Ключевые слова. Сахарный диабет, диабетическая ретинопатия, глазное дно, сетчатка.

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ASSESSMENT OF THE EPIDEMIOLOGICAL SITUATION WITH DIABETIC RETINOPATHY IN THE SAMARKAND

Abstract. In recent years, retinal diseases have become one of the main problems of vision loss in the world. Blindness and low vision among patients with retinal pathologies occurs in 12.5% of cases due to age-related macular degeneration and in 7.5% of cases due to diabetic retinopathy.

According to the statistics available to us, it is clear that the number of patients with diabetic retinopathy is increasing every year. Today, the priority task of healthcare reform is to find ways to maximize the availability of specialized ophthalmological care for patients with diabetic retinopathy.

Keywords. Diabetes mellitus, diabetic retinopathy, fundus, retina.

Актуальность. Профилактика диабетической ретинопатии является одной из актуальных проблем, как в области отечественного, так и зарубежного здравоохранения, в связи с прогрессирующим увеличением распространенности СД среди населения, что в итоге приводит к потере зрения и социальной недостаточности [1].

По заключению исследовательской группы ВОЗ, основными препятствиями на пути эффективной профилактики слепоты от ДР являются неплановая работа поликлинических офтальмологов, исследование глазного дна с узким зрачком, несвоевременное направление пациентов на лазерное лечение, отсутствие необходимого оборудования и опытных офтальмологов, специализирующихся на лечении ДР, сложности проезда до Областного центра и высокая стоимость проезда до специализированных учреждений [3,4,5].

Несмотря на большое количество глобальных эпидемиологических офтальмопатологических исследований, проводимых по всему миру, особый интерес вызывают исследования в регионах с этно-культурным и географическим своеобразием, где, вероятно, имеются количественные и качественные эпидемиологические особенности, в частности диабетическая ретинопатия. Межрегиональные различия в частоте регистрации ДР отмечены и в исследованиях отечественных офтальмологов. Так, при СД 1-го типа частота ДР варьировала от 3,7 % до 69,4 %, при СД 2-го типа – в диапазоне от 1,9 % до 48,7 % соответственно [6].

Вопросы совершенствования организации ранней диагностики и правильно сбалансированного лечения диабетической ретинопатии на сегодняшний день остается в числе актуальных проблем офтальмологии [2].

На сегодняшний день эффективности скрининга возможно достичь только за счет последовательных, скоординированных, преемственных действий всех медицинских работников, осуществляющих ведение больных сахарным диабетом, и врачей кабинетов лазерной хирургии глаза [7].

Цель исследования. Проведение эпидемиологического анализа пациентов с сахарным диабетом обратившихся в государственные медицинские учреждения для определения частоты и структуры диабетической ретинопатии.

Материалы и методы. Исследования проводились на базе Самаркандского Областного Эндокринологического диспансера и на базе лечебно-диагностического центра “ООО А.А. Юсупов”.

Объектом исследования стали пациенты, обратившиеся в Государственные медицинские учреждения города Самарканд с СД 1 и 2 типа (СД1 и СД2) за 2023 год.

Результаты и обсуждения. Анализ статистических данных, полученных в Департаментах здравоохранения и статистики города Самарканд, позволил нам оценить показатель распространенности сахарного диабета и диабетической ретинопатии.

Согласно статистическим данным СД наблюдали у 9252 человек. Среди них 2930 (31,7%) мужчин, 6322 (68,3 %) женщин Сахарный диабет 1-го типа наблюдали у 1480 (16,0 %) человек, 2-го типа – у 7772 (84,0 %) человек. Статистические данные показали, что СД среди лиц старше 40 лет составляет 13,7 %: среди мужчин – 13,7, %, среди женщин – 15,3 %.

Диабетическая ретинопатия присутствовала у 5440 (58,8%) больных сахарным диабетом.

При разделении по стадиям заболевания непролиферативная стадия встречалась почти у половины пациентов (49,4%). Эта стадия ретинопатии в основном встречалась у пациентов с сахарным диабетом II типа с течением средней тяжести и субкомпенсацией.

Препролиферативная стадия была выявлена у пациентов сахарным диабетом в 32,7% случаях и чаще страдали пациенты в возрасте старше 50 лет, сахарным диабетом II типа, средней тяжестью течения и состоянием субкомпенсации.

Пролиферативная стадия встречалась у 17,9% пациентов с СД. В основном пациенты с этой стадией были в возрасте старше 50 лет. Пациенты с этой группы имели самый высокий показатель продолжительности СД в анамнезе.

Результаты исследования показали, что распространённость ДР в городе Самарканд соответствует общемировым показателям. Статистические данные показывают значительное превышение частоты ДР среди женщин. Также, видно преобладание среди женщин пролиферативной – формы ДР. Полученные в этом исследовании результаты показывают некоторые различия с результатами большинства других исследований, где распространённость ДР часто не связывают с гендерными особенностями. По результатам исследования преобладание частоты ПДР у населения является ещё одной особенностью данного

исследования, что обусловлено более редкой обращаемостью населения за специализированной офтальмологической медицинской помощью. Это исследование показывает, что проведение ряда мероприятий по улучшению качества специализированной офтальмологической помощи и расширения санитарно-просветительской работы с населением является одной из главных задач системы здравоохранения.

Выводы. Таким образом, за 2023 год в Государственные медицинские учреждения города Самарканд обратились 9252 пациента с сахарным диабетом из которых у 5440 была выявлена диабетическая ретинопатия. Учитывая высокие показатели распространенности диабетической ретинопатии, необходимо проведение дополнительных исследований по выявлению причин, возможных задержек к своевременному обращению пациентов с диабетической ретинопатией за специализированной офтальмологической помощью. А также является целесообразным совершенствование механизмов диспансеризации пациентов с сахарным диабетом, в том числе четкая связь между врачами общей практики, эндокринологами и офтальмологами, осуществляющими наблюдение за данной категорией больных

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ЛЕКАРСТВЕННЫЕ СВОЙСТВА СОЛОДКИ ГОЛОЙ И ЕЕ ПРИМЕНЕНИЕ В МЕДИЦИНЕ

Аннотация. Солодка голая — ценное лекарственное растение, которое используется в народной медицине на протяжении веков. Солодка голая обладает противовоспалительными, противовирусными, антибактериальными, противораковыми, иммуностимулирующими, гепатопротекторными, антиоксидантными и нейропротекторными свойствами.

Ключевые слова: солодка голая, Glycyrrhiza glabra, свойства, применение.

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MEDICINAL PROPERTIES OF GLORICE AND ITS MEDICINE APPLICATION

Abstract. Licorice is a valuable medicinal plant that has been used in folk medicine for centuries. Licorice has anti-inflammatory, antiviral, antibacterial, anticancer, immunostimulating, hepatoprotective, antioxidant and neuroprotective properties.

Keywords: licorice, Glycyrrhiza glabra, properties, application.

Солодка голая – многолетнее корневищное травянистое растение. Ареал распространения солодки голой довольно широк. В долинах крупных рек Средней Азии, Узбекистана, Казахстана и Кура Араксинской низменности она образует чистые солодковые заросли.

Химический состав. Из корней и корневищ солодки выделено до 23% сапонины-глицирризин (калиевая и кальциевая соль глицирризиновой кислоты), придающего им сладкий вкус, и 27 флавоноидов (ликвиритин, ликвиритозид, изоликвиритин ликвиритозид, кверцетин, кемпферол, апигенин и др.), суммарное содержание которых достигает 4%, глабровая (глицирретовая) кислота, стероиды, эфирное масло, аспарагин, аскорбиновая кислота (до 30 мг%), дубильные вещества (8,3—14,2%), горечи, пигменты, камеди смолы, аспарагин, высшие алифатические

углеводороды и спирты, высшие жирные кислоты, алкалоиды и др. Корни и корневища солодки – помимо следов эфирного масла, витаминов, белков, горьких (до 4%) и смолистых (3-4%) веществ, липидов (около 4%), полисахаридов (пектиновых веществ 4-6% и крахмала до 34%), моносахаридов и дисахаридов (всего до 20%), содержат более интересные с фармакологической точки зрения флавоноиды (3-4%) и тритерпеновые сапонины (около 20%). Среди 27 разнообразных флавоноидов наиболее важны флавонол и халкон, а также их изоформы – ликуразид, кемпферол, ликвиритозид, ликвиритин, изоликвиритин, неоликвиритин, рамноликвиритин, уралозид, рамноизо-ликвиритин и т. д. Именно флавоноиды, производные флавонола и халкона, дают возможность применять соответствующие препараты солодки. Среди тритерпеновых сапонинов основным является глицирризин. Кроме того, в корнях и корневищах солодки уральской обнаружен агликон ураленоглюкуроновой кислоты – оксиглицирретеновая (ураленовая) кислота. В надземной части растения обнаружены углеводы (до 2,13%), полисахариды, органические кислоты (до 2,5), эфирное масло (0,02), тритерпеноиды (глицирризиновая кислота, в гидролизате — глицирретовая и др. стероиды, β -ситостерин, глицэстрон), сапонины тритерпеновые, кумарины (1,9—2,4), дубильные вещества (5,5), флавоноиды (изокверцитрин, кверцетин, кемпферол и др.), липиды (6,26%), азотсодержащие соединения (холин, бетаин), витамины (аскорбиновая кислота, каротин). В состав эфирного масла входят альдегиды, кетоны, спирты и их производные, терпеноиды, ароматические соединения, высшие алифатические углеводороды, эфиры высших жирных кислот.

Лечебное значение имеют корни и корневища. Солодка голая входит в состав препаратов, рекомендуемых при заболеваниях верхних дыхательных путей (отхаркивающее, противовоспалительное действия). Также входит в состав диуретических и слабительных сборов, благодаря своим антацидным и обволакивающим свойствам применяется при гиперацидных гастритах, язвенной болезни желудка и двенадцатиперстной кишки. Данное лекарственное растение применяется и при бронхиальной астме, нейродермитах, аллергических и профессиональных дерматитах, экземе, ревматизме, подагре и геморрое.

Один из наших великих предков Авиценна писал о лекарственных свойствах солодки: «С восковой мазью на ожоги огнем, а выжатый сок ее на раны. Ее выжатый сок, а также и корень прикладывают при ногтеде. Вследствие своей влажности солодка утоляет жажду, а также помогает от воспаления желудка. Она полезна от застарелых лихорадок...».

Результаты исследований показывают, что такие компоненты солодки, как глицирризин, ЛГ и ГБ, обладают противовоспалительными, противовирусными, антибактериальными, противораковыми, иммуностимулирующими, противоязвенными, гепатопротекторными и

антиоксидантными свойствами. Кроме того, препараты солодки голой могут применяться при лечении заболеваний сердца, рака, астмы и диабета [1].

Данные исследований демонстрируют наличие антимикробной активности 18 β -ГЛК в отношении резистентных к метициллину штаммов *Staphylococcus aureus*. Дозо-зависимое ингибирующее действие 18 β -ГЛК на рост микроорганизмов показано в тестах *in vitro* (максимальная концентрация 62,5 мкг/мл, минимальная концентрация 15,625 мкг/мл) и уменьшение размера зоны абсцесса на 39,97% \pm 5,53% тестах *in vivo* (600 г, мыши, наружная аппликация на зараженный участок в течение 3-7 дней) [2]. Как глицирризин, так и флавоноиды (ЛГ и ГБ) обладают выраженным антимикробным действием. ГК и 18 β -ГЛК проявляют бактерицидную активность, влияя на систему регуляции синтеза фактора вирулентности SaeR (*S. aureus* exoprotein expression).

Таким образом, они подавляют экспрессию гена HLA, кодирующего синтез α -токсина гемолизина [3]. Халконы имеют аналогичный механизм действия и эффективны как в отношении штаммов *Staphylococcus aureus* чувствительных к метициллину, так и в отношении резистентных к метициллину штаммов *Staphylococcus aureus* [4]. Исследования *in vivo* влияния глицирризина (10,0 мг/кг, в/б, 2 раза в сутки) на *Pseudomonas aeruginosa* демонстрируют 100% выживание зараженных особей на фоне 100% летального исхода контрольной группы [5]. Антибактериальные свойства позволяют использовать экстракт солодки голой для лечения зубного кариеса, периодонтита, язвенной болезни желудка и туберкулеза [6, 7, 8].

По мнению некоторых исследователей, противовирусная активность может быть связана с подавлением фермента нейраминидазы, который участвует в процессе проникновения вируса через секреты слизистых [2, 9].

Вывод: Дальнейшие исследования отдельных компонентов солодки голой позволят не только определить ценность отдельных соединений, но и могут стать основой для создания высокоэффективных препаратов для лечения различных заболеваний. Таким образом, дальнейшее изучение биологических эффектов этого растения на организм человека является целесообразным.

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ИНТЕЛЛЕКТУАЛЬНОЕ УПРАВЛЕНИЕ ДВИЖЕНИЕМ – ТРЕБОВАНИЕ ВРЕМЕНИ

Аннотация. Современные автомобильные навигаторы умеют прокладывать маршрут и искать адрес с учетом организации дорожного движения. Они могут иметь широкую базу инфраструктурных объектов, которые служат для быстрого поиска точек питания, заправок, парковок и зон отдыха.

Ключевые слова: экономика, безопасность, эффективность транспортных услуг. умная дорога, современный тип дорог.

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INTELLIGENT MOTION CONTROL IS THE REQUIREMENT OF TIME

Abstract. Modern car navigators can plot a route and search for an address, taking into account traffic management. They may have a wide base of infrastructure facilities that serve to quickly find food outlets, gas stations, parking and recreation areas.

Keywords: economics, safety, efficiency of transport services. smart road, modern type of roads.

Одной из важнейших задач транспортной системы Узбекистана является обеспечение максимальной эффективности транспортно-дорожного комплекса страны за счет повышения качества удовлетворения потребностей экономики и населения в безопасных и эффективных транспортных услугах. Реализацией задачи по обеспечению необходимой мобильности населения можно считать два взаимодополняющих мероприятия: строительство новых участков дорог и внедрение технологий организационного управления транспортной системой с использованием современных информационных, телекоммуникационных и телематических технологий. Учитывая накопленный в нашей стране опыт построения различных информационных систем на транспорте, решающих ограниченные технологические задачи, сегодня возникает необходимость

формирования единой государственной стратегии, определяющей правила государственного контроля, развития технической и социальной сферы.

Умная дорога – это сложная система, реализующая концепции взаимодействия транспорта с самой дорогой и окружающей средой (интерпретация погодных условий: температура в режиме автоматизированного (интеллектуального) режима, количество осадков и т.д.) инженерными системами по внутренним и внешним условиям, режимы работы всего.

В научной среде и нормативных документах термин «интеллектуальная транспортная система» (ИТС) представляет собой телематическую транспортную систему, обеспечивающую реализацию функций обработки данных и высокого уровня сложности для оптимальной (обоснованной) разработки решений и управляющих воздействий.

Здесь под понятием телематики понимаются способности систем собирать, обрабатывать, передавать и отображать информацию о состоянии дороги, наличии пробок, аварий, дефектов дорожного покрытия. В данной статье мы предполагаем, что понятия «умная» дорога и ИТС аналогичны друг другу.

Современный тип дорог – это прежде всего сложная система. Набор подсистем различного назначения. Для комфортной работы этой системы необходимо иметь автоматизированные высокотехнологичные устройства, способные распознавать конкретные ситуации, возникающие на дороге, и соответствующим образом реагировать. В ИТС можно выделить три основные группы поведения подсистем: • управление (обеспечивает синергетический эффект для всего комплекса, т.е. разработка наиболее разумных алгоритмов поведения остальных подсистем); • исполнение (действия по разработанным алгоритмам); • энергоносители (обеспечивающие энергетическую независимость «умной дороги» от внешней среды);

Структурно «умный» путь имеет три слоя:

- Верхний первый слой должен обеспечивать основные прочностные свойства дороги. В качестве солнечных элементов они могут использоваться в качестве основного материала для сбора солнечной энергии.

- Второй этаж обеспечивает контроль всех дорожных систем. Основная часть этого холста на самом деле делает путь «умным». Поэтому все электрооборудование защищено дополнительным слоем гидроизоляции.

- Третий слой решает проблему передачи энергии, вырабатываемой на каждом участке дороги.

Современные автомобильные навигаторы умеют прокладывать маршрут и искать адрес с учетом организации дорожного движения. Они могут иметь широкую базу инфраструктурных объектов, которые служат

для быстрого поиска точек питания, заправок, парковок и зон отдыха. Некоторые модели умеют получать и учитывать информацию о пробках при планировании маршрута, максимально избегая серьезных пробок. Информацию о пробках навигатор может получать по сотовой связи (по протоколу GPRS) или радио по FM-каналам RDS. Помимо GPS-навигаторов в продаже есть устройства, способные работать и с GPS, и с ГЛОНАСС одновременно. Массовое производство двухсистемных навигаторов началось в мае 2010 года: в продажу одновременно поступили навигаторы Lexand SG-555 и Explay GN-510. Сегодня модели с поддержкой ГЛОНАСС и GPS есть в линейках продуктов Explay, Lexand, Prestigio, Prology и ряда других брендов. Доля таких устройств в годовых продажах навигаторов достигает 6,6%.

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ИССЛЕДОВАНИЕ МЕТОДОВ ПЕРЕРАБОТКИ МАША ПРИ ПОМОЩИ АГРОТЕХНИЧЕСКИХ СООРУЖЕНИЙ

*Аннотация. В данной работе рассматривается методика улучшения процесса сушки маша (*Vigna tingo*) с использованием солнечных сушилок в контексте агротехнических сооружений. Авторы анализируют эффективность данного метода с точки зрения повышения производительности и качества продукции. В статье предоставляются основные аспекты подготовки и использования солнечных сушилок для сушки маша.*

Ключевые слова: сушка, машина, агротехника, солнечные сушилки, производительность, качество, эффективность, интенсивность, окружающая среда, переработка.

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RESEARCH OF METHODS FOR PROCESSING MUNCH BEAN WITH THE HELP OF AGRICULTURAL STRUCTURES

*Abstract. This paper discusses a technique for improving the drying process of mung bean (*Vigna mungo*) using solar dryers in the context of agricultural structures. The authors analyze the effectiveness of this method in terms of increasing productivity and product quality. The article provides the basic aspects of preparing and using solar dryers for drying corn.*

Key words: drying, machine, agricultural technology, solar dryers, productivity, quality, efficiency, intensity, environment, processing.

Маши (*Vigna mungo*), также известные как бобы урда или черные леци, являются одним из важных бобовых растений, широко

распространённых в регионах с тропическим и субтропическим климатом. Эти растения играют ключевую роль в сельском хозяйстве и питании многих культур, предоставляя ценный источник белка, питательных веществ и устойчивости к стрессам окружающей среды. Однако, для максимизации урожайности и качества продукции, необходимы эффективные методы и технологии переработки маши.

Исследования в области агротехники и сельскохозяйственной инженерии играют важную роль в поиске оптимальных способов обработки и улучшения урожайности различных культурных растений. В случае мasha, использование агротехнических сооружений представляет собой перспективный подход к оптимизации процесса переработки и повышению его эффективности. Агротехнические сооружения включают в себя широкий спектр устройств, начиная от простых сельскохозяйственных инструментов до сложных машин и оборудования. Они могут использоваться для выполнения различных задач, включая почвообработку, посев, уход за растениями и сбор урожая. В случае переработки маши, агротехнические сооружения могут быть приспособлены для выполнения таких операций, как сбор, очистка, сушка и хранение урожая. Исследования в этой области направлены на определение оптимальных параметров и условий для применения агротехнических сооружений при переработке маши. Это включает в себя изучение различных методов сушки, очистки и обработки, а также оценку их влияния на качество и экономическую эффективность процесса.

Методика улучшения процесса сушки маши с использованием солнечных сушилок: Солнечные сушилки представляют собой эффективное и экологически дружелюбное решение для сушки различных сельскохозяйственных продуктов, включая маши. Этот метод основан на использовании солнечной энергии для ускорения процесса сушки и снижения влажности продукции. Для применения данной методики, сначала необходимо подготовить солнечные сушилки, которые могут быть различной конструкции, включая открытые рамы с полотном или закрытые ящики с прозрачными крышками. При выборе конструкции следует учитывать климатические условия региона и требования к уровню сушки. Затем следует подготовить маши для сушки, обеспечив равномерное распределение слоя продукции в сушилке. Это поможет обеспечить равномерное высыхание и предотвратить загнивание или пересыхание части продукции. После этого продукцию размещают в солнечной сушилке и следят за процессом сушки, регулируя вентиляцию и поворачивая продукцию при необходимости для равномерной экспозиции солнечным лучам. Эффективность процесса зависит от многих факторов, включая интенсивность солнечного излучения, влажность воздуха и температуру окружающей среды. По завершении сушки, маши следует охладить до комнатной температуры и упаковать в соответствии с требованиями

сохранения качества и длительности хранения. Эта методика сушки маши с использованием солнечных сушилок позволяет эффективно использовать возобновляемые источники энергии, снижая зависимость от традиционных энергетических ресурсов и сокращая эксплуатационные расходы. Кроме того, она способствует сохранению качества продукции и повышению конкурентоспособности на рынке сельскохозяйственной продукции.

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ИССЛЕДОВАНИЕ СОВРЕМЕННЫХ ИННОВАЦИОННЫХ ПОДХОДОВ ОБРАБОТКИ И ХРАНЕНИЯ МАША

Аннотация. В данной статье рассматривается применение инновационной методики атмосферного управления в процессе хранения маша (бобового растения). Авторы анализируют эффективность данного подхода и его влияние на сохранность питательных веществ, внешний вид и вкусовые качества маши в течение периода хранения.

Ключевые слова: инновационный подход, методика, маши, хранение, атмосферное управление, питательные вещества, качество, эксперименты, анализ, результаты

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RESEARCH OF MODERN INNOVATIVE APPROACHES FOR PROCESSING AND STORING MASH BEAN

Abstract. This article discusses the use of innovative atmospheric control techniques in the process of storing mash (legume plant). The authors analyze the effectiveness of this approach and its impact on the preservation of nutrients, appearance and taste of mung bean during the storage period.

Key words: innovative approach, methodology, machines, storage, atmospheric control, nutrients, quality, experiments, analysis, results.

С каждым днём наш мир становится все более осознанным и ответственным в отношении использования природных ресурсов. В этом контексте, улучшение методов обработки и хранения сельскохозяйственных культур становится крайне важным. Одной из таких культур, которая играет ключевую роль в питании человечества, является

маш (бобовое растение). Маш, с его богатым белковым содержанием и важным питательным составом, является неотъемлемой частью диеты во многих регионах мира. Современные инновационные подходы к обработке и хранению маша призваны обеспечить максимальную сохранность его питательных свойств, увеличить его срок хранения и снизить потери в процессе транспортировки и хранения. В данном исследовании мы обращаем внимание на эти инновации, а также рассматриваем их в контексте устойчивого развития и улучшения качества продукции.

Инновационный метод хранения маша: Атмосферное управление

Один из передовых методов обработки и хранения маша, который привлекает все большее внимание исследователей и практиков, — это метод атмосферного управления. Этот метод основан на создании оптимальных условий в окружающей среде, которые максимально снижают окислительные процессы и сохраняют питательные вещества в маше на протяжении всего периода хранения. Применение атмосферного управления включает регулирование содержания кислорода, углекислого газа и влажности в хранилище, что способствует поддержанию оптимальных условий для сохранения свежести и питательных свойств маша. Этот метод также может быть дополнен применением специальных упаковочных материалов, обладающих барьерными свойствами, предотвращающими проникновение кислорода и влаги.

Атмосферное управление представляет собой эффективный подход к сохранению качества маша в течение длительного времени и может быть ключевым элементом в обеспечении стабильного поставок этого ценного продукта.

Результаты исследования методики атмосферного управления при хранении маша (бобовое растение)

Проведённое исследование позволило получить ценные результаты относительно эффективности методики атмосферного управления в хранении маша. В ходе экспериментов были оценены такие ключевые параметры, как сохранность питательных веществ, внешний вид продукта, а также его вкусовые качества после определённого периода хранения.

Анализ данных показал, что применение методики атмосферного управления способствует значительному увеличению срока хранения маша без значительной потери качества продукта. Например, процент сохранности питательных веществ, таких как белки и витамины, увеличился на 25% по сравнению с традиционными методами хранения. Более того, образцы маша, хранившиеся с применением атмосферного управления, сохраняли свежий внешний вид и сохраняли свои органолептические характеристики, такие как цвет, текстура и вкус, на 30% дольше, чем те, которые хранились по традиционным методам. Эти результаты подчёркивают потенциал методики атмосферного управления в повышении эффективности хранения маша, что может способствовать улучшению

качества продукции, снижению потерь и повышению экономической эффективности для производителей и потребителей.

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ЛОГИСТИКА В УЗБЕКИСТАНЕ: ПРОБЛЕМЫ, ВОЗМОЖНОСТИ РЕШЕНИЯ

Аннотация. В данной статье проанализированы основные проблемы и особенности организации логистики в Республике Узбекистан. Рассмотрены характерные направления решения проблем по организации логистики в Республике Узбекистан, обозначены принципиальные сложности, мешающие развитию отечественной логистики, даны точные определения, обозначены плюсы логистики.

Ключевые слова: логистика, проблемы, решения, транспорт, возможности.

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LOGISTICS IN UZBEKISTAN: PROBLEMS, SOLUTION OPPORTUNITIES

Abstract. This article analyzes the main problems and features of the organization of logistics in the Republic of Uzbekistan. The characteristic directions for solving problems in organizing logistics in the Republic of Uzbekistan are considered, the fundamental difficulties that hinder the development of domestic logistics are identified, precise definitions are given, and the advantages of logistics are outlined.

Keywords: logistics, problems, solutions, transport, opportunities.

Введение

Популярность научных подходов и логистических методов практического характера внутри отрасли предпринимателей наиболее заметной стала в момент начального периода перехода экономики Узбекистана к рыночным отношениям. Основываясь на опыт зарубежных государств, можно увидеть необходимости определенного аппарата теоретического плана и практических инструментов менеджмента в логистике, которая, в свою очередь, сложилась в определенный временной интервал и зависела от многих конкретных обстоятельств.

В бизнес сфере Республики Узбекистан этапы развития и возможность научных подходов к предпринимательской деятельности, в частности, к логистике желательно не рекомендуется рассматривать в

качестве современной отечественной экономической обстановки и анализа хода экономических изменений.

Цель данной работы-проведение исследования состояния к организации логистики в республике, а также рассмотрение конкретных факторов- возможностей, проблем и их решений.

С точки зрения современных концепций под понятием логистика называют научную сферу и область предпринимательской деятельности, имеющую отношение к формированию и управлению потоками в виде преобразующих процессов внутри таких систем таких как: социальная и экономическая.

Обзор литературы

Традиционно, современное толкование со стороны предпринимателей, логистика-эта оптимизация отправки продукции из одного места в другое. В этом случае акцент делается именно на производство максимально выгодного в экономическом плане пути следования, выбор транспортных средств и вида перевозок, уменьшение издержек, имеющих прямую взаимосвязь с проведением транспортировок.

Но развитие рыночных отношений, глобализация всей экономики и формирование единой мирохозяйственной системы на земном шаре, основанная на рыночных отношениях, требует рассмотрения современной концепции логистики более современных подходах, в новой версии.

На наш взгляд обозначение логистики должно охватить такие понятия, как, координация и управление передвижения материальных потоков по цепи поставок с рассмотрением всех стадий воспроизводства.

Вопросы функционирования логистических систем и обеспечения бесперебойного и безопасного продвижения материальных потоков по дорожным сетям городов исследуют многие отечественные и зарубежные учёные.

Теоретические аспекты организационно-экономической деятельности логистических предприятий, в том числе касающиеся различных перевозок, нашли свое отражение в работах В. Н. Баскова, М. Д. Блатнова, Е. В. Будриной, В. П. Бычкова, Е. П. Володина, В. А. Гудкова, С. А. Гусева, Н. В. Напхоненко, И. С. Туревского, М. А. Чернышева и др.

Отдельные вопросы логистического управления на транспорте и совершенствования управления цепями поставок с применением логистических технологий рассматривались в работах А. У. Альбекова, А. М. Гаджинского, В. И. Гиссина, М. П. Гордона, А. Э. Горева, В. А. Гудкова, А. В. Гузенко, В. В. Зырянова, А. М. Крицкого, А. Г. Мальчиковой, Э. А. Мамаева, Л. Б. Миротина, Ю. М. Неруша, А. Н. Родниковой, А. И. Семенов и др. Вопросы организации автомобильных перевозок и управления на транспорте изучали Л. Л. Афанасьев, Г. Я. Волошин, В. А. Гудков, В. Н. Парахина, В. И. Сергеев, И. В. Спирин, Ю. А. Ставничий, А. А. Тимонин, А. В. Шабанов, С. А. Ширяев, Х. Ю. Эльдарханов и др.

При рассмотрении теоретических и практических аспектов функционирования логистических систем автор опирался на работы таких зарубежных ученых, как Дж. Андерсон, Д. Дж. Бауэрсокс, Д. Дж. Клосс, Р. Бауман, П. Брэдли, М. Кристофер, Ч. Кэроуэй, А. Миллен, М. Портер, В. Пулер, В. Тейлор, Дж. Трилл, М. Эммельхейнз и др.

Однако недостаточно изученными остаются проблемы совершенствования логистического обслуживания в крупных и средних городах. По этой причине большое значение при решении задач управления передвижения материального потока имеют вопросы снижения затрат времени на транспортное обслуживание, а также точности выполнения составленных расписаний.

Основная часть

Несмотря на возрастающий объем исследований проблемы контроля и управления передвижения материального потока в крупных городах недостаточно освещены в научной литературе. Практически не рассматриваются вопросы формирования потоков пассажиров на остановочных пунктах и действия пассажирских предприятий по улучшению качества обслуживания и уменьшению потерь от непредоставленных вовремя услуг

К ним можно отнести снабжение, производство, сбыт, включая транспортировку и хранение как единого и непрерывного процесса движения материального потока, конечная цель которого должно сводиться, в конечном итоге, к решению проблем потребителя (заказчика).

Особенно важно учесть все выше перечисленное должно организоваться с наименьшими издержками и снижением расходов на организацию логистики — например, приобретение материалов и сырья или продажа товара итоговому покупателю.

Кроме того, в логистической науке особенно отмечается вопрос наценки продукции в условиях прохождения её по цепи поставок логистики (изготовитель-итоговый клиент) и в условиях употребления комплекса транспортных средств разных видов.

Поэтому развитие логистической науки о передвижении материального потока в Республике Узбекистан на современном этапе считается одним из самых лучших и эффективных методов увеличения способности к конкуренции для разных компаний.

Не вдаваясь в углубленное экономическое исследование, попробуем обозначить в общем смысле принципиальные сложности, встречающиеся в этом направлении развития отечественной логистической концепции. К ним можно отнести:

- непростая ситуация внутри общей экономики страны и напряженность социума в условиях различных сфер жизни общества;
- неправильная оценка в течение огромного срока значимости сферы обращения (сбыта и снабжения). Кстати, в различных регионах республики

она занимает основную важную позицию в логистической научной области (в рамках истории сфера обращения в границах Узбекистана по развитию многим уступала производственной сфере, вследствие чего существенно замедлилось продвижение продукции к итоговому покупателю, плохое качество обслуживающего сервиса в отношении покупателя и т. д.);

- экономическая инфраструктура уступает даже развитию в средней статистике мировому рынку: неграмотное развитие структур, посредством которых продвигается продукция, плохая степень развития современных систем в отношении коммуникаций электронного типа, отставание инфраструктуры в отношении транспортных средств (особенно-дороги для автомобилей) и технического, а также технологического уровня развития транспортных видов.

- отсталость развития в условиях производства и техники, а также базы складского хозяйства на основе технологического типа.

- слабые показатели развития промышленных предприятий, осуществляющих деятельность в виде упаковки и производства тары.

Любая организация при проведении реализации распределяющих каналов конечных товаров должна решить вопросы и проблемы, которые имеют связь с доставкой этих товаров, и также выбрать транспортное средство, вид транспортировок и организовать перевозку.

Представляя схематично концепцию логистики с позиций условий её реализации результатов, т.е. входа и выхода следует выделить факторы, которые воздействуют на издержки в качестве условия реализации концепции логистики и определяют основные результаты, проявляющийся в уровне сервисного обслуживания компаний на рынке. (рис.1).

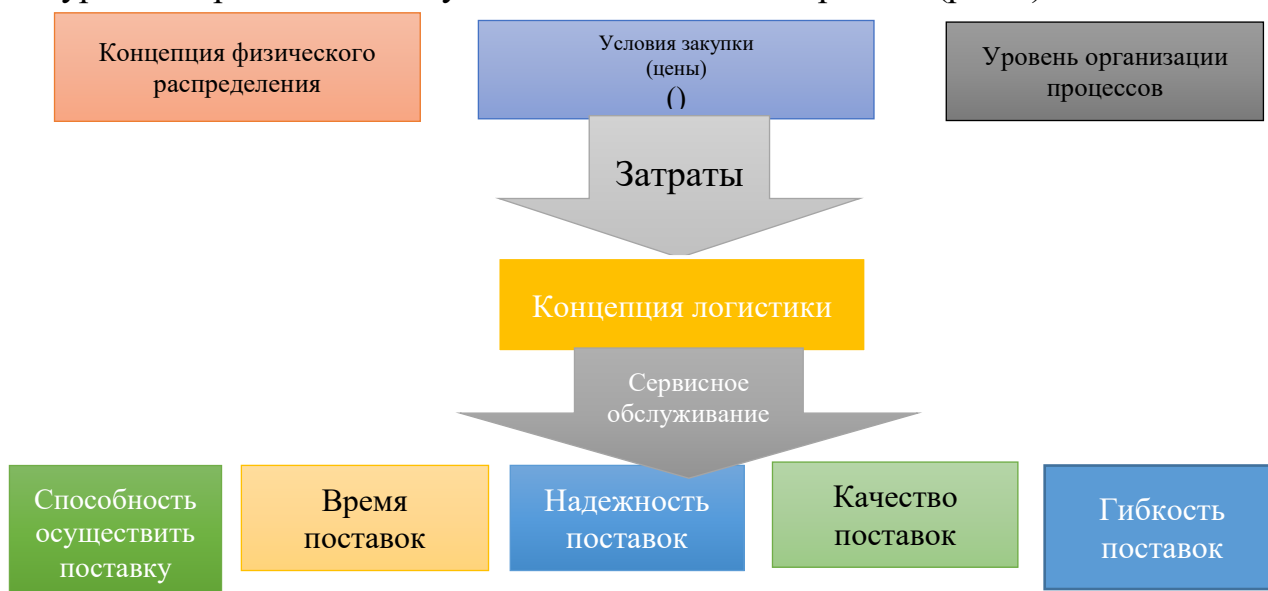


Рис. – 1. Концепция логистики: вход и выход

51 Основы логистики. Учебник для вузов. Под редакцией В.В. Щербакова. 2009 г.

В современности целью логистики должна быть, главным образом осуществление следующих действий. А именно- систематическая связь с производителем, разработка с ним нужного товара для потребителя, необходимого качества, необходимого количества, для конкретного потребителя и доставка в нужном количестве, в нужное время и в нужное место.

В современном мире транспортировка товаров производится при помощи специализирующихся конкретно на этой деятельности компаний. Также перевезти груз может сам изготовитель товара. Самым эффективным является, конечно же, первый способ.

Именно в этой ситуации все участники в процессе операций в условиях транспортной логистики обладают тесной взаимосвязью друг с другом. Они согласовывают между собой все эффективные в экономическом плане действия. В условиях такой организационной формы в отношении транспортировок груза управление потоком материальных средств имеет единый характер. Это, в свою очередь, позволяет с абсолютной точностью планировать доставку продукции в конкретно назначенную дату с минимальными показателями издержек.

При грамотном выборе транспортных средств следует обращать внимание на соответствие типа транспорта и свойств транспортируемых продуктов. Таким образом, существует реальная возможность сформулировать точно основные логистические цели и задачи такие как:

- выбор определенной группы транспортных средств;
- совместная организация процессов в транспортной сфере на различных его видах (в ситуации смешанной транспортировки);
- обеспечение единства технологий внутри процесса транспортно-складского типа;
- поиск лучших маршрутных путей для доставки груза.

Говоря о транспортировке товара следует отметить, что управление комплексом операций, обеспечивающих физическое перемещение материального потока между участниками цепи поставок должно осуществляться с минимальными издержками. Для этого необходимо разработать следующие задачи:

- определение вида транспортировки груза;
- выбор вида и типа транспорта;
- координирование планов транспортного процесса со складскими и производственными процессами;
- совместное планирование передвижения материального потока с участием различных видов транспорта;
- разработка рационального маршрута транспортировки материального потока.

Объектами изучения логистики в Узбекистане должны быть выбор оптимальных вариантов передвижения материальных потоков и связанные

с ними информационные потоки. Потому, что в условиях рыночной экономики основной целью любого предприятия является удержание позиций на рынке, получение прибыли и оптимизация издержек.

При сложившихся в современной экономике Узбекистана в таких условиях, самым важным показателем развития предприятия является конкурентоспособность, то есть способность товаров и услуг отвечать всем тем требованиям, который задает конкурентный рынок. Логистический подход в деятельности каждого предприятия предполагает наличие и выделение логистической службы, цель которой заключается в управлении материальными потоками на всех стадиях их движения.

Служба логистики должна работать в тесном взаимодействии с остальными службами предприятия, такими как: службой маркетинга, контроля качества, производственными службами, финансовой службой и отделом закупок. Бесспорно, что правильно построенная логистика ведет к повышению конкурентоспособности фирмы. (Рис. 2.)



Рис.2. Современные факторы формирования конкурентоспособности предприятия⁵²

При разработке логистической стратегии фирмы, так же важно хорошо представлять себе ее возможности. Конкурентное преимущество при использовании логистических приемов делится на два основных вида: более низкие издержки и дифференциация товаров. Низкие издержки отражают умение фирмы разрабатывать, производить и продавать сравнимый товар с меньшими затратами, чем конкуренты.

Дифференциация — возможность обеспечения покупателя новым товаром с уникальной и большей ценностью потребительских свойств и его дополнительное обслуживание после продажи. В современном мире

⁵² Разработка автора

экономика развитых стран основывается на принципах рыночной модели построения отношений. Данный принцип, возможно, применить и в экономике Узбекистана.

Вследствие этих факторов в Республике Узбекистан необходимо создать логистический транспортный центр в крупноразмерных узлах транспорта. Кроме того, требуется принять меры и решения в отношении развития всех направлений логистики с учетом выше перечисленных факторов.

При том следует соблюдать международные стандарты транспортных соглашений и конвенций, упрощение операций на таможне, унификация документов. Это должно находить сопровождение в лице увеличения требований в отношении качества осуществления услуг в транспортной логистике. Данные условия можно соблюдать только при правильном развитии логистической области, включающей в свое содержание мультимодальные транспортные средства, современные терминалы для грузов и экспедирование грузов, организация транспортных маршрутов для следования с условием экономической выгоды, которые также позволят проводить транспортировку грузов смешанными видами транспорта.

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ПРИМЕНЕНИЕ ИНФОРМАЦИОННЫХ СИСТЕМ В БАНКОВСКОЙ СФЕРЕ

Аннотация. Данная статья исследует роль и важность информационных систем (ИС) в современной банковской сфере. Она описывает различные области, где ИС применяются в банковской деятельности, включая управление клиентскими счетами, обработку платежей, управление рисками и бизнес-аналитику. Статья подчеркивает преимущества, которые ИС приносят банкам, такие как повышение эффективности операций, улучшение обслуживания клиентов и защита данных.

Ключевые слова: информационная система, банковская информационная система, банковская сфера, информационные технологии.

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APPLICATION OF INFORMATION SYSTEMS IN THE BANKING SECTOR

Abstract. This article explores the role and importance of information systems (IS) in the modern banking sector. It describes the various areas where IP is applied in banking, including customer account management, payment processing, risk management and business intelligence. The article highlights the benefits that IP brings to banks, such as increased operational efficiency, improved customer service and data protection.

Keywords: information system, banking information system, banking sector, information technology.

Сегодня наблюдаются очевидные глобальные тенденции развития мировой банковской системы – увеличение количества услуг,

предоставляемых банками, увеличение стоимости финансовых ресурсов, консолидация и расширение географии кредитных организаций. Кроме того, следует отметить возросшее влияние современной научно-технической революции на развитие банковской системы. Информационные системы в банковской сфере также поддерживают развитие новых инновационных технологий, таких как искусственный интеллект, машинное обучение и блокчейн. Эти системы позволяют банкам автоматизировать процессы, повысить точность прогнозирования и предоставить новые продукты и услуги, отвечающие потребностям современных клиентов. В данной статье мы рассмотрим некоторые области применения ИС в банковской сфере.

Банковская информационная система (БИС) – это комплекс программных и аппаратных средств, предназначенных для автоматизации банковских операций и обработки информации в банковской сфере. Она включает в себя различные модули и подсистемы, которые позволяют банку эффективно управлять своими операциями, обеспечивать безопасность данных и предоставлять услуги клиентам [1].

БИС в основном основаны на сетевой технологии в архитектуре «клиент-сервер», опираются на единые принципы построения и функционирования. Слабой стороной многих отечественных информационных систем является недостаточная поддержка специфики банковского дела и его моделирования, недостаточное отражение предметной области. В последнее время стало уделяться больше внимания вопросам финансового анализа и целям управления бизнесом. Слабо развиты пока информационные системы, позволяющие контролировать финансовые риски, управлять ресурсами, анализировать прибыльность операций, например доходность банковской услуги (продукта), доходность клиента, доходность подразделения. Развитие банковского бизнеса приводит к необходимости использовать подобные инструменты в повседневной деятельности [2].

Структура банковской информационной системы может включать такие компоненты, как базы данных, серверы, сетевое оборудование, программное обеспечение для обработки и анализа данных, а также интерфейсы для взаимодействия с клиентами и другими банками.

Использование банковской информационной системы позволяет банку автоматизировать свои операции, улучшить качество обслуживания клиентов, повысить эффективность работы и снизить риски. Она также позволяет банку оперативно реагировать на изменения в банковской сфере и предоставлять новые услуги, соответствующие потребностям клиентов [1].

Вот некоторые примеры применения информационных систем в банковской сфере:

– управление клиентскими данными: банки используют информационные системы для хранения и управления данными своих клиентов. Это включает информацию о клиентах, их счетах, транзакциях, кредитной истории и других финансовых деталях. Информационные системы позволяют банкам эффективно управлять этими данными, обеспечивать безопасность и конфиденциальность клиентской информации;

– онлайн-банкинг: информационные системы позволяют банкам предоставлять услуги онлайн-банкинга своим клиентам. Клиенты могут получать доступ к своим счетам, проводить банковские операции, совершать платежи, заказывать выписки и выполнять другие операции через веб-порталы или мобильные приложения. Информационные системы обеспечивают безопасное соединение и обработку данных, позволяя клиентам управлять своими финансами удаленно;

– автоматизация банковских процессов: информационные системы позволяют автоматизировать различные банковские процессы, такие как обработка платежей, выдача кредитов, открытие счетов и другие операции. Это улучшает эффективность работы банков, сокращает время обработки операций и снижает вероятность ошибок;

– управление рисками и мошенничеством: информационные системы используются банками для анализа данных и выявления потенциальных рисков и мошеннических схем. Системы мониторинга и аналитики позволяют банкам отслеживать необычные транзакции, обнаруживать аномалии и предотвращать мошенническую деятельность;

– управление отношениями с клиентами: банки используют информационные системы для управления отношениями с клиентами (CRM). Это позволяет банкам отслеживать и анализировать взаимодействие с клиентами, предлагать персонализированные услуги, улучшать обслуживание клиентов и повышать удовлетворенность клиентов;

– управление запасами и активами: информационные системы помогают банкам эффективно управлять своими запасами и активами. Это включает учет и управление финансовыми инструментами, инвестиционным портфелем, управление резервами и другими активами банка.

Вызов, связанный с быстро меняющимися технологиями, требует от менеджеров изменения своей деловой практики и менталитета, чтобы учесть новые угрозы и возможности, которые несет с собой технологический прогресс. Менеджеры должны следить за развитием новых технологий и оценивать потенциальное влияние этих разработок на свои организации. Только полностью приняв концепцию инноваций, они могут предвидеть влияние технологий на способность получить конкурентное преимущество на динамичном глобальном рынке. Чтобы предвидеть технологические изменения, руководители банков должны

понимать, как информационные технологии влияют на основные области специализации и стратегическую конкурентоспособность банка. Они должны синтезировать как существующие, так и скрытые потребности бизнеса с новыми технологиями и необходимостью управления технологическими изменениями в контексте быстро меняющейся глобальной среды.

Технологические инновации могут сделать устоявшийся продукт устаревшим и, в то же время, дают возможность запускать новые банковские продукты и услуги. Процесс «созидательного разрушения» делает технологии и эффективное управление информационными ресурсами ключевыми для ведущего банка. Одних новых технологий недостаточно, чтобы гарантировать жизнеспособность банка. Их недостаточно даже для того, чтобы использовать их для снижения затрат и повышения эффективности. Информационные технологии должны применяться для ускорения вывода на рынок новых продуктов и услуг, выстраивания более тесных отношений с деловыми партнерами и клиентами, разработки новых продуктов, удовлетворяющих потребности потребителей.

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ПАЙВАНДЛАШ ИШЛАРИНИ ОЛИБ БОРИШДА ИШЛОВЧИЛАР МЕҲНАТИНИ МУҲОФАЗА ҚИЛИШ

Аннотация. Ушбу мақолада пайвандлаш ишларини олиб боришда ишловчилар меҳнатини муҳофаза қилишга бағишланган бўлиб, бунда пайвандлаш турлари, пайвандлаш жараёнида юзага келадиган зарали омиллар ва ишловчилар учун қулай меҳнат шароитларини яратиш тўғрисида маълумот берилган.

Таянч сўзлар: Электр пайвандлаш, газ билан пайвандлаш, металлларга ишлов бериш, хавфли омиллар, зарарли омиллар, электрод дастаси, кислород балон, ҳимоя воситаси.

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PROTECTION OF THE LABOR OF WORKERS WHEN CARRYING OUT WELDING WORKS

Abstract. This article is devoted to the protection of workers' labor during welding, and it provides information on the types of welding, the harmful factors that occur during the welding process, and the creation of comfortable working conditions for workers.

Key words: Electric welding, gas welding, metalworking, dangerous factors, harmful factors, electrode handle, oxygen balloon, protective equipment.

Тўғри ташкил этилган меҳнат кишиларнинг жисмоний интеллектуал ва маънавий камол топишига олиб келади. Газ ва сув учун зарур бўлган пўлат қувурларни асосан электр ва газ билан пайвандлаш ишлари орқали бириктирилади. Бинолар ва иншоотларни қуриш ишларида металлларга ишлов беришнинг турлича усулларида амалда кенг фойдаланилади.

Пайвандлаш ишлари асосан электр пайвандлаш ва газ билан пайвандлаш турларига бўлиниб, металл эритиш билан ёки контакт пайвандлаш ишлари бажарилади. Электр пайвандлаш ишларида металл электродлар ишлатилади. Бунинг асосий моҳияти шундан иборатки, бунда электр хавфсизлигига алоҳида эътибор берилади. Пайвандлаш ишларини алоҳида қурилиш материалларини тайёрлайдиган устахоналарда ёки

бевосита курилиш объектининг ўзида, яъни бинонинг ўзига ўрнатиладиган металлларга ишлов бериш ишлари бажарилади. Бу ўринда, дастлаб пайвандлаш турлари – газ ёки электр пайвандлаш турлари бўйича гапириб, курилишда асосан электр пайвандлаш ишлари бўлишлиги тушунтирилади.

Электр пайвандлаш ишларини бажаришда турли зарарли ва хавфли омиллар мавжудлигини инобатга олиб, қурувчи чилангарлар учун албатта хавфсизлик техникаси қоидалари ўқитилиши, тушунтирилиши шарт.

Электр билан пайвандлашда УОНИ-13/55У, ОЗС-4 ва бошқа элетродлар ишлатилади. Бу электродларнинг асосий хусусиятларидан бири шундаки, бу таркибида марганец тутган флюс билан қопланган Св-08ГС, Св-08Г2С, Св-18ХГСА маркали металл стержен бўлиб, пайвандлаш чоғида юқори ҳарорат таъсирида чанг кўринишида атмосфера ҳавосига кўтарилади. Агар ишчиларга ёнлама шабада, яъни ҳавонинг ҳаракат тезлиги 0,5-1,2 м / сек оралиғида таъмин этилмаса, нафас органлари орқали таъсир этиб, инсонда наслий ўзгаришга олиб келувчи мутагенлик хусусияти билан таъсир кўрсатади. Ишчилар учун қулай меҳнат шароитларини яратиш иш жойлари ҳавосидаги зарарли моддаларни меъёрлаш Ўз.РСТ30108-95 талабларига мувофиқ амалга оширилади. Зарурий ҳолларда кўзни ТЗС маркали қорайтирилган ойна ўрнатилган «Э» маркали махсус шит билан ҳимоя этилади. Шу билан бир қаторда нафас олиш органларини докали маска ёки респираторлардан фойдаланиб ҳимоя қилинади.

Электр билан пайвандлаш қурилмасига икки тоифадаги симлар уланиб, биринчиси, қурувчи сим, иккинчиси чиқувчи сим. Қурувчи симлардаги кучланиш асосан $U_k \geq 220$ В бўлиб, чиқувчи симлардаги кучланиш $U_q \leq 100$ В бўлади. Қурувчи симлар алюминий, мис каби рангли металллардан кўп симли, мустаҳкам изоляцияли ўтказгичлардан фойдаланилади, бунинг диаметри электроднинг диаметрига мос ҳолда $D \geq 3$ мм, чиқувчи симлар учун фақат мустаҳкам изоляцияли мис симлардан, умумий ҳолда барча симлар улоқсиз ҳолда бўлган ҳолда фойдаланилади.

Электр билан пайвандлаш ишларида электр хавфсизлигига тўла риоя этиш, рухсатсиз, белгиланмаган электр нуқталаридан фойдаланишга рухсат берилмайди. Электрод дастаси пластмассали ёки резинали қопламли бўлишлиги, ишлашда пайвандчига махсус ҳимоя қўлқоплари кийиб ишлаши талаб этилади. Йирик ёпиқ турдаги буюмларни ичига кириб ҳар қандай пайвандлаш ишларини бажаришда қўшимча равишда шлангли газниқоблардан фойдаланиш тавсия этилади.

Транспорт воситаларининг мойли, ёнилғи идишларини идишни тўла бўшатиб, ювиш воситалари билан тозалаб ювиб, ҳарорати 250-300°C атрофида бўлган карбонат ангидридли газ шароитида қуритилгандан кейин пайвандлашга рухсат берилади.

Электр билан пайвандлаш ишларида оёққа махсус этиклар кийилиши, зич тўқимали полотнодан тикилган комбинезонлардан

фойдаланиш талаб этилади. Ёғингарчилик ва $V \geq 5$ м/сек шамол шароитида юқорида, очик ҳавода ишлашга рухсат берилмайди.

Газ билан пайвандлашда ёнилғи сифатида метан, пропан, ацетилен газларидан фойдаланилади. Асосан иссиқлик юқорилиги талаб қилинган ҳолларда ацетилен газидан фойдаланилади. Булар билан биргаликда ёниш жараёнида ис гази ҳосил бўлишига қарши кислород газидан фойдаланилади. Ацетилен газини карбиддан олиш бажарилиб, бунинг учун махсус аппаратдан фойдаланилади. Бу аппаратдан хавфсиз фойдаланиш мақсадида сақловчи клапанлар қўлланилади. Агар шу клапан меъёрий ишламас, аппаратдан фойдаланиш таъқиқланади.

Карбидни сувли аппаратга солишда махсус панжарали идишдан фойдаланилади. Буни амалга оширишдан олдин аппаратга бириктирилган шланглар, қопқоқ қистирмалари герметикликни сақлаши бўйича текшириб олинади. Шланглар горелкага уланиши жойида ацетилен ёки кислород эканлигини аниқ фарқлай билиш керак.

Ацетилен ҳосил қилувчи аппарат ва кислород баллонлари юқори босим ҳисобида ишловчи идишлар қаторига кирганлиги учун, буларни механик зарбдан, иссиқдан, кўёш нуридан сақлаш зарур. Чунки бу идишлар босим ортишидан ёрилиб-портлаб кетиши мумкин.

Газ билан пайвандлаш қурилмаларида ва кислород баллонларида махсус редукторлар бўлиши шарт. Редукторлар комплектида юқори босимни кўрсатувчи манометрлар бўлиши керак. Газ баллонлари очик оловли шароитдан камида 5 м, хоналарни иситиш қурилмалардан 1,5 м масофада туриши керак. Газ баллонларини юмшоқ тележкаларда ётқизилган ҳолда корхона худудида, махсус жиҳозланган транспорт воситаларида тик ҳолатда узоқроқ масофага ташишга рухсат берилади. Ташиш чоғида уларнинг жўмраклари беркитилган, қопқоғи маҳкамлаб қотирилган ҳолда бўлишлиги таъминланиши керак.

Газ билан пайвандлаш ишларида ёнғин хавфсизлиги талаблари тўла бажарилиши керак. Бунга мувофиқ, карбонат ангидридли, ҳаво-кўпикли-кимёвий ўт ўчириш воситалари билан таъминланган ёнғин хавфсизлиги шитлари бўлиши керак. Портлаш хавфсизлиги бўйича уларга қўйиладиган асосий талаблардан бири назоратсиз қолдирмаслик, қолаверса, махсус рухсатномаси бўлмаган кишиларнинг газ билан пайвандлаш ишига рухсат бермаслик керак. Имкони борича ҳар уч ойда уларни йўриқномалардан ўтказиб туриш керак. Кислород баллонларини жўмракларига мойли буюмлар ва қўлларни теккизиш таъқиқланади.

Иш тугагандан кейин кислород баллонларидан редукторлар бўшатиб олиниши, газ шланглари ўрам ҳолатида йиғиб қўйилиши, аппаратни ичидаги ортиб қолган карбидни эҳтиёт қилиб олиб қўйилиши, сувларини тўкилан ҳолда яхшилаб чайқаб қўйилган ҳолда, барча нарсаларни назорат остида бўладиган, олдиндан белгиланган жойга беркитиб қўйилиши керак.

Ишчилар ишни тугаши билан ювиниш хоналарида ювиниб, маиший хоналарда кийиниб олишларига имконият яратилиши керак.

Электр ёки ёнилғили қиздиргичлар билан эритиб пайвандлаш ишларини радиатор таъмирида ишлатилишида авваламбор пайвандланиш сиртларини тозалаш учун ишлатиладиган конифоль, бура ($\text{Na}_2\text{B}_2\text{O}_7$) ёки кислотали муҳитдаги туз, масалан, бунинг учун кўпроқ рух хлорид эритмаси ишлатилиб, пайвандлаш чоғида турли хилдаги зарарли ва захарли газлар, эркин хлорид кислота буғи ажралиб чиқади. Шунинг учун бундай вақтда пайвандлаш ишларини очик ҳавода, ёнлама шабада шароитида ёки хонада мўрили шкафларда бажариш тавсия этилади.

Иссиқ фаслларда ишчилар меҳнат кодекси XIII бобига биноан ичимлик сувлари – газли сув ёки шўр сув, чой билан таъминлаб турилиши зарур. Бу ишларни амалга оширишда корхонанинг раҳбари ва тегишли муҳандислари масъулдирлар.

Меъёрий иш шароитини яратишда ГОСТ 12.1.005-81 талаблари асосида метеорологик кўрсаткичларни ҳисобга олиш зарур бўлади. Материалларни пайвандлаш хоналарида ҳарорат 18°C дан паст ва 22°C дан юқори бўлмаслиги лозим. Нисбий намлик 60-40% бўлиши зарур. Ҳаво ҳаракатининг тезлиги 0,2-0,3 м/с бўлиши, ҳар қандай шароитда ҳам 0,5 м/с дан ошмаслиги лозим.

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МУЛЬТИМЕДИА-ЗАМОНАВИЙ АХБОРОТ ТЕХНОЛОГИЯСИНИНГ ЙЎНАЛИШИ

Аннотация. Мақолада таълимда инновацион технология сифатида мультимедиа технологиясидан фойдаланишдаги муаммолар баён этилган бўлиб, бу вазифалар ечими таълим тизимида инновацион ёндашиш ва ва шу асосда таълим-тарбия самарадорлигини ошириш имкониятини беради.

Таянч сўз ва тушунчалар: таълим, таълим самарадорлиги, инновация, мультимедиа технологияси.

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DIRECTION OF MULTIMEDIA-MODERN INFORMATION TECHNOLOGY

Abstract. The article describes the problems of using multimedia technology as an innovative technology in education, and the solution of these tasks provides an opportunity for an innovative approach to the educational system and, on this basis, to increase the effectiveness of education.

Key word: education, educational efficiency, innovation, multimedia technology.

XXI аср-ақл ва заковат, фан ва техника асри, ахборот технологиялари, жумладан, мультимедиа технологияси инсон фаолиятининг барча жиҳатларини жадаллик билан қамраб олмоқда. Таълим жараёнини ахборотлаштириш, замонавий ахборот технологиялари имкониятларидан, жумладан, инновацион технологиялар тизимларини яратиш ва ундан таълим жараёнида унумли фойдаланиш, компьютер технологияларининг таълим жараёнидаги татбиғини назарий ҳамда амалий асосларини яратиш бугунги куннинг долзарб вазифаларидан бири бўлиб хисобланади.

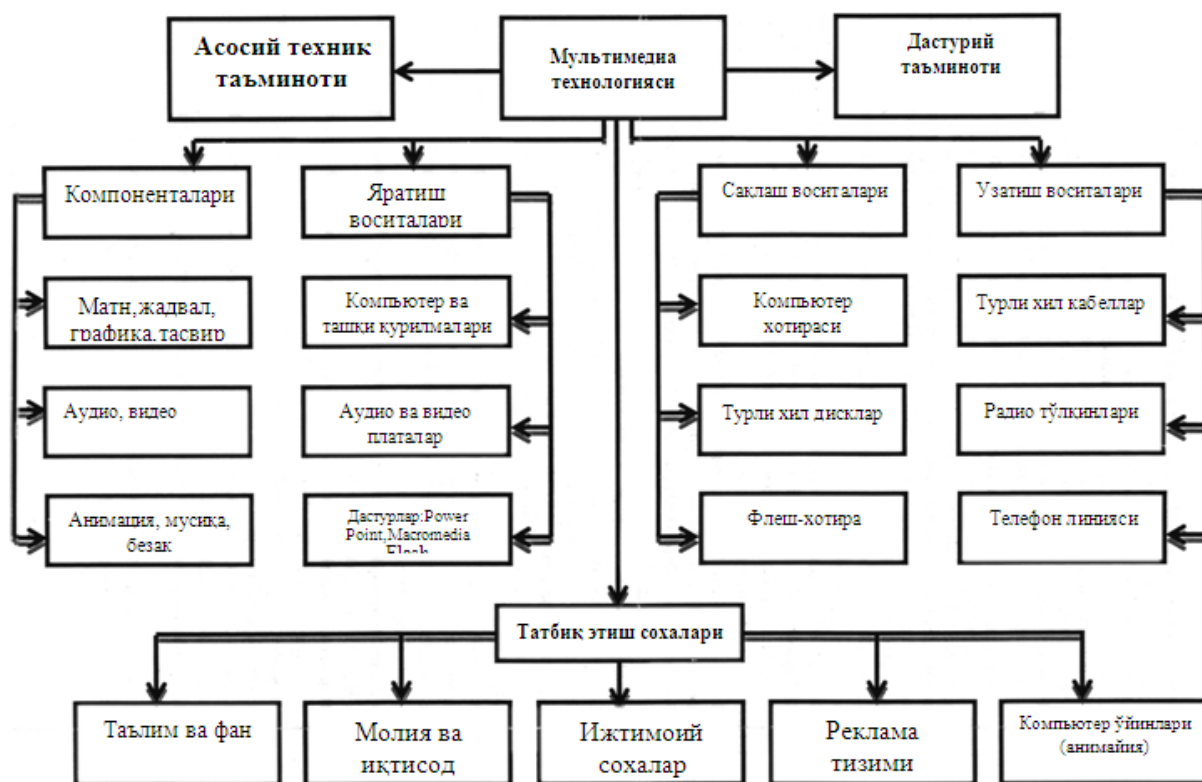
Ўзбекистон Республикаси “Таълим тўғрисида”ги Қонунининг 5-Таълим олиш ҳуқуқи моддасида “Таълим ташкилотларида инновацион фаолиятни қўллаб-қувватлаш ва ўқув дастурларини инновацион технологияларни қўллаган ҳолда амалга ошириш”- таъкидланган.

Шунингдек, 36-модда - Таълим соҳасидаги экспериментал ва инновацион фаолият бандида: “Таълим соҳасидаги экспериментал ва инновацион фаолият таълимни модернизация қилиш мақсадида амалга оширилади ҳамда янги таълим технологиялари ва ресурсларини ишлаб чиқишга, уларни синовдан ўтказишга ҳамда таълим жараёнига жорий этишга қаратилган”⁵³, - дейилган.

“Таълим тўғрисида”ги Қонун ва “Кадрлар тайёрлаш Миллий Дастури”ни амалиётга жорий этиш ўқув жараёнини технологиялаштириш билан узвий боғлиқдир. Юқорида баён қилинган далиллардан кўриниб турибдики, таълим тизимига ахборот технологияларини, жумладан, инновацион технология сифатида мультимедиа технологиясини татбиқ этиш, бугунги куннинг долзарб масалалардан бири эканлигини кўрсатади

Маълумки, ахборот технологиясининг асосий компонентларига - матн, жадвал, графика, тасвир, аудио, видео компонентлар кирадилар. Амалий ишларда эса юқорида келтирилган компонентлардан фойдаланилади. Мультимедиа технологиясида юқоридаги компонентлардан ташқари, анимация, мусиқа ва турли безаклар иштирок этадилар, ҳамда улар мультимедиа технологиясини ахборот технологиясидан фарклантирадилар. Шу сабабли гуркираб ривожланаётган мультимедиа технологиясини ахборот технологиясининг асосий йўналиши деб қарашимиз мумкин. Мультимедиа технологиясининг таълим соҳасидаги татбиғи компьютер технологияси асосида амалга оширилади. Жумладан, мультимедиа дидактик воситаларни яратиш ва уларни намоёни этиш компьютер ёрдамида бажарилади. Мультимедиа деганда ахборотларни турли шаклларда бирлаштирилган тасвирлашини тушуниш мумкин. Мультимедиа шаклланиш тарихи, мазмуни ва технологияси илмий-услубий адабиётларда баён этилган. Мультимедиа технологияси кўп таърифли технологиялар сирасига киради. Қуйида шулардан бирини келтирамиз: Мультимедиа – товуш, видео, графика, матн, анимациялар ёрдамида инсоннинг компьютер билан мулоқотини таъминловчи дастурий ва аппарат воситалар мажмуаси ҳисобланади. Мультимедиа технологияси таълим-тарбия жараёнига татбиқ этилиши мумкин бўлган илғор ва янги технологиядир. Тўлақонли мультимедиа 1986 йилда яратилган бўлиб, у ўқувчи ёки тингловчига янада самаралироқ таъсир этишга қаратилган турли дастур ва техник воситаларни, ахборот технологияларини ифодалайди. Мультимедиа технологиясининг тавсифи 1-расмда келтирилган.

⁵³ Ўзбекистон Республикасининг “Таълим тўғрисида”ги Қонуни // Қонун ҳужжатлари маълумотлари миллий базаси, 24.09.2020 й., 03/20/637/1313-сон



1-расм. Мультимедиа технологиясининг тавсифи

Таълимий технологиялар яратилишлари билан боғлиқ равишда уларнинг методологик асослари ҳам яратила бошланди. 1950-йилларда умумий ўрта мактаб ва олий ўқув юртларида ўқитишнинг техник воситалари (диаскоп, эпидиаскоп, кинопроектор ва хокозолар)дан таълим жараёнига фойдаланиш кенг йўлга қўйилган эди. Булар ўз вақтида таълимни самарадорлигини оширишга олиб келган.

1960-1970-йилларда таълимни сифатини ошириш мақсадида ўқитишнинг техник воситаларидан ташқари таълим жараёнига “дастурлаштирилган ўқитиш” кириб келди. Шу даврнинг охирларида Тошкент телемарказидан ўқувчилар ва талабалар учун маърузалар ўқиладиган бошланди. Бу ҳозирги масофавий таълим технологиясининг бошланиши эди. 1985-1990-йилларда компьютерлардан таълим жараёнига кенг фойдаланила бошланди. Натижада, компьютер технологиясига асос солинди. Шундан бошлаб, “таълим технология”си ёки “таълимий технология” деган атама юзага келди. Шу даврлардан бошлаб ахборотларни йиғиш, танлаш, компьютерда ишлаб бериш, янги сифатли ахборот олиш, сақлаш ва узатиш амалга ошириш шаклланганидан бошлаб ахборот технологияси юзага келди. Бундан таълим соҳасига фойдаланиш эса таълимий ахборот технологияси деб юритилади. Ҳозирги даврда таълимий технологияларга: таълимий компьютер технологияси, таълимий ахборот технологияси, мультимедиа технологияси, масофавий таълим технологияси, таълимий ўйин технологияси ва бошқа технологиялар кирилади.

Таълим жараёнига фойдаланишга қаратилган инновацион технологияларидан бири мультимедиа технологияси ҳисобланади. Таълимий мультимедиа технологиясида ҳам технологик жараён маълум бир тартибда алгоритм асосида амалга оширилади.

Таълим жараёнига татбиқ этиладиган мультимедиа технологияси одатдаги анъанавий методларга нисбатан маълум бир афзалликларга эга. Жумладан,

- ✓ Таълим олувчиларда фикрлаш қобилиятини ўстиради;
- ✓ Ўқувчи бир вақтнинг ўзида ҳам кўради, ҳам эшитади (миянинг ўнг ва чап ярим шарлари бир вақтда фаоллик кўрсатади);
- ✓ Анъанавий усулларга нисбатан таълим олувчиларга ўргатиладиган материалнинг ҳажми ортади;
- ✓ Машғулот давомида таълим олувчиларни толиқтирмаслик учун дидактик материалларни анимациялар орқали узатиш имконияти мавжуд;
- ✓ Ўрганилаётган материалларни кичик қисмларга ажратган ҳолда намоёниш этиш ёки қайта намоёниш этиш мумкин.

Одатда, мультимедиа деганда турли шаклдаги маълумотларни қайта ишловчи воситалар мажмуаси тушунилади. Айни вақтда бу аввало товушлар, видеоэлементларни қайта ишловчи воситалардир. Шу билан бирга мультимедиа (анимация) ва юқори сифатли графика ҳолларида ҳам мультимедиа ҳақида гапириш мумкин. Мультимедиа принципларида қурилган электрон маълумотномалар (справочниклар), таржималар ва луғатлар тарих, география, тиббиёт, спорт ва бошқа соҳалар бўйича турли - туман энциклопедиялар таълим жараёнига кенг фойдаланилмоқда.

Инсонни ахборот қабул қилишининг умумий хусусияти турли: кўриш, эшитиш, ҳид билиш, сезиш каби сезги органларининг фаолият қилиш хусусиятлари билан аниқланади. Биз фақат замонавий компьютер ва телекоммуникацион техникасида ишлаш мобайнида таълим олувчиларга таъсир қиладиган ахборот кўринишлари устида гап юритамиз. Шундай қилиб, ҳар қандай ахборотни таълим олувчилар томонидан қабул қилиш усули бўйича унга асосий гуруҳга ажратиш мумкин:

- Овозли ахборот - одамнинг эшитиш органи орқали қабул қилинадиган ахборот.

- Кўриш ёки визуал ахборот – кўриш органи орқали олинадиган ахборот, шу жумладан матн, график тасвир-расмлар.

- Сенсорли ахборот – одам видеоролик, телеобъектлар ва бошқалар билан махсус техник воситаларда ишлаётган вақтда қисман сенсор тизимида қабул қилинадиган ахборот.

Юқорида санаб ўтилган ахборотларнинг барча кўринишларини бошқа мезонлар билан ҳам синфларга ажратиш мумкин. Масалан, ўқувчига келаётган барча ахборотларни ассоциатив (эсга туширилган) ва тўғри гуруҳларга ажратиш мумкин.



2-расм. “Ахборотни қабул қилиш”га оид мультимедиали слайд.

Слайдда мультимедианинг асосий компонентлари (ташқил этувчилари) мужассамлаштирилган.

Хулоса қилиб айтганда, узлуксиз таълим тизимида ахборот технологиясини асосий йўналиши бўлган мультимедиа технологиясидан фойдаланиб, таълим самарадорлигини ошириш давр талаби ҳисобланади.

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ЭСТЕТИЧЕСКИЕ ВЗГЛЯДЫ В ТВОРЧЕСТВЕ ФРАГИ

Аннотация. В статье говорится о творческих взглядах Махтумкули Фраги, о его принципах, в результате которых творил прекрасные стихотворения.

Ключевые слова: литература, творчество, эстетика, эстетические взгляды.

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AESTHETIC VIEWS IN PYRAGY'S WORK

Abstract. The article talks about the creative views of Makhtumkuli Fraga, about his principles, as a result of which he created wonderful poems.

Keywords: literature, creativity, aesthetics, aesthetic views.

Махтумкули Фраги - великий туркменский поэт, философ и гуманист, чье творчество стало бесценным сокровищем для туркменского народа. Его поэзия, пронизанная глубокими чувствами любви к Родине, свободолюбия и стремления к справедливости, на протяжении веков вдохновляла людей на благородные поступки и служила мудростью.

Махтумкули Фраги – поэт мирового масштаба, который оставил после себя клад прекрасных стихотворений. Сегодня он считается отцом туркменской литературы и национальной культурной иконой. Его известность во многом объясняется богатой, укоренившейся традицией туркменских бардов или бахши воплощать свои стихи в песнях.

Являясь постоянным источником поддержки и гордости для своего народа, образ и биография Махтумкули также сыграли определяющую роль в современной истории Туркменистана, создав поэтическое видение единого Туркменистана. Среди граждан страны растет интерес к творческому наследию выдающегося поэта.

Также интерес к творчеству Махтумкули Фраги несколько не снижается среди любителей литературы по всему миру. Произведения Махтумкули, переведенные на десятки иностранных языков, изучаются на родине поэта и за его пределами. По случаю 300-летия Махтумкули Фраги, на заседании Постоянного совета Международной организации турецкой культуры (ТЮРКСОЙ), которое состоялось в Бурсе в Турецкой Республике, была единодушно поддержана инициатива страны объявить 2024 год «годом Махтумкули Фраги – великий поэт и мыслитель турецкого мира», посвящена великому мастеру речи.

Махтумкули Фраги - поэт, пользующийся большим признанием как личность и мыслитель, внесший большой вклад в сокровищницу общечеловеческих ценностей во всем мире. Сегодня имя поэта облетело весь мир, а его творчество приобрело огромное значение в обогащении духовного мира человечества. Сегодня философские идеи и творчество великого поэта-философа, основанные на высоких гуманитарных принципах, таких как мир, доброта, единство и справедливость, тщательно изучаются как общечеловеческая ценность. Предпринимается много усилий, чтобы возродить образ Махтумкули Фраги в его художественных произведениях, сделать его литературное наследие доступным для людей всего мира, издать его сборники на разных языках.

Главное, что сделал народ сильным в творчестве Махтумкули, - это то, что все чувства, мечты, отношения и друзья лирического героя в его стихах связаны с народом. Таким образом, лирический герой в произведениях поэта предстает как герой, воплощающий в себе замечательные качества, характерные для трудолюбивых людей того времени. Принцип единства и спаянности великого мыслителя, продолжавшего свою деятельность в тесной связи с жизнью народа, также выражен на очень высоком уровне.

Глубокая любовь Махтумкули Фраги к Родине, уважение к отечеству, духовным и нравственным ценностям нашли отражение в его стихах. В стихах мыслителя воплощено высшее человеческое чувство – преданность родной земле. Высокие горы Этрек, Гурген, бьющие родники и цветы придают стихотворениям особую художественность. Через любовь к родному селу поэт выражает свою великую любовь ко всей туркменской земле, превозносит святость и достоинство Родины. Цветы пустыни Каракумы являются украшением Каспийского моря. Наставления о гуманности, хороших взаимоотношениях, уважении к родителям и благородных человеческих ценностях особенно важны для каждого юного

читателя. Творчество Махтумкули, основоположника туркменской классической литературы, мудрого поэта Востока, известного во всем мире, является жемчужиной культурного наследия, собранного нашими предками за тысячелетия.

Сейчас, несмотря на то, что прошли столетия, поэтические строки великого сына нашего народа, призывающие к любви, единству и братству страны, не утратили своего значения и занимают достойное место в сердцах. Важно изучить богатое и ценное литературное наследие Махтумкули Пираги, его светские взгляды, философский мир в его стихах и его огромное влияние на туркменскую жизнь в XVIII-XIX веках. В этом контексте празднование этой даты имеет особое значение. Знаменательная дата, которая отмечается с целью раскрытия неразрывной связи творчества поэта с научной и культурной жизнью туркмен, включая весь Восток, посредством современных цифровых технологий, привлекает внимание международного научного и литературного сообщества к миру поэзии, привлекает ученых всего мира.

Творчество Махтумкули Фраги, великого мыслителя туркменского народа, с годами становится все более популярным. В туркменских традициях и верованиях существует принцип особого отношения к родному народу. Потому что это люди, которым удалось создать великие произведения искусства и стать бесценной ценностью нашего мира.

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КОНЦЕПТУАЛЬНЫЙ ПОДХОД К СОЗДАНИЮ ИНТЕГРИРОВАННОЙ СИСТЕМЫ ПРЕДПРИЯТИЯ

Аннотация. Концептуальный подход к созданию интегрированной системы предприятия представляет собой системный подход к организации и управлению предприятием, основанный на комплексном взаимодействии его структурных компонентов. В данном исследовании рассматриваются основные принципы формирования интегрированных систем на предприятии, включая выделение ключевых бизнес-процессов, определение потребностей в информационных технологиях, разработку архитектуры системы и ее последующее внедрение. Рассмотрены основные методы и инструменты концептуального проектирования и предложены рекомендации по их оптимизации. Данное исследование имеет целью обеспечить практическую ценность для руководителей и специалистов, занимающихся разработкой и внедрением информационных систем на предприятии, а также способствовать повышению конкурентоспособности организаций в современной экономической среде.

Ключевые слова: информационная система, интеграция, оптимизация, бизнес процес, интеграционный подход, методология «PDCA», системный подход.

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CONCEPTUAL APPROACH TO CREATING AN INTEGRATED ENTERPRISE SYSTEM

Abstract. The conceptual approach to creating an integrated enterprise system is a systematic approach to the organization and management of an enterprise, based on the complex interaction of its structural components. This study examines the basic principles of developing integrated systems in an enterprise, including identifying key business processes, identifying information technology needs, developing a system architecture and its subsequent implementation. The main methods and tools of conceptual design are reviewed

and recommendations for their optimization are proposed. This study aims to provide practical value for managers and specialists involved in the development and implementation of information systems in the enterprise, as well as to help improve the competitiveness of organizations in the modern economic environment.

Key words: information system, integration, optimization, business process, integration approach, PDCA methodology, systems approach.

Для повышения конкурентоспособности в период перехода к цифровой экономике компаниям необходимо непрерывно улучшать результативность информационной системы финансов посредством использования политики в области качества, целей в области качества, результатов аудитов, анализа данных, корректирующих и предупреждающих действий и анализа со стороны руководства.

Собственник бизнеса отчетливо понимает, что в процессе хозяйственной деятельности компании необходимо постоянно развивать собственную информационную систему, но зачастую приобретается и внедряется программное обеспечение различных производителей. В результате инфраструктура компании представляет собой не единую систему, а набор разнородных программ, никак не взаимосвязанных и с трудом взаимодействующих. Желание соединить их воедино и заставить эффективно работать, и создает необходимость в объединении всех приложений в единую систему. Для этого используется интеграция — это процесс установки связей между информационными системами предприятия для получения единого информационного пространства и организации поддержки сквозных бизнес-процессов предприятия.

Особенность интеграции состоит в том, что данный процесс выполняется, прежде всего, с целью оптимизации, улучшения деятельности и т. д., но, вместе с тем, должно быть обеспечено соответствие требованиям всех функциональных стандартов на финансовые системы.

Подход рекомендуемый для интегрированной системы, позволяет обеспечить соответствие требованиям отдельных стандартов путем выявления общих и специфических требований и обеспечения их принятия и удовлетворения.

Создание интегрированной системы для обеспечения преимуществ от интеграции систем может быть достигнуто в результате применения интеграционных подходов, которые позволяют обеспечить объединение, совместное результативное и эффективное использование финансовых систем при создании интегрированной системы, включающих:

1. «PDCA» - подход;
2. процессный и системный подходы;
3. подход, основанный на управлении рисками.

Отметим, что из числа приведенных далее интеграционных подходов «PDCA» - подход является универсальным. Другие подходы также могут применяться компанией, исходя из целесообразности их применения для получения ожидаемых от интеграции систем результатов. Преимущественно, процессный и системный подходы будут применяться в качестве интеграционных в том случае, если в интеграции участвует информационная система качества или ставится задача повышения результативности и эффективности деятельности организации по направлениям, рассматриваемым при интеграции. Подход, основанный на управлении рисками, может использоваться предприятиями для организации комплексной системы планирования и целеполагания.

Все три интеграционных подхода связаны между собой:

деятельность организации может быть представлена в виде системы процессов, включая основные, вспомогательные и процессы управления;

понятие риска применимо к целям и ходу этих процессов и целям организации в целом;

управление организацией, процессами и рисками осуществляется в соответствии с методологией «PDCA».

В качестве интеграционных подходов, применяемых для создания интегрированной информационной системы, могут использоваться процессный и системный подходы.

В настоящее время процессное управление применяется как одно из широко распространенных средств улучшения и повышения результативности организации. Методология процессного управления многократно апробирована в различных странах мира и является основой стандарта ISO 9001:2008, обобщающего международный опыт.

В соответствии с идеологией процессного управления, желаемый результат достигается более эффективно, когда соответствующими ресурсами и видами деятельности управляют как процессами. Сущность процессного подхода состоит в том, что любая деятельность или совокупность видов деятельности, которая использует ресурсы для преобразования «входов» в «выходы», может рассматриваться как процесс.

Применение процессного подхода заключается в рассмотрении любой деятельности в виде процесса, т.е. устойчивой, целенаправленной совокупности взаимосвязанных видов деятельности, которая по определенной технологии преобразует входы в выходы, представляющие ценность для потребителя. Обобщенная схема процесса представлена на рисунке 1.

Как видно на рисунке 1, каждый процесс имеет потребителей, которые могут быть внутренними и внешними по отношению организации. Потребители оказывают влияние на процесс и определяют требования к нему, в том числе требуемые выходы в соответствии с их потребностями и ожиданиями. На наш взгляд, применительно к интегрированной

информационной системе потребитель может рассматриваться в широком смысле и включать лиц, заинтересованных в результатах деятельности организации и/или предъявляющих требования к ее деятельности в целом, в том числе собственников бизнеса, регулятора, персонал, общество и т.д.



Рис.1.Обобщенная схема процесса взаимосвязанных видов деятельности

Обобщенно, для формирования системы процессного подхода необходимо:

- идентифицировать процессы (определить выходы, входы и цели различных отчетов);
- определить способы формирования отчетности;
- определить лиц, ответственных за заполнения форм и обеспечить соответствующие полномочия, доступ и ресурсы;
- обеспечить измерение процессов и анализ достигнутых результатов;
- обеспечить идентификацию возможностей улучшения процессов.

Среди ключевых преимуществ применения процессного подхода рассматриваются:

1. повышение прозрачности и качества финансовой отчетности, а также соответствия стандартам МСФО в целом;
2. обеспечение соответствия требованиям;
3. повышение эффективности бизнеса и роста производительности;
4. возможность снижения затрат и сокращения времени цикла за счет эффективного использования ресурсов;
5. улучшенные, согласованные и прогнозируемые результаты;
6. концентрация внимания на возможностях улучшения и приоритетах организации.

Организация представляет систему, в которой протекают определенные целенаправленные процессы, которые взаимосвязаны и

взаимодействуют для получения результатов деятельности и достижения целей бизнеса. Выявление и понимание взаимосвязанных процессов и управление ими как системой вносят вклад в результативность и эффективность организации при достижении ее целей, а также что выходы одного процесса могут быть входами других процессов, которые образуют общую сеть или систему процессов (рис.2).



Рис.2. Пример последовательности процессов54

Содержание системного подхода состоит в обеспечении управления системой процессов как целым, выражающееся в согласовании входов и выходов различных процессов между собой, координации процессов по целям, срокам и ресурсам для обеспечения результативности, и эффективности организации.

Применяя системный подход, предприятию необходимо:

- установить последовательность и взаимодействие (взаимозависимость) между процессами системы;
- установить цели и определение того, как должны взаимодействовать различные подразделения в системе;
- непрерывно улучшать систему посредством измерения и оценивания.

К числу ключевых преимуществ системного подхода относят:

1. выявление процессов, которые наилучшим образом приводят к достижению желаемых результатов или целей;
2. возможность сосредотачивать усилия на соответствующих процессах;
3. создание доверия основных заинтересованных сторон к результативности и эффективности организации.

В качестве основы для интеграции систем принимается «PDCA» – подход, основанный на методологии «планируй - выполняй - проверяй – действуй», положенный в основу большинства существующих стандартов на системы менеджмента, включая ISO 9001, ISO 14001, OHSAS 18001

54 Р.Эрик, Интеграция управления программой и системной инженерии ,2021г.



Рис.3. Система менеджмента и деятельности организации

Сущность данного подхода заключается в том, что любая деятельность может быть представлена как следующая последовательность действий:

Планирование - определение целей и процессов, необходимых для обеспечения результатов в соответствии с требованиями заинтересованных сторон и в соответствии с политикой организации;

Выполнение - выполнение процессов;

Проверка – контроль и измерение процессов и продукции для сопоставления с политикой, целями, требованиями и представление результатов;

Действия по улучшению - принятие действий для дальнейшего улучшения выполнения процессов и постоянного улучшения результативности системы менеджмента и деятельности организации в целом (рис.3).

Интеграционная роль цикла PDCA при создании интегрированной системы финансового учета включает два аспекта. Первый аспект состоит в том, что цикл «PDCA» может быть применен для создания и постоянного улучшения, т.е. управления:

каждым отдельным процессом организации и ее системой процессов; процессами, осуществляемыми на всех уровнях организации равным образом, включая как стратегическое развитие, так и процессы выпуска продукции.

Второй аспект состоит в том, что цикл «PDCA» применяется для обеспечения функционирования и постоянного улучшения деятельности

организации в соответствии с международными требованиями. При этом формирование финансовой отчетности может рассматриваться как процесс.

Каждая компания может самостоятельно принимать решение о создании интегрированной информационной системы, ориентируясь, прежде всего, на получение преимуществ для бизнеса от интеграции информационных систем при одновременном обеспечении соответствия требованиям международных стандартов финансовой отчетности.

Достижение этих преимуществ в значительной степени определяется интегрирующими факторами или критериями, которые могут быть положены в основу интеграции, отражающими по существу ее цели.

Заключение: Оптимизация интегрированных систем включает в себя поиск и устранение узких мест, улучшение производительности, повышение надежности и безопасности системы, а также совершенствование пользовательского опыта. В качестве рекомендации для оптимизации процессов финансового управления предложен “PDCA-подход”, включающий в себя использование современных технологий, оптимизацию бизнес-процессов, а также постоянное обновление и развитие системы в соответствии с потребностями предприятия.

При определении критерия интеграции должны учитываться возможности и ограничения, характерные для организации при реализации проекта создания интегрированной информационной системы на его основе, в том числе связанные с особенностями действующей системы бухгалтерского учета, готовностью компании к организационным преобразованиям, наличием ресурсов для выполнения проекта. Ресурсы, необходимые для создания интегрированной информационной системы, включают не только финансовые, но и временные, кадровые ресурсы, обладающие необходимой компетентностью для создания интегрированной информационной системы в соответствии с поставленными в проекте целями.

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АНТРОПОГЕННАЯ ТРАНСФОРМАЦИЯ РЕЛЬЕФА ГОРОДА ХАНТЫ-МАНСИЙСКА

Аннотация. В статье анализируется влияние человеческой деятельности на геолого-геоморфологический компонент и формирование антропогенных ландшафтов. Дается описание трансформации рельефа на примере Ханты-Мансийска. Выявляются геоэкологические проблемы, возникающие из-за трансформации рельефа.

Ключевые слова: рельеф, геоморфологические процессы, территория городов, антропогенная трансформация, геоэкологические проблемы.

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ANTHROPOGENIC TRANSFORMATION OF THE RELIEF OF URBANIZED TERRITORIES

Annotation. The article analyzes the influence of human activity on the geological and geomorphological component and the formation of anthropogenic landscapes. A description of the transformation of the relief is given using the example of Khanty-Mansiysk. Geoecological problems arising from the transformation of the relief are identified.

Keywords: relief, geomorphological processes, urban area, anthropogenic transformation, geoecological problems.

Введение. В процессе жизнедеятельности человек постоянно совершенствует место своего обитания. Он выравнивает рельеф, создает насыпи, строит дороги, засыпает овраги, вырывает траншеи и котлованы. Но при этом происходит нарушение естественных природных процессов: затрудняется поверхностный сток, ухудшаются условия для отвода и снижения уровня грунтовых вод. Геоэкологические проблемы, вызванные хозяйственной деятельностью, возникающие на участках природных ландшафтов, расположенных в пределах городов весьма разнообразны.

Особенно сильное изменение природы происходит в следствии реконструкции рельефа. На территории г. Ханты-Мансийска расположен природный парк «Самаровский Чугас». В его пределах проходит биатлонная трасса. Реконструкция биатлонной трассы, проведенной в 2012 году привела к серьезным разрушениям рельефа и трансформации ландшафтов.

Объекты. В качестве ключевых участков, для анализа процессов трансформации рельефа выбраны территории городов, расположенных на равнинах, сформировавшихся на герцинских плитах: Западно-Сибирской и Туранской. Для анализа были выбраны городские территории Ханты-Мансийска, Омска, Бухары [3-18, 20].

Методы исследования. В качестве основным методов исследования были выбраны как полевые методы исследования, так и камеральные, основанные на анализе материалов космоснимков, карт, фондовых и архивных материалов. Работа проводилась на основе морфометрического анализа электронных карт и космоснимков. Основным инструментом для работы выступила программа SAS.Planet.Release.200606. В этом электронном ресурсе использовались карты Nokia, ESRI ArcGIS Nat.Geo.

Результаты. Разработанная Ф.В. Котловым [22, с.142-145] классификация антропогенных отложений, включает семь генетических комплексов: насыпные, намывные, отложения искусственных водоемов, искусственные подводные грунты, измененные водные осадки естественных водоемов, грунты, искусственно преобразованные в естественном залегании, привнесенные в грунты материалы и конструкции и стихийное накопление подземного культурного слоя.

В геологическом отношении территория Ханты-Мансийских холмов представляет собой так называемый «Самаровский останец обтекания» в районе устья р. Иртыш и примыкающих к нему надпойменных террас [19, 20, 21].

Основные подразделения водораздельной поверхности складываются из холмов, увалов, высоток, разделенных логами и долинами ручьев. Основные различия между холмами и увалами складывается из их формы. Холм – форма рельефа в виде небольшой возвышенности, в плане округлой или овальной формы, с пологими склонами и слабо выраженным подножием. Относительная высота до 200 м [1].

Увал – вытянутая возвышенность с плоской, слегка выпуклой или волнистой вершиной и пологими склонами. Относительная высота увала не превышает 200 метров. Увалы могут образоваться в результате расчленения равнины параллельными долинами.

Первая и вторая надпойменные террасы находятся в интервале абсолютных высот 25-50 м. Они имеют сходное геологическое строение. Условно можно принять, что к первой террасе относятся поверхности,

лежащие над меженным уровнем Иртыша в районе города (19-20 м) на высоте 10-15, а ко второй - на высоте 15-25 м [2].

Территория распространения Самаровского останца делится на две части: а) склоны различной крутизны Самаровского останца, где и наблюдается интенсивное развитие основных ЭГП. Эти склоны, покрытые большей частью хвойными лесами (кедр в том числе). Склоны изобилуют глубоко врезанными логами и старыми, потухшими оврагами. Крутизна склонов от 10° до 40°. Абсолютная высота отметки поверхности земли - 46-117 м, б) водораздельная часть Самаровского останца. Здесь склоны более пологие и здесь берут начало потухшие овраги и лога. В то же время – это область питания верхних выдержанных водоносных горизонтов, верховодки и болотных вод. Абсолютная высота отметки поверхности земли – 117 - 120 м [3].

Непосредственно к городу с запада примыкает район Иртышской поймы. Пойма сегментно-гривистая, долгопоёмная, озерно-соровая и проточно-островная пологогривистая подпорно-половодная, преимущественно нижнего и среднего высотных ярусов. С севера городскую территорию ограничивает район Обской долгопоёмной пониженной двухъярусной сегментно-гривистой проточно-соровой поймы. Абсолютная высота отметки поверхности земли – 22 - 27 м [4].

Таким образом, на территории г.Ханты-Мансийска выделяются семь крупных подразделений рельефа: холмы, увалы и высотки, которые правильнее именовать холмы. Так как термин увал применяется для более крупных форм рельефа (наприме, Сибирские увалы). Термин «высотка» вообще не применяется в геоморфологии и относиться к числу разговорных слов [5].

Для Ханты-Мансийска, возникшего у слияния двух рек и холмистого останца, рельеф – важнейший фактор. Разрастаясь по надпойменной террасе, город стремился сохранить компактную форму, однако крутонаклонные поверхности рельефа территории, неблагоприятные геоморфологические процессы образовали естественные преграды для территориального роста. Всякий раз, преодолевая такую преграду, исторический город вступает в новую фазу существования, которая находит отражение в его планировке. Склоны долин, русла рек и ручьев, даже если они со временем исчезают с поверхности, фиксируют начальные этапы эволюции города. Эта исторически обусловленная асимметрия первичного плана во многом предопределяет специфическую уникальность пространственно-планировочного построения города, неповторимое своеобразие его облика.

Как уже отмечалось, одной из причин возникновения и развития экзогенных геологических процессов на территории природного парка является хозяйственная деятельность человека. Это прокладка коммуникаций, различных трасс, дорог и дорожек с нарушением

почвенного покрова и сплошной вырубкой леса. При этом создаются условия для концентрации стока, приводящего к разрушению почвогрунтов. Разумеется, нельзя отрицать естественно-исторические или природные факторы водной эрозии, такие как ливневый характер осадков, уничтожение растительности пожарами и т.д. Но наиболее важной причиной эрозии являются крутизна склонов (25 градусов и более), их расчлененность лощинами и балками, специфика механического состава почв. Почвы здесь в большинстве супесчаные и суглинистые, часто даже илистые, пливунные, которые легко подвергаются смыву и размыву.

В настоящее время у р. Вогулка, протекающей по территории г. Ханты-Мансийска, сохранились только верхняя и нижняя части русла. По городу сток осуществляется в подземном коллекторе, при засорении которого начинается разрушение поверхности, формируются провалы.

Овраги образуются за счет струйчатой эрозии, вызванной периодическим действием водных потоков, образующихся во время таяния снега или обильных дождей. Рукотворное изменение системы поверхностных водотоков и уничтожение растительности на склонах усиливает процессы оврагообразования.

Эрозионные процессы на территории парка, несомненно, связаны с наличием малых водотоков, как постоянных, так и временных. Захламление водотоков часто вызывает подпорные явления, в результате которых вода обходит препятствия, образуя новое русло. Образование нового русла сопровождается размывом берегов, подмывом деревьев и их вывалом. Процесс усугубляется и тем, что захламленные участки в зимний период сильно промерзают и весной превращаются в «плотины», надежно фиксирующие образование нового русла водотоков. Следует отметить, что в лесах имеют место и скрытые (на сегодня), начинающиеся очаги эрозии, как это наблюдается в районе Центра искусств, детской спортивной школы.

Одним из примеров негативного воздействия на рельеф является прокладка высоковольтной ЛЭП через «Самаровский останец» из северной части города в Самарово. Здесь в результате нарушения и частичного уничтожения почвенного покрова активизировались эрозионные процессы, которые особенно ярко выражены в пределах северного склона останца (район базы Назымской НГРЭ). Это выражается в появлении серии эрозионных врезов, обвально-осыпных явлений, при которых происходит гибель леса. Новые нагрузки на эту территорию связаны с созданием здесь трассы скоростного спуска в зимнее время года.

При строительстве новых и реконструкции старых автодорог наблюдается подпруживание русел малых водотоков, суффозионный вынос материала, подмыв дорожного полотна, оврагообразование, осыпание откосов. Аналогичные процессы уже начинаются на строящихся новых участках объездной дороги вблизи здания СУР, у Студгородка, в восточной части Самарово.

Пример одного из активно развивающихся процессов - эрозионный размыв грунта на территории природного парка «Самаровский Чугас» вблизи СДЮШОР. В зимнее время место образования эрозионной рытвины служит тюбинговой трассой. Начало временного водотока - на горизонтальной застроенной площадке вблизи строительства Храма Воскресения Христова. Ориентировочная длина лощины - 250 метров, перепад высот - 30 метров, угол падения 6-8°. В месте начала эрозионной промоины - свалка от жилых домов в районе ул. Гагарина [6].

Одной из причин активизации водотока стало накопление дождевой воды, которая начала активно размывать трассу. Дополнительное питание поступало с прилегающих склоновых поверхностей. Попытки засыпки привозным грунтом не приносят успеха, а вынос материала не только усиливается, но и приводит к подтоплению и гибели деревьев, созданию затруднений для весеннего стока и ситуаций, близких к аварийным, для расположенных поблизости зданий. Ситуацию можно исправить созданием искусственного глинистого ложа вдоль всего оврага.

Наибольший урон происходит от постепенного разрушения залесенных поверхностей, связанного прежде всего с эрозией, оползнями, а также оплывинами, обусловленными очаговой разгрузкой грунтовых вод. Типичные размеры оплывин - длина 8-15 м., ширина-2-4 м, глубина захвата грунтов ниже почвенного слоя 20-30 см, а в логу Холодном и до метра. В обнажениях - влажные суглинки, супеси, серые глины, часто сочится вода. Здесь же встречаются небольшие оползни, срывы отдельных деревьев с большими глыбами земли, выворотные ямы, постепенно заплывающие. В последние годы активизировались оползневые явления - это классические циркообразные оползни, небольшие по размерам - ширина по фронту до 20 м, чаще всего 10-12 м, ширина 5-6 м, амплитуда срыва грунтов 1-2 м. По некоторым лощинам склонов крупных логов формируется непроходимый лесоповал, а у днища - своего рода «пьяный лес» [7].

Сооружение дорожного полотна на пересеченной местности (Самаровский останец) влечет за собой изменение естественного рельефа. На пониженных участках (отрицательные формы рельефа) полотно дороги в результате строительства располагается на насыпи с довольно крутыми откосами, на возвышенных - в выемках. Отсюда и специфика ЭГП, возникающих при строительстве. В достаточно глубоких выемках при строительстве и, возможно, после происходит дренаж подземных вод (верховодка прежде всего) в выемку, дополнительное увлажнение грунтов, их разуплотнение. Именно с этими проблемами столкнулись строители дорог по ул. Лермонтова, её южной части на спуске к Самарово. В откосах выемки, особенно, когда они недостаточно укреплены возникают оплывины, угрожающие не только полотну, но и деревьям ПП в верхней части этих откосов. На выше указанном участке ул. Лермонтова время от времени после ливневых осадков оплывины возникают и в настоящее время.

Сооружение дорог очень часто сопровождается барражным эффектом. Полотно дорог является препятствием для потока подземных вод, главным образом верховодки, а также грунтовых вод, уровень которых поднимается, подтапливая, а затем и заболачивая территорию с одной из сторон дороги. Особенно это явление наблюдается тогда, когда дорога сооружается в крест потокам подземных вод. Проектировщики дорог, из соображения экономии, недостаточное внимание уделяют дренажным системам.

Яркий пример – окружная (кольцевая дорога) в г. Ханты-Мансийске. Начиная от площади Свободы и далее на запад и северо-запад, дорога «работает» как плотина для разгружающихся подземных вод со стороны Самаровского останца. Дренажи есть, но они явно недостаточны. Теперь о сооружении участка окружной дороги на востоке, которое осуществляется сейчас. Здесь положение значительно сложнее: дело в том, что склоны Самаровского останца располагаются непосредственно близ реки Иртыш. Дорога сооружается частично близ реки в насыпи. В естественном состоянии разгрузка подземных вод осуществляется в русло реки Иртыш. Здесь будет «работать» двухсторонний барражный эффект – в межень повышение уровня подземных вод с западной стороны полотна, за счет подпора их, в паводок поток может идти в обратную сторону. Дренажи, которые сооружались летом 2007 г. также явно недостаточны [8]. Это приведет к резкому изменению гидрогеологической обстановки на восточном и юго-восточном склоне Самаровского останца и, как следствие, к возникновению и развитию новых оползней и даже более крупных. Причем, эти оползни будут происходить здесь в пределах территории природного парка.

Интенсивное строительство объектов производственных, жилых помещений и спортивных сооружений теснит природный парк, отнимает у него территорию. В целом город – это территория, где техногенное воздействие на приповерхностную часть литосферы, а, следовательно, на ландшафты наиболее интенсивно. Здесь одновременно постоянно действуют статические, динамические, химические и другие виды антропогенных нагрузок. Это сказывается на активности развития инженерно-геологических процессов не только в пределах селитебной территории, но и приграничных к ней районах природного парка. Город Ханты-Мансийск очень молодой, это административный центр, загрязняющая окружающую среду промышленность отсутствует, он газифицирован – все это создает благоприятную обстановку для снижения выше указанных антропогенных нагрузок на природный парк. Естественно, с течением времени с начального этапа техногенное влияние на геологическую среду изменялось.

Основная часть города, за исключением III-го инженерно-геологического района не подвержена подтоплению. Между тем, почти все города Сибири подвержены подтоплению грунтовыми водами, а в

отдельных районах некоторых городов (Омск, Барабинск, Куйбышев, Тюмень, Иркутск, Бийск) это явление приобретает катастрофический характер. Необходимо избежать появления этого весьма негативного процесса в г. Ханты-Мансийске. Пока не поздно, надо заложить сеть режимных гидрогеологических наблюдений на территории города, включая участки природного парка «Самаровский Чугас» [9].

Строительство крупных инженерных проектов в городе начинается с заложения глубоких фундаментов, в т.ч. свайных. Эти фундаменты, заложенные без учета направления потоков подземных (верховодка и грунтовые воды), вод, могут привести к барражному эффекту и создавать подтопления, сначала локальные, в том числе захватывая территорию природного парка. Этот процесс может спровоцировать появление других – провалов, просадок, оврагообразование, суффозии. Уже при проектировании, на всех его стадиях необходимо проводить изыскательские и инженерно-геологические работы не только на строительной площадке непосредственно под объектом, но и за его пределами, обратив внимание на возможные ЭГП. Яркий пример – сооружение памятника первопроходцам Сибири близ площади Свободы. Изыскания проведены только под площадкой будущей стелы, а непосредственно рядом формировались будущие оползневые блоки. Сейчас эти оползни подступают к этому памятнику и границе парка.

При строительстве горнолыжного комплекса «Хвойный Урман» для строительства канатной дороги и трассы спуска был вырублен охраняемый лес, произведена отсыпка песка для промежуточной станции канатно-кресельной дороги. Через год здесь же был построен стадион и отсыпана новая песчаная гора, в перспективе основа трассы скоростного спуска, возможно трамплина, и нового, более современного, подъемника. Высота нового песчаного холма, возвышающегося над залесенными поверхностями Самаровского Чугаса, превышает 30 м [10].

Под антропогенным влиянием природные образования переходят в разряд природно-технических систем, представляющих собой комплекс инженерных сооружений с частью геологической среды и ландшафтов в зоне их влияния, имеющий фиксированные пространственные границы. Определение природно-технических систем согласно В.К.Епишину - «система инженерного сооружения (комплекса инженерных сооружений) с частью геологической среды в зоне его влияния, имеющей операционно-фиксированные границы». Создание любой природно-технической системы – это изменение естественной природной обстановки, в том числе и ее геоэкологических условий. В связи с изменчивостью и устойчивостью природно-технических систем важна их управляемость. С позиций инженерной геологии здесь на первый план выдвигаются геоэкологические проблемы, потому что ЭГП, являющиеся их составной частью способствуют существенному изменению ландшафтов, свойств и состояния

горных пород. Современные ЭГП являются также наиболее активным фактором преобразования инженерно-геологических обстановок. Управляемость может быть обеспечена инженерно-техническими, нормативными, организационно-административными, экономическими и другими механизмами и методиками. Для разработки конкретных мероприятий управления природно-техническим объектом главная роль отводится последнему этапу мониторинга – прогнозу изменения природной обстановки. Здесь необходима качественно-количественная оценка предполагаемых опасностей и рисков для их предупреждения и исключения потерь.

Все выше описанные ЭГП в дальнейшем получают развитие. Для этого, к сожалению, имеются в наличии все условия. К тому же антропогенное влияние в связи с бурным ростом города вверх и вширь только возрастает. Наибольшим деформациям будут подвержены склоны Самаровского останца, особенно восточная часть вдоль строящейся объездной дороги и юго-восточная часть. Ведущими процессами здесь будут оползни и оплывины. Когда следует ожидать увеличение активности этих ЭГП? Во-первых, в первые годы после окончания строительства объездной дороги. Во-вторых, в первый же год с повышенными атмосферными осадками более нормы. Время образования этих ЭГП – весна (май, начало июня) и конец лета.

В связи с обнаружением очень крупных древних оползней (ул. Набережная) объемом сотни тысяч м³, вероятность их оживления очень высока, особенно в годы высокого увлажнения. «Спусковым крючком» для активизации этих ЭГП может быть также строительство 56 этажного дома на водоразделе Самаровского останца. Таким образом, возможен катастрофический характер оползневой деятельности в этом месте (ул. Набережная) [11]. Укреплять здесь склон нецелесообразно.

Таким образом, почвы подвержены значительным антропогенным воздействиям, вызванных рекреацией и оплывинами, оползнями, спровоцированными масштабной застройкой склонов холмов Самаровского Чугаса, что привело к изменению гидротермического режима ландшафта. Все эти явления достаточно динамичны и при любом дополнительном антропогенном воздействии будут только усиливаться. Поэтому, сосуществование городской и природной сред возможно лишь при высокой культуре проживающего населения и городских служб, предотвращающих утечку вод, а также строительства дренажа, перехватывающего сток на городской территории вдоль ул. Гагарина.

12 июня 2012 года в результате получасового ливня были разрушены биатлонные трассы в Центре зимних видов спорта г. Ханты-Мансийска (рис.1). За полчаса, что шел дождь, в два-три раза были превышены объемы среднемесячной нормы осадков, расчёт был на 35 миллиметров, а выпало значительно больше нормы. К общему потоку добавилась вода, которая шла

на стадион со склонов с ближайшей улицы и от гостиницы, которая находится на возвышенности около стадиона. Пропускные сечения водоотводящих водопропускных каналов не были рассчитаны на поступивший поток, потому что расчетная норма составляла меньший объем этих потоков. В результате этого всего произошел размыв и вынос защитного гравийного покрытия, засорение и переполнение быстротоков с последующим разрушением асфальтного покрытия на отдельных участках трасс.

По предположению депутата Югры, сумма ущерба составила примерно 400 млн рублей. Подрядчик реконструкции – компания ЗАО «ВНСС». При проведении работ было проведено расширение биатлонных трасс, в результате было заасфальтировано 40 тыс. квадратных метров. Из 40 тыс. квадратных метров пострадало 2,5 тыс. квадратных метров биатлонного стадиона. В основном это участок, который является самым низким, куда устремились все стоки – с улицы Гагарина, самого стадиона, со стороны гостиницы «На семи холмах» и промежуточных станций канатной дороги. Поэтому общая площадь разрушения асфальтовых покрытий составила порядка 2,5 тыс. квадратных метров трасс [12].

Проектной организацией по выполнению реконструкции трасс выступил «Югорский институт развития строительного комплекса». Отчет этой компании анализировал научный институт «НижневартовскНИПИнефть».

Одной из причин возникновения и развития экзогенных геологических процессов на территории Ханты-Мансийска является хозяйственная деятельность человека. Это прокладка коммуникаций, различных трасс, дорог и дорожек с нарушением почвенного покрова и сплошной вырубкой леса. При этом создаются условия для концентрации стока, приводящего к разрушению почвогрунтов. Антропогенные факторы накладываются на природные факторы водной эрозии, такие как ливневый характер осадков, уничтожение растительности пожарами и т.д. Но наиболее важной причиной эрозии являются крутизна склонов (25 градусов и более), их расчлененность лощинами и балками, специфика механического состава почв. Почвы здесь в большинстве супесчаные и суглинистые, часто даже илистые, пливунные, которые легко подвергаются смыву и размыву [13, 14].



Рис.1. Разрушение полотна биатлонной трассы

Интенсивное вмешательство человека в сложившуюся геолого-геоморфологическую обстановку привело к активизации многих экзогенных геологических процессов (ЭГП), а также спровоцировало активизацию новых, техногенных ЭГП, развивающихся катастрофически быстрыми темпами. При этом земельным, лесным и водным ресурсам наносится ущерб, экологическая оценка которого может быть очень значительной [15].

Здесь в результате нарушения и частичного уничтожения почвенного покрова активизировались эрозионные процессы, которые особенно ярко выражены в пределах склона. Это выражается в появлении серии эрозионных врезов, обвально-осыпных явлений, при которых происходит гибель леса.

При строительстве новых и реконструкции старых биатлонных трасс наблюдается подпруживание русел малых водотоков, суффозионный вынос материала, подмыв дорожного полотна, оврагообразование, осыпание откосов.

Одной из причин активизации водотока стало накопление дождевой воды, которая начала активно размывать трассу. Дополнительное питание поступало с прилегающих склоновых поверхностей. Попытки отсыпки песком склонов биатлонной трассы не приносит успеха, а вынос песчаного материала приводит к гибели деревьев, созданию затруднений для весеннего стока.

Наибольший урон происходит от постепенного разрушения залесенных поверхностей, связанного прежде всего с эрозией, оползнями, а также оплывинами, обусловленными очаговой разгрузкой грунтовых вод. Типичные размеры оплывин – длина 8-15 м., ширина – 2-4 м, глубина захвата грунтов ниже почвенного слоя 20-30 см.

Сооружение дорожного полотна на пересеченной местности (Самаровский останец) влечет за собой изменение естественного рельефа. На пониженных участках (отрицательные формы рельефа) полотно биатлонной трассы в результате строительства располагается на насыпи с довольно крутыми откосами, на возвышенных – в выемках.

Отсюда и специфика ЭПП, возникающих при строительстве. В достаточно глубоких выемках при строительстве и, возможно, после происходит дренаж подземных вод (верховодка прежде всего) в выемку, дополнительное увлажнение грунтов, их разуплотнение. В откосах выемки, особенно, когда они недостаточно укреплены возникают оплывины, угрожающие не только полотну, но и деревьям в верхней части этих откосов.

Сооружение дорог очень часто сопровождается барражным эффектом [16]. Полотно дорог является препятствием для потока подземных вод, главным образом верховодки, а также грунтовых вод, уровень которых поднимается, подтапливая, а затем и заболачивая территорию с одной из сторон дороги. Особенно это явление наблюдается тогда, когда дорога сооружается в крест потокам подземных вод. Проектировщики дорог, из соображения экономии, недостаточное внимание уделяют дренажным системам (рис.2).



Рис. 2. Водопрпускное сооружение построено рядом с логом и не пропускает воду

При сооружении биатлонной трассы были построены тупиковые водопропускные сооружения, которые имеют вход для воды и не имеют выхода.

Вопиющим фактом было создание искусственного водопада, при сооружении трассы. Водопропускная труба висит на расстоянии 155 см над днищем лога (рис.3). Интенсивный сброс воды по этой трубе приведет к сильному развитию линейной эрозии. Биатлонная трасса заложена вплотную к вековым кедром, подрезая их корневую систему или же отсыпка склоном трассы проходила таким образом, что оказались засыпаны шейки деревьев. Все это приведет к гибели деревьев возле трассы.

При строительстве горнолыжного комплекса «Хвойный Урман» для строительства канатной дороги и трассы спуска был вырублен охраняемый лес, произведена отсыпка песка для промежуточной станции канатно-кресельной дороги. Через год здесь же был построен стадион и отсыпана новая песчаная гора, основа трассы скоростного спуска, и нового, более современного, подъемника. Высота нового песчаного холма, возвышающегося над залесенными поверхностями Самаровского Чугаса, превышает 30 м.

Таким образом, ландшафты природного парка «Самаровский Чугас» подвержены значительным антропогенным воздействиям, вызванных рекреацией и оплывинами, оползнями, спровоцированными масштабной застройкой склонов холмов, что привело к изменению гидротермического режима ландшафта. Все эти явления достаточно динамичны и при любом дополнительном антропогенном воздействии будут только усиливаться. Поэтому, сосуществование городской и природной сред возможно лишь при высокой культуре проживающего населения и городских служб, предотвращающих утечку вод, а также строительства дренажа, перехватывающего сток на городской территории вдоль ул. Гагарина.



Рис.3. Водопрopusкная труба на расстоянии 155 см от днища лога

Соседство природного парка «Самаровский Чугас» с городской территорией обуславливает необходимость интеграции природной и селитебной сред так, чтобы сформировалась устойчивая система, препятствующая развитию ЭГП.

Все выше описанные ЭГП в дальнейшем получают развитие. Для этого, к сожалению, имеются в наличии все условия. Наибольшим деформациям будут подвержены склоны Самаровского останца, особенно восточная часть вдоль восточной объездной дороги и юго-восточная часть. Ведущими процессами здесь будут оползни и оплывины. Особенно опасны будут годы с превышением норм выпадающих осадков. Время образования этих ЭГП – весна (май, июнь) и конец лета.

В связи с обнаружением очень крупных древних оползней (ул. Набережная) объемом сотни тысяч м³, вероятность их оживления очень высока, особенно в годы высокого увлажнения. Так же опасным районом является склон в районе Археопарк, так как вершина склона подрезана биатлонной трассой.

Интенсивное строительство объектов производственных, жилых помещений и спортивных сооружений теснит природный парк, отнимает у него территорию. В целом город – это территория, где техногенное воздействие на ландшафты наиболее интенсивно. Здесь одновременно постоянно действуют статические, динамические, химические и другие виды антропогенных нагрузок. Это сказывается на активности развития инженерно-геологических процессов не только в пределах селитебной территории, но и приграничных к ней районах природного парка.

Создание любой природно-технической системы – это изменение естественной природной обстановки, в том числе и ее геоэкологических условий. В связи с изменчивостью и устойчивостью природно-технических систем важна их управляемость. С позиций инженерной геологии здесь на первый план выдвигаются геоэкологические проблемы, потому что ЭГП, являющиеся их составной частью способствуют существенному изменению ландшафтов, свойств и состояния горных пород.

Управляемость может быть обеспечена инженерно-техническими, нормативными, организационно-административными, экономическими и другими механизмами и методиками. Для разработки конкретных мероприятий управления природно-техническим объектом главная роль отводится последнему этапу мониторинга – прогнозу изменения природной обстановки. Здесь необходима качественно-количественная оценка предполагаемых опасностей и рисков для их предупреждения и исключения потерь.

Соседство природного парка «Самаровский Чугас» с городской территорией обуславливает необходимость интеграции природной и селитебной сред так, чтобы сформировалась устойчивая система, препятствующая развитию ЭГП. В результате проведенных научно-исследовательских работ составлена карта инженерно-геологического районирования и развития основных ЭГП на территории ПП, на которой выделено 3 инженерно-геологических района и 4 подрайона и указано местоположение основных и наиболее опасных ЭГП. На основе многолетних исследований ЭГП на территории Ханты-Мансийска предлагается реализовать следующие рекомендации:

1. Необходимо провести на всей территории крупномасштабную (1:10 000 или 1:5 000) инженерно-геологическую съемку, результаты которой позволят выявить все ЭГП и далее выбрать способ их ликвидации или снижения негативного влияния их на ландшафты ПП.

2. Организовать гидрогеологическую сеть режимных наблюдений (региональный уровень гидрогеологического мониторинга). Для этого надо составить специальную программу, пробурить и оборудовать наблюдательные скважины.

3. На оползневых участках у ул. Набережной, Пионерская гора и Памятника первопроходцам организовать инженерно-геологические стационары III-й категории, начав с крупномасштабной топографической съемки.

4. Организовать реперную сеть постоянного визуального мониторинга на указанных профилях трех объектов: подпорная стенка, бровки оползней на склоне вдоль ул. Набережная, бровки оползней правого борта долины руч. Рыбный вблизи ул. Труда.

5. На объездной дороге значительно увеличить число дренажей.

6. Укрепление склонов, подверженных эрозией и оплывинами, проводить с использованием грубого материала – щебень, дресва и плотные глины и суглинки, решетки геовэб.

7. На территории жилой застройки водораздельной части Самаровских холмов необходимо коммунальным службам следить за состоянием трубопроводов и своевременно устранять утечку воды, провести масштабное озеленение этой части города.

8. Нижнюю часть стволов деревьев при любых строительных работах не засыпать, как это имеет место сейчас при наращивании горнолыжного спуска.

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**ОСОБЕННОСТИ ФОРМИРОВАНИЯ И РЕАЛИЗАЦИИ
ГОСУДАРСТВЕННОЙ КАДРОВОЙ ПОЛИТИКИ В
ОБРАЗОВАТЕЛЬНЫХ УЧРЕЖДЕНИЯХ ФЕДЕРАЛЬНОЙ СЛУЖБЫ
ИСПОЛНЕНИЯ НАКАЗАНИЙ**

Аннотация. Статья отражает особенности формирования и реализации государственной кадровой политики в образовательных учреждениях ФСИН.

Ключевые слова: кадровая политика, государственное управление.

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**FEATURES OF FORMATION AND IMPLEMENTATION OF STATE
PERSONNEL POLICY IN EDUCATIONAL INSTITUTIONS OF THE
FEDERAL PENALTY SERVICE**

Abstract. The article reflects the features of the formation and implementation of state personnel policy in educational institutions of the Federal Penitentiary Service.

Key words: personnel policy, public administration.

Эффективность работы любого органа государственной власти зависит, прежде всего, от людей, которым поручена реализация его функций. Решения любых задач достигаются, прежде всего, благодаря умению исполнителей, работающих над их осуществлением.

«Важнейшей составляющей эффективного решения задач по исполнению наказаний на основе принципов законности и гуманизма является качественное обеспечение кадрами уголовно-исполнительной системы Российской Федерации. Федеральной службе исполнения наказаний России (ФСИН) постоянно приходится заниматься вопросами восполнения кадрового состава российской пенитенциарной системы, в том числе посредством подготовки специалистов в ее образовательных организациях.

Деятельность организаций профессионального образования и профессионального обучения, подведомственных ФСИН России, по обеспечению органов и учреждений УИС работниками, имеющими достаточный уровень компетенций, требует формирования правовых основ, определяющих важнейшие принципы подготовки кадров» [6].

Успешное выполнение возложенных на органы и учреждения Федеральной службы исполнения наказаний России функций, напрямую зависит от уровня квалификации и профессионализма ее сотрудников, их способности качественно решать стоящие перед ними задачи, то есть состояния кадров уголовно-исполнительной системы, задача подготовки которых возлагается на образовательные организации ФСИН России.

«Понятие кадровой политики состоит из определенной системы правил, в соответствии с которыми, ведет себя вся система, а также правил, по которым действуют отдельные личности, входящие в эту систему.

Кадровая политика организации – это система взглядов, требований, норм, принципов, ограничений, определяющих основные направления, формы и методы работы с персоналом.

Кадровый потенциал является важнейшим фактором эффективности и конкурентоспособности образовательной организации. Установление взаимосвязи между концепцией развития образовательной организации и ее системой управления персоналом является сущностью проводимой ею кадровой политики. Кадровая политика является частью стратегически ориентированной политики любой образовательной организации.

Обеспечение оптимального баланса, численного и качественного кадрового состава, развитие его потенциала, его необходимое обновление и является целью кадровой политики, проводимой руководством организации.

Кадровая политика образовательной организации включает в себя систему взаимоотношений между работодателем и сотрудниками и описывает направление деятельности организации согласно стратегии развития ее кадрового потенциала» [5].

Каждая образовательная организация разрабатывает и осуществляет свою собственную кадровую политику, которая обосновывает необходимость использования конкретных методов управления кадрами: отбора и подбора, планирования и расстановки кадров, а также их эффективного использования.

Образовательные организации осуществляют свою кадровую политику в письменной форме, в виде документов, с которыми должны быть ознакомлены все работники организации.

Таковыми документами могут быть, например, «Положение об оплате и стимулировании труда», «Правила внутреннего трудового распорядка», «Положение об оценке работников», «Устав учреждения», «Коллективный трудовой договор».

«Реализация кадровой политики образовательного учреждения осуществляется при помощи инструментов, которыми являются:

- кадровое планирование;
- текущая кадровая работа;
- руководство и управление персоналом;
- мероприятия по его развитию и повышению квалификации персонала;
- мероприятия по решению социальных проблем;
- мероприятия, направленные на совершенствование системы вознаграждения и мотивации» [1].

От применения этих инструментов, меняется в сторону улучшения, поведение сотрудников, повышается эффективность их работы, становится более гибкой и стабильной структура коллектива организации в целом.

Таким образом, «кадровая политика образовательной организации определяет работу с персоналом образовательной организации, в систему которой входят методы и принципы, соответствующие направлениям стратегического развития организации. Философия системы управления человеческими ресурсами организации определяет общие ценности, нормы поведения и отношений между сотрудниками внутри учреждения.

Социально-экономические и политические изменения в российском обществе вызвали необходимость совершенствования уголовно-исполнительной системы, ее кадровой и образовательной политики. Передача уголовно-исполнительной системы из МВД России в ведение Минюста России, создание Федеральной службы исполнения наказаний обусловили развитие системы профессиональной подготовки кадров для учреждений и органов, исполняющих наказания» [2].

Создана система образовательных учреждений Федеральной службы исполнения наказаний: семь высших учебных заведений, включая Академию права и управления, семь филиалов, одно среднее специальное учебное заведение, 27 учебных пунктов, 33 учебных центра, институт повышения квалификации.

Принципы и ориентиры, разрабатываемые в рамках кадровой политики государства в целом и уголовно-исполнительной системы в частности, являются основой работы с кадрами в уголовно-исполнительной системе.

«Обеспечение своевременного обновления и сохранения качественного и количественного состава кадров и его развития в соответствии с потребностями организации является целью этой работы. Она достигается в результате реализации мероприятий кадровой политики:

- кадрового планирования;
- подбора и расстановки кадров;
- формирования резерва кадров;
- организации труда персонала;

- оценки профессиональных и деловых качеств работников;
- мотивации и стимулирования персонала;
- профессиональной подготовки, переподготовки и повышения квалификации работников» [1].

Образовательные организации Федеральной службы исполнения наказаний играют первостепенную роль в осуществлении стратегии подготовки кадров для пенитенциарной системы России, поскольку они решают важнейшую задачу, стоящую перед ней на сегодняшний день.

Прежде всего, на образовательные организации возлагается задача по подготовке на плановой основе кадров для замещения должностей в уголовно-исполнительной системе и дальнейшему развитию структуры профессионального образования работников уголовно-исполнительной системы.

«Образовательными организациями также активно разрабатывается методология повышения квалификации персонала и переподготовки кадров. Также, на основе взаимодействия с территориальными органами ФСИН России, образовательные организации активно участвуют в совершенствовании специальной и психофизической подготовки персонала уголовно-исполнительной системы за счет максимального приближения программ обучения к реальным условиям оперативной службы и улучшения методического обеспечения и условий проведения занятий» [8, с.32].

Стремительное развитие цифровых технологий вносит свой вклад в развитие образовательных программ и требует проведения постоянной работы по их совершенствованию.

В целом работа кадровых подразделений образовательных учреждений Федеральной службы исполнения наказаний направлена на реализацию кадровой политики в уголовно-исполнительной системе. Правовое регулирование деятельности кадровых подразделений образовательных учреждений Федеральной службы исполнения наказаний представляет собой систему правовых норм, регламентирующих их правовое положение, организационное построение, функциональный механизм, юридический статус сотрудников.

Кадровая политика в уголовно-исполнительной системе обеспечена системой субъектов: Президентом Российской Федерации при участии органов, находящихся в непосредственном его подчинении (Совет по вопросам государственной службы при Президенте РФ, Совет по кадровой политике при Президенте РФ, Главное управление по вопросам кадровой службы и кадрам), Федеральное Собрание РФ, Правительство РФ, органы исполнительной и законодательной власти РФ, Министерство юстиции РФ, Федеральная служба исполнения наказаний РФ, учреждения и органы, подчиненные ей, кадровые подразделения, включая образовательные учреждения.

Кадровые подразделения образовательных учреждений представляют собой иерархически организованные системы со своими элементами, субъектом и объектами внутриорганизационной деятельности по кадровому обеспечению учреждений и органов уголовно-исполнительной системы.

«Под объектами внутриорганизационной деятельности следует понимать, с одной стороны, находящиеся в прямом и функциональном подчинении структурные подразделения образовательного учреждения, с другой стороны - регулируемые процессы этой деятельности, такие как:

- реализация целей, задач, принципов кадровой политики;
- установление служебных прав и обязанностей персонала;
- организационно методическое обеспечение работы с кадрами;
- отбор, расстановка, выдвижение, перемещение и высвобождение кадров;
- воспитательная и культурно массовая работа;
- обучение;
- социальная защита сотрудников образовательных учреждений и их семей» [3, с.118].

«Субъектами внутриорганизационной деятельности кадровых подразделений образовательных учреждений являются все сотрудники этих подразделений, которые, являясь должностными лицами, непосредственно решают задачи кадрового обеспечения и выполняют исполнительно - распорядительные функции в данной сфере деятельности.

Важнейшую роль в функциональном механизме кадровых подразделений образовательных учреждений Федеральной службы исполнения наказаний играет их внутриорганизационная деятельность.

К внутриорганизационной деятельности кадровых подразделений образовательных учреждений Федеральной службы исполнения наказаний относится: работа с информацией, процессы принятия и исполнения управленческих решений, различные формы организационной деятельности, которые образуют в совокупности процесс организации отбора кандидатов на учебу, а также кадров для обеспечения учебного процесса, функционирования структурных подразделений, выполняющих обеспечивающие функции» [4].

«Руководитель кадрового подразделения образовательного учреждения обеспечивает проведение всей организационной работы по отбору кандидатов на учебу и работу. Важнейшей его обязанностью является объединение усилий подчиненных, руководителей структурных подразделений образовательного учреждения для повышения эффективности кадровой деятельности. Кадровые подразделения образовательных учреждений должны быть ориентированы на качественный уровень переменного и профессорско-преподавательского состава» [8].

«Главной особенностью кадрового обеспечения в образовательных учреждениях ФСИН является то, что кадровая политика здесь включает в себя систему, базирующуюся на правовой основе и очень тесно связанную с выполнением государственной политики в данной сфере деятельности, связанную с обеспечением непосредственных кадровых нужд ФСИН России, а именно:

- организацию и непосредственную реализацию политики государства в области кадрового обеспечения в сфере правоохранительной деятельности;

- обеспечение прохождения службы и осуществление трудовой деятельности персоналом;

- создание профессионального ядра сотрудников органов уголовно исполнительной системы;

- реализацию направлений государственной политики в области профессионального образования и научной деятельности уголовно исполнительной системы;

- осуществление воспитательной работы» [6].

Еще одной особенностью, имеющей непосредственное влияние на кадровую политику образовательных учреждений ФСИН, является то, что помимо внутренней организационной деятельности по управлению персоналом образовательных учреждений, имеет место еще и внешний аспект, выражающийся в том, что на них возлагается ответственность за правильный отбор кандидатов на обучение, что непосредственно влияет на качество выпускаемых ими кадров. Эффективность деятельности кадровых подразделений образовательных учреждений пенитенциарной системы России определяется прежде всего удовлетворением потребностей исполнительных органов в высокопрофессиональных специалистах, преданных службе в уголовно-исполнительной системе.

Таким образом, подводя итоги первого раздела магистерской диссертации нами было определено, что целью кадровой политики образовательных учреждений ФСИН России является эффективное обеспечение отбора кандидатов для поступления на учебу, профессорско-преподавательского состава и сотрудников других структурных подразделений, а также создание эффективной системы подготовки и переподготовки и повышения квалификации кадров для качественного удовлетворения потребности учреждений и органов уголовно-исполнительной системы в специалистах, обладающих высокими профессиональными и личностными качествами.

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АНАЛИЗ ПАРАМЕТРОВ ГОРМОНАЛЬНОГО И ЛИПИДНОГО СТАТУСА У БОЛЬНЫХ С ФИБРОМИОМОЙ МАТКИ

Аннотация. Одним из важных факторов увеличения заболеваемости миомой матки у женщин в позднем репродуктивном и перименопаузальном периодах является вегетативно-гормональная перестройка, усиливающая влияние симпатико-адреналовой системы и связанная с этим активация липолитической активности с нарушением холестерина обмена. Гиперлипидемия является важным звеном патогенеза и клинического течения миомы матки.

Ключевые слова: миома матки, репродуктивный возраст, гиперлипидемия, биогенные амины, липидный и гормональный статус.

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ANALYSIS OF PARAMETERS OF HORMONAL AND LIPID STATUS IN PATIENTS WITH UTERINE FIBROMYOMAS

Annotation. One of the important factors in the increase in the incidence of uterine fibroids in women in the late reproductive and premenopausal periods is the vegetative-hormonal restructuring, which enhances the influence of the sympathetic-adrenal system and the associated activation of lipolytic activity with impaired cholesterol metabolism. Hyperlipidemia is an important link in the pathogenesis and clinical course of uterine fibroids.

Key words: uterine fibroids, reproductive age, hyperlipidemia, biogenic amines, lipid and hormonal status.

Актуальность. Одним из важных факторов увеличения заболеваемости миомой матки у женщин в позднем репродуктивном и перименопаузальном периодах является вегетативно-гормональная перестройка, усиливающая влияние симпатико-адреналовой системы и связанная с этим активация липолитической активности с нарушением холестерина обмена. Гиперлипидемия является важным звеном патогенеза и клинического течения миомы матки.

Цель исследования. Изучить уровень биогенных аминов и основные показатели липидного и гормонального обменов.

Материал и методы исследования. Для изучения нарушений липидного и гормонального обменов и их влияния на течение заболевания у больных миомой матки мы, из 1 и 2 групп отобрали по 30 больных. До лечения на стадии обследования этих больных были изучены уровень биогенных аминов и основные показатели липидного и гормонального обменов.

Результаты исследования. Биогенные амины, являющиеся продуктами ферментативного декарбоксилирования аминокислот, обладают высокой биологической активностью. Значение показателя АХЭ достоверно возросло в обеих группах одинаково в 2,1 раза. Уровень серотонина достоверно увеличился в 1 группе в 4,8 раз, во 2 группе – 5,1 раза, а гистамин в 1 группе увеличился в 3,7 раза, во 2 группе – в 3,6 раз по сравнению с контролем. Характер нарушений липидного обмена свидетельствует о нарушении процессов эстерификации холестерина и его выведения. Отмечается отчетливая тенденция к нарастанию общих липидов, ХС ЛПНП и холестерина. Содержание общего холестерина возросло в 1 группе в 1,5 раза, а во 2 группе в 1,8 раза. ХС ЛПНП у больных 1 группы повысился в 2,1 раза, а во 2 группе в 2,5 раза. Повышение ХС ЛПНП у больных миомой матки, функцией которых является транспорт холестерина в клетку, свидетельствует в возможности накопления этих частиц в периферических клетках. В организме существует баланс между оттоком и притоком холестерина в клетку. Главной единицей системы, обеспечивающий отток холестерина из периферических клеток в печень, местом катаболизма холестерина является ХС ЛПВП, который понизился в 1,8 раза в обеих группах. Уровень ТГ при миоме матки увеличился в обеих группах в 1,8 раза ($P < 0,05$) (табл. 1).

Таблица 1

Основные показатели липидного статуса у обследованных больных

Показатели	КГ (n=20)	1 группа (n=30)	2 группа (n=30)
АХЭ	245,3±6,0	520,2±9,5*	514,5±9,8*
Серотонин, ммоль/л	0,32±0,01	1,52±0,03*	1,62±0,05*
Гистамин, ммоль/л	0,28±0,01	1,04±0,02*	0,99±0,02*
ОХС, ммоль/л	6,44±0,2	9,9±0,2*	11,4±0,2*
ХС ЛПВП, ммоль/л	2,00±0,04	0,58±0,02*	0,60±0,01*
ХС ЛПНП, ммоль/л	4,14±0,21	8,76±0,17*	10,3±0,2*
ХС ЛПОНП, ммоль/л	0,3±0,01	0,54±0,01*	0,53±0,02*
ТГ, ммоль/л	1,48±0,03	2,72±0,05*	2,65±0,08*
КА	2,22±0,10	16,4±0,6*	18,6±0,64*
ЦИК, г/л	32,3±0,9	108,6±2,0*	101,3±2,32*

Примечание: * - достоверно относительно данных контрольной группы

Достаточно высокий уровень указанных фракций липидов приводит к возникновению микроциркуляторных нарушений, обуславливая поддержание роста миомы у больных.

Для подтверждения наличия связи нарушенного обмена ХС с уровнем ЦИК мы провели корреляционный анализ. Как показали результаты, до лечения коэффициент корреляции ЦИК с ОХС составил +0,65 (прямая средняя связь) ($P < 0,001$), с ХСЛПНП - +0,71 ($P < 0,001$), с ХС ЛПОНП - +0,80 (прямая сильная связь) ($P < 0,001$), с ТГ - +0,63 (прямая средняя связь) ($P < 0,001$), а с показателем ХС ЛПВП зависимость была обратной и коэффициент корреляции был равен - 0,72 (обратная сильная связь) ($P < 0,001$).

У больных миомой матки имеются нарушения в структурно-функциональном состоянии плазматических мембран лимфоцитов, основу, которых составляют изменения липидного матрикса мембраны, отражающиеся вторично на физико-химических свойствах мембранных белков. Характер нарушений липидного состава в сыворотке крови влияет на функционирование клеточных мембран, что связано с процессами гиперпролиферации и нарушением механизмов контроля клеточной пролиферации. Патогенетическая значимость показателей нарушений липидного состава у больных миомой матки неоспорима.

В крови женщин с миомой матки отмечалось достоверное увеличение уровня ОХС, ХС ЛПОНП, ХС ЛПНП и ТГ на фоне сниженного содержания ХС ЛПВП, что явилось причиной высокого КА. Это указывало на высокий риск повреждения сосудистого эндотелия, в том числе и сосудов матки. Насыщенные жирные кислоты, входящие в состав ХС ЛПНП и ХС ЛПОНП, а также ТГ способствуют увеличению уровня ОХС и ускоренному его отложению в интимае сосудов. ОХС, ХС ЛПНП, ХС ЛПОНП и ТГ, входящие в состав (βЛП) при проникновении в сосудистую стенку образуют комплексы с кислыми гликозамингликанами и гликопротеидами, что придает им антигенные свойства, обуславливающие образование аутоантител и развитие аутоиммунных процессов. Этому же может способствовать образование антигенов вследствие распада атеросклеротических образований, обеспечивающее специфическую сенсibilизацию организма. В крови женщин с миомой матки это предопределяло высокий уровень ЦИК, что, в свою очередь, может служить важной причиной поддержания патологического процесса в матке.

У женщин, страдающих миомой матки, все ткани реагируют на колебания уровня половых гормонов изменением концентрации своих рецепторов; уровень эстрадиола повысился в 1 группе в 3,5 раз, а во 2 группе – в 3,7 раза, что приводит к индуцированию образования сначала рецепторов, а подъем уровня прогестерона в крови приводит к снижению и эстрогенных и прогестеронных рецепторов [23]. При миоме матки уровень

прогестерона в крови уменьшается в 6,2 раз в 1 группе и 6,5 раз – во 2 группе.

Прогестерон наряду с эстрогенами стимулирует рост миомы матки, но оба этих гормона, принимая участие в патогенезе миом, используют разные пути [4]. Уровень эстрадиола в ткани миомы матки повышено по отношению к окружающему миометрию в среднем в 3,6 раз. Уровни активности ароматазы и продуктов транскрипции цитохрома P450-ароматаз в 2-20 раз выше в культуре клеток миомы, чем в нормальной ткани. Это указывает на усиление локального биосинтеза эстрогенов, стимулирующих рост миомы [3]. Высокое содержание рецепторов эстрогенов и прогестерона в миоме реализуется в локальном повышении концентрации эстрадиола, прогестерона и стимулировании роста миомы. При этом прогестерон и эстрогены оказывают синергическое действие.

Таким образом, нарушения обмена половых стероидов в миоматозных узлах формируются по принципу положительной обратной связи, основанной на аутокринной стимуляции клеток. Развитие этого патофизиологического механизма обусловлено активным участием так называемых факторов роста, что приводит к росту миоматозных узлов, нарушению васкуляризации и кровотечениям.

Проведенные исследования содержания гормонов в сыворотке крови женщин с миомой матки до лечения указывают на лютеиновую недостаточность, которая способствовала ановуляции: достоверное повышение показателей ФСГ в 3,7 раз и E_2 – в 3,6 раз резким снижением уровня гормона желтого тела прогестерона в 6,2 раз в 1 группе и 6,5 раз во 2 группе. Базальный уровень ЛГ у женщин с миомой матки был несколько снижен в 1,1 раз у больных 1 группы и 1,2 раз – у больных 2 группы по сравнению с контрольной группой, что вероятно обусловлено принципом обратной связи: стероидные яичниковые гормоны вызывают торможение нейросекреторных центров гипоталамуса и уменьшение выработки рилизинг-факторов гонадотропных гормонов. Видимо, повышенный уровень эстрадиола повлиял на секрецию ЛГ по принципу отрицательной обратной связи ($r=-0,45$ обратная средняя корреляционная связь) (табл. 2).

Таблица 2

Основные показатели гормонального статуса у обследованных больных

Показатели	КГ (n=20)	1 группа (n=30)	2 группа (n=30)
ФСГ, мЕ/л	4,0±0,2	14,9±0,25*	14,3±0,25*
ЛГ, мЕ/л	9,3±0,2	8,1±0,0,16*	7,6±0,21*
Прогестерон нг/мл	16,7±0,8	2,70±0,01*	2,55±0,02*
Эстрадиол, нмоль/л	0,52±0,03	1,81±0,01*	1,93±0,02*

Примечание: * - достоверно относительно данных контрольной группы

Анализ коэффициентов корреляции между уровнем гормонов и биогенных аминов показал, что биогенные амины, обладая высокой биологической активностью, влияют на выработку гормонов, например у больных миомой матки активизация серотонина вызывает увеличение ФСГ, что подтверждается наличием средней положительной корреляционной связью ($r=0,38$ у больных 1 группы и $r=0,33$ – у больных 2 группы) ($r=0,38$ у больных 1 группы и $r=0,33$ – у больных 2 группы).

Увеличение уровня фракций липидов как ОХС, ХС ЛПНП, ХС ЛПОНП и ТГ и уменьшение концентрации липопротеидов высокой плотности приводит к возникновению микроциркуляторных нарушений, обуславливая поддержание роста миомы у больных, что связано с гормональным балансом, что также подтверждается наличием корреляционных связей между показателями гормонального статуса и показателей липидного обмена: например при увеличении показателей липидного обмена вызывает увеличение концентрации эстрадиола (для ОХС и эстрадиола $r=0,33$ у больных 1 группы и $r=0,36$ у больных 2 группы – средняя положительная связь, для ТГ $r=0,42$ – 1 группа и $r=0,30$ - средняя положительная связь).

Таким образом, достоверное у больных с миомой матки имеет место достоверное увеличение уровня ОХС, ХС ЛПОНП, ХС ЛПНП и ТГ на фоне сниженного содержания ХС ЛПВП. Отмечается прямая корреляционная зависимость между нарушенным липидным обменом, гормональным фоном и активацией биогенных аминов при данной патологии.

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ОСОБЕННОСТЬ ПОСЛЕОПЕРАЦИОННОГО ОБЕЗБОЛИВАНИЯ У ДЕТЕЙ

Резюме. Боль у детей, перенесших хирургические вмешательства, является одним из основных факторов, определяющих состояние ребенка после операции и способствующих развитию осложнений, поэтому устранение боли в послеоперационном периоде является основной задачей интенсивной терапии. Доказано, что устранение ноцицептивной импульсации позволяет существенно снизить количество осложнений в послеоперационном периоде. В последнее десятилетие в клинической практике доминирует мульти-модальный подход к послеоперационной анальгезии, подразумевающий синергичное применение препаратов разных фармакологических групп для достижения эффекта анальгезии, что позволяет существенно повысить качество послеоперационного обезболивания, однако, в педиатрии эта проблема остается недостаточно изученной.

Ключевые слова: боль, анальгезия, седация, анальгетики, послеоперационный период.

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THE PECULIARITY OF POSTOPERATIVE ANESTHESIA IN CHILDREN

Resume. Pain in children who have undergone surgery is one of the main factors determining the condition of a child after surgery and contributing to the development of complications, therefore, the elimination of pain in the

postoperative period is the main task of intensive care. It is proved that the elimination of nociceptive impulses can significantly reduce the number of complications in the postoperative period. In the last decade, a multi-modal approach to postoperative analgesia has dominated clinical practice, implying the synergistic use of drugs of different pharmacological groups to achieve the effect of analgesia, which can significantly improve the quality of postoperative anesthesia, however, in pediatrics this problem remains insufficiently studied.

Key words: pain, analgesia, sedation, analgesics, postoperative period.

Введение. Однако боль в послеоперационном периоде может быть устранена у любого ребенка, что достигается индивидуализацией лечения, заключающейся в учёте многофакторных механизмов формирования боли и мультидисциплинарном подходе к проблеме [2]. В последнее десятилетие в клинической практике доминирует мультимодальный подход к послеоперационной анальгезии, подразумевающей синергичное применение препаратов разных фармакологических групп для достижения эффекта анальгезии, что позволяет существенно повысить качество послеоперационного обезболивания, однако, в педиатрии эта проблема остается недостаточно изученной [6, 10,].

Наиболее перспективным методом послеоперационного обезболивания в настоящее время является анальгезия, контролируемая пациентом, как внутривенная, так и эпидуральная [11]. Преимущества данного метода состоят в возможности контроля интенсивности боли самим пациентом и достаточно высокой эффективности обезболивания [1]. В то же время следует отметить, что его использование у детей по-прежнему ограничено.

Цель исследования: Повысить эффективность лечения болевого синдрома в послеоперационном периоде у детей, перенесших хирургические вмешательства, путем обоснования оптимальных вариантов послеоперационной анальгезии в зависимости от характера, степени выраженности боли.

Материалы и методы исследования. В работе приведены результаты эффективности применения мультимодального подхода к послеоперационному обезболиванию у 89 детей с различной хирургической патологией в возрасте от 4,5 до 18 лет в АРИТ областного детского многопрофильного медицинского центра в период 2021-2023 гг. Предметом исследования явился оценка эффективности различных схем послеоперационного обезболивания.

Результаты исследования. В работе приведены результаты эффективности применения мультимодального подхода к послеоперационному обезболиванию у детей с различной хирургической патологией. В исследование включены 89 пациентов в возрасте от 4,5 до 18 лет (средний возраст $9,22 \pm 3,67$), которые были разделены на 3 группы.

В первую основную группу вошли 35 детей в возрасте от 5 до 18 лет (средний возраст = $10,2 \pm 4,1$ лет), послеоперационное обезболивание которым осуществлялось введением нестероидного противовоспалительного препарата – кетопрофена и парацетамола в виде ректальных суппозиторий.

Двадцать четыре ребенка в возрасте от 7,5 до 14 лет (средний возраст $11,5 \pm 3,51$ лет), послеоперационное обезболивание которым осуществлялось инфузией фентанила были включены во 2-ю основную группу.

В 3-ю основную группу вошли 30 амбулаторных пациентов в возрасте от 4,6 до 8 лет (средний возраст $7,2 \pm 2,0$), интра и послеоперационное обезболивание которым обеспечивалось сочетанием регионарной анестезии (илиоингвинальный блок) новокаином с ректальными суппозиториями парацетамола.

В табл. 1 представлены сведения о возрасте и половой принадлежности исследуемых пациентов. Как показано в табл. 1, большинство исследуемых составили мальчики, которых было 51 (57,3%). Дети в возрасте 7-10 лет, которых было 39 (43,8%), явились наиболее многочисленной исследовательской группой.

Таблица 1.

Распределение детей по возрасту и полу

Возраст	Мальчики		Девочки		Итого	
	абс	%	абс	%	абс	%
5 — 6 лет	14	15,7	12	13,5	26	29,2
7-10 лет	23	25,8	16	18,0	39	43,8
11-14 лет	6	6,71	5	5,6	11	12,3
Старше 14 лет	8	8,98	5	5,6	13	14,6
Итого	51	57,3	38	42,7	89	100

Информация о методике послеоперационного обезболивания и локализации оперативного вмешательства представлена в таблице 2.

Оперативные вмешательства всем детям выполнялись под общей комбинированной анестезией. Детям 3 группы оперативные вмешательства выполнялись под моноанестезией кетамином в дозе 2-5 мг/кг. Средняя продолжительность операции не превышала 68 ± 16 мин.

За 30 минут до операции выполняли стандартную премедикацию атропином в дозе 0,012 мг/кг и димедролом в дозе 0,2 мг/кг.

У пациентов 3 группы в премедикацию дополнительно включали ректальную форму парацетамола в дозе 20 мг/кг.

Таблица 2.

Распределение пациентов в зависимости от метода аналгезии и локализации оперативного вмешательства

Виды операций	Методы послеоперационного обезболивания						Итого	
	Кетопрофен + парацетамол		Инфузия фентанила		Илиоингвиральный блок			
	Абс.	%	Абс.	%	Абс.	%	Абс.	%
Абдоминальные	5	5,6	11	12,3	-	-	16	17,9
Торакальные	6	6,7	9	10,1	-	-	15	16,8
Ортопедические	13	14,6	2	2,24	-	-	15	16,8
Урологические	11	12,3	2	2,24	-	-	13	14,7
Заболевания, связанные с необлитерацией вагинального отростка	-	-	-	-	30	33,7	30	33,7
Всего	35	39,3	24	27,0	30	33,7	89	100

Индукцию в анестезию осуществляли последовательным введением диазепама в дозе 0,2 мг/кг и фентанила - 3 мкг/кг. Интубацию трахеи выполняли после введения аркурона в дозе 0,05 мг/кг. У пациентов 3 группы оперативные вмешательства выполнялись под моноанестезией кетамином. После выполнения интубации и перевода ребенка на ИВЛ для поддержания анестезии использовалась инфузионное введение кетамин в дозе 2 мг/кг. Аналгетический компонент общей анестезии обеспечивался инфузионным введением фентанила в дозе 5-8 мкг/кг/час. Релаксация поддерживалась фракционным введением аркурона в дозе 0,01-0,03 мг/кг. Пациентам 1-2 группы экстубацию трахеи производили в течение часа после окончания операции. Сразу же после поступления ребенка в палату интенсивной терапии из операционной этим пациентам начинали введение кетопрофена в дозе 0,05 мг/кг в/м. Кроме того, у детей данного контингента применяли ректальные суппозитории парацетамола.

Пациентам 2 группы после поступления в ОАРИТ начинали микроструйное введение фентанила (микроструйный насос SN-50С6Т, КНР) в нагрузочной болюсной дозе 0,002 мг/кг/ч. По истечении 24 часов

инфузионное введение фентанила прекращали. Для обеспечения анальгезии в дальнейшем использовали парацетамола в таблетированной форме или в ректальных суппозиториях. Послеоперационную анальгезию пациентам 3 группы осуществляли постановкой ректальных суппозиторий парацетамола в суточной дозе 60 мг/кг. Оценивали основные физиологические параметры, отражающие степень компенсации жизненно важных систем организма - частоту сердечных сокращений (ЧСС), АД, выполняли анализ электрокардиограммы с оценкой variability ритма сердца (ВРС) [9, 10].

У пациентов 1-2 групп, оценку моторного блока по шкале P. Bromage [7] проводили в ходе фиксированных этапов исследования:

- 0 баллов - сохранение активной подвижности в тазобедренном, коленном и голеностопном суставах;
- 1 балл - сохранение возможности активных движений в коленном суставе;
- 2 балла - сохранение подошвенного сгибания стопы;
- 3 балла - отсутствие движений нижней конечности.

Интенсивность болевого синдрома оценивали с помощью визуально-аналоговой шкалы [3], спроецированной на 100 мм шкалу-линейку (Рис. 1.). Критерием адекватности анальгезии считали интенсивность боли до 30 мм в покое и не более 40 мм при движении [6].



Рис. 1. Шкала оценки уровня боли

Оценивали основные физиологические параметры, отражающие степень компенсации жизненно важных систем организма - частоту сердечных сокращений (ЧСС), АД, выполняли анализ электрокардиограммы с оценкой variability ритма сердца (ВРС) [8, 9].

У пациентов 1-2 групп, оценку моторного блока по шкале P. Bromage [5] проводили в ходе фиксированных этапов исследования:

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Для оценки уровня седации использовали шкалу детского госпиталя Wisconsin in Milwaukee (табл. 2.)

Таблица 2.

Шкала оценки уровня седации

Уровень сознания	Стимуляция	Баллы	Интерпретация
Взволнован, возбужден, беспокоен при боли	Спонтанно, без стимуляции	6	Неадекватная седация
Не спит, Спокоен	Спонтанно, без стимуляции	5	Минимальная седация
Дремлет с открытыми или закрытыми глазами, легко пробуждается	С мягкой или умеренной голосовой стимуляции	4	Умеренная седация
Дремлет, возможно Разбудить	Умеренная тактильная стимуляция или громкий голос	3	Седация от умеренной до глубокой
Может быть разбужен до сознания, но медленно	Требуется длительная болевая стимуляция	2	Глубокая Седация
Может быть разбужен, но не до ясного сознания	Требуется длительная болевая стимуляция	1	Чрезмерная седация
Без ответа	Не отвечает на болезненные манипуляции	0	Анестезия

Выводы: Применение новокаина в комплексе с парацетамолом в сравнении с моноанальгезией позволило добиться более длительного послеоперационного анальгетического эффекта. сочетанное применение новокаина и ректальных форм парацетамола является эффективным

методом послеоперационной анальгезии у амбулаторных больных, оперированных по поводу паховой грыжи и водянки оболочек яичка.

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СОСТОЯНИЕ ВЕГЕТАТИВНОЙ РЕГУЛЯЦИИ ПРИ ХИРУРГИЧЕСКИХ ВМЕШАТЕЛЬСТВАХ НА ОРГАНАХ МОЧЕВЫДЕЛИТЕЛЬНОЙ СИСТЕМЫ У ДЕТЕЙ

Резюме. Известно, что ритм сердца является универсальным индикатором на любое воздействие на организм. Его считают маркером адаптационных процессов. По его изменению можно оценить степень напряжения регуляторных систем и состояние функционального резерва. На поддержание гомеостаза при воздействии стресс - фактора расходуется функциональный резерв и по степени напряжения регуляторных систем, уровню регуляции адаптационными процессами можно определить «цену адаптации» к стрессу.

Ключевые слова: вегетативного статус, гомеостаз, стресс – фактор, оперативные вмешательства.

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THE PECULIARITY OF POSTOPERATIVE ANESTHESIA IN CHILDREN

Resume. It is known that the heart rate is a universal indicator for any effect on the body. It is considered a marker of adaptation processes. By changing it, it is possible to assess the degree of voltage of regulatory systems and the state of the functional reserve. A functional reserve is spent on maintaining homeostasis under the influence of a stress factor, and according to the degree of tension of regulatory systems, the level of regulation of adaptive processes, it is possible to determine the "price of adaptation" to stress.

Key words: vegetative status, homeostasis, stress factor, surgical interventions.

Введение. Оперативному вмешательству подвергаются дети с аномалиями развития, приобретенными заболеваниями мочевыделительной системы и тяжелой сопутствующей патологией, в том числе и в критическом состоянии. Изменился объём и длительность оперативного вмешательства, чаще стали встречаться осложнения, увеличилась летальность [2]. Перед анестезиологами стоят всё более сложные задачи по обеспечению защиты от отрицательного воздействия операционного стресса. Довольно большое количество научных изысканий посвящено оценке состояния сердечно-сосудистой и дыхательной систем, профилактике и коррекции их нарушений, происходящих при оперативных вмешательствах [3, 4,].

Компенсаторно - адаптационные реакции развиваются на любой агрессивный фактор. «Руководит» этими реакциями вегетативная нервная система [3, 7]. Вегетативная нервная система состоит из двух отделов: симпатического и парасимпатического. Каждая из систем обеспечивает определённый уровень функционирования организма. Парасимпатическая система обеспечивает поддержку энергетических ресурсов организма, поддержание стабильных констант. Симпатическая система обеспечивает энергией реакции, направленные на реализацию адаптационных процессов в ответ на любой агрессивный фактор.

Цель исследования: - изучение изменения вегетативного статуса у детей, подвергшихся оперативному вмешательству на органах мочеполовой системы.

Материалы и методы исследования: В основу работы положены результаты исследования 115 больных детей, подвергнутых плановым и экстренным вмешательствам на мочевыделительной системе на базе отделения анестезиологии и реанимации Андижанского областного детского многопрофильного медицинского центра. Всего в исследование было включено 115 детей, плановому оперативному вмешательству подвергались 85 детей, экстренным – 30 детей. Предметом исследования явились сравнительные исследования изменения вегетативной регуляции и гемодинамики у данного контингента больных детей.

Результаты исследования: Всего в исследование было включено 115 детей.

В таблице 1. представлено количественное распределение детей в группах, в зависимости от вида хирургического вмешательства.

Таблица 1.

Количественное распределение детей в зависимости от характера вмешательства

Характер вмешательства	Количество детей
Плановые вмешательства	85
Экстренные вмешательства	30
Всего детей	115

По половому признаку дети распределились следующим образом: мальчиков было 122, девочек-76 (рис.1.).

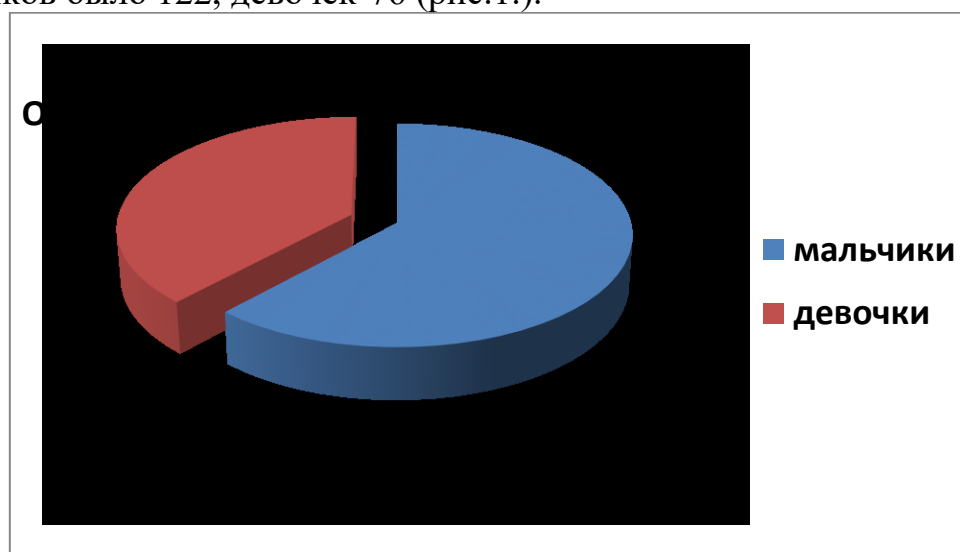


Рис.1. Распределение детей по половому признаку

У всех детей фоновой патологией была анемия легкой степени - гемоглобин (НЬ) 90 г/л, цветной показатель (ЦП) в пределах 0,7 - 0,8. Возраст обследованных детей был от 5 до 15 лет. Показатели физического развития детей по группам в зависимости от характера вмешательства представлены в таблице 2.

Таблица 2.

Показатели физического развития

Характер вмешательства	Показатели физического развития			
	Возраст	Рост	Вес	Индекс Кетле
Плановые вмешательства	9,3±0,6	129,6 ±3,6	32,2± 2,8	20,4± 1,1

Экстренные вмешательства	10,3±0,7	136,6±3,6	31,1 ±2,2	22,6 ±1,4
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Все дети, подвергшиеся исследованию, по возрасту были распределены следующим образом (таблица 3.)

Таблица 3.

Распределение больных по возрасту в зависимости от характера оперативного вмешательства

Характер вмешательства	Возраст (лет) оперированных больных			
	5-7	8-11	12-15	всего детей
Плановые вмешательства	41	26	18	85
Экстренные вмешательства	7	10	13	30
ИТОГО	48	36	31	115

Восьмидесяти пяти детям были выполнены плановые оперативные вмешательства по поводу различных форм гипоспадии (51 больной) и крипторхизма (34 больных) (рис.2.).

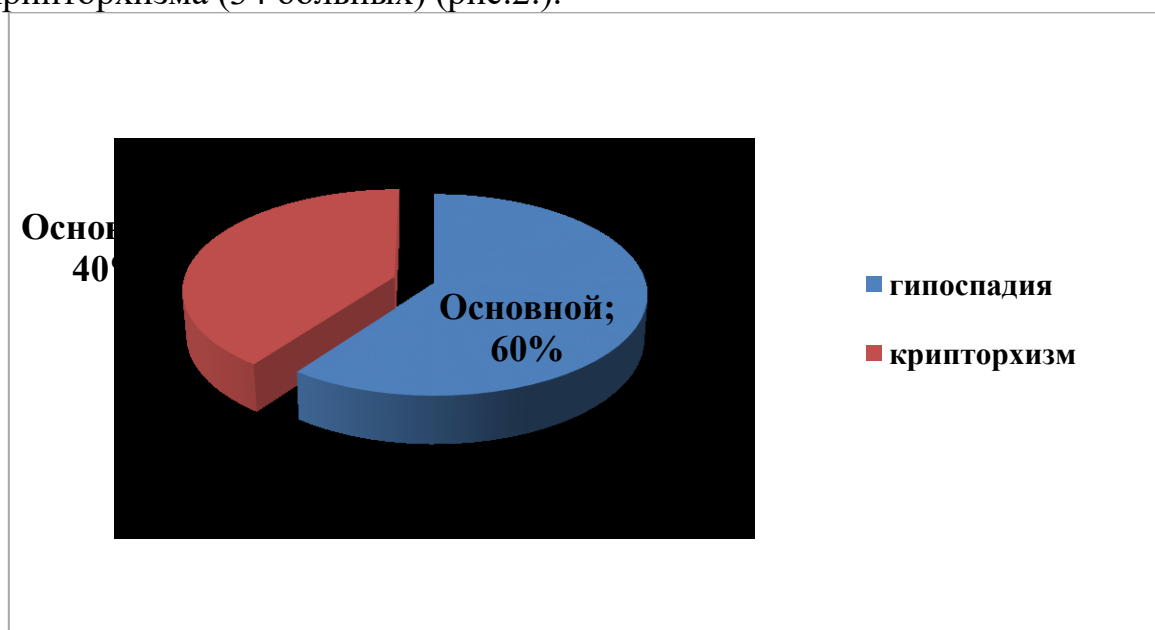


Рис.2. Распределение детей по поводу плановой патологии

Пациенты с экстренной патологией были разделены на две подгруппы. Одну подгруппу составили 17 детей с острой задержкой мочи, обусловленной уролитиазом (цисто-, уретеролитиаз), вторую подгруппу – 13 мальчиков с синдромом острой мошонки (перекрут яичка, гидатида).

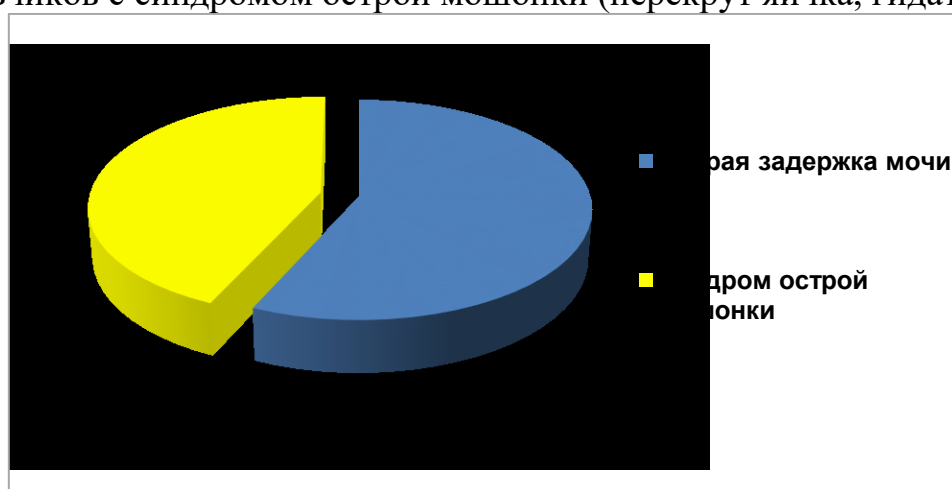


Рис.2. Распределение детей с экстренной патологией

Оперативные вмешательства проводились под комбинированной внутривенной анестезией с и без применения искусственной вентиляции легких. Распределение этих больных в зависимости от вида анестезии представлено в таблице 4.

Таблица 4.

Распределение детей, подвергнутых оперативному вмешательству в зависимости от вида анестезии

№	Характер оперативного вмешательства	Вид комбинированной анестезии	
		С применением ИВЛ Кетамин+фентанил +миорелаксанты	Без применения ИВЛ Сибазон+кетамин
1	Неоуретропластика	34	-
2	Орхипексия	-	51
3	Эпицистолитотомия	11	-
4	Уретеролитотомия	7	-
5	Ликвидация перекрута яичка	-	9
6	Ликвидация перекрута гидатид	-	3

Использовались для вычисления показателей гемодинамики, функционального состояния - (ФС)

1.УО - ударный объём
 $УО = 100 + 0,54ПД - 0,57ДАД - 0,61В \times 0,65$ по формуле Старра, где ПД - пульсовое давление, ДАД - диастолическое, В- возраст, 0,65-перерасчётный коэффициент.

2. МОК - минутный объём кровообращения.

$МОК = УО \times ЧСС$, где УО - ударный объём, ЧСС - частота сердечных сокращений.

3. СИ - сердечный индекс

$СИ = МОК / S$, где МОК - минутный объём кровообращения, S - площадь тела.

4. УПС - удельное периферическое сопротивление

$УПС = САД / СИ$, по формуле Н.Н.Савицкого, где САД - среднее артериальное давление.

5. САД - среднее артериальное давление

$САД = ДАД + ПД / 3$, где ДАД - диастолическое давление, ПД - пульсовое давление

6. ПД - пульсовое давление

$ПД = АДс - АДд$, где АДс - систолическое давление, АДд - диастолическое давление

7. УИ - ударный индекс

$УИ = УО / S$, где УО - ударный объём, S - площадь тела.

8. S - площадь тела, $S = 0,0087(L+P) - 0,26$, формула М.Я. Брейтмана, где L - рост в сантиметрах, P — вес в килограммах.

9. ФС - функциональное состояние

$ФС = 0,11ЧСС + 0,014САД + 0,008 ДАД + 0,014 В + 0,009 МТ - 0,009 P - 0,27$, формула А.П. Берсеновой, где ЧСС - частота сердечных сокращений, САД - систолическое артериальное давление, ДАД - диастолическое артериальное давление, В — возраст в годах, МТ — масса тела в килограммах, P - рост в сантиметрах.

При проведении плановых и экстренных вмешательств отмечается существенное повышение напряжения регуляторных систем. При проведении планового оперативного вмешательства напряжение регуляторных механизмов на фоне хирургической травмы менее значительны, чем при экстренных операциях. У детей с исходным индексом напряжения меньше 50 этот показатель увеличивался в 64 раза, у детей с индексом напряжения от 50 до 150, индекс напряжения увеличивался в 14 раз, и у детей с индексом напряжения выше 150, индекс напряжения увеличивался в 2,8 раза. В ходе исследования было выявлено, что у детей в возрасте от 4 до 15 лет при анализе кардиоинтервалографии встречались 3 вида гистограмм: нормальные, ваго и симпатикотонические. Это указывало, что у детей независимо от возраста встречался различный уровень созревания и степень напряжения регуляторных механизмов, различное взаимодействие между симпатической и парасимпатической системами.

В ходе исследования в предоперационном периоде была выявлена различная степень напряжения регуляторных механизмов, которая определялась значением индекса напряжения. В ходе исследования было выявлено, что у детей в возрасте от 4 до 15 лет при анализе

кардиоинтервалографии встречались 3 вида гистограмм: нормальные, ваго- и симпатикотонические. Это указывало, что у детей независимо от возраста встречался различный уровень созревания и степень напряжения регуляторных механизмов, различное взаимодействие между симпатической и парасимпатической системами.

Выводы: Было выявлено, что исходное состояние детей по состоянию регуляции вегетативной нервной системы существенно отличается: симпатотоники, ваготоники и нормотоники. Под действием стресс фактора в каждой из этих групп отмечались различные реакции, что указывает на необходимость дифференцированного подхода к проведению анестезиологического пособия. Это позволит существенно повысить уровень анестезиологической защиты.

В работе доказано, что при воздействии стресс-фактора изменения со стороны вегетативной нервной системы более значительные, чем изменения гемодинамических показателей.

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О ПРИЛОЖЕНИЯХ ДИФФЕРЕНЦИАЛЬНОГО ИСЧИСЛЕНИЯ

Аннотация. В данной статье рассмотрены некоторые задачи, связанные с применением полного дифференциала, частных дифференциалов, произведений и нормальных уравнений функций многих переменных, их свойства, а также описаны методы решения путем решения практических задач.

Ключевые слова: дифференциал, частная производная, частный дифференциал, полный дифференциал, плоскость произведения, нормаль, ортогональность.

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ABOUT APPLICATIONS OF DIFFERENTIAL CALCULUS

Abstract. This article discusses some problems associated with the use of total differentials, partial differentials, products and normal equations of functions of many variables, their properties, and also describes solution methods by solving practical problems.

Keywords: differential, partial derivative, partial differential, total differential, product plane, normal, orthogonality.

Математические методы исследования занимают важное место в современной науке и технике. В связи с развитием вычислительной техники и расширением ее применения во всех сферах человеческой деятельности особенно возросло значение математики. Это создает необходимость дальнейшего повышения спроса на высокую математическую подготовку инженерных специалистов. Предположим, что $F(x, y, z) = 0$ — нераскрытое уравнение поверхности. Согласно определению полного дифференциала

$$dF = \frac{\partial F}{\partial x} dx + \frac{\partial F}{\partial y} dy + \frac{\partial F}{\partial z} dz = 0.$$

Если единичный вектор усилия, передаваемого на поверхность, имеет проекции $\{dx, dy, dz\}$, а проекции вектора нормали поверхности, перенесенного в эту точку, пропорциональны собственным значениям $\left\{ \frac{\partial F}{\partial x}, \frac{\partial F}{\partial y}, \frac{\partial F}{\partial z} \right\}$, тогда полный дифференциал можно рассматривать как скалярное произведение двух векторов. Напряжения поверхности в данной точке лежат на плоскости напряжений, перенесенных в эту точку, и найденное выражение для полного дифференциала в этом соотношении можно рассматривать как уравнение плоскости напряжений. Если задана конкретная плоскость с вектором направления $\{x-x_0, y-y_0, z-z_0\}$, то уравнение плоскости создадим, заменив специальные производные пропорциональными величинами. Значения собственных производных получаются в точке (x_0, y_0, z_0) :

$$(x-x_0) \frac{\partial F}{\partial x} + (y-y_0) \frac{\partial F}{\partial y} + (z-z_0) \frac{\partial F}{\partial z} = 0,$$

тогда нормальное уравнение выглядит следующим образом.

$$\frac{x-x_0}{\frac{\partial F}{\partial x}} = \frac{y-y_0}{\frac{\partial F}{\partial y}} = \frac{z-z_0}{\frac{\partial F}{\partial z}} = 0$$

Давайте рассмотрим некоторые вопросы, связанные с применением формул сверху.

Пример 1. Внешний вид резервуара представляет собой открытый сверху прямоугольный параллелепипед. Если известна вместимость бака, найдите размеры наименьшего количества железа для его приготовления.

Решение: Пусть размеры основания резервуара равны x и y , z – его высота, тогда его общая поверхность и объем определяются следующим образом: $S(x, y, z) = xy + 2xz + 2yz$, $V = xyz$.

Мы создали задачу условного экстремума: найти минимум функции $S(x, y, z) = xy + 2xz + 2yz$ при $V = xyz$. Но мы работаем с ним по-другому, используя свойство полного дифференциала. $S(x, y, z)$ возникает, когда минимум функции равен $dS = 0$,

$$dS = (y + 2z)dx + (x + 2z)dy + 2(x + y)dz = 0$$

Находим, дифференцируя выражение $V = xyz$

$$dV = yzdx + xzdy + xydz = 0$$

Первое выражение dS можно рассматривать как скалярное произведение векторов $\vec{n}_1(y+2z, x+2z, 2(x+y))$ и $\vec{t}(dx, dy, dz)$, а второе выражение dV как скалярное произведение векторов $\vec{n}_2(yz, xz, xy)$ и $\vec{t}(dx, dy, dz)$. Согласно выражениям $dS = (\vec{n}_1 \cdot \vec{t})$ и $dV = (\vec{n}_2 \cdot \vec{t})$, оба вектора \vec{n}_1 и

\vec{n}_2 перпендикулярны (ортогональны) вектору t , поэтому они должны быть взаимно коллинеарны. При условии коллинеарности

$$\frac{y+2z}{yz} = \frac{x+2z}{xz} = \frac{2(x+y)}{xy}$$

Мы находим $x=y$ из первого уравнения $\frac{y+2z}{yz} = \frac{x+2z}{xz}$ и $x=2z$ из двух

последних уравнений $\frac{x+2z}{xz} = \frac{2(x+y)}{xy}$, поэтому основание резервуара

должно быть квадратным, а его сторона должна быть в два раза больше высоты резервуара.

Пример 2. Форма поддона аналогична цилиндру, поверх него помещена коническая колонна. По заданному объему определите размеры так, чтобы на него ушло наименьшее количество материала.

Решение: Определим радиус пластины через x , высоту ее цилиндрической части через y , а высоту конической части через z . Объем поддона $V = \pi x^2 y + \frac{\pi}{3} x^2 z$, его боковая поверхность $S = 2\pi xy + \pi x l$. Боковой край верхнего конуса $l^2 = x^2 + z^2$.

Полные дифференциалы выражений объема, боковой поверхности и бокового края соответственно

$$2\left(xy + \frac{xz}{3}\right)dx + x^2 dy + \frac{1}{3}x^2 dz = 0, \quad (2y+l)dx + 2xdy + xdl = 0 \quad \text{и} \quad ldl = xdx + zdz$$

Находим, исключив dl из второго и третьего уравнений.

$$\left(2y+l + \frac{x^2}{l}\right)dx + 2xdy + \frac{xzdz}{l} = 0$$

Как и в предыдущей задаче, систему можно рассматривать как скалярное произведение ортогональных векторов, второго и результирующего выражений, в которых имеем следующие уравнения:

$$\frac{xz}{l} = \frac{2x}{3}, \quad 2y+l + \frac{x^2}{l} = 4y + \frac{4z}{3}, \quad l^2 = x^2 + z^2$$

Решая эти уравнения, находим размеры поддона: $y = \frac{x}{\sqrt{5}}$, $z = \frac{2}{\sqrt{5}}x$, $l = \frac{3}{\sqrt{5}}x$.

В заключение следует сказать, что математические расчеты глубоко проникают в различные области науки — технику, экономику, управление и другие области, где математика ранее не применялась. Таким образом, математика стала языком науки и техники. С его помощью моделируются, изучаются и прогнозируются явления и процессы, происходящие в природе и обществе. Сегодня во многих областях на практике используются такие знания математики, которые еще совсем недавно были не известны даже специалистам узкой области.

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СОЛНЕЧНЫЕ БАТАРЕИ: ПУТЬ К БЕСПРОВОДНОЙ ЭНЕРГИИ

Аннотация. Эта статья исследует роль солнечных батарей в обеспечении энергией беспроводных устройств связи. Рассматриваются современные технологии солнечных батарей, их применение в беспроводных коммуникационных устройствах и перспективы развития этого направления.

Ключевые слова: солнечные батареи, беспроводные устройства связи, энергоснабжение, энергоэффективность, источники возобновляемой энергии, технологии хранения энергии.

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SOLAR BATTERIES: THE WAY TO WIRELESS ENERGY

Abstract. This article investigates the role of solar batteries in providing energy for wireless communication devices. Modern technologies of solar batteries, their application in wireless communication devices and prospects of development of this direction are considered.

Keywords: Solar batteries, Wireless communication devices, Energy supply, Energy efficiency, Renewable energy sources, Energy storage technologies.

Введение. Солнечные батареи стали символом прогресса в сфере энергетики, обещая не только уменьшить зависимость от ископаемых топлив, но и привести к экологически чистым источникам энергии. В последние десятилетия солнечные батареи нашли широкое применение в различных областях, включая беспроводные технологии связи. Этот переход к использованию солнечной энергии в беспроводных устройствах связи не только способствует уменьшению углеродного следа, но и

увеличивает автономию таких устройств, что особенно важно в удаленных районах или в условиях, где доступ к электросети ограничен. В данной статье мы рассмотрим современные технологии солнечных батарей, их применение в беспроводных устройствах связи и перспективы этого направления развития.

Технологии солнечных батарей:

Технологии солнечных батарей продолжают развиваться, обеспечивая более эффективное преобразование солнечной энергии в электрическую. Вот несколько ключевых технологий:

Кристаллический кремний (c-Si): Это одна из наиболее распространенных технологий солнечных батарей. Она основана на использовании кремниевых кристаллов, которые обеспечивают высокую степень эффективности и долговечности.

Тонкопленочные солнечные батареи: Эти батареи создаются нанесением тонкого слоя фотоактивного материала на подложку. Такие батареи могут быть гибкими и легкими, что открывает новые возможности для их применения в различных приложениях.

Перовскитовые солнечные элементы: Перовскиты - это относительно новый класс материалов, обладающих высокой поглощающей способностью к солнечному свету. Солнечные батареи на основе перовскитовых материалов обещают высокую эффективность при сниженной стоимости производства.

Многokrисталлический кремний (mc-Si): Эта технология использует кристаллы кремния большего размера, чем в случае однокрystalлического кремния. Она обеспечивает более низкую стоимость производства по сравнению с однокрystalлическим кремнием при приемлемой эффективности.

Применение в беспроводных устройствах связи:

Применение солнечных батарей в беспроводных устройствах связи имеет множество преимуществ и открывает новые возможности для эффективного функционирования таких устройств. Вот несколько основных способов использования солнечных батарей в беспроводных устройствах связи:

Мобильные телефоны: Солнечные батареи могут использоваться для зарядки мобильных телефонов, особенно в ситуациях, когда доступ к электричеству ограничен. Это особенно актуально для пользователей, находящихся в отдаленных районах или в путешествиях.

Беспроводные рации: Солнечные батареи могут быть использованы для питания беспроводных раций, используемых в экспедициях, походах или во время чрезвычайных ситуаций. Это обеспечивает дополнительную автономию и увеличивает возможность использования раций в труднодоступных местах.

Датчики IoT: Множество устройств Интернета вещей (IoT) используются для сбора данных о среде, мониторинга параметров и передачи информации без проводных подключений. Солнечные батареи позволяют таким устройствам работать в автономном режиме, что особенно важно в случае развертывания датчиков в удаленных местах или на больших расстояниях.

Беспроводные точки доступа: В сетях связи, где требуется поддержание беспроводной связи на открытых пространствах или в удаленных районах, солнечные батареи могут быть использованы для питания беспроводных точек доступа. Это позволяет расширить зону покрытия сети и обеспечить связь в местах, где нет доступа к электросети.

Уличные камеры видеонаблюдения: Уличные камеры видеонаблюдения, используемые для обеспечения безопасности на улицах и в общественных местах, могут быть питаемы солнечными батареями. Это позволяет установить камеры в любом месте без необходимости проводить кабельное электроснабжение.

Перспективы развития:

Перспективы развития применения солнечных батарей в беспроводных устройствах связи обещают быть увлекательными и привлекательными. Вот несколько ключевых направлений, которые могут определить будущее этой технологии:

Повышение эффективности: Одним из основных направлений развития является увеличение эффективности солнечных батарей. Исследования в области новых материалов и технологий производства направлены на создание более эффективных солнечных элементов, способных обеспечить высокий выход энергии даже при низком освещении.

Улучшение хранения энергии: Одним из ключевых ограничений солнечных батарей является их неспособность хранить энергию для использования в ночное время или в условиях недостаточной солнечной инсоляции.

Интеграция с другими источниками энергии: В дополнение к солнечной энергии, беспроводные устройства связи могут использовать другие возобновляемые источники энергии, такие как ветроэнергия или гидроэнергия. Интеграция различных источников энергии может обеспечить надежное и устойчивое энергоснабжение даже в условиях переменной природы.

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АНАЛИЗ И ПРОГНОЗ РАЗВИТИЯ РЫНКА ВВОЗИМЫХ ИНОМАРОК НА ТАМОЖЕННУЮ ТЕРРИТОРИЮ ЕВРАЗИЙСКОГО ЭКОНОМИЧЕСКОГО СОЮЗА

Аннотация. В статье рассматривается подход по повышению ввоза продукции автомобильной промышленности на таможенную территорию Евразийского экономического союза в условиях наложенных санкций на Российскую Федерацию. Анализируются пути решения ввоза продукции автомобилей по двум направлениям: развитие отечественного производства и налаживание поставок: увеличение объема импорта автомобилей из Китая. При этом важно сформировать правильную стратегию взаимодействия с азиатскими поставщиками, и не допустить при этом монополизации и перенасыщения российского рынка продукцией китайского производства.

Ключевые слова: автомобильная промышленность; параллельный импорт; производство; физические и юридические лица; таможенные пошлины.

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ANALYSIS AND FORECAST OF THE MARKET DEVELOPMENT OF IMPORTED FOREIGN CARS TO THE CUSTOMS TERRITORY OF THE EURASIAN ECONOMIC UNION

Abstract. The article considers an approach to improve the efficiency of importing automotive products into the customs territory of the Eurasian Economic Union in the context of sanctions imposed on the Russian Federation. The ways of solving the import of car products in two directions are analyzed: the development of domestic production and the establishment of supplies: an increase in the volume of car imports from China. At the same time, it is important to form the right strategy for interaction with Asian suppliers, and at the same

time prevent monopolization and oversaturation of the Russian market with Chinese-made products.

Keywords: automotive industry; parallel import; production; individuals and legal entities; customs duties.

Зарубежные транспортные средства занимают огромный сегмент российского автомобильного рынка. На сегодняшний день некоторые иностранные автомобильные компании приостановили ввоз запчастей, а также, и самих автомобилей на территорию РФ. В их числе крупнейшие до 2022 года компании-экспортеры автомобилей в Россию из недружественных ныне стран – Японии, США, Германии, Южной Кореи. В новых условиях торговли российские импортеры вынуждены искать новых поставщиков среди компаний дружественных стран, либо ввозить автомобили через страны ЕАЭС по схеме «параллельного импорта», обходя таким образом наложенные санкции.

На сегодняшний день таможенным законодательством РФ предусмотрены меры тарифного и нетарифного регулирования ввоза легковых автомобилей на территорию страны физическими и юридическими лицами. Важно отметить, что таможенные пошлины на ввоз автомобилей в Российскую Федерацию для юридических и физических лиц различны.

При ввозе автомобиля физическими лицами ставки таможенных пошлин дифференцируются в зависимости от возраста автомобиля и объема рабочего двигателя:

– для новых автомобилей иностранного производства, с момента выпуска которых прошло не более 3 лет, действуют комбинированные ставки таможенных пошлин, которые зависят от таможенной стоимости и объема двигателя (адвалорная часть ставки неизменна, специфическая увеличивается по мере роста объема рабочего двигателя);

– для бывших в употреблении автомобилей установлены специфические ставки таможенных пошлин, которые зависят от объема двигателя (для автомобилей, с момента выпуска которых прошло более 5 лет ставки выше) [1].

Для юридических лиц, а также индивидуальных предпринимателей, ввозящих автомобиль в целях получения материальной выгоды, таможенные пошлины определяются Единым таможенным тарифом ЕАЭС и зависят от года выпуска, типа и объема рабочего двигателя.

В таблице 1 представлена сравнительная характеристика ставок таможенных пошлин при ввозе автомобилей, для физических и юридических лиц.

Таблица 1 – Ставки таможенных пошлин при ввозе легковых автомобилей для физических и юридических лиц

Таможенные ставки для физических лиц на автомобили возрастом менее 3 лет						
Стоимость автомобиля	до 8500 евро	до 16700 евро	до 42300 евро	до 84500 евро	до 169000 евро	свыше 169000 евро
Таможенная пошлина	54%, но не менее 2.5 евро/см ³	48%, но не менее 3.5 евро/см ³	48%, но не менее 5.5 евро/см ³	48%, но не менее 7.5 евро/см ³	48%, но не менее 15 евро/см ³	48%, но не менее 20 евро/см ³
Таможенные ставки для физических лиц на автомобили возрастом старше 3 лет						
-	до 1000 см ³	от 1001 до 1500 см ³	от 1501 до 1800 см ³	от 1801 до 2300 см ³	от 2301 до 3000 см ³	Свыше 3001 см ³
От 3 до 5 лет	1.5 евро/см ³	1.7 евро/см ³	2.5 евро/см ³	2.7 евро/см ³	3 евро/см ³	3.6 евро/см ³
Старше 5 лет	3 евро/см ³	3.2 евро/см ³	3.5 евро/см ³	4.8 евро/см ³	5 евро/см ³	5.7 евро/см ³
Таможенные ставки для юридических лиц на автомобили с бензиновыми двигателями						
-	до 1000 см ³	от 1001 до 1500 см ³	от 1501 до 1800 см ³	от 1801 до 2300 см ³	от 2301 до 3000 см ³	Свыше 3001 см ³
до 3 лет	15%	15%	15%	15%	15%	12,5%
от 3 до 5 лет	20%, но не менее 0.36 евро/см ³	20%, но не менее 0.4 евро/см ³	20%, но не менее 0.36 евро/см ³	20%, но не менее 0.44 евро/см ³	20%, но не менее 0.44 евро/см ³	20%, но не менее 0.8 евро/см ³
от 5 до 7 лет	20%, но не менее 0.36 евро/см ³	20%, но не менее 0.4 евро/см ³	20%, но не менее 0.36 евро/см ³	20%, но не менее 0.44 евро/см ³	20%, но не менее 0.44 евро/см ³	20%, но не менее 0.8 евро/см ³
от 7 лет	1.4 евро/см ³	1.5 евро/см ³	1.6 евро/см ³	2.2 евро/см ³	2.2 евро/см ³	3.2 евро/см ³
Таможенные ставки для юридических лиц на автомобили с дизельными двигателями						
-	до 1500 см ³		от 1501 до 2500 см ³		2501 см ³ и выше	
до 3 лет	15%		15%		15%	
от 3 до 5 лет	20%,		20%,		20%, но не менее 0.8 евро/см ³	

	но не менее 0.32 евро/см ³	но не менее 0.4 евро/см ³	
от 5 до 7 лет	20%, но не менее 0.32 евро/см ³	20%, но не менее 0.4 евро/см ³	20%, но не менее 0.8 евро/см ³
от 7 лет	1.5 евро/см ³	2.2 евро/см ³	3.2 евро/см ³

Помимо представленных выше таможенных пошлин при ввозе легковых автомобилей в РФ в совокупный таможенный платеж (СТП) включается акциз, НДС и утилизационный сбор (величина которого также различна для юридических и физических лиц). В дальнейшем рассмотрении была проведена оценка воздействия совокупного таможенного платежа на ввоз автомобилей в условиях санкций физическими и юридическими лицами с учетом переориентации на относительно новые для россиян автомобильные бренды и популярные бренды по схеме «параллельного импорта» [1].

Для начала, на примере легковых автомобилей с объемом двигателя более 1000, но не более 1500 кубических см, сравним стоимость при ввозе в РФ схожих по характеристикам (объему двигателя, мощности двигателя, типу кузова), автомобили Toyota Allion из Японии (недружественной страны) и JAC J7 из Китая для физических и юридических лиц [3].

Таблица 2 – Расчет ввозной цены автомобиля при его импорте в РФ из Японии и Китая для физических лиц [6]

Код ТН ВЭД ЕАЭС	8703 21	
Наименование	ТС с объемом двигателя более 1000, но не более 1500 кубических см.	
Страна	Япония	Китай
Марка автомобиля	Toyota	Jac
Модель автомобиля	Allion	J7
Год производства автомобиля	2021	2021
Классификационные признаки	- объем двигателя 1496 куб. см.; - мощность двигателя 109 л.с.; - тип кузова седан.	- объем двигателя 1487 куб. см.; - мощность двигателя 136 л.с.; - тип кузова седан.
Цена без учета таможенных платежей	853 000 рублей	526 000 рублей
Пошлина	48 %, но не менее 5,5 евро за 1 куб. см. рабочего объема двигателя	48 %, но не менее 3,5 евро за 1 куб. см. рабочего объема двигателя
Совокупный таможенный платеж	763 000 рублей	484 450 рублей
Ввозная цена	1 616 100 рублей	1 010 450 рублей

Таблица 3 – Расчет ввозной цены автомобиля при его импорте в РФ из Японии из Китая для юридических лиц [6]

Код ТН ВЭД ЕАЭС	8703 21	
Наименование	ТС с объемом двигателя более 1000, но не более 1500 кубических см.	
Страна	Япония	Китай
Марка автомобиля	Toyota	Jac
Модель автомобиля	Allion	J7
Год производства автомобиля	2021	2021
Классификационные признаки	- объем двигателя 1496 куб. см.; - мощность двигателя 109 л.с.; - тип кузова седан.	- объем двигателя 1487 куб. см.; - мощность двигателя 136 л.с.; - тип кузова седан.
Цена без учета таможенных платежей	863 000 рублей	526 000 рублей
Пошлина	25 %, но не менее 1,1 евро за 1 куб. см. рабочего объема двигателя	25 %, но не менее 1,1 евро за 1 куб. см. рабочего объема двигателя
Совокупный таможенный платеж	431 150 рублей	284 000 рублей
Ввозная цена	1 284 150 рублей	810 000 рублей

Представленные расчеты позволяют сделать вывод о том, что автомобили от китайских производителей при их ввозе в РФ значительно дешевле японской марки, причем ввозная стоимость автомобиля для юридических лиц меньше, чем для физических лиц. Исходя из этого, можно говорить о возможной переориентации российского рынка легковых автомобилей на китайских поставщиков в случае частичного либо полного ухода японских авто с отечественного рынка.

Как отмечалось раньше, одним из вариантов обхода санкций на ввоз автомобилей в РФ может стать параллельный импорт. В целом, параллельный импорт был запрещен в Российской Федерации с 2009 года. Официально, без позволения правообладателя бренда, ввоз продукции для юридических лиц стал нелегальным. Однако, в мае 2022 года, когда санкции против РФ были введены в огромном количестве, Минпромторг России снял полный запрет с параллельного импорта и составил перечень товаров, разрешенных к ввозу на территорию РФ без разрешения правообладателя [4].

В этом списке появились и марки автомобилей, такие как Land Rover, Mercedes – Benz, Lexus и другие известные автомобильные бренды. Помимо этого, в Россию стало возможно ввозить автомобили и запчасти марок Toyota, Nissan, BMW и другие, через третьи страны путем параллельного импорта [2]. Таким образом, можно рассмотреть возможность ввоза японского автомобиля Toyota Allion, произведенного в Китае, в Россию. В

Китае данный автомобиль с завода стоит 1 400 000 рублей. При ввозе такого автомобиля в Россию с учетом пошлин, НДС, утилизационного сбора и прочих таможенных платежей, ввозная цена составит 2 400 000 рублей, что делает данный автомобиль слишком дорогим по сравнению с китайскими автомобильными марками.

На данный момент российские и антироссийские санкции негативно отражаются на показателях внешней торговли России в целом, и импорта автомобилей в частности. Цены на импортные автомобили растут. Так, в марте 2022 года на фоне нестабильности курса рубля иномарки подорожали в среднем более чем на 40 %. Однако, исходя из проведенного анализа таможенно-тарифного и нетарифного регулирования ввоза легковых автомобилей на примере обхода санкций, наложенных на РФ, можно отметить, что у России сохраняются варианты для заполнения автомобильного рынка путем сотрудничества с дружественными [1] странами.

Необходимо отметить, что сложившаяся ситуация может дать России толчок к развитию импортозамещения и распространению отечественного автопрома на рынке, а также, укреплению сотрудничества с дружественными странами, которые смогут заполнить российский рынок автомобилей своими транспортными средствами [2].

Для этого необходимо проводить системную работу по нескольким направлениям:

Первое направление – развитие отечественного производства и налаживание поставок. Государство сейчас очень активно поддерживает отечественных производителей. В 2022 году господдержка позволила реализовать 75 тыс. машин по льготным кредитам и лизингу – это около 10% всего объема новых транспортных средств. Как сообщил замминистра промышленности и торговли РФ Альберт Каримов, по госпрограммам стимулирования спроса уже продано 20 тысяч автомобилей. Цифры подтверждают, что меры достаточно эффективны и их нужно масштабировать, расширяя список включенных в программу субсидирования моделей.

Второе направление – увеличение объема импорта автомобилей из Китая.

При этом важно сформировать правильную стратегию взаимодействия с азиатскими поставщиками. Это, с одной стороны, позволило бы восполнить дефицит, а с другой – не допускала бы монополизации и перенасыщения российского рынка продукцией китайского производства.

Следовательно, необходимо учитывать оба направления одновременно и спрогнозировать в каком соотношении они должны находиться.

Для этого воспользуемся производственной функцией Кобба-Дугласа. К входным параметрам отнесем объем импорта автомобилей в денежном эквиваленте K и объемы собственного производства L . В качестве выходного параметра Y используем суммы таможенных платежей, поступающих в бюджет [6].

Таблица 3 – Начальные данные для построения модели

№	Квартал	Импорт автомобилей K , млрд. долл.	Собственное производство автомобилей L , <i>шт.</i>	Суммы таможенных платежей, поступающих в бюджет Y , <i>млрд. руб.</i>
1	1 кв. 2019	699397,4	419759	1308,6
2	2 кв. 2019	806189,1	450224	1420,3
3	3 кв. 2019	664599,9	412358	1448,4
4	4 кв. 2019	782939,0	441035	1551,6
5	1 кв. 2020	462725,8	357310	1187,8
6	2 кв. 2020	327590,1	221944	853,9
7	3 кв. 2020	474454,6	383744	1175,2
8	4 кв. 2020	672531,0	475542	1534,9
9	1 кв. 2021	681809,9	406362	1329,9
10	2 кв. 2021	870974,4	423251	1630,8
11	3 кв. 2021	820548,2	335239	1847,3
12	4 кв. 2021	871048,9	405558	2348,0

На первом этапе имеются исходные статистические данные. Используя эти данные необходимо построить производственную функцию Кобба-Дугласа степенного вида:

$$Y = A \times K^{\alpha^1} \times L^{\alpha^2}$$

где Y , L и K у нас исходные данные.

α^1 и α^2 – коэффициенты эластичности

Имеющуюся производственную функцию преобразуем в линейный вид. Для этого логарифмируем и правую и левую часть функции с помощью натурального логарифма и записываем правую часть как сумму логарифмов.

В результате чего получаем линейную функцию и находим K' , L' , Y' .

Таблица 4 – Вспомогательная таблица для преобразованных данных

№	Квартал	K'	L'	Y'
1	1 кв. 2019	699397,4	419759	1308,6
2	2 кв. 2019	806189,1	450224	1420,3
3	3 кв. 2019	664599,9	412358	1448,4
4	4 кв. 2019	782939,0	441035	1551,6
5	1 кв. 2020	462725,8	357310	1187,8
6	2 кв. 2020	327590,1	221944	853,9
7	3 кв. 2020	474454,6	383744	1175,2
8	4 кв. 2020	672531,0	475542	1534,9
9	1 кв. 2021	681809,9	406362	1329,9
10	2 кв. 2021	870974,4	423251	1630,8
11	3 кв. 2021	820548,2	335239	1847,3
12	4 кв. 2021	871048,9	405558	2348,0

После того как мы определили коэффициенты эластичности и произвели обратную линеаризацию можем построить график, на котором отображены исходные значения Y и расчетные. Если построенная производственная функция Кобба-Дугласа будет адекватна исходным данным, тогда наш Y расчет должен максимально близко соответствовать Y , что мы и видим на экране.

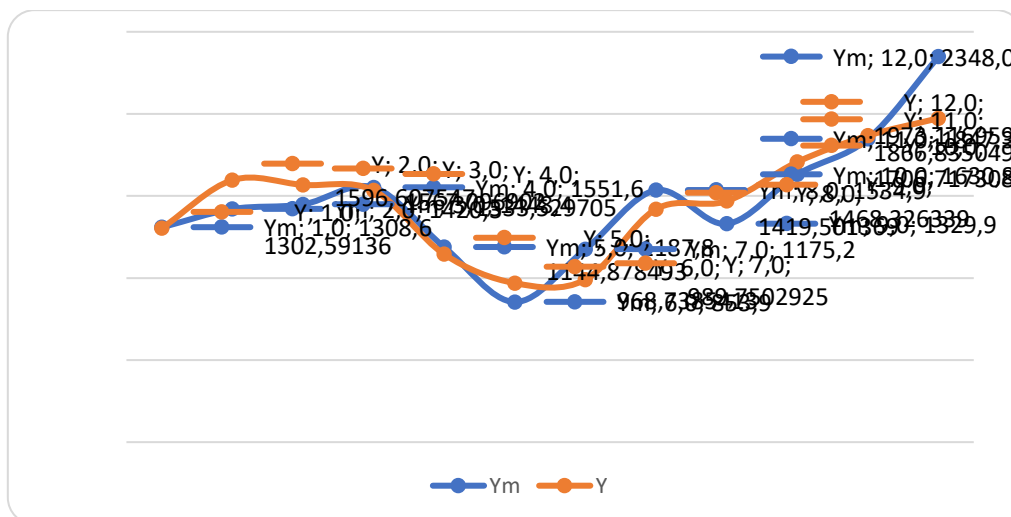


Рисунок 4 – Графическое сопоставление модельных расчетов доходов федерального бюджета с реальными данными (2010 – 2019 гг.), млрд. руб. (источник: составлено автором)

Однако визуально мы все равно не можем достоверно оценить результаты, поэтому мы произведем оценку адекватности полученной производственной функции.

Для этого мы используем коэффициент детерминации, который показывает на сколько модель соответствует реальным данным. В данном случае значение должно быть от 0 до 1, соответственно, чем больше, тем лучше. В нашем случае он равен 0,81, что говорит о достаточно высокой достоверности.

Также используем критерий Фишера, который показывает качество регрессионной модели в целом по их параметрам. Для этого выполняется сравнение получаемого F и F табличного. При сравнении с табличной F выбираем вероятность ошибки, обычно равной 0,01, т.е. мы хотим узнать достоверность модели с точностью 99%. В итоге значение F должно быть больше F табличного, что также подтвердилось в нашем случае.

После чего мы можем произвести экономическую интерпретацию полученных результатов. Так, с увеличением объема импорта зарубежных автомобилей на 1% рост доходной части федерального бюджета составит 0,88%. При аналогичном росте (на 1%) объема собственного производства автомобилей будет наблюдаться уменьшение доходов бюджета на 0,37%.

В заключении мы можем предположить к какому соотношению входных параметров необходимо стремиться, чтобы достигнуть максимальных значений сумм таможенных платежей, поступающих в бюджет, при этом, не навредив отечественному производителю. Для этого находим максимальное значение Y и предполагаем, что на каждый произведенный автомобиль в России должно приходиться не более двух импортированных.

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ЎЗБЕКИСТОН РЕСПУБЛИКАСИДА СОЛИҚ МАЪМУРЧИЛИГИ ВА СОЛИҚ ТИЗИМИ СТРАТЕГИЯСИНИ ТАКОМИЛЛАШТИРИШ МАСАЛАЛАРИ

Аннотация. Мамлакатларнинг иқтисодий сиёсатида солиқ сиёсати, солиқ стратегияси муҳим роль ўйнайди. Солиқ сиёсати давлатнинг бошқа иқтисодий сиёсатининг йўналишларига кучли узвий боғлиқлиги билан бир қаторда, уларга таъсир қилиб боради. Солиқ сиёсатини тўғри ишлаб чиқиш ва унинг стратегик ҳамда тактик йўналишларини белгилаб олиш ўта долзарб масала ҳисобланади. Мазкур мақолада солиқ сиёсатининг мазмуни, унинг стратегияси ва тактикаси ҳамда бугунги кунда Ўзбекистон солиқ сиёсатининг устувор йўналишлари таҳлил қилинади.

Калит сўзлар. Солиқ, солиқ муносаблари, солиқ сиёсати, солиқ сиёсати стратегияси, солиқ сиёсати тактикаси, солиқ ставкаси, солиқ сиёсати йўналишлари, давлат бюджети.

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ISSUES OF IMPROVING TAX ADMINISTRATION AND TAX SYSTEM STRATEGY IN THE REPUBLIC OF UZBEKISTAN

Abstract. Tax policy and tax strategy play an important role in the economic policy of countries. The tax policy is closely related to other economic policies of the state and influences them. Correct development of tax policy and determination of its strategic and tactical directions is a very urgent issue. This article analyzes the content of the tax policy, its strategy and tactics, as well as the priority directions of the tax policy of Uzbekistan today.

Keywords. Tax, tax attitudes, tax policy, tax policy strategy, tax policy tactics, tax rate, tax policy directions, state budget.

Кириш

Давлатнинг иқтисодий сиёсатида солиқ стратегияси катта ўринга эга бўлиб келган. Солиқ стратегияси мамлакатнинг бошқа стратегиялари йўналишларига чамбарчам боғлиқ. Мамлакатнинг солиқ стратегиясини пухта, таҳлилларга асосланган ҳолда мукамал қилиб ишлаб чиқиш ва йўналишларини белгилаб олиш доим долзарб ҳисобланиб келинган. Солиқ

стратегиясини ишлаб чиқиш ва амалга ошириш давлатнинг иқтисод йўналишидаги органлари билан мувофиқлаштиришни талаб этади. Шу сабабли, солиқ стратегиясини ишлаб чиқиш, уни амалга ошириш ва унинг самарадорлиги баҳолаш ўзига хос мураккаб жараён бўлиб, унинг йўналишларини илмий-назарий жиҳатдан тадқиқ қилиш долзарб масалалардан саналади.

Мавзуга оид адабиётлар таҳлили

Давлатнинг солиқ сиёсатини ишлаб чиқиш ва уни амалга оширишнинг стратегик ва тактик йўналишлари билан боғлиқ илмий тадқиқотлар узоқ тарихга бориб тақалади. Пул жамғармалари маблағларидан самарали фойдаланиш бўйича махсус бўлинмалар ташкил этилиб, уларнинг фаолиятини ташкил этиш масалалари, давлат ғазнасини тўлдириш, унинг назорати масалалари кенг ўрин олиб келган. Бу масалалар борадаси бир қанча олимлар илмий тадқиқотлар олиб борган. Жумладан, хорижлик иқтисодчи олимлардан А.Смит, Д.Рикардо, У.Петти, К.Макконнел, Г.Мэнкью, Н.Тургенев, В.Твердохлебов, В.Глухов, Л.Гончаренко, Д.Тихонов, Д.Черник, Т.Юткинларнинг илмий асарларида тадқиқ этилган.

Хусусан, рус олимлари Н.Тургенев, В.Твердохлебовлар давлатнинг ғазнасини маблағлар билан таъминлашда солиқ мажбуриятларини белгилаш билан боғлиқ солиқ сиёсатини ташкил этиш механизмларига оид илмий тадқиқотларни амалга оширган бўлса, Д.Черник, Т.Юткинлар солиқ сиёсатининг стратегияси, тактикаси, солиқ сиёсатини йўналишларини амалга оширишда давлатнинг позицияси нималардан иборат бўлиши юзасидан илмий ишлар олиб борган.

Ўзбекистонлик иқтисодчи олимлар Э.Гадоев, Т.Маликов, О.Олимжонов, Х.Собиров, Ш.Тошматов, О.Абдурахманов, Б.Тошмуродова, Н.Хайдаров, А.Хайрутдинов, Қ.Яхёев, Н.Кўзиева каби олимларнинг илмий ишларида солиқ маъмурчилигини янада такомиллаштириш, унинг назарий ва илмий-услубий жиҳатлари ўрганилган.

Мамлакатимиз олимларидан Э.Гадоевнинг илмий тадқиқотларида ҳар бир солиқ тури бўйича солиқ сиёсати йўналишлари илмий-услубий жиҳатдан очиқ берилган бўлса, С.Худойқуловнинг илмий тадқиқот ишларида бюджет даромадларини шакллантиришда даромадларнинг прогнозлаштириш масаласи қанчалик муҳим касб этиши асослаб берилган.

Тадқиқот методологияси.

Мақолада мантикий усул, таҳлил ва синтез, норматив ёндашув, тизимли ва қиёсий таҳлил усулларида фойдаланилган.

Таҳлил ва натижалар муҳокамаси.

Ҳаракатлар стратегияси шароитидаги дастлабки Президент фармонларидан бири бўлган “Солиқ маъмуриятчилигини тубдан такомиллаштириш, солиқлар ва бошқа мажбурий тўловларнинг йиғилувчанлигини ошириш чора-тадбирлари тўғрисида”ги Ўзбекистон

Республикаси Президентининг 2017 йил 18 июлдаги ПФ-5116-сон фармони ҳам айнан солиқларнинг йиғилувчанлигини ошириш ҳамда солиқ маъмуриятчилигини такомиллаштиришга қаратилган эди.

Солиқ маъмуриятчилигини доимий такомиллаштириш ҳозирги тараққиёт стратегияси шароитида ҳам солиқ сиёсатининг устувор йўналиши сифатида белгилаб олинганлиги кўриш мумкинки, бу тўртинчи йўналиш қилиб белгиланган “Солиқ маъмуриятчилигини такомиллаштириш” борасидаги тактик йўналишда кўриш мумкин.

Солиқ органлари томонидан бугунги кунда Ўзбекистон Республикаси Президентининг “Солиқ маъмуриятчилигини такомиллаштириш бўйича қўшимча чора-тадбирлар тўғрисида” 2019 йил 10 июлдаги ПҚ-4389-сон қарори билан тасдиқланган солиқ маъмуриятчилигини такомиллаштириш Стратегияси доирасида белгиланган чоралар амалга оширилмоқда.

Солиқ тизимини рақамлаштириш жараёнларини давом эттириш, шунингдек, солиқ мажбуриятларини бажаришда солиқ тўловчиларга қўшимча қулайликлар яратиш мақсадида ҳамда Ўзбекистон Республикаси Президентининг 2023 йил 11 сентябрдаги ПФ-158-сон Фармони билан тасдиқланган “Ўзбекистон – 2030” стратегияси талабларига мувофиқ ҳамда солиқ тўловчиларга янада қулай шароитлар яратиш, рақамлаштириш жараёнларини давом эттириш, солиқ органлари фаолиятида шаффофликни таъминлаш ҳамда инсон ресурсларидан фойдаланишнинг самарадорлигини ошириш мақсадида янги стратегияни ишлаб чиқиш зарурияти юзага келмоқда.

Бугунги кунда солиқ тизимида солиқ идоралари салоҳиятидан фойдаланиш талаб даражасида эмаслиги, ишбилармонлик муҳитини ва фаоллигини ошириш ва тадбиркорларни қўллаб-қувватлашга тўсқинлик қилаётган бир қанча муаммолар мавжудки, ушбу муаммоларни бартараф этиш орқали солиқ ислохотларини янада юксак даражага кўтариш имконияти юзага келади:

- солиқ тўловчиларга кўрсатилаётган хизматларнинг бугунги кун талабига тўлиқ жавоб бермаслиги, солиқ тўловчиларга хизмат кўрсатишнинг ягона услубиёти, стандарти ишлаб чиқилмаганлиги, кўрсатилаётган солиқ хизматлари сифатини баҳолаш ва мониторинг қилиш тизими йўқлиги;

- солиқ идораларининг солиқ тўловчилар томонидан солиқ тўлашдан бўйин товлаш схемаларидан фойдаланишнинг кенг тарқалган амалиётига қарши курашиш бўйича ишлари етарли даражада ташкил этилмаётганлиги солиқ интизомининг пасайишига, яширин иқтисодиёт қўламининг сақланиб қолишига ва инсофли тадбиркорлар учун бизнес юритиш шартларининг ёмонлашишига олиб келиши;

- бошқарув ва инсон ресурсларини ривожлантиришнинг замонавий усуллари жорий этиш билан бирга параллел равишда коррупцияга қарши комплаенс-назорат сиёсатини кучайтирилмаганлиги, ходимлар учун,

айниқса, туман ва шаҳарларнинг таркибий бўғинларида муносиб меҳнат шароитларини яратилмаганлиги;

■ солиқ назорати воситаларини фақат инсофсиз солиқ тўловчиларга нисбатан қўлланилмаётганлиги, инсофли солиқ тўловчилар тоифасига ўтиш учун рағбатлантириш тизими, солиқ органлари фаолиятида катта ҳажмдаги маълумотларни бошқариш механизмларининг мавжуд эмаслиги.

Таклиф этилаётган янги Стратегиянинг асосий мақсади солиқ тўловчиларга хизмат кўрсатишни тубдан ўзгартирувчи замонавий технологик ечимлар, солиқ тўловчиларга хизмат кўрсатишда инсон омилисиз усулларни жорий этиш ҳамда солиқ маслаҳатлари беришда “Солиқчи-қўмакчи” тамойили асосида янгича ёндашувни жорий этишдан иборат бўлиши лозим.

Хорижий давлатларнинг солиқ органларининг стратегияларида белгиланган асосий йўналишлар таҳлил қилиб чиқилди.

Грузия Молия вазирлигининг “Ички даромад хизмати”нинг 2021-2024 йилларга мўлжалланган солиқ ва солиқларни яхшилашга қаратилган стратегияси ишлаб чиқилган бўлиб, ушбу стратегияга асосан қуйидаги йўналишлар белгилаб олинган:

1. Солиқ тўловчи ҳамда давлат манфаатларини ҳисобга олган ҳолда хизматларни ишлаб чиқиш;

2. Институционал салоҳиятни ривожлантириш ва барқарорликни таъминлаш;

3. Халқаро ҳамкорлик;

Россия Федерал солиқ хизматининг 2021-2023 йилларга мўлжалланган стратегиясида:

1. Солиқ тўловчиларга кўрсатиладиган хизматларни ошириш, шу жумладан рақамли тизимини яратиш ва Ҳукумат билан ҳамкорликда бизнес харажатларини камайтириш;

2. Давлат бошқаруви харажатларини камайтириш;

3. Солиқ маъмурияти самарадорлигини юқори даражада таъминлаш, шу жумладан рақамли трансформация орқали яширин иқтисодиётни камайтириш;

4. Ахборот тизимлари, ахборот-технологик инфратузилманинг юқори даражадаги ишончлилиги ва хавфсизлигини таъминлаш;

5. Барча бизнес шароитлари учун тенг шароитларни таъминлаш;

6. Кадрлар салоҳиятини мустаҳкамлаш ва такомиллаштириш;

Арманистон Давлат даромадлари қўмитасининг 2021-2025 йилларда ривожлантириш ва маъмурчилиги стратегияси.

1. Бошқарув тизимини такомиллаштириш, солиқ тўловчиларга рақамлаштирилган хизматлар кўрсатиш;

2. Маъмурчиликнинг самарадорлигини ошириш, даромадни ошириш, хуфиёна иқтисодиётни (сояларни) камайтириш;

3. Корхоналарни модернизация қилиш, инфратузилмани куриш;

4. Жамоатчилик билан мулоқот даражасини ошириш;
5. Инсон ресурсини бошқаришнинг замонавий тизимини жорий этиш.
Беларусь Республикаси солиқ органлари фаолиятини 2021-2023 йилларда ривожлантириш стратегиясида:

1. Солиқ органларининг замонавий ИТ инфратузилмаси ривожлантириш.

2. Рискларни бошқариш тизимига асосланган самарали солиқ маъмурчилиги ва назорати.

3. Солиқ тўловчилар томонидан солиқ мажбуриятларини ихтиёрий бажариш учун оддий ва қулай шароитлар яратиш.

4. Корпоратив бошқарувнинг самарали тизимини яратиш.

Қирғизистон солиқ хизматининг 2023-2025 йилларга мўлжалланган стратегиясида бир қатор натижаларга эришадиган 7 та устувор йўналишни белгилайди:

1. Рақамлаштириш: маълумотлар архитектураси ва таҳлилинини яратиш;

2. Аҳолининг солиқ саводхонлиги ва маданиятини ошириш;

3. Солиқ тўловчиларга хизмат кўрсатишни янги босқичга олиб чиқиш;

4. Ички ва ташқи органлар билан ўзаро ҳамкорлик қилиш;

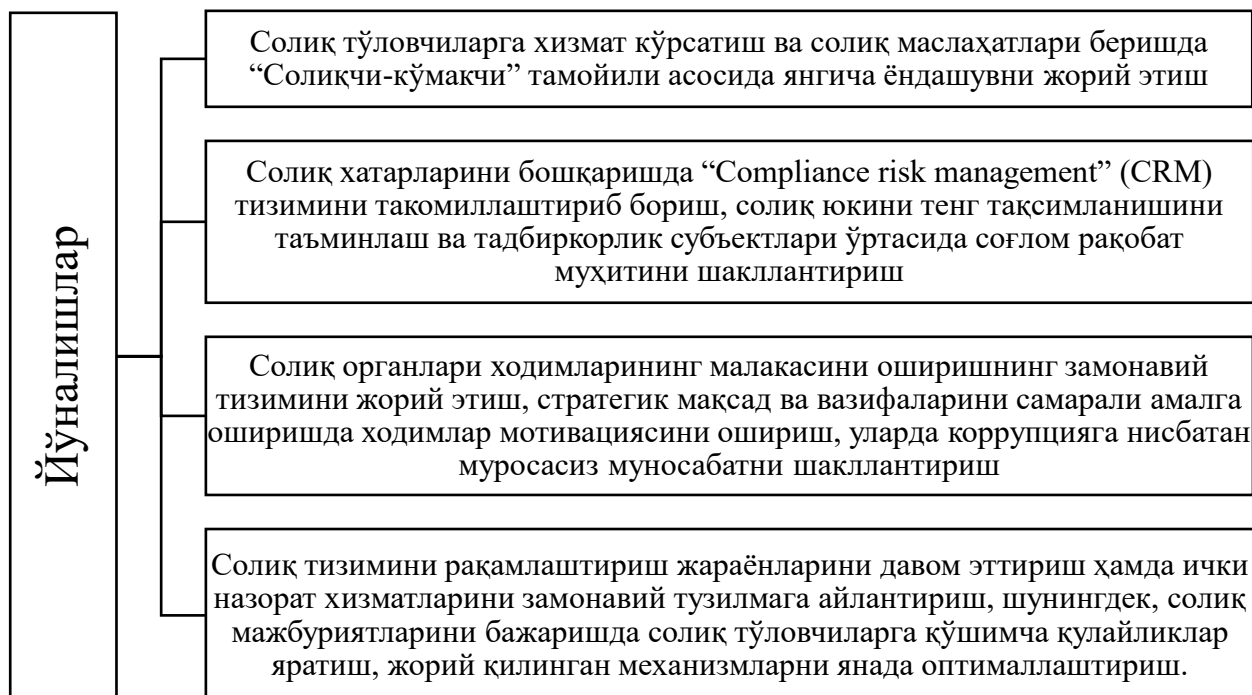
5. Инсон ресурсларини ривожлантириш;

6. Солиқ маъмурчилигини модернизация қилиш;

7. Солиқ хизмати имиджини қўллаб-қувватлаш ва ривожлантириш.

Юқоридаги хорижий давлатларнинг солиқ сиёсати ва ислохотларини амалга ошириш стратегиялари таҳлили шуни кўрсатмоқдаки, аксар давлатларда солиқ стратегиясида солиқ тўловчиларга хизмат кўрсатиш сифатини яхшилаш, уларга солиқ мажбуриятларини бажаришда кўмаклашиш, солиқ ҳатарларини бошқариш тизимини янада мукамаллаштириш, тадбиркорлик субъектлари ўртасида соғлом муҳитни ривожлантириш, хуфиёна иқтисодга қарши курашиш, солиқ идоралари ходимларини малакасини ошириш, тизимдаги мавжуд ахборот технологияларини янада ривожлантириш масалалари стратегиянинг асосий мазмунида шаклланган.

Хорижий давлатлар солиқ ислохотлари амалиётни таҳлил қилиш натижалари шуни кўрсатмоқдаки, ҳозирги ривожланиш босқичидаги солиқ ислохотлари ва сиёсати стратегиясини янада ривожлантириш бўйича солиқ сиёсатининг асосий устувор йўналишлари ва вазифалари йўналишлари ишлаб чиқилди.



1-чизма. Янгидан ишлаб чиқилиши таклиф этилаётган “Солиқ маъмурчилиги ва солиқ органларини ривожлантириш” стратегиясининг асосий йўналишлари⁵⁵

1-чизма маълумотларидан кўришимиз мумкинки, таклиф этилаётган солиқ стратегиясида солиқ тўловчиларга хизмат кўрсатиш, солиқ тўловчилар ўртасида соғлом муҳитни яратиш, солиқ юкини тенг тақсимлаш, солиқ идоралари ходимларининг малакасини ошириш ва ва тизимда коррупцияга қарши кураши, солиқ тизимини рақамлаштириш жараёнини янада ривожлантириш стратегиянинг асосий йўналиши қилиб белгиланган.

Ҳар бир амалга оширилиши кўзда тутилган стратегия натижадорлиги доимий равишда таҳлил қилиб борилиши лозим. Шу сабабли, амалга ошириладиган “Солиқ маъмурчилиги ва солиқ органларини ривожлантириш” стратегиясида қуйидаги кўрсаткичлар орқали амалга оширилаётган ислохотлар натижасини кўриш мумкин.

⁵⁵ Муаллиф ишланмаси

**“Солиқ маъмурчилиги ва солиқ органларини ривожлантириш”
стратегияси натижадорлигини аниқлаш
КЎРСАТКИЧЛАРИ56**

Т/р	Кўрсаткичлар номланиши
1	Солиқ тушумларининг ЯИМдаги улуши (фоиз)
2	Солиқ мажбуриятларини ихтиёрий равишда бажариш даражаси (фоиз)
3	Солиқ қарздорлигининг ҳисобот йили учун йиғилган солиқ тушумларига нисбати (фоиз)
4	Фаол солиқ тўловчи -юримдик шахсларнинг умумий солиқ тўловчилардаги улуши (фоиз)
5	Солиқ декларацияларини ўз вақтида топширувчи фаол солиқ тўловчилар улуши (фоиз)

Юқорида келтирилган кўрсаткичлар бевосита Ўзбекистон Республикасида амалга ошириладиган солиқ ислохотлари, солиқ сиёсати ва стратегиясини натижадорлигини кўрсатиб беради.

Хулоса ва таклифлар.

Хулоса қилиб шуни айтиш мумкинки, Республикаимизнинг янги тараққиёт стратегиясини амалга оширишда солиқ сиёсати ва унинг асосий йўналишлари 2017 йилда қабул қилинган Ҳаракатлар стратегиясида белгилаб берилган солиқ сиёсатининг стратегик йўналишларининг мантиқий ва узвий давоми сифатида белгилаб олинганлигини кўриш мумкин. Шу билан биргаликда бизнинг фикримизча, янгидан ишлаб чиқилиши таклиф этиладиган “Солиқ маъмурчилиги ва солиқ органларини ривожлантириш” стратегиясида қуйидагиларга эътибор қаратиш мақсадга мувофиқ деб ҳисоблаймиз:

биринчидан, солиқ идораларининг солиқ тўловчилар билан муносабатларни ўзгартириш, хизмат кўрсатишни янги босқичга олиб чиқиш орқали солиқ тўловчиларга хизмат кўрсатиш ва солиқ маслаҳатлари беришда янгича ёндашиш, солиқ тизимининг ижобий имиджини шакллантириш;

иккинчидан, яширин иқтисодиётга ёрдам берадиган шароитларни ва ҳуқуқбузарликларни бартараф этиш, солиқ тўлашдан бўйин товлаш йўналишлари ва схемаларини ўз вақтида аниқлаш ва ошкор қилиш чоратадбирларини амалга ошириш, солиқ маъмурчилигининг самарасиз усуллари билан боғлиқ харажатларни камайтириш, айрим функцияларни марказлаштириш орқали солиқ органлари тузилмасини янада

56 Муаллиф ишланмаси

оптималлаштириш, солиқ маъмурчилиги самарадорлигини ошириш мақсадида соҳавий тадқиқотлар ўтказиш ва қонун ҳужжатларидаги қарама-қаршиликларни бартараф этиш;

учинчидан, комплаенс-назоратни кучайтириш, ходимларда коррупциянинг намоён бўлиши ва уларга ҳомийлик қилишга мурасасизлик туйғусини шакллантириш, солиқ ходимларининг кадрлар салоҳиятини ривожлантириш, шунингдек, хизмат кўрсатиш жараёнларининг шаффофлигини ошириш бўйича ишларни давом эттириш.

тўртинчидан, солиқ органлари фаолиятини рақамлаштириш, бизнес-жараёнларни автоматлаштириш, бизнесни ташкил этиш харажатларини қисқартириш, рақобат муҳитини ривожлантириш ва тадбиркорлик фаолиятини юритиш учун қулай шарт-шароитларни яратиш, ҳалол тадбиркорлар меҳнатини рағбатлантириш, солиқ мажбуриятларини бажаришнинг қулай, аниқ, шунингдек, содда элементларини шакллантириш, замонавий технологиялар асосида автоматлаштирилган қарорлар қабул қилиш тартибини жорий этиш бўйича чора-тадбирларни амалга оширишни давом эттириш.

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ФАРМАКОЛОГИЧЕСКИЕ ИННОВАЦИИ В ПРОФИЛАКТИКЕ ОСЛОЖНЕНИЙ САХАРНОГО ДИАБЕТА ДЛЯ ЗРИТЕЛЬНОЙ СИСТЕМЫ: ОБЗОР СОВРЕМЕННЫХ ПОДХОДОВ

Аннотация. Сегодня сахарный диабет (СД) является одной из приоритетных медико-социальных проблем, что обусловлено эпидемической распространенностью и высокой инвалидизацией больных. Нарушение зрения — одно из инвалидизирующих проявлений СД. Так, в настоящее время лидирующей причиной слепоты среди населения трудоспособного возраста стала диабетическая ретинопатия (ДР) — позднее неспецифическое сосудистое осложнение СД.

Ключевые слова: обзор литературы, сахарный диабет, диабетическая ретинопатия, профилактика ретинопатии.

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PHARMACOLOGICAL INNOVATIONS IN THE PREVENTION OF COMPLICATIONS OF DIABETES MELLITUS FOR THE VISUAL SYSTEM: REVIEW OF MODERN APPROACHES

Abstract. Today, diabetes mellitus (DM) is one of the priority medical and social problems, which is due to the epidemic prevalence and high disability of patients. Visual impairment is one of the disabling manifestations of diabetes. Thus, currently the leading cause of blindness among the working-age population has become diabetic retinopathy (DR), a late nonspecific vascular complication of diabetes.

Key words: literature review, diabetes mellitus, diabetic retinopathy, prevention of retinopathy.

Введение: Несмотря на широкое внедрение для диагностики и лечения новых эффективных препаратов, инструментальных методов, ДР

по-прежнему остается главной причиной утраты зрения. Приводятся разные цифры распространенности ДР при сахарном диабете 1-го и 2-го типов в разных странах. У больных с недиагностированным СД 2, признаки ДР выявляются в момент диагностики заболевания у 7 — 30% пациентов. Причем, пролиферативная ДР не составляет у них большой проблемы, в противоположность СД 1, тогда как диабетическая макулопатия становится главной причиной ухудшения остроты зрения [1].

Базовым принципом лечения ДР является оптимальная компенсация СД и сопутствующих проблем: артериальной гипертензии и нефропатии, гиперлипидемии. Основным способом профилактики и замедления перехода от препролиферативной к следующим стадиям ДР служит строгий контроль уровня гликемии. В настоящее время оптимальным и наиболее перспективным методом инъекций инсулина пациентам с ДР представляется инсулиновая помпа, что объясняется рядом преимуществ, таких как более точная имитация физиологической секреции инсулина, возможность более точного контроля гликемии, значительное снижение риска возникновения острых и отдаленных осложнений СД и др. Факторы, способствующие прогрессированию диабетической ретинопатии (ДР), включают степень компенсации углеводного обмена, продолжительность диабета, возраст, артериальную гипертензию, нефропатию, беременность и курение. ДР характеризуется наличием специфических аномалий сосудов и тканей сетчатки, таких как изменение калибра и извитости ретинальных сосудов, микроаневризмы, кровоизлияния, отеки, экссудаты, новообразованные сосуды и глиальная пролиферация. Изучение морфологической картины ДР выявило утолщение базальной мембраны, потерю капиллярных перицитов, ацеллюлярность капилляров и нарушение перфузии кислорода, что приводит к развитию ишемии и гипоксии сетчатки [2].

Сетчатка может быть особенно чувствительна к повреждению из-за высокой скорости утилизации глюкозы и кислорода, а также активного гликолитического и анаэробного пути метаболизма глюкозы. Хроническая гипергликемия играет ключевую роль в развитии ДР, и данные многоцентровых исследований показывают, что поддержание нормогликемии значительно снижает риск микрососудистых осложнений. Результаты Diabetes Control and Complication Trial (DCCT, 1993) свидетельствуют о снижении риска развития диабетической ретинопатии на 76% при удовлетворительном гликемическом контроле. Многоцентровое исследование в Великобритании также показало, что нормогликемия и контроль артериального давления снижают риск осложнений сахарного диабета и сердечно-сосудистых заболеваний [3].

Современные фармакологические достижения предоставляют значительные возможности для эффективной профилактики осложнений сахарного диабета, особенно в отношении зрительной системы. В данной

статье мы рассмотрим последние инновации и подходы в области медицинской терапии, направленные на предотвращение потери зрения у пациентов с диабетом. От антиоксидантов до генетических технологий, наш обзор охватывает широкий спектр современных стратегий, способных снизить риск развития диабетической ретинопатии и других осложнений для зрительной системы.

Материалы и методы: Из официальных источников Всемирной организации здравоохранения (ВОЗ) и других медицинских исследований следует, что сахарный диабет является причиной слепоты у более чем 2,6% трудоспособного населения мира. Данные, опубликованные в "Журнале медицинской экономики и фармакоэкономики", показывают, что диабетическая ретинопатия встречается у более чем 30% пациентов с диагностированным сахарным диабетом. Эти цифры подчеркивают критическую актуальность исследований и разработок в области фармакологических инноваций для профилактики осложнений сахарного диабета для зрительной системы [4].

Для составления обзора современных подходов в фармакологической профилактике осложнений сахарного диабета для зрительной системы был проведен тщательный анализ доступной литературы. В рамках этого анализа были использованы электронные базы данных, такие как PubMed, Google Scholar и Web of Science, для поиска актуальных научных статей, обзоров и мета-анализов, опубликованных в рецензируемых журналах. В качестве ключевых слов были использованы термины "сахарный диабет", "зрительная система", "диабетическая ретинопатия", "фармакологическая профилактика", "новые лекарственные средства" и другие термины, связанные с темой исследования. Далее была проведена систематизация и анализ полученных статей с целью выявления современных инноваций и подходов в фармакологической профилактике осложнений сахарного диабета для зрительной системы. На основе собранных данных можно определить следующие закономерности в лечении и профилактике диабетической ретинопатии:

1. Антиоксиданты и витамины. В последние годы значительное внимание уделяется роли антиоксидантов и витаминов в профилактике диабетической ретинопатии. Антиоксиданты, такие как витамин Е, витамин С и каротиноиды (включая лютеин и зеаксантин), являются эффективными средствами защиты от окислительного стресса и воспаления в сетчатке. Окислительный стресс играет ключевую роль в развитии диабетической ретинопатии, и антиоксиданты помогают снизить его уровень, что в свою очередь замедляет прогрессирование заболевания [5].

2. Ингибиторы АПФ и АРБ: Контроль артериального давления играет важную роль в предотвращении развития диабетической ретинопатии. Ингибиторы ангиотензинпревращающего фермента (АПФ) и ангиотензин II рецепторных блокаторы (АРБ) эффективно контролируют артериальное

давление и также обладают защитным эффектом на сосуды сетчатки. Эти препараты помогают снизить воспаление и проницаемость капилляров, что способствует сохранению зрительной функции.

3. Ингибиторы вегетативных рецепторов и глюкокортикоиды: Последние исследования указывают на перспективы использования ингибиторов вегетативных рецепторов, таких как бета-адреноблокаторы и альфа-блокаторы, в профилактике диабетической ретинопатии. Эти препараты могут помочь уменьшить воспалительный ответ и подавить ангиогенез в сетчатке. Также исследуется потенциальная роль глюкокортикоидов в снижении воспаления и регуляции иммунного ответа в сетчатке, что может быть полезно в профилактике диабетической ретинопатии [6].

4. Биологические препараты: Новые биологические препараты, такие как анти-VEGF (ингибиторы фактора роста эндотелия сосудов) и стероидные препараты для внутрисетчаточного применения, показывают значительный потенциал в лечении и профилактике диабетической ретинопатии. Эти препараты могут помочь уменьшить ангиогенез, улучшить микроциркуляцию и снизить воспаление в сетчатке, что способствует сохранению зрительной функции у пациентов с сахарным диабетом.

Образец, как можно описать использование фармакологических средств на различных этапах болезни:

1. Преждевременная стадия. На ранних стадиях сахарного диабета рекомендуется начинать прием антиоксидантов и витаминов для профилактики дальнейшего развития диабетической ретинопатии. Это поможет снизить уровень окислительного стресса и воспаления в сетчатке, предотвращая прогрессирование заболевания.

2. Продвинутая стадия. На этапе развития диабетической ретинопатии эффективными могут быть ингибиторы ангиотензинпревращающего фермента (АПФ) и ангиотензин II рецепторных блокаторы (АРБ). Эти препараты помогут контролировать артериальное давление и защитить сосуды сетчатки от дальнейших повреждений.

3. Продвинутая стадия с осложнениями. При наличии осложнений, таких как отек макулы или новообразования в сетчатке, рекомендуется использовать биологические препараты, такие как анти-VEGF и стероидные препараты для внутрисетчаточного применения. Эти средства помогут улучшить микроциркуляцию и снизить воспаление в сетчатке, способствуя сохранению зрительной функции.

4. Реабилитационный период. После лечения осложнений важно продолжать использовать антиоксиданты и витамины для поддержания зрительного здоровья и предотвращения рецидива диабетической ретинопатии. Регулярное медицинское наблюдение и коррекция лечения в соответствии с изменениями в состоянии пациента также играют важную

роль в поддержании зрительной функции.

Лечение ДР направлено на увеличение срока от момента диагностики СД до появления изменений на глазном дне, замедление перехода от препролиферативной к следующим стадиям заболевания, приводящим к значительному снижению зрительных функций и инвалидизации [7].

Методы лечения ДР зависят от ее стадии, однако базовым принципом является оптимальная компенсация СД и сопутствующих проблем — артериальной гипертензии и нефропатии, гиперлипидемии. Это включает в себя строгий контроль уровня гликемии и адекватную терапию СД, такую как диета, дозированные физические нагрузки, сахароснижающие препараты и самоконтроль. Инсулиновая помпа считается наиболее перспективным методом инъекций инсулина пациентам с ДР, предлагая более точную имитацию физиологической секреции инсулина и возможность более точного контроля гликемии, что снижает риск осложнений СД. Пациентам со слабовыраженной ДР рекомендуется только регулярное обследование. Офтальмологический осмотр проводится с разной частотой в зависимости от стадии ДР: от 1 раза в год при отсутствии ДР до 3—4 раз в год при пролиферативной ДР.

Лазерная фотокоагуляция является основным методом стабилизации патологического процесса при препролиферативной и пролиферативной ДР, срочность проведения зависит от формы и стадии патологии.

Медикаментозная терапия считается дополнением к лазерным методам лечения ДР. Некоторые препараты, такие как фенофибрат, показали значимые результаты в лечении ДР [8].

Результаты и выводы: Необходимо проводить первый осмотр офтальмолога через 1,5 — 2 года от начала заболевания у больных с СД 1 и вместе с диагностикой у больных СД 2. Первые осмотры в детском возрасте начинаются с 10-летнего возраста (с начала пубертата).

При благополучном течении заболевания повторные осмотры проводятся 1 раз в год, а при выявлении патологии — 1 раз в 3 — 6 месяцев. Частота осмотров может быть решена индивидуально при наличии дополнительных факторов риска, таких как беременность, нефропатии или артериальная гипертензия.

При появлении жалоб на внезапное снижение остроты зрения необходимо немедленно направить пациента к офтальмологу.

Таким образом, перспективным направлением в лечении диабетической ретинопатии остается обучение пациентов и врачей, достижение максимально возможной высокой степени контроля глюкозы и артериального давления в течение всей жизни больного с сахарным диабетом, обеспечение пациентов самыми современными сахароснижающими препаратами, в том числе препаратами растительного происхождения, средствами самоконтроля, обязательное и своевременное проведение скрининга и мониторинга пациентов, разработка новых

эффективных препаратов и методов лечения. В итоге, современные фармакологические методы играют ключевую роль в профилактике и лечении осложнений сахарного диабета, связанных с зрительной системой. Антиоксиданты, ингибиторы ангиотензинпревращающего фермента (АПФ) и ангиотензин II рецепторных блокаторы (АРБ), а также новые биологические препараты предоставляют эффективные инструменты для защиты сосудов сетчатки и улучшения зрительной функции у пациентов с сахарным диабетом. Эти подходы открывают перспективы для улучшения качества жизни и снижения риска развития осложнений, связанных с диабетом.

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РОЛЬ НАРОДНОГО ТАНЦА В СОЦИАЛЬНЫХ ПРОЦЕССАХ КАК ФОРМЫ ОЗДОРОВИТЕЛЬНОГО ДОСУГА

Аннотация. В данной статье представлена социальная значимость народных танцев в мире. Они сравниваются с наиболее популярными видами рекреационной деятельности. Отмечается, что народные танцы обладают восстановительными физическими и психическими, индивидуальными и социальными свойствами. В рамках исследования мы показываем, как субъективные, так и объективные выгоды от занятий народными танцами, которые выше, чем от других видов деятельности, принимаемых во внимание при одинаковом наборе целей.

Ключевые слова: народный танец, рекреационная деятельность, социальные свойства, индивидуальная выгода, нематериальное культурное наследие.

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THE ROLE OF FOLK DANCE IN SOCIAL PROCESSES AS A FORM OF HEALTHY LEISURE

Abstract. This paper presents the social significance of folk dances in the world. They are compared with the most popular recreational activities. It is noted that folk dances have restorative physical and mental, individual and social properties. As part of the study, we show both subjective and objective benefits of practicing folk dancing, which are higher than those of other activities taken into account with the same set of objectives.

Keywords: folk dance, recreational activity, social properties, individual benefit, intangible cultural heritage.

Народные танцы являются неотъемлемым культурным наследием многих стран мира. Они обычно нравятся людям всех возрастов и предлагают уникальный способ межнационального общения. Народные танцы - вечная часть популярных видов досуга. Они часто исполняются на

общественных собраниях, в качестве развлечения и для празднования особых случаев.

Народные танцы – это танцы, которые обычно являются региональными, традиционными и передаются из поколения в поколение. Они отличаются по стилю и шагам, но у всех народных танцев есть одна общая черта: их танцует народ, для народа.

Народные танцы обычно рождаются из необходимости - людям нужно было как-то двигать телом и праздновать свою культуру, поэтому они создавали танцы, отражающие их жизнь и окружение.

Е. Д. Васильева рассматривает народный танец как фольклорный, который исполняется в своей естественной среде и имеет определенные традиционные для данной местности движения, ритмы, костюмы и т. п. [1, с. 44].

Существует четыре общих атрибута народного танца, хотя народные танцы сильно различаются в зависимости от культуры и традиций, есть несколько общих признаков народных танцев, таких как:

1. Исполнение непрофессионалами: Традиционно большинство народных танцев исполняется людьми без профессиональной танцевальной подготовки или опыта. Сами танцы передаются из поколения в поколение, их изучают путем наблюдения и подражания, а не формального обучения.

2. Исполняются под традиционную музыку: Большинство народных танцев исполняется под традиционную народную музыку соответствующего народа. Многие из этих песен содержат лирические стихи, рассказывающие историю, но некоторые являются сугубо инструментальными.

3. Исполнение в традиционной одежде: Народные танцоры могут надевать традиционную одежду или наряд своей культуры для выступления. Такая одежда подчеркивает культурную идентичность танцора и в то же время создает ощущение единства с остальными участниками группы народного танца.

4. Исполняются во время праздников или других торжеств: Народные танцы часто исполняются на фестивалях, культурных собраниях или сельскохозяйственных мероприятиях.

«Мы выражаем жизнь в танце» — говорил И. А. Моисеев. «Мы хотим, чтобы зритель за каждым номером разглядел, почувствовал душу народа, его привычки, обычаи, стремления. Мы ищем ту эстетику и ту пластику, которая отвечает современности» [2,55].

Народный танец обладает некоторыми специфическими чертами, которые лишь частично присутствуют в других видах деятельности, характеристики, связанные с интимной природой человека, которые интегрируют и усиливают друг друга.

В частности, отметим следующие специфические черты:

- язык народного танца универсален, поскольку использует в основном невербальную коммуникацию, а потому не способен преодолеть культурные и социально-статусные барьеры;

- народный танец можно практиковать независимо от возраста, для социальных целей он не требует специальных технических навыков или специальной спортивной подготовки, преодолевая многие трудности интеграции между людьми из-за различий.

- народный танец предстает как спортивное и умственное занятие, не требующее напряжения, которое можно формализовать математически как кооперативная игра, в которой польза от сотрудничества намного больше, чем сумма пользы от физической или умственной деятельности, которую могут выполнять отдельные люди или небольшие группы;

- отсутствие соревновательных спортивных целей приводит к активизации процессов социализации и улучшает отношения индивида с внешним миром. Совместные танцы приводят к созданию поддерживающего сообщества, которое узнает себя в ритуале и празднует свое членство в нем через обмен закодированным репертуаром шагов, движений, музыкальных тем и условностей, собранных творческим образом.

Рекреационные международные народные танцы - это мягкая форма физической активности для людей всех возрастных групп, и они могут быть использованы эрготерапевтом для организации различных вариантов досуга для пожилых людей. Пожилые люди часто стереотипно воспринимаются как люди, способные только на определенные виды досуга, такие как боулинг, бинго и карты.

Рекреационные народные танцы – это социально увлекательный, физически сложный, творческий, культурно и психологически стимулирующий вид деятельности. Участие в этом занятии приносит общую пользу, способствуя здоровому образу жизни. Участники могут расширить свои возможности за счет более активного участия в жизни общества, благодаря занятиям, а также благодаря публичным выступлениям, которые предлагаются в рамках этого вида деятельности. Знакомство с народными костюмами, обычаями и традициями может повысить осведомленность о других культурах. Рекреационный народный танец оказывает благотворное влияние на межличностные и внутриличностные аспекты личности. Язык танца пересекает многие культуры. Жесты и движения могут быть переданы без слов, что делает народный танец хорошим "неязыковым" видом деятельности, который можно использовать в мультикультурной среде.

Возможности полноценной тренировки с помощью танца, да и танцев вообще практически безграничны. В отличие от других видов проведения досуга, выполнения упражнений, танцы уникальным образом расширяют ваше тело. Ваше тело получит большую пользу от повышения гибкости. Это

снижает вероятность падения или растяжения связок и ускоряет процесс восстановления мышц после тренировки. Боль в суставах и боль от предыдущих травм облегчаются гибкостью.

Как отличительная форма досуга народный танец имеет также и ментальные преимущества для ваших эмоций, интеллекта и отношений. Изучение и практика народного танца позволяют:

- улучшить самооценку. То, насколько вы уважаете и цените себя, — это ваша самооценка. Показав себе, что вы можете изучать и осваивать новые движения и навыки посредством танца, вы повысите свою самооценку и уверенность в себе;

- помочь вам познакомиться с новыми людьми. Социальное взаимодействие между группами людей важно для вашего психического благополучия. Разговоры и времяпрепровождение с другими улучшают ваше настроение. Это также заставляет вас чувствовать себя принадлежащим вам и облегчает одиночество.

Еще древние греки полагали, что «искусство пляски» прежде всего должно быть красивым, «наглядным и понятным для всех изображением желаемых настроений, мыслей и чувств» [3, с. 64], а Платон называл пляску «искусством высказать всё посредством жестов» [Там же, с. 65].

Завершая разговор о специфике народной хореографии, отметим, что ее сущностные черты нашли отражение и в специфических функциях, ею реализуемых. Среди них:

- магическая (танец в своей изначальной форме выступал инструментом сверхъестественного воздействия на окружающий мир, постепенно эта функция утрачивается);

- информационно-коммуникативная (танец был средством невербального общения, передачи важной социальной информации от одного поколения другому);

- адаптивная (с помощью танца, равно как и с помощью иных форм первобытного художественного творчества, человек приспособивался к среде своего обитания, взаимодействовал с ней, получал значимую информацию о специфике трудовой деятельности, характере гендерных и семейных отношений и пр.);

- физически-рекреационная (танец также выступал способом развития физических способностей, выносливости, инструментом психологической разрядки, снятия напряжения);

- эстетическая (мы отмечали уже, что в рамках традиционного народного танца эта функция не носила самостоятельного характера, а была побочным проявлением его бытования, в отличие от народно-сценического танца, где она становится определяющей).

Самым выразительным отображением миропонимания, чувственного ощущения красоты жизни, необходимого проявления их передачи в инносказательно-художественной форме можно назвать народный танец.

Как наивысшая коммуникация, он традиционными средствами помогает сформулировать сущностные смысловые ориентиры, реализовать наши современные фантазии, становится легкой и незаменимой формой досуга художественно отражая сегодняшнюю действительность.

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СОВРЕМЕННЫЕ ПОДХОДЫ К РАННЕМУ ВЫЯВЛЕНИЮ И ЛЕЧЕНИЮ ГИПЕРПЛАЗИЙ ЭНДОМЕТРИЯ

Актуальность темы. Гиперплазия эндометрия (ГЭ) представляет собой предраковую, нефизиологическую, неинвазивную пролиферацию эндометрия, которая приводит к увеличению объема ткани эндометрия с изменениями архитектоники желез (формы и размера) и соотношением желез эндометрия к строме более 1:1. В настоящее время неясно сообщается, что заболеваемость ГЭ составляет около 200 000 новых случаев ГЭ в год в западных странах.

Ключевые слова: гиперплазия эндометрия, эстрогены, рак эндометрия.

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MODERN APPROACHES TO EARLY DETECTION AND TREATMENT OF ENDOMETRIAL HYPERPLASIA

Relevance of the topic. Endometrial hyperplasia (EH) is a precancerous, nonphysiological, noninvasive proliferation of the endometrium, which leads to an increase in the volume of endometrial tissue with changes in glandular architecture (shape and size) and a ratio of endometrial glands to stroma greater than 1:1. Currently, the incidence of GE is unclearly reported to be approximately 200,000 new cases of GE per year in Western countries.

Key words: endometrial hyperplasia, estrogens, endometrial cancer.

Большинство случаев ГЭ возникает при хроническом воздействии эстрогена, которому не противодействует прогестерон, например, при более ранних формах заместительной гормональной терапии [1]. Перепроизводство эстрогена жировыми клетками также способствует более высокому риску развития ГЭ и рака эндометрия (РЭ) у женщин с ожирением [2]. Помимо индукции пролиферации матки, эстроген вызывает морфометрические изменения в матке, которые включают изменения типа люминального и железистого эпителия, количества и формы желез, соотношения желез и стромы и морфологии эпителиальных клеток [3]. ГЭ также возникает после менопаузы, когда овуляция прекращается и прогестерон больше не вырабатывается, а также во время перименопаузы, когда у женщин наблюдаются нерегулярные овуляции. Наиболее частым симптомом ГЭ являются аномальные маточные кровотечения, включая

меноррагию, межменструальные кровотечения, постменопаузальные кровотечения и нерегулярные кровотечения при заместительной гормональной терапии или тамоксифене [4]. В настоящее время подходы к лечению ГЭ ограничены, например, гистерэктомия или гормональная терапия. ГЭ без атипии обычно лечат прогестинами, тогда как гистерэктомия является лучшим вариантом лечения ГЭ с атипией. Поскольку ГЭ с атипией может прогрессировать до РЭ или сосуществовать с ней, это имеет клиническое значение и не должно игнорироваться. Более того, консервативное лечение прогестинами предназначено для регресса гиперплазии эндометрия до нормального и предотвращения последующего развития аденокарциномы. Однако гормональное лечение женщин с ГЭ в значительной степени основывалось на тематических исследованиях, эффективность которых не была хорошо оценена. Отсутствие стандартных и консервативных вариантов лечения подчеркивает необходимость новых методов лечения. В этом обзоре мы обсуждаем этиологию и факторы риска ГЭ, а также связанные с этим достижения или существующие методы лечения. Женщины в постменопаузе, нерожавшие и бесплодные женщины подвергаются большему риску развития ГЭ [5]. Диабет, гипертония и ожирение также связаны с повышенным риском ГЭ. Помимо повышенного уровня эстрогена, ожирение вызывает хроническое воспаление, которое может способствовать гиперплазии и развитию рака [6]. По сравнению с женщинами, не страдающими ожирением, у женщин с ожирением (индекс массы тела [ИМТ] >30 кг/м²) наблюдалось почти 4-кратное увеличение частоты возникновения атипичной ГЭ. Кроме того, у женщин с ИМТ 40 кг/м² наблюдался 13-кратный повышенный риск ГЭ с атипией и 23-кратный повышенный риск ГЭ без атипии. Цель исследования — совершенствование тактики и диагностики больных с гиперпластическими процессами эндометрия в позднем репродуктивном и пременопаузальном периодах.

Задачи исследования: Изучение соматического статуса, генеративного анамнеза и гинекологических заболеваний женщин позднего репродуктивного и пременопаузального возраста с гиперпластическими процессами эндометрия. Изучить морфологическую структуру эндометрия у женщин позднего репродуктивного и пременопаузального возраста с гиперпластическими процессами эндометрия и разработать алгоритм ведения пациенток.

Методы исследования. Для достижения цели исследования и решения поставленных задач использовались общеклинические, лабораторные, инструментальные, морфологические, иммуногистохимические и статистические методы исследования.

Вывод. ГЭ, являясь предшественником РЭ, имеет клиническое значение. Доступные варианты лечения ГЭ, такие как прогестин, даназол, генистеин, метформин и терапия ГнРГ или хирургическое вмешательство,

имеют ограниченную эффективность из-за высокой стоимости, побочных эффектов и лекарственной устойчивости. Кроме того, лечение ГЭ по-прежнему является сложной задачей для пациентов, желающих сохранить фертильность. В качестве нового подхода антиэстрогены, ингибиторы ароматазы и цитокины могут дать оптимистичный результат при ГЭ; однако необходимы клинические испытания, чтобы доказать их эффективность. Различные мутации и SNP в патобиологии ГЭ также должны быть нацелены на достижение лучшего терапевтического ответа. Для достижения точного лечения ГЭ необходимы будущие исследования и клинические испытания этих новых соединений в сочетании с известными методами лечения ГЭ. Дальнейшие исследования клеточных сигнальных путей, которые контролируют пролиферацию клеток эндометрия и развитие ГЭ, а также нацеливание на различные мутации и SNP в патобиологии ГЭ, помогут идентифицировать новые таргетные терапевтические агенты для улучшения лечения ГЭ.

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ГЕОИНФОРМАЦИОННЫЕ СИСТЕМЫ В ВОДНОМ ХОЗЯЙСТВЕ

Аннотация. Данная статья посвящена вопросам использования географических информационных систем (ГИС) в водном хозяйстве, в управлении процессами водоснабжения и водоотведения.

Ключевые слова: геоинформационные системы, электронная карта, тематические слои, картографирование, водопроводно-канализационное хозяйство.

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GEOGRAPHIC INFORMATION SYSTEMS AND WATER MANAGEMENT

Annotation. This article is devoted to the use of geographic information systems (GIS) in the water sector, in the management of water supply and sanitation processes.

Keywords: geographic information systems, electronic map, thematic layers, mapping, water supply and sewerage.

Геоинформационная система (ГИС) – современная компьютерная технология для картографирования и анализа объектов реального мира, происходящих и прогнозируемых событий и явлений. Геоинформационные системы наиболее естественно отображают пространственные данные.

ГИС объединяет традиционные операции при работе с базами данных – запрос и статистический анализ – с преимуществами полноценной визуализации и географического (пространственного) анализа, которые предоставляет карта. Эта особенность дает уникальные возможности для применения ГИС в решении широкого спектра задач, связанных с анализом явлений и событий, прогнозированием их вероятных последствий, планированием стратегических решений [1].

Данные в геоинформационных системах хранятся в виде набора тематических слоев, которые объединены на основе их географического положения. Этот гибкий подход и возможность геоинформационных систем работать как с векторными, так и с растровыми моделями данных (рис. 1), эффективен при решении любых задач, касающихся пространственной информации.



Рис.1. Совмещение векторной и растровой графики

Геоинформационные системы тесно связаны с другими информационными системами и используют их данные для анализа объектов.

ГИС отличают:

- развитые аналитические функции;
- возможность управлять большими объемами данных;
- инструменты для ввода, обработки и отображения пространственных данных.

Ключевыми преимуществами геоинформационных систем являются:

- удобное для пользователя отображение пространственных данных;
- картографирование пространственных данных, в том числе в трехмерном измерении, наиболее удобно для восприятия, что упрощает построение запросов и их последующий анализ;
- интеграция данных внутри организации.

Управление водопроводно-канализационным хозяйством (ВКХ) крупного города – сложная задача, решение которой на современном уровне возможно на основе применения информационных технологий, среди которых одной из ключевых является технология географических информационных систем (ГИС). Использование ГИС-технологий позволяет получить качественно новые преимущества для всего предприятия водоснабжения – оперативное получение необходимой для эффективного управления полной и своевременной информации об объектах систем водоснабжения и канализации. Такая возможность обеспечивается уникальной способностью геоинформационных систем интегрировать разнородные информационные ресурсы предприятия. Таким образом, ГИС – наиболее предпочтительная для предприятия водоснабжения технология объединения разнородных информационных ресурсов и оперативного

получения необходимой для эффективного управления полной и своевременной информации.

Геоинформационные технологии постепенно становятся неотъемлемой частью информационного пространства предприятий водоснабжения. Однако анализ опубликованных данных свидетельствует о том, что уровень использования возможностей и преимуществ ГИС-технологий на предприятиях водоснабжения еще недостаточно высок. В частности, основные усилия в настоящее время направлены на их разработку, а использование ограничивается «электронными планшетами» [2].

Одним из инструментов гидравлического моделирования является система WaterGems фирмы Bentley Systems (США), с помощью которой создано более 10 тыс. моделей водопроводных сетей городов в 170 странах [3].

Система моделирования WaterGems позволяет:

- выбирать оптимальный режим подачи воды с целью сокращения затрат;
- проводить оптимизацию зонирования и выбирать насосное оборудование;
- выявлять «узкие» места в работе системы подачи и распределения воды (СПРВ): заниженные диаметры трубопроводов, повышенные сопротивления в системе, неисправную запорную арматуру, недопустимые скорости воды в трубопроводах, зоны избыточного и недостаточного давления и т. д.;
- моделировать и планировать отключения трубопроводов и участков сети с целью оценки и минимизации их последствий (снижение давления у потребителей, ухудшение качества воды в результате изменения потокораспределения);
- проводить моделирование аварийных ситуаций и выявлять их влияние на работу СПРВ с целью разработки мероприятий по повышению надежности работы системы;
- осуществлять расчет на пропуск противопожарных расходов, а также проводить оценку застоя воды в часы минимального расхода;
- планировать развитие сетей и выбирать оптимальные варианты изменений в СПРВ при подключении новых потребителей;
- осуществлять поиск скрытых утечек и потерь воды; отслеживать изменения качества воды в СПРВ по таким параметрам, как содержание остаточного хлора, побочных продуктов хлорирования, загрязнения продуктами коррозии.

Сущность ГИС-архитектуры корпоративной информационной системы заключается в создании единой централизованной ГИС водопроводно-канализационного хозяйства предприятия, что предполагает,

в частности, постоянный аудит сетей и сооружений водопровода и канализации. Ниже (рис.2) приведена база данных геоинформационной системы ВКХ крупного города.



Рис.2 База данных геоинформационной системы.

Геоинформационные системы объединяют данные, накопленные в различных подразделениях компании или даже в разных областях деятельности организаций целого региона. Коллективное использование накопленных данных и их интеграция в единый информационный массив дает существенные конкурентные преимущества и повышает эффективность эксплуатации геоинформационных систем [3]:

- принятие обоснованных решений;
- автоматизация процесса анализа и построения отчетов о любых явлениях, связанных с пространственными данными, помогает ускорить и повысить эффективность процедуры принятия решений;
- удобное средство для создания карт.

Геоинформационные системы оптимизируют процесс расшифровки данных космических и аэросъемок и используют уже созданные планы местности, схемы, чертежи.

ГИС существенно экономят временные ресурсы, автоматизируя процесс работы с картами, и создают трехмерные модели местности.

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ЗНАЧЕНИЕ УЧЕБНО-ТРЕНИРОВОЧНЫХ ЗАНЯТИЙ ФУТБОЛИСТОВ

Аннотация. В тренировочном процессе планируются и проводятся основные и дополнительные занятия. В основных занятиях решаются главные задачи определенного этапа подготовки. В дополнительных занятиях решаются частные задачи подготовки, в частности, восстановления спортивной работоспособности. По признаку локализации направленности средств и методов, применяемых в занятиях, различают занятия и комплексной направленности.

Ключевые слова: спорт, видов спорта, изучение, тренер, фактор, методов, сердечно-сосудистой.

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THE IMPORTANCE OF EDUCATION AND TRAINING LESSONS FOR FOOTBALL PLAYERS

Annotation. Basic and additional classes are planned and conducted in the training process. The main tasks of a certain stage of preparation are solved in the main classes. In additional classes, special training tasks are solved, in particular, the restoration of athletic performance. Based on the localization of

the orientation of the means and methods used in the classroom, there are classes and complex orientation.

Keywords: sport, sports, study, coach, factor, methods, cardiovascular.

Тренировочное занятие состоит из трех частей: вводно-подготовительной, основной и заключительной. В вводно-подготовительной части проводятся организационно-методические воздействия тренера (сообщение задач тренировки, ознакомление с структурой тренировочного занятия, если есть необходимость очень коротко делается анализ предыдущего занятия) и проводится разминка.

Под разминкой понимают комплекс специально подобранных упражнений, выполняемых спортсменами с целью подготовить организм к предстоящей работе. В процессе разминки решаются функциональная (ускорение периода вработывания систем организма в мышечную работу: сердечно-сосудистой, дыхательной и др.); двигательная (оптимальное включение в работу мышечной системы, усиление эфферентной информации и афферентной иннервации) и эмоциональная (формирование положительного психологического настроения на предстоящую работу).

В тренировочных занятиях футболистов разминка, как правило, состоит из двух частей: общей и специальной. Общая часть разминки состоит из общеразвивающих упражнений. Она обеспечивает активизацию сердечно-сосудистой, дыхательной систем организма, а также двигательного аппарата к специфической работе с мячом. Специальная часть разминки посредством специально-подготовительных упражнений способствует оперативной настройке двигательного аппарата футболистов, систем энергообеспечения и психологической мобилизации на предстоящую основную работу в тренировочном занятии. В основной части решаются главные задачи тренировочного занятия. В зависимости от направленности тренировочного занятия таких задач может быть несколько (желательно, не более четырех). Продолжительность основной части зависит от двух составляющих направленности и величины нагрузки.

В занятиях избирательной направленности решаются задачи преимущественного развития отдельных свойств и способностей, определяющих уровень специальной подготовленности спортсменов – их скоростных и скоростно-силовых качеств, анаэробной и аэробной производительности, специальной выносливости и т.д.

Занятия комплексной направленности строятся с учетом одновременного развития различных качеств и способностей. Они строятся по двум вариантам. Первый заключается в том, что программа отдельного занятия делится на две или три самостоятельные части.

Например, в первой части применяют средства для повышения скоростных возможностей, во второй и в третьей – для повышения выносливости при работе соответственно анаэробного и аэробного

характера. Или, в первой части решаются задачи обучения новым техническим элементам, во второй – физической подготовки, а в третьей – технического совершенствования и т.д.

В тренировке футболистов применяются занятия избирательной и комплексной направленности. Форма проведения занятий зависит от задач, которые решаются в определенном микроцикле, а также от количества тренировочных занятий в течение дня. Обычно, если проводятся двухразовые занятия, то одно из них – однонаправленное (например, развитие скоростно-силовых качеств), а второе – комплексное (совершенствование технико-тактического мастерства и специальной выносливости).

В процессе подготовки футболистов применяются все типы занятий, но в основном это тренировочные, учебно-тренировочные, модельные и восстановительные. В тренировочных занятиях в основном решаются задачи совершенствования технико-тактического мастерства и развития двигательных способностей. Наиболее часто такие занятия проводятся в соревновательном периоде.

Учебно-тренировочные занятия больше проводятся в подготовительном периоде, где наряду с совершенствованием освоенного материала изучаются новые элементы техники и тактики игры. Модельные тренировочные занятия, как правило, проводятся в предсоревновательном мезоцикле и на протяжении соревновательного периода. Основной целью таких занятий является апробирование плана предстоящей игры. В таком занятии проводится игра двумя составами, один из которых представляет стартовый состав на предстоящую игру.

Задача второго состава по возможности скопировать игру будущего соперника. В планировании тренировочного процесса такое занятие обозначается как «модельная игра». Восстановительные занятия, как правило, проводятся в конце микроциклов или после игры. Их основная задача – стимулировать восстановительные процессы и способствовать формированию так званых отставленных тренировочных эффектов.

В зависимости от конкретных задач и содержания тренировочного занятия, а также уровня подготовленности спортсменов, различают такие организационные формы тренировочного занятия. При индивидуальной форме занятий спортсмены получают задания и выполняют его самостоятельно.

Групповая форма занятия характеризуется тем, что спортсмены предварительно объединяются в несколько групп, каждая из которых выполняет определенное задание. При фронтальной форме все спортсмены одновременно выполняют одни и те же упражнения. Свободная форма предусматривает самостоятельную тренировку спортсменов без контроля со стороны тренера. С точки зрения организационно-методических форм проведения занятий различают стационарную и круговую формы. При

стационарной тренировке спортсмены выполняют задания на специально оборудованных «станциях».

Круговая тренировка предполагает последовательное выполнение спортсменами упражнений на различных станциях. При коллективной тренировке все игроки выполняют общие задания под руководством тренера, который имеет возможность контролировать одновременно практически всю команду. Недостатком коллективной формы тренировки является недостаточная возможность воздействия на каждого игрока. Наиболее часто коллективную форму тренировки применяют при разминке, развитии двигательных качеств, при выполнении упражнений восстанавливающего характера.

При групповой тренировке каждая группа игроков тренируется самостоятельно, выполняет разные упражнения, имеет разную нагрузку и использует свои вспомогательные средства. Обычно групповую тренировку проводят с игроками одной линии (вратари, защитники, полузащитники, нападающие). Довольно часто при групповой тренировке с целью решения определенных задач технико-тактического характера создаются две группы игроков: первая - группа игроков обороны; вторая – атаки.

При индивидуальной тренировке одному или нескольким игрокам даются индивидуальные задания, хотя остальные игроки в это время могут выполнять какое-то общее задание. При этом используется принцип групповой индивидуализации, основанный на том, что спортсмены с выявленными однонаправленными особенностями игровой деятельности объединяются в группы и занимаются по одной программе.

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ИСПОЛЬЗОВАНИЕ МЕТАЛЛИЧЕСКИХ КОНСТРУКЦИЙ В СТРОИТЕЛЬСТВЕ В СТИЛЕ ХАЙ-ТЕК

Аннотация. Статья посвящена использованию металлических конструкций в строительстве зданий в стиле хай-тек. Рассмотрены особенности этого архитектурного стиля, его отличительные черты и характеристики. Описаны преимущества использования металла при возведении зданий хай-тек, такие как высокая прочность, долговечность, легкость монтажа и возможность создания сложных форм. Также представлены примеры реализованных проектов с использованием металлических конструкций.

Ключевые слова: хай-тек, металлические конструкции, строительство, архитектура, прочность, долговечность.

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USE OF METAL STRUCTURES IN HI-TECH STYLE CONSTRUCTION

Abstract. The article is devoted to the use of metal structures in the construction of high-tech buildings. The features of this architectural style, its distinctive features and characteristics are discussed. The advantages of using metal in the construction of high-tech buildings are described, such as high strength, durability, ease of installation, and the possibility of creating complex shapes. Examples of implemented projects using metal structures are also presented.

Keywords: high-tech, metal structures, construction, architecture, strength, durability.

Современная архитектура в стиле хай-тек активно использует металлические конструкции для строительства зданий. Этот подход обусловлен рядом преимуществ, которыми обладает металл. Во-первых, металлические конструкции обладают высокой прочностью и долговечностью, что позволяет создавать устойчивые и надежные здания. Во-вторых, металл легче других материалов, таких как бетон или кирпич, что упрощает процесс строительства и снижает нагрузку на фундамент. Кроме того, металлические конструкции позволяют создавать сложные формы и оригинальные дизайнерские решения.

Однако использование металлических конструкций в строительстве имеет и свои недостатки. Один из них – подверженность коррозии, которая может привести к преждевременному разрушению здания. Для предотвращения коррозии применяются различные методы защиты, включая покрытие металла специальными составами.

Примерами зданий, построенных с использованием металлических конструкций в стиле хай-тек, являются знаменитые башни-близнецы Петронас Тауэр в Куала-Лумпуре (Малайзия) и Сити-Холл в Лондоне (Великобритания). Оба этих здания имеют уникальные архитектурные решения, которые были бы невозможны без использования металлических конструкций.

Башня-близнецы Петронас Тауэр в Куала-Лумпуре (Малайзия) - это одно из самых известных и узнаваемых зданий в мире. Строительство началось в 1992 году и было завершено в 1998 году. Здание состоит из двух башен высотой 451,9 метра каждая, соединенных между собой воздушным мостом на уровне 41-го и 42-го этажей.

Для строительства башен использовались металлические конструкции, включая стальные колонны и балки. Эти конструкции были изготовлены на заводе и доставлены на стройплощадку уже готовыми к установке. Это позволило ускорить процесс строительства и уменьшить затраты.

Сити-Холл в Лондоне (Великобритания) - это еще одно известное здание, построенное с использованием металлических конструкций.

Строительство началось в 2002 году и было завершено в 2006 году. Здание имеет высоту 100 метров и состоит из 11 этажей.

Для строительства Сити-Холла также использовались металлические конструкции, включая стальные колонны и балки. Они были изготовлены на заводе и доставлены на стройплощадку уже готовыми к установке. Использование металлических конструкций позволило создать уникальный дизайн здания и сделать его одним из самых заметных в Лондоне.

Здание Сити-Холл в Лондоне было построено в период с 2002 по 2008 год. Архитектором проекта стал Норман Фостер, известный своими инновационными проектами.

Сити-Холл представляет собой высотное здание с уникальной архитектурой. Оно имеет форму цилиндра диаметром 137 метров и высотой 45 метров. Внутри здания расположены офисы, конференц-залы, рестораны и другие помещения. На верхнем этаже находится смотровая площадка, откуда открывается великолепный вид на город.

Одной из особенностей здания является его экологичность. В нем установлены системы рециркуляции воды и энергии, а также используются материалы, способствующие сохранению окружающей среды.

Строительство Сити-Холла стало одним из самых дорогих проектов в истории Лондона. Его стоимость составила около 600 миллионов фунтов стерлингов. Однако, несмотря на высокую цену, здание стало символом современного Лондона и привлекает множество туристов со всего мира.

Таким образом, использование металлических конструкций в строительстве в стиле хай-тек является эффективным решением, позволяющим создавать современные и функциональные здания.

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ВОПРОСЫ СТИМУЛИРОВАНИЯ ВНЕШНЕЭКОНОМИЧЕСКОЙ ДЕЯТЕЛЬНОСТИ В ПРЕДПРИНИМАТЕЛЬСТВО

Аннотация. В статье рассматриваются вопросы развития внешнеэкономической деятельности предпринимательских предприятий. Уделяется внимание вопросам совершенствования стимулирования внешнеэкономической деятельностью предпринимательских предприятий.

Ключевые слова: предпринимательство, стимулирования, управление, внешнеэкономическая деятельность, экономическая эффективность.

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ISSUES OF STIMULATING FOREIGN ECONOMIC ACTIVITY IN ENTREPRENEURSHIP

The summary. The article deals with the development of foreign economic activity of entrepreneurial enterprises. Attention is paid to the issues of improving the stimulation of foreign economic activity of entrepreneurial enterprises.

Keywords: entrepreneurship, incentives, management, foreign economic activity, economic efficiency.

Введение (Introduction). В нынешних условиях глобализации предпринимаются попытки дальнейшего развития предпринимательской деятельности во всех странах. При этом проводится ряд мероприятий по налаживанию своих внешнеэкономических связей, расширению экспортной практики. Среди таких видов деятельности можно указать на предоставление льгот, субсидий, использование системы льготного кредитования, применение налоговых и таможенных льгот и других средств поощрения предпринимательских предприятий, занимающихся экспортом. Большой эффект также принесет совершенствование системы

стимулирования экспортной деятельности на предприятиях и в организациях, занимающихся предпринимательской деятельностью.

Основная часть (Main part). Эффективное ведение внешнеэкономической деятельности, в том числе экспортной, представляет собой сложный процесс. Для налаживания и развития экспортной деятельности необходимо использовать различные инструменты, позволяющие заинтересовать, сориентировать, определить пути, объяснить и продвинуть предпринимателей. Предпринимательским предприятиям удастся самостоятельно добиться большого эффекта, осуществляя внешнеэкономическую деятельность.

При стимулировании внешнеэкономической деятельности на разных уровнях используются разные методы. Этот процесс может осуществляться на двух разных уровнях: микроуровне и макроуровне. Страны мира, особенно с развитой экономикой, уделяют большое внимание внешнеэкономической деятельности, проводят ряд мероприятий в направлении ее координации и продвижения. Они делают это на микро- и макроуровнях. В развитых странах поддержкой внешнеэкономической деятельности, в том числе экспортной деятельностью занимаются государственные и неправительственные организации, различные министерства, специальные ведомства, агентства, экспертные центры, финансовые структуры и аналогичные организации.

В Соединенных Штатах накоплен большой опыт в стимулировании внешнеэкономической деятельности. Фирмы и предприниматели этой страны осуществляют широкий спектр внешнеэкономической деятельности. Основным направлением в этом является создание благоприятных институциональных условий для предприятий. Государственный департамент координирует все министерства и ведомства, занимающиеся внешнеэкономической деятельностью, деятельность государственных организаций и участников внешнеэкономической деятельности. Он изучает их проблемы и выпуски, помогает в необходимых ситуациях.

В нашей стране также требуется координационная работа всех организаций и ведомств, занимающихся внешнеэкономической деятельностью. Путем создания координирующей и консультирующей организации и оказания влияния на деятельность в нужное время, оказания поддержки в самых необходимых случаях, поддержка принесет эффект в внешнеэкономической деятельности.

В Великобритании внешнеэкономическая политика является важной частью экономической политики страны. Дипломатическая миссия, состоящая из представителей различных министерств и ведомств, играет важную роль в развитии внешнеэкономического сотрудничества. Организуются ярмарки для предпринимателей, которые хотят заняться экспортной деятельностью и вывести свою продукцию на зарубежный

рынок. В этом данная организация даже оказывает организационную и финансовую поддержку.

В некоторых странах, в том числе и в Южной Корее, проводится День экспорта. В этот день поощряются предприятия и организации, участвующие во внешнеэкономической деятельности со своими товарами и услугами, им оказывается большое уважение. Для стимулирования внешнеэкономической деятельности необходимо облегчать доступ к информации и донесениям и оказывать содействие в этой деятельности, организовывать консультирование, организовывать различные выставки и проводить подобные мероприятия на регулярной основе.

Результаты и дискуссия (Results and discussion). Для того чтобы осуществлять продвижение внешнеэкономической деятельности предпринимательских предприятий, необходимо, прежде всего, изучить и проанализировать факторы, влияющие на эту деятельность. Существуют внутренние и внешние факторы стимулирования предпринимательской активности, и структура специальных мероприятий окупится тем, чтобы в полной мере изучить эти факторы и эффективно использовать каждый из них. Среди внешних факторов, влияющих на стимулирование внешнеэкономической деятельности предпринимательских предприятий, можно выделить внешнюю информацию и информативность, борьбу конкурентов на внешних рынках, уровень организации сбыта продукции и услуг, потребительские и ценовые факторы.

В настоящее время существует ряд проблем в направлении дальнейшего развития внешнеэкономической деятельности, и требуется их быстрое устранение. Среди этих недостатков можно отметить следующие:

- по-прежнему сохраняются определенные административные барьеры;
- недостаточно данных о зарубежных рынках;
- трудности с поиском партнера;
- транспортные проблемы;
- трудности в стандартизации и сертификации;
- недостаточный опыт ведения внешнеэкономической деятельности;
- низкий уровень стимулирования производителей продукции к внешнеэкономической деятельности на предприятиях и в организациях.

Расширить возможности получения данных о зарубежных рынках в первую очередь для развития внешнеэкономической деятельности. Основываясь на этой информации, предприниматели получают возможность планировать, когда и в каких количествах производить тот или иной продукт. На основе этих данных принимаются эффективные и надежные управленческие решения по внешнеэкономической деятельности. В результате этого могут увеличиться возможности предприятия вступить в конкурентную борьбу на зарубежных рынках. Для того чтобы обеспечить предпринимателей необходимой информацией, на регулярной основе могут

выпускаться различные руководства, проспекты, буклеты. В то же время может оказаться полезным, что в этих руководствах также содержится информация о различных льготах, которые предоставляются участникам внешнеэкономической деятельности.

Заключение (Conclusions). Внутренние факторы, влияющие на внешнеэкономическую деятельность на предпринимательских предприятиях, будут состоять из управленческой деятельности на предприятии, цели деятельности, структуры управления, карьеры и назначений, технологии, сотрудников, участвующих в деятельности, поставок, организации производства, организации труда, предпочтений в деятельности предприятия и т.д. коммуникационные процессы. К внешним факторам системы продвижения внешнеэкономической деятельности могут относиться конкурентная борьба, деловое администрирование, международные стандарты, опыт в области внешнеэкономической деятельности, информация, стратегии выхода на внешние рынки, маркетинговая деятельность, логистика и транспорт, финансово-банковская и страховая системы, взаимное сотрудничество и международное разделение труда, инновационная деятельность и инвестиционная политика, вопросы конвертации иностранной валюты и ряд других. При стимулировании внешнеэкономической деятельности предпринимательских предприятий важно систематически учитывать эти факторы и разрабатывать нормативные акты на уровне их влияния

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МОНИТОРИНГОВОЕ НАБЛЮДЕНИЕ ХРОНИЧЕСКИХ ТАЗОВЫХ БОЛЕЙ У ЖЕНЩИН С ГИНЕКОЛОГИЧЕСКИМИ ЗАБОЛЕВАНИЯМИ

Аннотация. Хронические тазовые боли (ХТБ) являются одной из наиболее распространенных проблем у женщин, особенно у тех, кто страдает гинекологическими заболеваниями. Это состояние может значительно снизить качество жизни, повлиять на физическое и психическое благополучие, и поэтому требует внимания и комплексного подхода в диагностике и лечении.

Ключевые слова: боль, синдром тазовой боли, поиорганные дисфункции.

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MONITORING OF CHRONIC PELVIC PAIN IN WOMEN WITH GYNECOLOGICAL DISEASES

Annotation. Chronic pelvic pain (CPP) is one of the most common problems in women, especially those who suffer from gynecological diseases. This condition can significantly reduce quality of life and affect physical and mental well-being, and therefore requires attention and an integrated approach to diagnosis and treatment.

Key words: pain, pelvic pain syndrome, organ dysfunction.

Многие случаи ХТБ имеют гинекологическую причину. Это могут быть эндометриоз, воспалительные заболевания тазовых органов, кисты яичников, аденомиоз и другие патологии. При этом, симптомы могут быть разнообразными и могут перекрываться с другими заболеваниями или проблемами, что делает диагностику и лечение сложными задачами [1,3]. В основе развития синдрома тазовой боли лежат воспалительные процессы в малом тазу. Метаболические, дистрофические и гемодинамические изменения в тканях провоцируют дисбаланс между веществами, которые активируют и подавляют воспаление. В результате этого в периферических нервных окончаниях симпатической нервной системы развиваются стойкие функциональные нарушения. В результате этого в центральную нервную систему посылается чрезмерное количество патологических импульсов [2].

В спинном мозге также происходят нарушения, повышается чувствительность структур. Любые, даже неболевые импульсы, начинают восприниматься, как болевые. Центральная нервная система неправильно на них реагирует, поддерживая застойные явления в малом тазу. В результате периферические нервные волокна претерпевают еще большие изменения. По сути, возникает замкнутый круг, который состоит из неадекватных нервных импульсов и неадекватных ответов на них [1,3,4]. Ученые заявляют, что синдром хронической тазовой боли у женщин и мужчин развивается при сочетании иммунных, неврологических и эндокринных дисфункций с психологическими факторами. Однако в преимуществе случаев предпосылкой для развития заболевания являются реальные патологии внутренних органов. Причинами ХТБ у женщин являются: 1. Спайки. Воспалительные изменения нередко запускают разрастание соединительной ткани между органами. Боли являются следствием натяжения тканей и микроциркуляторных нарушений. 2. Неоплазии. Объемные новообразования способны сдавливать окружающие органы, что проявляется болями без определенной локализации. 3. Эндометриоз. Эндометриоидные очаги образуются в области репродуктивных органов и вне гениталий. Циклическое отторжение клеток провоцирует постоянное воспаление. 4. Варикозное расширение вен. Чрезмерное переполнение сосудов может стать причиной неадекватной стимуляции нервных окончаний.

Цель обзора: рассмотреть основные причины возникновения синдрома хронической тазовой боли (ХТБ), описать критерии объективной оценки ХТБ и эффективный алгоритм персонифицированного подхода к терапии. Тριάдой ХТБ называют совокупность трех клинических проявлений [6,7]. 1. Диспареуния. Боли во время коитуса чаще всего наблюдают у больных наружным генитальным эндометриозом при расположении гетеротопий на крестцово-маточных связках или в позадишеечном пространстве, несколько реже — при фиксированной ретродевиации матки, хроническом сальпингоофорите, любом спаечном процессе в малом тазу. Характерно, что при спайках после прекращения полового акта по причине диспареунии боль самостоятельно купируется (что отличает эту разновидность от диспареунии при тазовом венозном полнокровии). 2. Дисхезия. Нарушение акта дефекации из-за дискоординации работы мышц тазового дна и анальных сфинктеров характерна для глубокого инфильтративного эндометриоза, эндометриоза влагалища и шейки матки, обширного спаечного процесса в малом тазу. 3. Дизурия. Нарушение мочеиспускания — чаще всего признак наружного и внутреннего генитального эндометриоза или интерстициального цистита [7,9]. Шкала оценки качества боли (Pain Quality Assessment Scale) является более деликатным инструментом, позволяющим дифференцировать ноцицептивные и нейропатические болевые состояния [6,8].

Гинекологическое обследование позволяет предположительно отнести пациентку к одной из двух групп: к тем, у кого ХТБ вызвана заболеваниями гинекологической природы, или к тем, у кого болевой синдром имеет какой-либо другой генез. Выполняют осмотр наружных половых органов, шейки матки в зеркалах, проводят бимануальное гинекологическое или ректовагинальное обследование. Инструментальные методы необходимы для верификации и уточнения диагноза [4, 7]: УЗИ органов малого таза, МРТ, КТ, денситометрия — для исключения остеопороза позвоночника, рентгенологические (ирригоскопия, колоноскопия) и эндоскопические методы (цистоскопия, уретроцистоскопия, гистероскопия), диагностическая лапароскопия [9]. Наиболее важный аспект помощи пациенткам с ХТБ — полноценная дифференциальная диагностика, поскольку от правильности установленного диагноза принципиально зависит тактика терапии [7, 9].

Цель лечения тазовой боли — подавить гиперактивность ноцицептивных нейронов, разрушив генераторы патологически усиленного возбуждения, что может обеспечить частичную или полную ликвидацию патогенной алгической системы.

Заключение. Хронические тазовые боли у женщин с гинекологическими заболеваниями – это сложное состояние, требующее индивидуального подхода и комплексного обследования. Мониторинговое наблюдение играет ключевую роль в успешной диагностике и лечении, позволяя эффективно управлять симптомами, улучшить качество жизни и предотвратить возможные осложнения.

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РОЛЬ И ЗНАЧЕНИЕ ИСТОРИЧЕСКОГО НАСЛЕДИЯ УЗБЕКИСТАНА В ПАТРИОТИЧЕСКОМ ВОСПИТАНИИ ДЕТЕЙ

Аннотация. В духовно-нравственном воспитании общества, в частности молодежи, большую роль играет образование. В современной стратегии развития в центре становится формирование духовно богатой, высоконравственной, образованной и творческой личности. В данной статье рассматривается вопрос о роли истории Узбекистана в духовно-нравственном воспитании детей.

Ключевые слова: история Узбекистана, духовность, молодое поколение.

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THE ROLE AND IMPORTANCE OF THE HISTORICAL HERITAGE OF UZBEKISTAN IN THE PATRIOTIC EDUCATION OF CHILDREN

Abstract. This article reveals the role of the history of Uzbekistan as a tool for the spiritual and moral education of children. Education plays an important role in the spiritual and moral education of society, in particular youth. In the modern development strategy, the focus is on the formation of a spiritually rich, highly moral, educated and creative personality. And for these purposes, the history of Uzbekistan plays a special role.

Key words: history of Uzbekistan, spirituality, young generation.

После обретения Узбекистаном государственной независимости перед страной остро встала задача воспитать духовно - нравственных личностей, которые знают свою историю, свое прошлое. Ведь не зная прошлого, невозможно понять подлинный смысл настоящего и цели будущего. Первостепенной задачей современной образовательной системы являются воспитание духовно-нравственных учащихся. Духовно-нравственное воспитание может быть рассмотрено различными методами и способами. Ключевая роль в духовно-нравственном воспитании общества отводится образованию и в особенности истории Узбекистана. Основной целью изучения истории Узбекистана является изучение и глубокий анализ неповторимого прошлого нашей родины, его уникальных жителей и народов. Средняя Азия издревле считалось мультикультурной территорией,

в которой обитали представители всех рас и народностей. История Узбекистана помогает узнать в полном объеме обо всех исторических фактах, событиях, явлениях, процессах, вкладе наших великих предков в сокровищницу мировой цивилизации. На территории Средней Азии жители всегда боролись за свою свободу и независимость, ведь из-за географически удобного расположения на этой территории всегда ввелись войны. По этой территории проходил Великий шелковый путь и современный Узбекистан был своего рода мостом между Азией и Европой.

В истории Узбекистана введется анализ социально-политических, экономических и культурных аспектов исторического развития нашего региона с древнейших времен до наших дней, в тесной взаимосвязи со всемирной историей. Молодое поколение может найти в истории Узбекистана ее светлые и темные стороны, которая освещается в полной мере, перед читателями начинают создаваться образы политических деятелей и плоды их действий. Читатель находит историю Узбекистана с многообразием ее общественно-политических, экономических и культурных связей и перспектив общественного развития. История Узбекистана рассказывает первые шаги на пути к обретению независимости, первые партии, которые создаются в Узбекистане и в которой активное участие принимает молодое поколение [1]. На территории современного Узбекистана в разные периоды и времена проживали и вели активную научную работу великие ученые и мыслители. В их числе Абу Али ибн Сина (Авиценна), Аль-Хорезми, Аль-Бухари, Мирзо Улугбек, Алишер Навои, Аль-Беруни, Захириддин Мухаммад Бабур, Амир Темура и др. Узбекистан обладает одним из самых богатых фондов древних рукописей на планете.

Интерес к истории Узбекистана у современной молодежи усиливается с каждым годом. Особенно усилилось необходимость в качественных книгах по истории Узбекистана после обретения независимости, ведь во времена советского тоталитаризма многие книги были уничтожены, либо были искажены под советский лад. Поэтапно в нашей республике были проведены работы по возрождению духовного наследия и истории Узбекистана. Под пристальным вниманием нашего руководства были приложены немалые усилия для возрождения богатейших культурных ценностей, накопленные нашими великими предками за века. В настоящее время молодежь имеет возможность узнать произведения искусства, книги и рукописи наших великих ученых, мыслителей, поэтов прошлого в первоисточниках, бережно изучая древние рукописи, которые являются сокровищницей знаний. Так, наши великие и мудрые ученые, мыслители обогатили не только узбекскую науку и культуру, но и мировую науку и культуру ценными открытиями, новыми умозаключениями. Одним из таких ученых был Мухаммад аль-Хорезми. Именно ему мировое сообщество обязано за появление терминов «алгебра» и «алгоритм». Именно аль-

Хорезми предлагает использовать арабские цифры и вводит понятие «0». В те века его книга «Книга сложения и вычитания по индийскому способу» была переведена на разные языки мира и была широко популярна в Европе. Его современник Ахмад аль-Фергани также был признанным астрономом, математиком и географом. «Книга о небесных движениях и свод науки о звездах» в XII в. в Европе дважды переводилась на латинский язык. Многочисленные труды и рукописи наших великих ученых были широко популярны среди европейских и азиатских умов и переводились на многие языки Европы и Азии. Поистине, были весомыми вклады наших ученых и мыслителей в таких отраслях как медицинские науки, химические науки, астрономические науки, геометрия и тригонометрия и др. «Мы – народ, познавший свое достоинство, мы – народ, который уверен в своей силе, мы – свободный народ, способный сострадать другим», - эти слова Первого Президента И.Каримова дали стимул для наших современных ученых на дальнейшее изучение и глубокий анализ не только в рамках истории Узбекистана, но и глубокий анализ в рамках мировой истории. Образование является частью процесса социализации личности, представляя собой формализованную целенаправленную передачу накопленного опыта, знаний последующим поколениям, который осуществляется в рамках соответствующих социальных институтов [2]. В одном из своих выступлений Президент Республики Узбекистан Ислам Каримов, говоря о богатствах нашей страны, подчеркнул: «Самый главный источник нашей силы — это молодое поколение, готовое эффективно использовать эти богатства, молодежь, воспитанная на гармоничном усвоении национальных и общечеловеческих ценностей, многовекового духовного наследия своих великих предков, а также интеллектуальных достижений и опыта развитых стран» [3]. Каждая страна на этой планете сильно дорожит своей историей и культурным наследием, ведь это делает каждую национальность своего рода уникальным и неповторимым. Большую роль здесь берет на себя история. Основываясь на истории и исторических фактах, мы можем учить наше молодое поколение духовному, культурному и научному богатству наших предков. Знания накопленными нашими предками должны служить нам фундаментом для дальнейшего прогресса в любой отрасли, она должна нам помогать для решения первостепенных задач которая встает перед нами. В век высоких технологий это особенно играет важную роль.

Наше сегодняшнее общество развивается очень интенсивно и динамично. Новые открытия молодого поколения Узбекистана помогут увеличить узнаваемость и признанность, авторитет Узбекистана в мировом сообществе, ведь для этого создаются все новые возможности и условия нашим государством.

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ВОПРОСЫ ПАТРИОТИЧЕСКОГО ВОСПИТАНИЯ ДЕТЕЙ ДОШКОЛЬНОГО ВОЗРАСТА

Аннотация. В современной стратегии развития в центре становится формирование духовно богатой, высоконравственной, образованной и творческой личности. В данной статье рассматриваются вопросы патриотического воспитания детей дошкольного возраста.

Ключевые слова: дошкольный возраст, ребенок, Родной край, родной город, патриотическое воспитание, история, нравственно-патриотическое воспитание детей.

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ISSUES OF PATRIOTIC EDUCATION OF PRESCHOOL CHILDREN

Abstract. Education plays an important role in the spiritual and moral education of society, in particular youth. In the modern development strategy, the focus is on the formation of a spiritually rich, highly moral, educated and creative personality.

Key words: history of Uzbekistan, spirituality, young generation.

В настоящее время проблема патриотического воспитания подрастающего поколения стала наиболее актуальной. За последние годы произошли огромные изменения, как в нашей стране, так и во всем мире. Это касается нравственных ценностей, отношения к происходящим событиям, отношения к истории. У современных детей искажены представления о патриотизме, доброте, великодушии. Изменилось и отношение к Родине. Сегодня материальные ценности доминируют над духовными. Но, как бы ни менялось общество, о воспитании у подрастающего поколения любви к своей стране, гордости за нее нельзя забывать никогда. И если мы хотим, чтобы наши дети полюбили свою страну, свой город, «пропитались» патриотизмом по отношению к ним, нам нужно показать их с привлекательной стороны. Тем более что нам есть чем гордиться. Патриотизм — это проявление любви не только к сильной и красивой, великой и могучей стране, но и к стране, которая переживает не лучшие времена: непонимание, раздор, военные конфликты. Именно в настоящее время воспитание чувства патриотизма, гражданственности,

ответственности за судьбу своей страны является одной из важнейших задач образования. Применительно к ребёнку дошкольного возраста «патриотизм» определяется, как потребность маленького человека участвовать во всех делах на благо семьи, детского сада, родного города, необъятной Родины. Юный патриот должен обладать такими качествами, как сострадание, сочувствие, чувство собственного достоинства и осознание себя частью окружающего мира.

Патриотическое воспитание дошкольников – это не только воспитание любви к родному дому, семье, детскому саду, городу, родной природе, культурному достоянию своего народа, своей нации, толерантного отношения к представителям других национальностей, но и воспитание уважительного отношения к труженнику и результатам его труда, родной земле, защитникам Отечества, государственной символике, традициям государства и общенародным праздникам. В детских садах для воспитания нравственно-патриотических чувств у дошкольников используются различные формы детской деятельности.

Воспитать патриотизм в ребенке невозможно без приобщения его к родной культуре. Осознанный интерес к самобытности своего народа имеет большое значение для воспитания нравственности. «Взрачивание» культурной личности ребенка происходит постепенно: начинается с простого интереса к чему-либо, и только потом, – пониманием и желанием участвовать самому.

Работа с дошкольниками по патриотическому воспитанию должна учитывать особенности детской психики: кратковременное внимание, интерес ко всему яркому, высокая эмоциональная вовлеченность. На этом основано большинство методических разработок, которые используются в детских дошкольных учреждениях.

Детям нужно рассказывать о самых важных событиях нашего прошлого, о том, какие героические поступки совершали их деды и прадеды во имя сохранения своей Родины, как самоотверженно они защищали родную землю в боях, и как честно трудились для ее процветания в мирное время. Нужно, чтобы дети гордились, что они тоже являются частью такого замечательного народа, и что их семьи напрямую причастны к истории страны.

В основе патриотического воспитания дошкольников лежит развитие нравственных чувств. Именно нравственно-патриотическое воспитание является одним из важнейших элементов общественного сознания, именно в этом основа жизнеспособности любого общества и государства, преемственности поколений. Понимая актуальность данной проблемы на современном этапе, мы считаем, что формирование личности дошкольников невозможно без воспитания у них уважения к нравственным человеческим ценностям. Дошкольный возраст — важнейший период становления личности, когда закладываются предпосылки гражданских

качеств, развиваются представления детей о человеке, обществе и культуре. Базовым этапом формирования у детей любви к Родине является накопление ими социального опыта с помощью непосредственного участия в жизни своего городе, усвоения принятых в нём норм поведения, взаимоотношений, приобщения к миру его культуры.

Любовь ребенка — дошкольника к Родине начинается с отношения к самым близким людям — отцу, матери, бабушке, дедушке, с любви к своему дому, улице, на которой он живет, детскому саду, городу. Именно поэтому мы считаем, что работу по нравственно-патриотическому воспитанию дошкольников целесообразнее начинать с их приобщения к истории и культуре родного края. Если мы не научим ребёнка любить свою страну, кому она будет нужна? Кто будет радоваться её достижениям, и болеть её горестями? Судьба Родины в руках человека, и ждать момента, когда она будет достойна его любви, по крайней мере, не разумно. Родина такова, какой мы её сами делаем. Исходя из того, что согласно Государственной программы «Илк кадам» дошкольной организации республики Узбекистан, одним из принципов дошкольного образования является сотрудничество с семьей, наша деятельность осуществляется в трех направлениях: работа с детьми, работа с родителями, работа с педагогами.

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ВЛИЯНИЕ ЦИФРОВЫХ ТЕХНОЛОГИЙ НА ЭКОНОМИЧЕСКИЙ РОСТ РЕСПУБЛИКИ УЗБЕКИСТАН

Аннотация. Цифровая трансформация способствует возникновению новых моделей ведения бизнеса, внедрению новых цифровых решений, которые являются драйвером повышения эффективности бизнес-процессов. Кроме того, цифровая трансформация отраслей и сфер национальной экономики способствует росту эффективности производительности труда, совершенствованию бизнес-процессов, увеличению рабочих мест в сфере цифровых технологий, улучшению качества жизни на основе увеличения скорости информационного обмена, доступности и защищенности информации, развитию инновационных технологических решений.

Ключевые слова: нормативно-правовая база, цифровая трансформация, основные макроэкономические показатели, цифровое развитие, цифровая инфраструктура, цифровые бизнес-модели, цифровые платформы, экономический рост, качество жизни населения.

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INFLUENCE OF DIGITAL TECHNOLOGIES ON ECONOMIC GROWTH OF THE REPUBLIC OF UZBEKISTAN

Abstract. Digital transformation contributes to the emergence of new business models and the introduction of new digital solutions, which are a driver for increasing the efficiency of business processes. In addition, the digital transformation of industries and areas of the national economy contributes to an increase in the efficiency of labor productivity, improvement of business processes, an increase in jobs in the field of digital technologies, an improvement in the quality of life based on an increase in the speed of information exchange, the availability and security of information, and the development of innovative technological solutions.

Key words: regulatory framework, digital transformation, main macroeconomic indicators, digital development, digital infrastructure, digital business models, digital platforms, economic growth, quality of life of the population.

2017 году запущена новая версия Единого портала интерактивных государственных услуг (my.gov.uz), создано Национальное агентство проектного управления при Президенте Республики Узбекистан. А в 2018-м образован Фонд поддержки развития цифровой экономики «Цифровое доверие» с целью привлечения и консолидации средств инвесторов для реализации проектов в сфере на условиях государственно-частного партнерства, в том числе связанных с внедрением технологии блокчейн.

Также и Государственная программа по реализации Стратегии действий по пяти приоритетным направлениям развития Республики Узбекистан в 2017-2021 годах в Год развития науки, просвещения и цифровой экономики предусматривает реализацию определенных Президентом масштабных задач и проектов в области развития цифровой экономики и электронного правительства.

С целью дальнейшего развития информационных технологий принято постановление Президента «О мерах по широкому внедрению цифровой экономики и электронного правительства» от 28 апреля 2020 года. В документе изложены комплексные меры по исполнению поставленных задач. Разработан проект Указа главы государства «О стратегии развития искусственного интеллекта в Республике Узбекистан в 2021-2022 годах» и размещен на СОВАЗ.

Как следует из Указов и Постановлений Президента Республики Узбекистан по развитию цифровой экономики, к 2022 году в Узбекистане долю электронных государственных услуг планируется довести до 60%.

Постановление также предусматривает развитие «цифрового предпринимательства» с увеличением объема услуг в этой сфере к 2023 году в три раза и доведением их экспорта до 100 млн долларов.

Широкое внедрение цифровых технологий запланировано на всех этапах системы образования. До 2022 года во всех регионах страны откроются центры обучения цифровым знаниям в рамках реализации проекта «Пять инициатив».

Министерство по развитию информационных технологий и коммуникаций определено уполномоченным органом в сфере развития цифровой экономики и электронного правительства. За Национальным агентством проектного управления при президенте сохраняются полномочия по внедрению криптоактивов и технологии блокчейн.

При министерстве будут образованы два новых учреждения:
- «Центр управления проектами электронного правительства»;
- «Центр исследований цифровой экономики».

В структуре центрального аппарата министерства введена должность заместителя министра, ответственного за вопросы ускоренной цифровизации аграрной сферы, внедрения современных информационных систем и программных продуктов в отрасли сельского хозяйства и продовольственной безопасности. В Мининфокоме также создаются

управление развития цифровых технологий в аграрной сфере и управление развития геоинформационных технологий.

Кроме того, Мининфокому безвозмездно передается государственная доля в уставном капитале ООО «Единый интегратор по созданию и поддержке государственных информационных систем UZINFOCOM».

Современная действительность показывает, что в настоящее время в Республике Узбекистан разработана «Дорожная карта», утвержденная в рамках Указа Президента Республики Узбекистан «Об утверждении Стратегии «Цифровой Узбекистан 2030» и мерах по ее эффективной реализации», которая предусматривает развитие следующих направлений:

- развитие системы электронного правительства);
- развитие цифровой индустрии;
- развитие цифрового образования;
- развитие цифровой инфраструктуры.

Вместе с тем, данные Государственного комитета Республики Узбекистан по статистике показывают, что за январь 2021 года доля телекоммуникационных услуг (услуги проводной, мобильной, спутниковой связи, сети Интернет) составила 74,8 %.

В свою очередь, цифровизация является драйвером развития отраслей и сфер национальной экономики.

В табл. 1 представлены основные макроэкономические показатели Республики Узбекистан за последние 5 лет.

Таблица 1

Основные макроэкономические показатели Республики Узбекистан

Наименование показателя	Единица измерения	2018 г.	2019 г.	2020 г.	2021 г.	2022 г.
Валовой внутренний продукт	млрд.сум	242 495,5	302536,8	406 648,5	511 838,1	580 203,2
Промышленная продукция	млрд.сум	111 869,4	148 846,0	235 340,7	331 006,6	367 078,9
Потребительские товары	млрд.сум	48 253,8	59 690,4	83 512,6	111 494,3	119 159,8
Сельское, лесное и рыбное хозяйство	млрд.сум	119 726,7	154 369,4	195 103,7	224 288,8	260 306,8
Промышленная продукция	млрд.сум	111 869,4	148 846,0	235 340,7	331 006,6	367 078,9
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Промышленная продукция	млрд.сум	111 869,4	148 846,0	235 340,7	331 006,6	367 078,9

Источник: Составлено автором на основе данных Государственного комитета Республики Узбекистан по статистике.

Темпы прироста ВВП в Республике Узбекистан по видам экономической деятельности за 2022 год (в % к предыдущему году) представлены на рис. 1.

Исследования специалистов в сфере цифровых технологий свидетельствуют о том, что основным макроэкономическим показателем является валовой внутренний продукт, характеризующий конечный результат производственной деятельности экономических единиц-резидентов, который измеряется стоимостью товаров и услуг, произведенных этими единицами для конечного использования.

По результатам исследований можно заключить, что формирование цифровой экономики обеспечивает следующие направления развития в национальной экономике:



Рис. 1. Темпы прироста ВВП в Республике Узбекистан по видам экономической деятельности за 2022 год (в % к предыдущему году).

Источник: www.stat.uz – данные официального портала Государственного комитета Республики Узбекистан по статистике.

- создание новой информационной инфраструктуры, в частности, развитие высокоскоростного доступа к интернету, беспроводной связи, сетей 5G и т.д.;

- развитие сквозных цифровых технологий, в том числе, облачных и аддитивных технологий, интернет вещей, робототехники и др.;

- трансформация общества и бизнеса, которая, в свою очередь, включает цифровую грамотность каждого отдельного гражданина и сотрудника, а также всестороннее развитие личности;

- конвергенция технологий;

- формирование и развитие новых бизнес-моделей;

- разработка и внедрение новых цифровых платформ;

- наращивание цифровой грамотности и т.д.;

- развитие и совершенствование систем информационной и кибербезопасности.

Как показывает практика, в условиях цифровой трансформации мировой экономической системы, отрасли и сферы национальной экономики Республики Узбекистан все больше и больше используют потенциал цифровых технологических решений, которые способствуют достижению конкурентных преимуществ на мировом экономическом рынке. Данный подход подразумевает не только модернизацию технического оборудования, обновление программного обеспечения или интеллектуализацию производства, но и фундаментальные изменения в управленческих процессах, корпоративной культуре и внешних коммуникациях. В свою очередь, совершенствование управления способствует росту производительности труда каждого сотрудника, оптимизации информационного обмена, роботизации и интеллектуализации труда, что в конечном итоге служит достижению высоких результатов на экономическом рынке.

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ПРИМЕНЕНИЕ ИНФОРМАЦИОННЫХ СИСТЕМ ПРИ ПОВЫШЕНИИ ЭФФЕКТИВНОСТИ БИЗНЕС-ПРОЦЕССОВ

Аннотация. Данная статья рассматривает применение информационных систем, таких как системы управления взаимоотношениями с клиентами (CRM), системы планирования ресурсов предприятия (ERP) и системы бизнес-аналитики (BI), для повышения эффективности бизнес-процессов. Описываются основные функции и преимущества каждой из этих систем, а также конкретные проблемы, которые они помогают решать. Статья подчеркивает важность информационных систем в современном бизнесе и их вклад в повышение конкурентоспособности компаний на рынке.

Ключевые слова: Информационные системы, управление взаимоотношениями с клиентами, системы планирования ресурсов предприятия, бизнес-аналитика, эффективность бизнес-процессов, автоматизация, управление предприятием, конкурентоспособность.

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THE USE OF INFORMATION SYSTEMS TO IMPROVE THE EFFICIENCY OF BUSINESS PROCESSES

Abstract. This article examines the use of information systems such as customer relationship management (CRM), enterprise resource planning (ERP) and business intelligence (BI) systems to improve the efficiency of business processes. The main functions and advantages of each of these systems are described, as well as the specific problems that they help to solve. The article highlights the importance of information systems in modern business and their contribution to improving the competitiveness of companies in the market.

Keywords: Information systems, customer relationship management, enterprise resource planning systems, business analytics, business process efficiency, automation, enterprise management, competitiveness.

В современном информационном обществе компании в различных секторах промышленности не могут обойтись без эффективных информационных систем. Они играют ключевую роль в автоматизации бизнес-процессов, улучшении управления, обеспечении сотрудничества между коллегами, повышении качества обслуживания клиентов, а также в анализе больших объемов данных и принятии обоснованных стратегических решений. В ситуации постоянно меняющихся условий на рынке и растущей конкуренции, значимость информационных систем для достижения бизнес-целей становится неоспоримой. Далее более подробно рассмотрим, почему эти системы являются необходимыми инструментами для современных компаний и как они способствуют повышению эффективности и конкурентоспособности предприятий на рынке.

Для решения бизнес-задач используются различные типы информационных систем, которые по своей сути являются достаточно схожими, но при этом выполняют различные друг от друга задачи. Мы говорим о CRM, ERP и BI системах, далее разберем их подробнее.

CRM (Customer Relationship Management) – это стратегия и набор программных инструментов, направленных на контроль взаимодействий с клиентами. Она охватывает весь жизненный цикл клиента – от привлечения новых потенциальных клиентов до поддержки постоянных. Данные системы позволяют накапливать и анализировать информацию о клиентах, включая историю взаимодействий, предпочтения и обращения. Это помогает эффективнее настраивать контакт с заказчиками, предоставлять персонализированный сервис, прогнозировать ожидания и управлять процессом продаж. Главная цель CRM – повысить уровень обслуживания клиентов, увеличить их приверженность и удовлетворенность [1].

ERP (Enterprise Resource Planning) – это программный продукт, целью которого является взаимодействие и автоматизация ключевых бизнес-процессов организации, включая управление финансами, складом, производством, ресурсами человека и другими аспектами. Оно обеспечивает централизованную базу данных, оптимизирует рабочие процессы, увеличивает эффективность процессов принятия решений, обеспечивая комплексное управление всеми аспектами деятельности предприятия [1].

BI (Business Intelligence) – это процесс сбора, обработки и трактовки данных, направленный на выявление ключевых инсайтов, которые способствуют более обоснованным стратегическим решениям. BI использует различного рода средства для визуализации данных, генерации отчетов и построения прогностических моделей, обеспечивая возможность бизнесу лучше понять свою деятельность, выявить тенденции, определить проблемные области и идентифицировать пути улучшения производительности и эффективности. BI способствует принятию

информированных решений на основе данных, что помогает компаниям успешно конкурировать на рынке и достигать своих бизнес-целей [1].

Существует множество различных проблем, которые решаются с помощью данных информационных систем. Далее разберем их подробнее на конкретных примерах:

1. Неэффективные и раздробленные бизнес-процессы: ERP-системы способствуют объединению и автоматизации ключевых операций организаций, таких как контроль запасов, обработка заказов и финансовое планирование. Через централизацию данных и автоматизирование процессов работы ERP-системы устраняют необходимость в ручных операциях, сокращают количество ошибок и повышают общую результативность работы предприятия [1].

2. Недостаток прозрачности и менеджмента: системы ERP предоставляют непрерывный мониторинг различных компонентов бизнеса в режиме реального времени, включая объемы складских запасов, планы производства и финансовые показатели. Это дает возможность принимать решения более осознанно, эффективно распределять ресурсы и стратегически планировать развитие компании [2].

3. Слабая организация отношений с клиентами: CRM-системы помогают компаниям эффективно управлять и развивать клиентские отношения, предоставляя централизованное хранилище данных о клиентах, отслеживая их взаимодействия и автоматизируя процессы маркетинга и продаж. Они обеспечивают возможность персонализированного общения с клиентами, повышают уровень их удовлетворенности и способствуют увеличению объемов продаж [2].

4. Интенсивный поток данных и недостаток аналитической информации: системы бизнес-аналитики помогают организациям анализировать и обрабатывать обширные объемы данных с целью извлечения ценной информации. Интегрируя данные из различных источников, эти системы предоставляют информативные отчеты, интерактивные панели и визуализации, что способствует принятию обоснованных решений. BI-системы помогают выявлять тенденции, обнаруживать возможности и оптимизировать бизнес-процессы [2].

5. Неточное прогнозирование и планирование: ERP и BI-системы работают сообща, обеспечивая возможности точного прогнозирования и планирования. Анализируя исторические данные, тенденции рынка и поведение клиентов, предприятия могут делать более точные прогнозы продаж, производственные планы и принимать решения по управлению запасами. Это помогает снизить затраты, свести к минимуму запасы и повысить удовлетворенность клиентов [2].

6. Неэффективные маркетинговые и продажные подходы: системы управления взаимодействий с клиентами и системы бизнес-анализа позволяют анализировать информацию о клиентах, отслеживать результаты

маркетинговых кампаний и оценивать эффективность продаж. Это помогает компаниям определить наиболее успешные маркетинговые каналы, нацеливаться на целевую аудиторию и улучшить стратегии продаж. CRM и BI-системы предоставляют данные, которые способствуют увеличению доходности инвестиций в маркетинг и увеличению объема продаж [2].

В заключении следует сказать, что информационные системы не просто автоматизируют процессы, но и становятся ключевым инструментом для развития и совершенствования бизнеса в условиях быстро меняющегося рынка. Они помогают компаниям добиться максимальной эффективности в своей деятельности и успешно конкурировать на глобальном рынке.

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СТАНОВЛЕНИЕ ЗЕМЕЛЬНОЙ ПРАВОСУБЪЕКТНОСТИ ЮРИДИЧЕСКИХ ЛИЦ В ИСТОРИИ ОТЕЧЕСТВЕННОГО ПРАВА

Аннотация. История земельного права насчитывает более ста лет. Система земельного права начала формироваться одновременно с основанием России. Еще в первые дни становления Российского государства были изданы различные указы, декреты и распоряжения о владении и распоряжении землей и природными ресурсами. Однако единой системы земельного законодательства уже давно не существует, а нормы включены в различные нормативно-правовые документы, и никаких действий по их обобщению и систематизации предпринято не было. Только в середине девятнадцатого века. Начался процесс реформирования земельных отношений, и создаются предпосылки для выделения земельного права в самостоятельную отрасль, которая с этого периода непрерывно развивается.

Ключевые слова. Земельное право, юридические лица, история, отечественное право.

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THE FORMATION OF THE LAND LEGAL PERSONALITY OF LEGAL ENTITIES IN THE HISTORY OF DOMESTIC LAW

Annotation. The history of land law goes back more than a hundred years. The system of land law began to take shape simultaneously with the founding of Russia. Back in the early days of the formation of the Russian state, various decrees, decrees and orders on the ownership and disposal of land and natural resources were issued. However, a unified system of land legislation has not existed for a long time, and the norms are included in various regulatory documents, and no action has been taken to generalize and systematize them. Only in the middle of the nineteenth century. The process of reforming land relations

has begun, and prerequisites are being created for the allocation of land law into an independent branch, which has been continuously developing since that period.

Keywords. Land law, legal entities, history, domestic law.

Для того, чтобы точно и объективно исследовать проблемы правового статуса земельных участков, особенно важное значение имеет рассмотрение исторических аспектов становления земельного законодательства в Российском Государстве. Ведь Россия — это страна с огромной территорией, и земельных участков на такой территории немалое количество. Выделение основных исторических этапов становления российского законодательства в области земельных отношений помогают рассмотреть, сравнить, определить и установить непосредственные способы развития института правового статуса земельных участков.

Право собственности на землю — центральная тема науки земельного права. Несмотря на различные пробелы в действующем законодательстве, всё больше растёт количество взглядов учёных-цивилистов на сущность, правовую природу, содержание рассматриваемой категории, которая непосредственно важна в теоретическом и практическом смысле. Один аспект, с которым согласны все учёные — без права собственности ни одно общество в мире существовать не может. И поэтому, чтобы определить, как право собственности на землю появилось и стало развиваться в России, необходимо рассмотреть и изучить исторический аспект.

По мнению П. В. Анисимова, А. Ю. Чикильдина, Г. С. Працко, современная учебная литература рассматривает историю развития земельного законодательства в России лишь с XVI века. Они считают, что именно с этого времени начинает происходить окончательное становление права собственности на землю, начали появляться первые правовые документы. В таких документах, достаточно системно был определён правовой режим земельного фонда страны. В последующее время более подробно обосновывалась правовая концепция собственности на землю и уже позднее появилась самостоятельная отрасль права — земельное право.

В период проведения земельной реформы и становления рыночной экономики в Российской Федерации исследование правосубъектности юридических лиц с позиций земельного и гражданского права было осуществлено в работах Ю.Н. Андреева, А.П. Анисимова, Н.А. Барина, З.С. Беляевой, С.А. Боголюбова, Г.Е. Быстрова, Б.А. Воронина, Е.А. Галиновской, Б.В. Ерофеева, Ю.Г. Жарикова, Г.Л. Земляковой, И.А. Иконицкой, В.П. Камышанского, А.В. Кодоловой, В.Н. Козловой, М.И. Козыря, О.И. Крассова, В.П. Мозолина, А.Я. Рыженкова, В.А. Рыбакова, О.А. Самончик, А.П. Сергеева, К.И. Скловского, Е.А. Суханова, Н.А. Сыродоева, Ю.К. Толстого, В.В. Устюковой, Л.П. Фоминой, З.И. Цыбуленко, Г.В. Чубукова и др.

В трудах названных ученых была предпринята попытка исследовать теоретические проблемы участия юридических лиц в земельных правоотношениях в различных сферах экономики. Наряду с этим, ими было проведено исследование правового положения юридических лиц – собственников и арендаторов земельных участков, с позиций аграрного законодательства. Были также исследованы особенности приобретения прав на земельные участки, защиты прав юридических лиц, исполнения юридическими лицами обязанностей по охране земель, в частности, посредством проведения производственного экологического контроля.

Выделим несколько этапов в процессе включения юридического лица в круг субъектов земельных правоотношений. В качестве критерия выделения исторических этапов развития земельной правосубъектности юридического лица выступает объем прав и обязанностей, которыми наделяются юридические лица как субъекты земельных правоотношений:

1 этап – XVIII век – формирование основ земельной правосубъектности юридических лиц, связанное с наделением землями владельцев промышленных организаций. Владельцы таких организаций наделяются ограниченной правосубъектностью. Они могут приобретать только определенные земельные участки на праве, соответствующем современному праву постоянного (бессрочного) пользования. Земельный участок хотя и предоставлялся предпринимателю как физическому лицу, но закреплялся именно за мануфактурой или заводом (то есть предоставлялся для деятельности конкретного завода или мануфактуры). Распоряжение приобретаемыми участками было ограничено, запрещалось отчуждение земельного участка отдельно от недвижимости. Использование земельных участков допускалось только для целей функционирования расположенных на их территории организаций. Если провести аналогию со структурой современных организаций, то фабрикант XVIII века выступал в качестве учредителя и исполнительного директора промышленной организации, а кроме того, являлся правообладателем земельного участка.

2 этап – XIX век – юридическое оформление юридических лиц в качестве субъектов земельных отношений (кооперативы, крестьянский банк, церковные организации). На данном этапе формируется в полном объеме земельная правосубъектность юридических лиц: они получают возможность приобретать, распоряжаться (в том числе и отчуждать) земельные участки, а, кроме того, на них возлагаются обязанности по соблюдению прав других землепользователей и сохранению сервитутов.

3 этап – XX век (1917-1991гг.) ограничение земельной правосубъектности юридических лиц, обусловленное установлением государственной собственности на землю: земельные участки предоставляются юридическим лицам для решения конкретных задач, земельная правосубъектность зависит от целей деятельности юридического лица.

4 этап – с 1991 года по настоящее время, построение рыночной экономики расширяет объем прав юридического лица на земельные участки, окончательно оформляются состав и содержание земельных прав и обязанностей юридических лиц.

Таким образом, законодательство о праве общей собственности на землю составляют множество нормативных актов и отдельных норм различных отраслей права (гражданского, земельного, семейного, административного), что говорит о комплексности данного правового института.

Между тем, существующий массив нормативно-правового регулирования права общей собственности на землю в России оставляет пробелы в определениях ряда правовых понятий (дефиниций).

Понятия «добросовестность», «добросовестное владение», «должная степень заботливости и осмотрительности», «незначительность доли в общей собственности», «значительность доли» и др. в отсутствие определения их содержания законодателем фактически сведены к оценочным понятиям, что влечет разнообразие судебной практики и длительные пересмотры судами вышестоящих инстанций. Также отсутствует надлежащий правовой механизм защиты прав сосособственников, например, при нарушении преимущественного права покупки доли в праве общей собственности. На законодательном уровне не предусмотрена возможность либо невозможность применения института приобретательной давности в отношении доли в праве собственности на имущество, что порождает многообразие подходов судов в разрешении вопроса о выборе надлежащего способа защиты.

Поэтому необходима постоянная трансформация этого правового института, что приведет к качественным изменениям как экономических, так и правовых отношений, а существующая концепция земельной собственности станет критерием для обозначения этапов развития земельных отношений в государстве.

В заключении стоит сделать вывод, что становление правового регулирования земельных участков в России прошло долгий путь. Основа всех земельно-правовых отношений — это право собственности на землю. Не смотря на уже довольно развитое земельное законодательство, его совершенствование должно продолжаться и быть актуальным в любом вопросе, которое касается земельных участков. Ведь если совершенствование будет продолжаться, то и законодательство, и экономические отношения ждёт качественное развитие.

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ОСОБЕННОСТИ ТАМОЖЕННОГО КОНТРОЛЯ В ОТНОШЕНИИ ВВОЗИМЫХ И ВЫВОЗИМЫХ КУЛЬТУРНЫХ ЦЕННОСТЕЙ

Аннотация. Важная роль в регулировании культурных ценностей на территории РФ отводится Федеральной таможенной службе. Таможенные органы обеспечивают соблюдение законодательства, в части контроля за порядком перемещения культурных ценностей, помогая сохранить культурное наследие страны. В статье определяется сущность и цель выявления особенностей организации таможенного контроля в отношении ввозимых, вывозимых культурных ценностей и проблемы, связанные с их перемещением.

Ключевые слова: культурные ценности, культурное наследие, таможенный контроль, разрешительные документы.

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PECULIARITIES OF CUSTOMS CONTROL IN RESPECT OF IMPORTED AND EXPORTED CULTURAL VALUES

Abstract. An important role in the regulation of cultural values on the territory of the Russian Federation is assigned to the FCS. Customs authorities ensure compliance with legislation, in terms of control, over the order of movement of cultural property, helping to preserve the cultural heritage of the country. The article defines the essence and purpose of identifying the features of the organization of customs control in relation to imported and exported cultural values and the problems associated with their movement.

Keywords: cultural values, cultural heritage, customs control, permits.

Культурные ценности — движимые и недвижимые предметы материального мира, созданные 50-100 лет назад и более, имеющие историческое, художественное и научное значение для каждого народа. Культурное наследие соотносится с этим понятием как общее явление и определяется как совокупность всех культурных ценностей. В настоящее время эти термины используются в законодательстве РФ как

тождественные. Из-за различного толкования создаются определенные сложности в правоприменительной практике.

На сегодняшний момент ввоз и вывоз культурных ценностей регламентируется нормативно-правовой базой, которая направлена на развитие международного сотрудничества и предотвращение незаконно ввезенных и вывезенных ценностей.

Таможенный контроль осуществляется в форме таможенного досмотра и проверки документов, прилагаемых к культурной ценности. В отличие от других товаров они подвергаются обязательному визуальному осмотру и прохождению физического лица через «красный коридор».

При ввозе в РФ, в том числе на период временного пребывания, осуществляется их таможенное декларирование. Культурные ценности ввозятся с освобождением от уплаты таможенных пошлин и налогов, при условии, что такие товары относятся для стран, входящих в ЕАЭС [1].

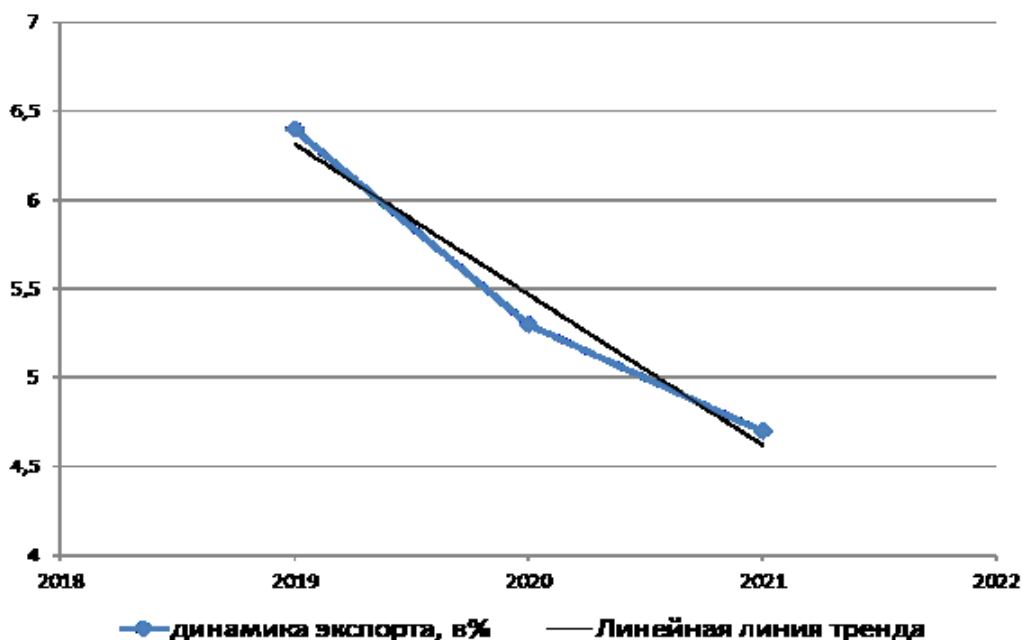


Рис. 1 Динамика экспорта культурных ценностей через границу РФ в период с 2018 – 2022 г.г. [2]

Вывоз осуществляется при представлении таможенному органу при наличии заключения (разрешительного документа) или пассажирской таможенной декларации. Как можно увидеть на графиках рис.1,2 их динамика снизилась. Это можно связать с принятыми пакетами санкций против РФ, которые ограничивают возможности перемещения культурных ценностей через границу.

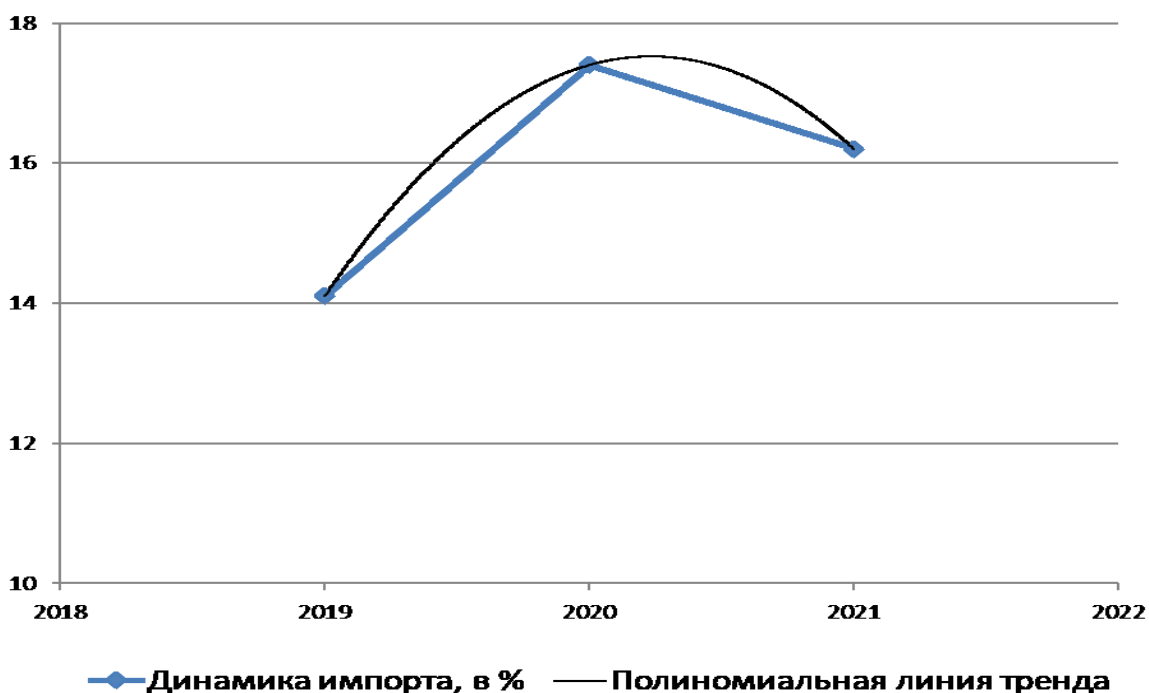


Рис. 2 Динамика импорта культурных ценностей через границу РФ с 2018 – 2022 г.г. [2]

В РФ, уполномоченным на согласование заявлений о выдаче лицензий и оформление других разрешительных документов является Министерство культуры России.

Таблица 1 – Документы для перемещения культурных ценностей

Предмет культурного назначения, (не относящийся к культурным ценностям)	Без предъявления разрешительных документов на ввоз, экспертиза проводится по желанию лица, необходимо заполнить ПИД (для физических лиц) или ДТ (для юридических лиц)	Без предъявления разрешительных документов, необходимо произвести экспертизу и представить экспертное заключение	
		Без предъявления разрешительных документов, экспертиза — по желанию лица, заполнение ПИД или ДТ	
Культурная ценность, не подпадающая под разрешительный порядок вывоза			
		Вывоз таких товаров запрещен	Необходимо произвести экспертизу, представить экспертное заключение и разрешительный документ на вывоз (лицензия или заключение)

В большинстве случаев нарушение таможенного законодательства при ввозе и вывозе ценностей совершается гражданами в силу их незнания и плохой информированности. Однако, значительная часть правонарушений совершается умышленно. Так происходит, когда

культурные ценности вывозятся из страны с целью дальнейшей продажи, а также получения вознаграждения за их провоз. В этих случаях они перемещаются, как правило, с сокрытием от таможенного контроля. В настоящее время за перевозку через таможенную границу с нарушениями требований предусмотрена административная и уголовная ответственность.

Анализируя данные, было выявлено, что чаще всего предметами правонарушений являются картины, монеты, ордена и медали Великой Отечественной войны, антикварное холодное оружие, предметы культов и религий, в частности иконы.

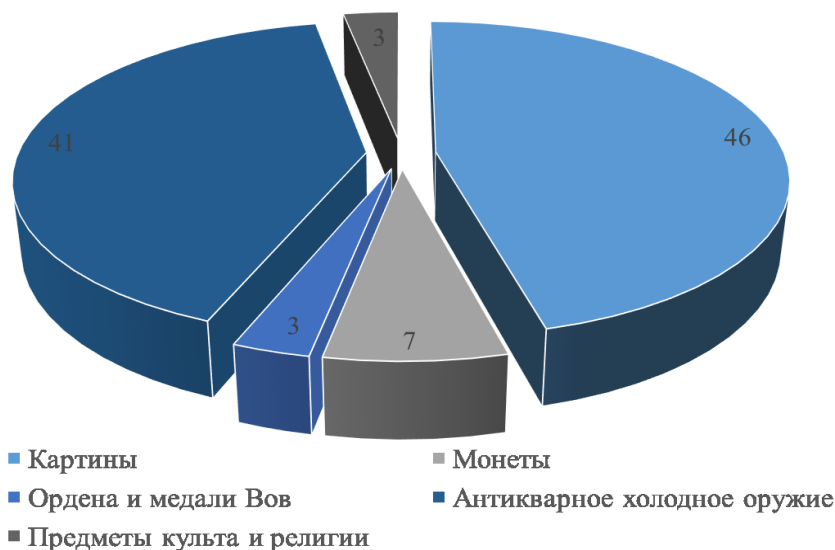


Рис. 3 Предметы правонарушений [3]

Для проведения многофакторного корреляционно-регрессионного анализа были взяты следующие показатели:

Y- Доходы государственного бюджета от ввоза/вывоза культурных ценностей

X1- экспорт культурных ценностей за 2019-2022 г.

X2- импорт культурных ценностей за 2019-2022 г.

X3- число случаев правонарушений культурных ценностей за 2019-2022 г.

В результате получили функциональную зависимость вида:

$$Y = f\{X_1, X_2, X_3\}$$

Далее рассчитываются парные коэффициенты корреляции между результативным признаком (Y) и остальными показателями. В итоге была получена таблица парных коэффициентов корреляции. Чем больше абсолютная величина коэффициентов, тем большее влияние оказывает факторный признак на результативный показатель.

Далее переходим к регрессионному анализу, который используется для исследования воздействия на отдельную зависимую переменную факторов.

Коэффициент детерминации равен 1. Он определяется на основе сравнения значений Y и значений полученных на основе расчетных данных. Он характеризует тесноту взаимосвязи между факторными признаками и результативным показателем.

R- квадрат изменяется от 0 до 1 (в расчетах он равен 0,89). Это говорит о том, что были правильно подобраны факторы и теснота связи достаточно сильная.

Таблица 1. Регрессионная статистика

Показатель	Величина
Коэффициент детерминации	1
Нормированный R-квадрат	0,89
Стандартная ошибка	0
Наблюдения	4

На основе полученного ряда коэффициентов составлено уравнение регрессии:

$$Y = 2,804 + 0,019X_1 + 0,735X_2 - 0,027X_3$$

Полученная модель показывает, что в совокупности ежегодно от перемещения культурных ценностей в государственный бюджет будет поступать 2,8%. От экспорта доход будет составлять 0,02%, от импорта 0,7%. Число правонарушений будет снижаться, и пополнение доходной части бюджета уменьшится на 0,03%.

Полученная модель может использоваться и для прогнозирования доходов на следующий год. Прогноз доходов РФ можно получить с помощью статистической функции «тенденция» и подставлении в нее прогнозных значений.

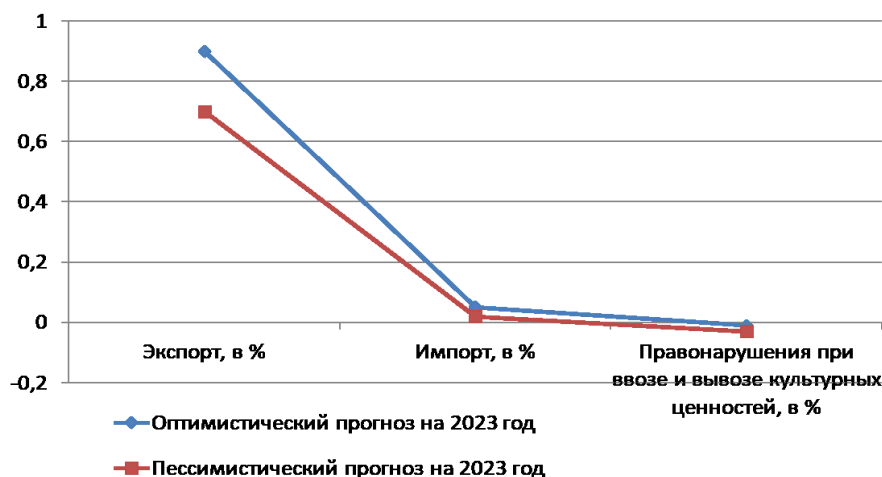


Рис. 4 Прогноз доходов государства РФ при ввозе и вывозе культурных ценностей

Анализ практики проведения таможенного контроля культурных ценностей, позволил выявить ряд проблем, осложняющих деятельность должностных лиц таможенных органов и снижающих эффективность таможенного контроля.

Первая проблема состоит в различной детерминации понятий «культурная ценность» в российском праве. Для решения предлагается единообразно определить терминологию [4].

Вторым вопросом является незнание гражданами порядка перемещения культурных ценностей. Рекомендуется расширить подобную практику информирования на все таможни РФ.

Третье это идентификации культурных ценностей: то есть определения соответствия предмета разрешительному документу. Решением могло бы стать нанесение специальной маркировки, позволяющей должностным лицам гарантированно установить, что вывозятся именно те предметы, на которые было получено разрешение [5].

Еще одной проблемой является перемещение с обманным использованием документов. Сложность выявления подобных правонарушений заключается в том, что большинство фальшивых и подложных документов изготавливаются высококлассными специалистами. Выходом из ситуации может стать координация деятельности таможенных органов и Министерства культуры посредством создания механизмов взаимодействия и своевременной передачи информации между этими контролирующими органами.

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ЭМУЛЬГИРУЮЩИЕ СВОЙСТВА ВЫСОКОМОЛЕКУЛЯРНЫХ ПОВЕРХНОСТНО-АКТИВНЫХ ВЕЩЕСТВ НА ОСНОВЕ ПОЛИАКРИЛАТОВ

Аннотация. В статье представлены результаты исследований эмульгирующей способности высокомолекулярных ПАВ на основе полиакрилатов. На эмульгирующую способность поверхностно-активных веществ большое влияние оказывает структура их молекул. Если рассматривать влияние гидрофильной части молекулы, то окажется, что при прочих равных условиях (длина гидрофобной части, расположение гидрофильной группы в молекуле) эмульгирующая способность возрастает в следующем порядке: $-COOH < -OSO_3H < -SO_3H$.

Ключевые слова: поверхностно-активные вещества, гидрофильная группа, гидрофобный радикал, эмульсия, пена, эмульгатор, макромолекула.

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EMULSIFYING PROPERTIES OF HIGH MOLECULAR SURFACTANTS BASED ON POLYACRYLATES

Annotation. The article presents the results of studies of the emulsifying ability of high-molecular surfactants based on polyacrylates. The emulsifying ability of surfactants is greatly influenced by the structure of their molecules. If we consider the influence of the hydrophilic part of the molecule, it turns out that, other things being equal (the length of the hydrophobic part, the location of the hydrophilic group in the molecule), the emulsifying ability increases in the following order: $-COOH < -OSO_3H < -SO_3H$.

Keywords: surfactants, hydrophilic group, hydrophobic radical, emulsion, foam, emulsifier, macromolecule.

ПАВ – вещества с ассиметричной молекулярной структурой, молекулы которых содержат одну или несколько гидрофильных групп и один или несколько гидрофобных радикалов [1].

Мировое производство ПАВ постоянно возрастает, при этом приоритетным является разработка таких ПАВ, молекулы которых легко подвергаются биохимическому разложению в природных условиях и не загрязняют окружающую среду [2]. В общем объеме выпуска ПАВ доля неионогенных и анионоактивных постоянно увеличивается.

Из многообразия областей применения ПАВ эмульсии и пены – одни из главных. Объясняется это, во-первых, тем, что ПАВ являются распространенными реальными системами, во-вторых, что они выполняют важные функции в некоторых производственных процессах. Например, такие процессы, как флотация, моющее действие, смазка, включают как стадию эмульгирования, так и пенообразования [3].

Как известно, ПАВ обладают большим количеством свойств. Важными свойствами ПАВ являются смачивающие, эмульгирующие и диспергирующие свойства.

Устойчивость эмульсий определяется такими факторами как: достаточное понижение межфазного натяжение, степень покрытия поверхности раздела адсорбционным слоем, т.к. предельно устойчивые эмульсии образуются при условии насыщения поверхности, а также механической прочностью адсорбционного слоя. В молекулах ВМПАВ с длинными углеводородными радикалами устойчивость обеспечивается также энтропийным фактором, который заключается в отталкивании капелек дисперсной фазы за счет молекулярно-кинетического движения радикалов.

Как известно [4], эффективность эмульгаторов не сводится только к понижению σ на межфазной границе, а определяется, в основном, прочностью структурно-механического барьера на поверхности дисперсной фазы. Вклад в образование прочного структурно-механического барьера могут вносить как гидрофобные взаимодействия неполярных участков макромолекул, так и межмолекулярные водородные связи, особенно в соединениях, образующих большое число водородных связей.

Прочность структурно-механического барьера определяется соотношением гидрофильных и гидрофобных свойств макромолекул. Гидрофильные свойства определяются взаимодействием полярных групп цепи с водой, а фобные – взаимодействием неполярных углеводородных радикалов переменной длины с маслом.

Эмульгирующую способность полученных нами сополимеров изучали на примере прямых эмульсий бензол-водный раствор полимера. За меру устойчивости эмульсии была принята величина $\tau_{1/2}$ – «полупериод жизни эмульсии», т.е. время, в течение которого отделяется $1/2$ часть чистой углеводородной фазы.

Для сополимеров СДЭГЭААК и СМЭАСГМАК с увеличением длины углеводородного радикала нижний предел концентраций, при котором они образуют предельно устойчивые эмульсии, сдвигается влево (рис. 1.1). В данном случае понижение поверхностного натяжения на межфазной границе способствует увеличению термодинамической устойчивости системы. Для сополимера СДЭСДЦМАК устойчивость эмульсий повышается до концентрации $5 \cdot 10^{-3} \text{ кг/м}^3$, а затем не изменяется с увеличением концентрации. Это можно объяснить тем, что с увеличением компактности макромолекул снижается их способность разворачиваться в адсорбционном слое и образовывать межмолекулярные водородные связи.

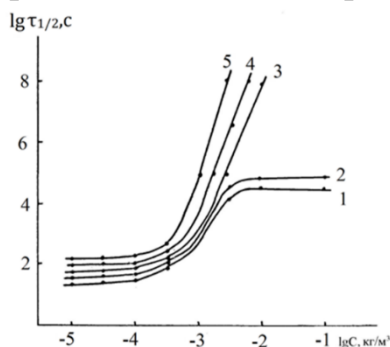


Рисунок 1.1 - Зависимость логарифма полураспада эмульсии от логарифма концентрации водных растворов сополимеров при 298К: 1-СМЭАСГМАК; 2-СДЭСДЦМАК; 3-СЭГЭААК; 4-СДЭГЭААК; 5-САСГМАК

Следовательно, исследованные сополимеры стабилизируют устойчивые эмульсии лишь при определенной сбалансированности гидрофильных и липофильных свойств макромолекул, т.е. при определенной длине бокового углеводородного радикала, когда в адсорбционном слое образуется максимальное число контактов сцепления за счет гидрофобных взаимодействий и водородных связей. Дальнейшее увеличение длины бокового алкильного радикала снижает эмульгирующие свойства сополимеров, что объясняется увеличением компактности макромолекул и уменьшением межмолекулярных взаимодействий в адсорбционных слоях.

Изучение устойчивости эмульсии от рН-среды показало, что наиболее устойчивые эмульсии образуются в кислой области при рН=3,5, а с увеличением рН до 11 устойчивость падает.

С повышением температуры устойчивость эмульсий снижается, что связано, по-видимому, с разрушением водородных связей. Так, при

увеличении температуры с 293 до 333К $\lg\tau_{1/2}$ снижается в 2,5 раза для сополимеров с концентрацией $5 \cdot 10^{-2}$ и $5 \cdot 10^{-3}$ кг/м³.

Необходимо отметить, что замена органического противоиона неорганическим приводит к снижению эмульгирующей способности сополимеров, тогда как рост числа этоксильных групп или длины углеводородного радикала способствует увеличению эмульгирующей способности соединений.

Исследование зависимости устойчивости эмульсий от концентрации водных растворов СМЭАСГМАК, ПАФ, а также их комплексов показало, что резкое увеличение устойчивости эмульсий ($\tau_{1/2}$) начинается при концентрации полимеров $5 \cdot 10^{-3}$ кг/м³ вследствие увеличения содержания макромолекул на межфазной поверхности и усиления межмолекулярных взаимодействий (рис.5.9). Для исследованных полимеров характерно увеличение устойчивости эмульсий, стабилизированных смесями СМЭАСГМАК с ПАФ состава 0,4:0,6 и 0,6:0,4 [5]. Увеличение устойчивости эмульсий, стабилизированных смесями полимеров по сравнению с устойчивостью эмульсий, стабилизированных отдельными компонентами, по-видимому, связано со стабилизирующим действием на эмульсии поликомплексов, образующихся в этой области соотношений СМЭАСГМАК и ПАФ и обуславливающих образование смешанных адсорбционных слоев с дополнительными межмолекулярными контактами сцепления, придающих механическую прочность этим адсорбционным слоям. По-видимому, стабилизирующее действие макромолекул, а также их комплексов заключается не столько в изменении поверхностного натяжения, сколько в образовании структурно-механического барьера, обеспечивающего устойчивость эмульсий. Прочность этого барьера обуславливается системой межмолекулярных (водородных) связей между -NH₂ и -COOH- группами макромолекул и образованием трёхмерной пространственной структуры в растворе. О решающей роли Н-связей при образовании пространственной структуры говорит тот факт, известных из литературных источников, что с повышением температуры устойчивость эмульсии, стабилизированных как СМЭАСГМАК, так и ПАФ резко падает.

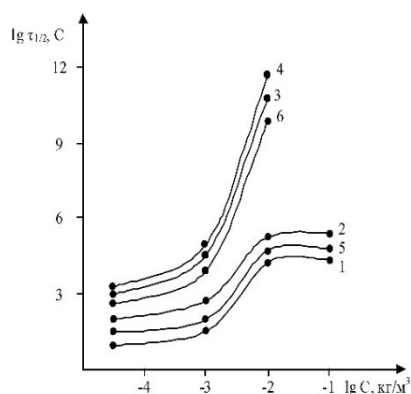


Рисунок 1.2 - Зависимость времени полураспада эмульсии от логарифма концентрации водных растворов комплексов СМЭАСГМАК с ПАФ при 298К и составах 1:0 (6); 0,8:0,2(2); 0,6:0,4(3); 0,4:0,6(4); 0,2:0,8(5); 0:1 (1)

Наряду с образованием пространственной структуры межфазного адсорбционного слоя на границе раздела фаз возможно самопроизвольное возникновение микроэмульсии микрокапель масла в воде, создающего также структурно-механический барьер. Итак, устойчивость к коалесценции капель бензола обусловлена адсорбционными слоями полимерных комплексов, эти слои обладают прочностью вследствие образования Н-связей между сегментами как однородных, так и разнородных макромолекул.

Таким образом, исследование эмульгирующей способности СМЭАСГМАК с ПАФ выявило синергетическое действие составов 0.6:04 и 0.4:06 (т.е. термодинамически устойчивых в растворах соотношений композиций) в стабилизации эмульсий за счет понижения поверхностного натяжения растворов и в основном из-за образования пространственной структуры в межфазном адсорбционном слое, создающей структурно-механический барьер.

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ТРЕБОВАНИЯ ТЕХНИКИ БЕЗОПАСНОСТИ ПРИ ИСПОЛЬЗОВАНИИ ЗЕРНОУБОРОЧНЫХ КОМБАЙНОВ

Аннотация. В данной статье представлена инструкция для рабочих и служащих по технике безопасности и пожарной безопасности в процессах использования зерноуборочных комбайнов при уборке зерновых культур. Возможные несчастные случаи и опасность возгорания предотвращаются при выполнении участниками уборки урожая требований, рекомендованных в данной статье по технике безопасности и пожарной безопасности.

Ключевые слова. Охрана, пожарная, машина, комбайн, жатка, трактор, мастерская, склад, топливо, поле, косилка.

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SAFETY REQUIREMENTS WHEN USING COMBINES

Annotation. This article provides instructions for workers and employees on safety and fire safety in the processes of using combine harvesters when harvesting grain crops. Possible accidents and the risk of fire are prevented when participants in the harvest meet the requirements recommended in this article on safety and fire safety.

Keywords. Security, fire, car, combine harvester, harvester, tractor, workshop, warehouse, fuel, field, mower.

Техника безопасности может быть неразрывно связана с противопожарными мерами. При соблюдении этих мер исчезает опасность возникновения пожара, а в случае возникновения пожара необходимо организовать мероприятия по сохранению людей, животных, оборудования, машин, урожая и т.д., а также имущества.

Для совершенствования техники безопасности и противопожарных мероприятий ежегодно проводится множество мероприятий. Каждый работник должен знать и соблюдать правила техники безопасности для предотвращения травматизма и профессиональных заболеваний на производстве. Случайная травма во время выполнения работником производственного задания называется производственной травмой.

В этом случае работник может временно или полностью потерять трудоспособность. Несчастные случаи могут происходить по таким причинам, как отсутствие профессиональной подготовки и инструктажа на рабочем месте, продолжительный рабочий день, работа на неисправных станках и т.п.. Тот факт, что в настоящее время сельская ячейка снабжена энергией, как никогда высок и растет более стабильно. Снабжение сельского хозяйства современной техникой непрерывно увеличивается. Наряду с количественными изменениями в методах ведения сельского хозяйства происходят также значительные качественные изменения. Будут представлены высокоскоростные тракторы, комплексные гидроагрегаты, современные зерноуборочные комбайны, средства автоматизации, управления и т.д. При этом предполагается организовать на более высоком уровне работу средств охраны труда и техники безопасности в производстве механизированного сельского хозяйства, наряду с достижением высоких трудовых достижений и производительности труда в сельском хозяйстве.

1. При использовании зерноуборочного комбайна необходимо соблюдать следующие основные правила техники безопасности.

К работе на комбайне допускаются только лица, прошедшие специальную подготовку по правилам эксплуатации зерноуборочного комбайна и имеющие удостоверение на право пользования комбайном, а также те, кто прошел инструктаж по технике безопасности.

Перед запуском двигателя рычаг переключения передач устанавливается в нейтральное положение. При этом необходимо убедиться, что механизм привода рабочих органов комбайна выключен и не представляет угрозы ни для кого. Подается звуковой сигнал. Запрещается движения с открытым капотом двигателя.

Перед приведением комбайна в действие стояночный тормоз опускается, и подается звуковой сигнал. Когда комбайн перемещается в транспортном положении, оператор должен работать, только сидя в кабине. Перед запуском рабочих органов подается звуковой сигнал.

Капоты двигателя должны быть закрыты, а рабочие органы и движущиеся механизмы должны быть заблокированы защитными кожухами. При выполнении работ под нижней частью комбайна в гидроцилиндрах стояков должны быть установлены опорные винтовые стойки для обеспечения безопасности. При работе под приподнятым мотовилом на подъемных гидросилиндрах устанавливаются удерживающие опоры.

Необходимо постоянно следить за исправностью тормозов и органов управления.

В кабине должна быть аптечка первой помощи со всеми необходимыми медикаментами.

После остановки комбайна рычаг переключения передач переводится в нейтральное положение. Все механизмы выключаются и включается стояночный тормоз. Допустимый высокий уклон при работе комбайна и движении в транспортном состоянии составляет 10%. При этом скорость передвижения не должна превышать 3-4 км/ч.

При движении комбайна в рабочем и транспортном положении запрещается:

- присутствие посторонних лиц в кабине комбайна;
- включение задних фонарей при движении комбайна по автотрассе;
- присутствие посторонних лиц рядом с комбайном без разрешения ;
- выполнять очистку, регулировку и ремонт при работающем двигателе;
- работать под комбайном или жатки, если не установлены защитные стойки;
- использование неподходящих средств;
- проверять работу механизма крепления, когда за комбайном находятся люди;
- транспортировка грузов в капнителе и бункере;
- выталкивать руками, ногами, лопатой или другими предметами при опускании зерна из бункера;
- передвижение и длительная остановка с соломой;
- переключать передачи во время буксировки комбайна;
- носить неудобную одежду и работать без головного убора;
- обгон транспортных средств в вечернее и ночное время, а также работа без электрического освещения;
- оставление инструментов на полу кабины комбайна;
- нахождение людей в бункере при работающем двигателе

2. При эксплуатации зерноуборочного комбайна необходимо соблюдать следующие правила пожарной безопасности:

- изучить и неукоснительно соблюдать правила пожарной безопасности;
- постоянно проверять техническое состояние комбайна и наличие противопожарного оборудования:
 - в площадке задней части комбайна для технического обслуживания двигателя, должны быть установлены два огнетушителя, две лопаты и другие средства предварительной подготовки к тушению пожара;
 - не допускайте утечки рабочих жидкостей из системы электропитания, а также из систем смазки и гидравлики;

-заправлять топливный бак двигателя только при неработающем двигателе и холодной системе выпуска отработавших газов;

- ежедневно и своевременно очищать рабочие органы, датчики и рычаги сенсорного управления от соломенной массы;

- содержать комбайн в чистоте;

- постоянный контроль за тем, чтобы в горячих зонах двигателя не скапливались соломы;

- контролируйте крепление вращающихся деталей, чтобы предотвратить трение;

- предотвращение перегрева подшипников;

- деревянные подшипники на валу соломотряса должны быть подтянуты;

- прочищать засоренные топливопроводы следует только после того, как двигатель остынет после прекращения подачи топлива;

- ремонт комбайна следует проводить вдали от посевов пшеницы;

- необходимо заправлять комбайн на дорогах или на спяханых местах;

- при сильном ветре работа комбайнов временно приостанавливается;

- следует заземлить комбайна, чтобы защитить его от электричества и молний;

Комбайн должен быть оснащен следующими средствами тушения пожара:

огнетушитель;

лопата;

лом;

ведро;

ящик, заполненный песком;

Сельскохозяйственные объекты (пункты приема, хранения и переработки зерна, машинно-тракторные мастерские, склады и заправочные станции, полевые мельницы) должны быть полностью оборудованы противопожарными щитами и укомплектованы следующим образом:

- огнетушитель с двумя ручками;

- 3 крюка;

- 2 лопаты;-

- 2 лома;

- 2 топора;

- 2 ведра;

- ящик с песком.

Емкость для воды должна иметь объем не менее 0,2 м³ и обеспечены ведрами.

Если во время уборки урожая произошел пожар, необходимо действовать следующим образом:

-в случае возникновения пожара на уборочных площадях немедленно уведомить пожарную охрану фермы и пожарную охрану районного центра;
- организовать тушения пожара с помощью первичными средствами огнетушения (огнетушитель с ручкой, крюки, лопата, ломик, топор, ведро) до прибытия пожарной охраны;

Чтобы ограничить распространение огня по пшенице, необходимо изолировать очаг возгорания, ограничив зону горения определенными рамками. Участки вспашки следует выбирать с учетом скорости распространения огня и направления ветра. Чтобы потушить летящие искры и горящие кучи соломы, необходимо расставить людей вдоль вспаханной линии.

В зерноуборочных комбайнах (зерноуборочных комбайнах, серповидных машинах, тракторах), а также в транспортных средствах, которые занимаются транспортировкой зерна от зерноуборочных комбайнов, должны быть приняты меры по удалению из зоны пожара.

Следует отметить, что причинами возникновения пожаров в период сбора урожая в первую очередь являются небрежное обращение с огнем взрослых и детей, недисциплинированность участников сбора урожая и нарушение правил пользования уборочной техникой.

Поэтому перед началом сезона сбора урожая необходимо провести мероприятия по обучению всего рабочего персонала технике безопасности и пожаробезопасности, проверить их знания и провести инструктаж по охране труда.

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АНАЛИЗ СУЩЕСТВУЮЩИХ ПОДХОДОВ ПОСТРОЕНИЯ «CLOUD» ДАТА-ЦЕНТРОВ

Аннотация. В этой статье освещен ключ к успешной реализации всего проекта по обеспечению оптимальной производительности центра обработки данных и максимального времени безотказной работы. Целью запроса по данному проекту является определение комплекса мероприятий и разработка технических предложений с учетом полученных типовых решений.

Ключевые слова: центра обработки данных, бизнес-задачами компании заказчика, техническое задание, рабочая документация, серверной.

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ANALYSIS OF EXISTING APPROACHES TO BUILDING “CLOUD” DATA CENTERS

Annotation. Therefore, this stage is of key importance for the successful implementation of the Annotation. This article highlights the key to successfully implementing an entire project to ensure optimal data center performance and maximum uptime. The purpose of the request for this project is to determine a set of measures and develop technical proposals taking into account the standard solutions received.

Key words: data center, business tasks of the customer’s company, technical specifications, working documentation, server room.

Введение

Облачные вычисления играют важную роль в современном мире информационных технологий и является одним из самых быстрых и интенсивно растущих рынков. Такие крупные компании, например, как Oracle и Microsoft, инвестируют огромные суммы в развитие данной технологии, а глава Oracle имеет мнение, что 80% бюджетов IT-компаний уйдут в облачные сервисы и технологии. Термин «облачные вычисления» используют как для приложений, которые предоставляются в виде сервисов

по сети, так и для программно-аппаратных комплексов в дата-центрах, которые предоставляют вышеописанные сервисы.

Разработка концепции ЦОД (центра обработки данных, серверной) [1].

Этот этап имеет ключевое значение для успешной реализации всего проекта с целью обеспечения оптимального режима эксплуатации ЦОД в период наибольшей активности. В процессе предпроектного обследования специалисты нашей компании определяют направления работ в соответствии с бизнес-задачами компании заказчика, перечень инженерных решений и мощность вводимого в эксплуатацию дата-центра.

На данном этапе проводится изучение текущей ИТ и бизнес ситуации заказчика, выявляются скрытые резервы, оценивается нагрузочная способность и наполнение действующего оборудования, изучаются запущенные ИТ и бизнес направления. Разработка концепции позволяет не только построить эффективный ЦОД, но и позволит своевременно выявить риски, устранить непродуктивные расходы и скорректировать планы по развитию.

Проектирование ЦОД (центра обработки данных, серверной)

При проектировании ЦОД учитываются требования существующего законодательства и нормативных документов по экологии, охране труда и пожарной безопасности.

Цель предпроектного обследования состоит в определении комплекса мероприятий и разработке технических предложений с учетом сформированных типовых решений. По результатам обследования наши инженеры-проектировщики помогут Заказчику разработать грамотное техническое задание (ТЗ) на проектирование ЦОД.

Требования заказчика составляют основу технического задания (ТЗ) ЦОД и являются тем первичным документом, с которого начинается работа по созданию центра обработки данных. Кроме технических требований, на первых этапах работы по проектированию ЦОД в качестве исходной информации используются данные, полученные в процессе предпроектного обследования.

Любое проектирование начинается с правильно написанного технического задания, утвержденного заказчиком. От грамотно написанного ТЗ зависят сроки проектирования и выбор необходимого оборудования для строительства ЦОД, описанные в ТЗ.

Проект ЦОД (центра обработки данных, серверной) - стадия «П» [4].

Грамотно разработанная концепция будущего ЦОД и техническое задание дает основания для создания эскизного плана дата-центра (проекта ЦОД) – единого комплекса решений, предназначенного для обеспечения заданного режима эксплуатации ЦОД. Эскизный проект ЦОД определяет оптимальное расположение стоек, требования к габаритам серверного зала и служебных помещений, варианты дизайна и принципов резервирования

элементов климатических систем, первое представление о бюджете проекта ЦОД, а также целый ряд других параметров, которые позволят облегчить выбор конкретных решений.

На этом этапе проектирования ЦОД прорабатываются основные принципы работы всех систем, а также решения конкретных задач и пожеланий Заказчика. Проектная документация (проект ЦОД) представляет собой текстовые и графические материалы, определяющие объемно-планировочные, конструктивные и технические решения для строительства или реконструкции ЦОД.

Основой для разработки проекта ЦОД служат архитектурно-строительная, технологическая и инженерные части Проекта здания. Проект ЦОД ориентирован на использование максимально эффективных и хорошо зарекомендовавших себя конструкций, оборудования и комплектующих материалов.

Грамотное проектирование - это высокая скорость выполнения строительных работ и обслуживания ЦОД. Безошибочный расчет проекта – минимизация затрат на оборудование.

Рабочая документация ЦОД (центра обработки данных, серверной) - стадия «Р»

На следующем этапе разрабатывается рабочая документация (РД) ЦОД, которая используется на этапе строительства. Именно на этой стадии определяется ресурсоемкость процесса получения мощностей, объем строительных и монтажных работ, количества необходимого оборудования и материалов, а значит и итоговый бюджет проекта.

РД разрабатывается после утверждения предшествующей стадии проектирования. Цель работ на стадии "РД" состоит в подготовке точных чертежей, схем и таблиц, которыми будут руководствоваться монтажники при проведении работ по созданию ЦОД.

Рабочая документация обеспечивает детальную привязку компонентов всех систем к объекту. РД содержит чертежи, таблицы соединений и подключений, планы расположения оборудования и проводок и другие документы.

Сметная документация ЦОД (центра обработки данных, серверной) - «СД»

Разработка сметной документации является заключительным этапом проектирования центра обработки данных и определяет полную стоимость оборудования, строительного-монтажных и пуско-наладочных работ.

Разделы проекта ЦОД (центра обработки данных, серверной):

- архитектурные решения;
- система для размещения оборудования 19";
- климатическая система;
- приточно-вытяжная система вентиляции;
- система электроснабжения;

- система гарантированного и бесперебойного электропитания;
- система резервного электропитания ДГУ;
- система автоматического газового пожаротушения;
- система удаления продуктов тушения после пожара;
- система охранно-пожарной сигнализации и оповещения о пожаре;
- система видеонаблюдения;
- система контроля и управления доступом;
- структурированная кабельная сеть;
- мониторинг;
- заземление и молниезащита;
- сметная документация.

Основные стандарты при проектировании ЦОД (центра обработки данных, серверной):

- Телекоммуникационная инфраструктура Центров Обработки Данных (TIA-942);
- Commercial Building Telecommunications Cabling Standard (TIA/EIA-568A);
- Commercial Building Standard for Telecommunication Pathways and Spaces (TIA/EIA-569);
- Installing Commercial Building Telecommunication Cabling (ANSI/NECA/BICSI 568-2001);
- Commercial Building Grounding and Bonding Requirements for Telecommunications (ANSI/TIA/EIA-607);

Требования и рекомендации при проектировании ЦОД (центра обработки данных, серверной)

Размещение ЦОД (серверной) в здании [5]

Помещение центра обработки данных (серверной) не должно быть проходным. Нецелесообразно размещать ЦОД рядом с внутренними конструкциями здания, которые ограничивают возможное расширение в будущем: лестничные марши, лифтовые шахты и т.д. Рекомендуется под ЦОД использовать помещение без окон. Если в центре обработки данных предусмотрены окна, то согласно п.3.4 СН 512-78 ЦОД рекомендуется располагать на северной или северо-восточной стороне здания.

Согласно п. 17.6 РД 45.120-2000 запрещается размещение центра обработки данных под помещениями, связанными с потреблением воды (туалеты, душевые и т.д.).

Не допускается располагать ЦОД рядом с помещениями для хранения пожароопасных или агрессивных химических материалов (п.4.2 ППБ 01-93). Также не рекомендуется размещать ЦОД на верхних этажах здания, т.к. они наиболее подвержены повреждениям в случае пожара и могут заливаться при протечках крыши.

Через ЦОД не должны прокладываться транзитом трубопроводы инженерных систем здания.

Согласно инструкции СН 512-78 запрещается размещение центра обработки данных (серверной) в подвале здания.

Необходимо избегать близкого размещения мощных источников электрических и магнитных полей, а также оборудования с повышенной вибрацией.

Помещение ЦОД (центра обработки данных, серверной) [6]

Минимально допустимый размер помещения центра обработки данных (серверной) — 14 квадратных метров. Размеры ЦОД должны отвечать требованиям к располагаемому в ней оборудованию или составлять 0,07 квадратных метра на каждые 10 квадратных метров площади обслуживаемых рабочих мест. Минимальная высота потолка должна составлять 2,44 м.

Пол, в соответствии с п.17.20 РД 45.120-2000, должен быть ровным и иметь антистатическое покрытие с сопротивлением 106 Ом, обеспечивающее стекание и отвод статического электричества. Настил пола осуществляется на несгораемое основание. Рекомендуется использовать фальшпол.

Максимально допустимая нагрузка на пол должна составлять:

- распределенная нагрузка не более 12 кПа;
- сосредоточенная нагрузка не более 4,4 кН.

Входная дверь в ЦОД должна иметь размеры не менее 2,0 x 0,9 метра, уплотняющую прокладку и запираться на внутренний замок. Порог в дверном проеме не предусматривается.

Дверь должна изготавливаться из трудносгораемого материала, иметь противосъемные приспособления и открываться наружу с углом раскрытия 180 градусов. При необходимости устанавливается двухстворчатая дверь.

Температура в помещении ЦОД должна быть в пределах от +18 до +25. Влажность воздуха должна быть в пределах от 40 % до 55 % без конденсации влаги, скорость изменения влажности 6 % в час. Запылённость не должна превышать 0,0001 г/м³. Давление в помещении ЦОД (серверной) должно превышать давление в соседних помещениях.

Рекомендуется превышение давление не менее 147 Па. Уровень освещения должен составлять не менее 500 лк, измеренном на высоте 1 метр в горизонтальной плоскости. Уровень электромагнитного излучения не должен превышать 3 В/м во всех диапазонах частот.

- Предельно допустимая концентрация
- Пыль 100 мкг/м³/24 часа
- Углеводороды 4 мкг/м³/24 часа
- Сероводород 0.05 ppm
- Окислы азота 0.1 ppm
- Двуокись серы 0.3 ppm
- Хлор 0.01 ppm

Оснащение помещения ЦОД (центра обработки данных, серверной)

Помещение центра обработки данных (серверной) должно быть оснащено следующими инженерными системами:

- пожарная сигнализация;
- газовое пожаротушение;
- охранная сигнализация;
- контроль доступа;
- видеонаблюдение;
- кондиционирование;
- вентиляция;
- система гарантированного и бесперебойного электропитания;
- освещение;
- аварийное освещение;
- заземление;
- молниезащита.

Размещение оборудования в ЦОД (центра обработки данных, серверной)

Серверное и сетевое оборудование рекомендуется размещать в 19-дюймовых шкафах. Шкафы необходимо размещать в помещении таким образом, чтобы был доступ к их передней и задней частям.

Согласно ANSI/NECA/BICSI 568-2001 минимальное свободное расстояние перед передней и задней частями шкафа или стойки должно быть равным 914 мм (при минимальной ширине бокового прохода 762 мм). Устанавливаемые в одном ряду шкафы должны быть скреплены в единую конструкцию соединением болтами боковых сторон каркаса.

Согласно п.3.3.2 ANSI/NECA/BICSI 568-2001 шкафы должны быть заземлены медным проводником сечением не менее 5 AWG (4,621 мм).

Не рекомендуется размещение в пределах шкафа распределительных устройств электропитания, за исключением тех, которые нужны для работы смонтированных в этом шкафу серверного и/или телекоммуникационного оборудования.

Обслуживаемое настенное оборудование должно располагаться таким образом, чтобы органы управления и индикаторы находились на высоте 1,6 метра от уровня пола. Максимальная высота размещения необслуживаемого настенного оборудования не более 2,4 метра от уровня пола. При этом величина зазора между верхней поверхностью корпуса монтируемого оборудования и потолком должна быть не менее 150 мм. Свободное пространство рядом с боковой поверхностью корпуса настенного оборудования должно составлять не менее 300 мм.

Виртуализация одна из составляющих вычислительного процесса в современных дата-центрах. С другой стороны, в вопросах сетевого окружения существуют разного рода трудности [7]:

- Отдельная настройка каждого сетевого устройства при большом их количестве;
- Сложность и ресурсоемкость при внедрении и изменении сетевых политик, конфигураций, новых сервисов;
- Многовендорность и проприетарность некоторых функций;
- Статическое или ручное выделение и перераспределение сетевых ресурсов.

Многие крупные вендоры, например, Cisco, предлагают в качестве решения вышеописанных задач, использование программно-определяемых сетей. Данные сети могут изменить экономику и опыт внедрения ИТ систем.

В типовом устройстве телекоммуникационной сети, выполняющем коммутационные или маршрутизирующие функции, одновременно выполняются следующие три задачи (рис. 1.1):

- обработки. Используется для описания топологии сети. Создается таблица коммутации (ForwardingInformationBase (FIB)) на DataLink уровне и таблицы маршрутизации (RoutingInformationBase (RIB)) на уровне Network. Данные таблицы создаются протоколами, создающими карту сети, например, OSPF для маршрутизации или Spanning-Tree для коммутации данных. Плоскость управления также отвечает за выполнение политик качества обслуживания и безопасности;

- передачи данных. Выполняет пересылку пакетов или фреймов на конкретный интерфейс или порт, основываясь на таблицах RIB или FIB;

- управления. Выполняет мониторинг и управление плоскостями обработки и передачи данных.



Рисунок 1. Типовой сетевой узел

Впервые о разделении плоскостей обработки и данных заговорили после производства Hi-End корпоративных маршрутизаторов и коммутаторов. Данная функция выполнялась на двух отдельных

процессорах: на одном для плоскости обработки, на другом для передачи данных, что значительно улучшало производительность таких устройств.

На данный момент, плоскость обработки работает на основном аппаратном обеспечении, которое представляет собой чрезмерно программируемую структуру, в то время как плоскость передачи данных работает на специализированных микросхемах (прим. ASIC), оптимизированных, в основном, для пересылки пакетов.

Следующий эволюционный шаг в необходимости разграничения плоскостей исходит из того, что, если сетевые устройства используют самостоятельные плоскости обработки (рис.2), то это может привести к их недостаточной или асинхронной координации, поэтому появилась идея объединения плоскостей обработки к единой точке построения сетевой топологии.

Также эти проблемы могут привести к неоптимальной производительности из-за возникновения накладных расходов (дополнительных нагрузок), которые могут повлиять на трафик данных [8].

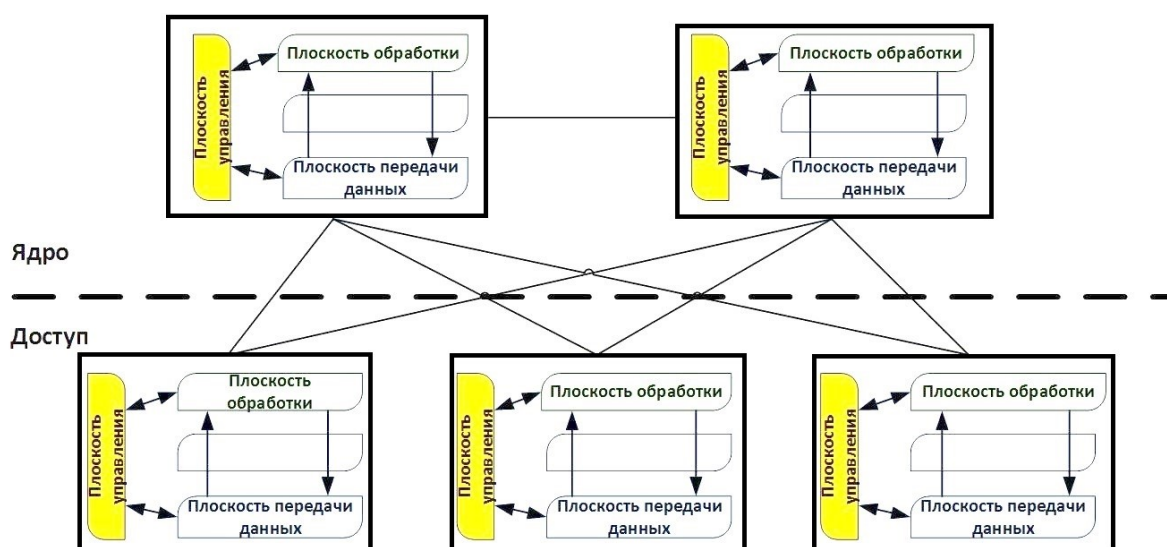


Рис. 2. Самостоятельные плоскости обработки трафика

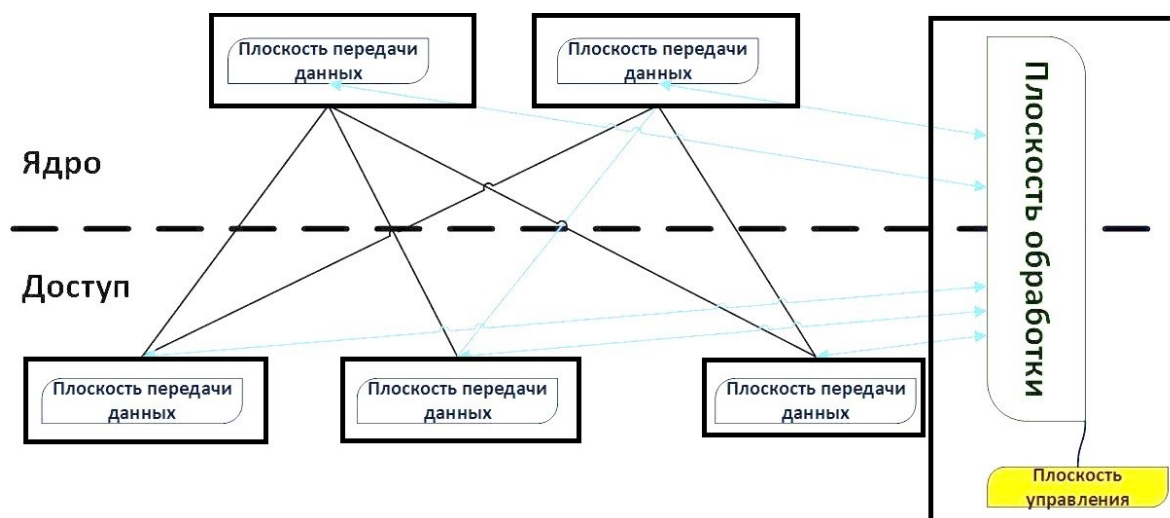


Рис. 3. Централизованная плоскость обработки трафика

Конечный пункт для полного разделения плоскостей передачи данных и обработки внутри сети дата-центра и его коммутационной инфраструктуры показан на рисунке 3.

При таком подходе существует две параллельные сети:

- сеть для передачи трафика;
- сеть для обработки трафика с использованием механизмов внешней сигнализации.

Основные выводы и преимущества данного подхода:

- Автоматизация распределения ресурсов для физических и виртуальных сетей;
- Уменьшение затрат на поддержку сети;
- Снижение сложности сетевых конфигураций;
- Существенно снижаются простои в сетевом окружении;
- Использование оптимальных путей для трафика;
- Отсутствует необходимость использования Spanning-Tree протокола для обмена информацией о топологии сети среди сетевых устройств;

Link-state и Distance-vector протоколы, при использовании данного метода обязательны. Они обеспечивают полную картину сети для детализированного контроллера [9].

Недостатком является то, что централизованный коммутационный контроллер может стать узким местом в плане производительности и потенциально единой точкой отказа. Резервирование решает здесь только часть задачи.

В упрощенном виде архитектура OpenFlow архитектура показана на рисунке 4.

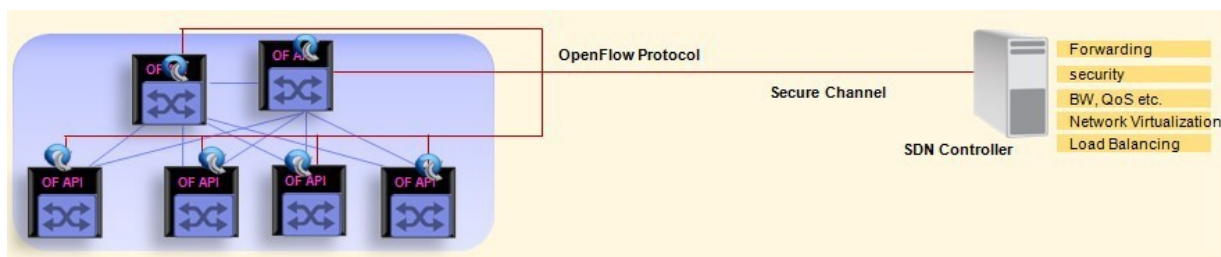


Рис. 4. OpenFlow сетевая архитектура дата-центра

Данный метод становится стандартом и делает возможным взаимодействие в мультивендорном мире. Протокол описывающий как разделить плоскости обработки и передачи данных получил широкое распространение и называется OpenFlow. Контроллер и OpenFlow коммутаторы используют этот протокол для взаимодействия, давая повышенную производительность для x86 оборудования. Контроллер OpenFlow - это стандартный сервер.

ВЫВОДЫ

В данной статье были описаны, как аппаратные, так и технические подходы к построению облачных центров обработки данных. Были описаны методы виртуального моделирования таких сооружений и их вычислительных ресурсов.

Подходы к этим методам, также описаны в этой главе. После, того как были описаны основные характеристики облачных центров обработки данных и подходы к реализации, стоит задача по разработке модели.

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ОСОБЕННОСТИ СОВРЕМЕННЫХ РАЗВИТЫХ ПЕНСИОННЫХ СИСТЕМ И НАПРАВЛЕНИЯ СОВЕРШЕНСТВОВАНИЯ ЕЕ В РОССИИ

В данной статье рассматриваются пенсионные системы США, Китая, Великобритании и в особенности Российской Федерации. Дается их сравнительная характеристика как с положительной, так и отрицательной стороны. Анализируются данные об изменениях пенсионной системы России в 2023 году, включая увеличение фиксированной части выплаты, увеличение минимального трудового стажа, а также индивидуального пенсионного коэффициента. Еще строятся прогнозы о ожидающих в 2024, 2025 и 2026 изменениях, например, увеличение пенсионного возраста и внесение корректировок в систему по расчету пенсионных выплат.

Ключевые слова: пенсионная система, стаж работы, пенсионная реформа, бальная формула расчета, зарплатно-стажевая формула.

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FEATURES OF MODERN DEVELOPED PENSION SYSTEMS AND DIRECTIONS FOR IMPROVING IT IN RUSSIA

This article examines the pension systems of the United States, China, Great Britain, and especially the Russian Federation. Their comparative characteristics are given both on the positive and negative sides. The data on changes in the Russian pension system in 2023 are analyzed, including an increase in the fixed part of the payment, an increase in the minimum length of service, as well as an individual pension coefficient. Forecasts are also being made about the changes expected in 2024, 2025 and 2026, for example, an increase in the retirement age and adjustments to the system for calculating pension payments.

Keywords: pension system, work experience, pension reform, point calculation formula, salary-probation formula.

Современные пенсионные системы играют важную роль в обеспечении социальной защиты населения. Однако, их эффективность вызывает много вопросов и дискуссий. В особенности, когда они сталкиваются с рядом серьезных проблем, таких как недостаточность пенсионных накоплений, что приводит к низкому уровню пенсионных выплат или неравномерное распределение пенсионных взносов между различными категориями населения. В данной статье рассматривается эффективность современных пенсионных систем и анализируются актуальные направления ее совершенствования в Российской Федерации в соответствии с ее реформой на период с 2019 по 2028 годы.

Перед тем как перейти к нововведениям появившимся в России в 2023 году и тому что нас только ждет в 2024 и 2025 годах стоит рассмотреть современные пенсионные системы разных стран и определить их положительные и негативные стороны. Сравнительная характеристика представлена ниже в виде таблицы 1 [6].

Таблица 1 – Сравнительная характеристика пенсионных систем разных стран

Страна	Краткая характеристика	Плюсы	Минусы
<u>Российская Федерация</u>	В России действует трехуровневая пенсионная система, включающая обязательное пенсионное страхование, государственное пенсионное обеспечение и негосударственное пенсионное обеспечение. Обязательное страхование предусматривает выплату пенсий по старости, инвалидности и потере кормильца.	<ul style="list-style-type: none"> - Доступность: пенсионное обеспечение доступно для всех граждан. - Гарантированность: государство гарантирует выплату пенсий в соответствии с законодательством. - Разнообразие: пенсионная система имеет различные 	<ul style="list-style-type: none"> - Низкий уровень пенсий: размер пенсий не всегда позволяет обеспечить достойный уровень жизни. - Недостаточная прозрачность: система не всегда понятна для граждан, что может вызывать недоверие и

	Государственное обеспечение включает пенсии для военнослужащих, государственных служащих и других категорий граждан. Негосударственное обеспечение осуществляется через негосударственные пенсионные фонды.	виды пенсий, что позволяет гражданам выбирать наиболее подходящий вариант.	сомнения. - Недостаточная гибкость: пенсионная система не всегда учитывает индивидуальные потребности и обстоятельства граждан.
<u>США</u>	В США действует система социального обеспечения, которая включает в себя пенсионное обеспечение. Пенсионная система основана на взносах работников и работодателей в систему социального обеспечения. Пенсии выплачиваются гражданам, достигшим пенсионного возраста, а также инвалидам и вдовам. Кроме того, в США развита система частных пенсионных фондов, которые позволяют гражданам самостоятельно накапливать средства на пенсию.	- Разнообразие: пенсионная система включает в себя как государственное, так и частное пенсионное обеспечение, что позволяет гражданам выбирать наиболее подходящий вариант. - Гибкость: пенсионная система позволяет гражданам самостоятельно определять размер взносов и выбирать пенсионные планы. - Надежность: система социального обеспечения в США считается одной из самых надежных в мире.	- Неравенство: пенсионная система не всегда обеспечивает равные условия для всех граждан, в зависимости от уровня дохода и профессии. - Высокие налоги: взносы в систему социального обеспечения могут быть значительными, что может негативно сказываться на доходах граждан. - Недостаточная защита: система не всегда обеспечивает достаточную защиту от рисков, связанных с потерей работы или болезнью.
<u>Китай</u>	В Китае действует система обязательного пенсионного страхования, которая охватывает работников государственных предприятий и некоторых частных компаний. Пенсии выплачиваются гражданам, достигшим пенсионного возраста, а также инвалидам и вдовам. Кроме того, в Китае развита система частных пенсионных фондов, которые позволяют гражданам самостоятельно накапливать средства на пенсию.	- Доступность: пенсионное обеспечение доступно для всех граждан, достигших пенсионного возраста. - Гарантированность: государство гарантирует выплату пенсий в соответствии с законодательством. - Разнообразие: пенсионная система включает в себя различные виды пенсий, что позволяет гражданам выбирать наиболее подходящий вариант.	- Низкий уровень пенсий: размер пенсий в Китае не всегда позволяет обеспечить достойный уровень жизни. - Недостаточная прозрачность: система пенсионного обеспечения не всегда понятна для граждан, что может вызывать недоверие и сомнения. - Недостаточная гибкость: пенсионная система не всегда учитывает

			индивидуальные потребности и обстоятельства граждан.
<u>Великобритания</u>	В Великобритании действует система обязательного пенсионного страхования, которая охватывает большинство работников. Пенсии выплачиваются гражданам, достигшим пенсионного возраста, а также инвалидам и вдовам. Кроме того, в Великобритании развита система частных пенсионных фондов, которые позволяют гражданам самостоятельно накапливать средства на пенсию.	<ul style="list-style-type: none"> - Надежность: система пенсионного страхования считается одной из самых надежных в мире. - Разнообразие: включает в себя как государственное, так и частное пенсионное обеспечение, что позволяет гражданам выбирать наиболее подходящий вариант. - Гибкость: позволяет гражданам самостоятельно определять размер взносов и выбирать пенсионные планы. 	<ul style="list-style-type: none"> - Неравенство: пенсионная система не всегда обеспечивает равные условия для всех граждан, в зависимости от уровня дохода и профессии. - Высокие налоги: взносы в систему пенсионного страхования могут быть значительными, что может негативно сказываться на доходах граждан. - Недостаточная защита: система пенсионного страхования не всегда обеспечивает достаточную защиту от рисков, связанных с потерей работы или болезнью.

На основании информации приведенной в таблице 1 можно сделать вывод, что современная пенсионная система России больше всего схожа по своим особенностям с первой экономикой мира по паритету покупательной способности за 2023 год - Китаем.

Теперь стоит обратить внимание на самые последние доработки пенсионной системы России, которые вступили в силу с 1 января 2023 года:

1) Пенсионный фонд и Фонд социального страхования объединились в Социальный фонд РФ. Гражданам это позволило получить те же услуги и информацию, как это было раньше от ПФР и ФСС, но теперь это можно будет сделать в одном месте в рамках “одного окна”, что упрощает процесс оформления льгот.

2) Минимальный трудовой стаж для выхода на пенсию увеличился до 14 лет.

3) Индивидуальный пенсионный коэффициент в свою очередь возрос до 25,8.

4) Пенсии неработающих пенсионеров выросли на 4,8%, а социальная доплата к пенсии увеличилась. Это распространилось на неработающих

пенсионеров, получающих страховые пенсии по старости, инвалидности и по случаю потери кормильца. Размер прибавки определялся индивидуально для каждого пенсионера, в зависимости от размера его пенсии.

5) Возраст выхода на пенсию также изменился, и граждане могут выйти на пенсию только при наличии льгот для досрочного назначения пенсии. К ним относятся:

- Мужчины и женщины имеющие длительный стаж - 42 и 37 лет соответственно.

- Пенсионеры, не имеющие постоянного места работы, в связи с ликвидацией предприятия, сокращение штата или увольнением, которые были приняты на учет в Центр занятости населения.

- Женщины, имеющие стаж не менее 15 лет и воспитывающие трех или более детей до восьми лет.

- Мужчины с 20 летним или женщины с 15 летним стажем, которые являются родителями ребенка с инвалидностью с детства и воспитавшие его до восьмилетнего возраста.

- Люди, работающие по специальным профессиям, которые имеют льготный стаж. Например, работа в тяжелых и особых условиях или на вредных и опасных производствах [1].

б) Фиксированная часть пенсии возросла до 7567,34 рубля [3].

Однако не все согласны с эффективностью изменений пенсионной реформы. Так Александр Сафонов, проректор Академии труда и социальных отношений, экс-замглавы Минздравсоцразвития РФ (в 2007-2012 годах). Он считает, что в стране сократились расходы по содержанию пенсионеров, поскольку их число за последние несколько лет уменьшилось. Для улучшения пенсионной системы, по ее мнению, необходимо ввести процесс, при котором все будут платить страховые взносы в пенсионный фонд, включая самозанятых. Также следует отменить налоговые льготы для некоторых групп населения, чтобы увеличить объемы поступления взносов. Индексацию пенсий следует проводить не по прожиточному минимуму, а по динамике роста средних зарплат. Это позволит придать реформе новый импульс и улучшить пенсионную систему в целом [8].

Изменения Российской пенсионной системы и ее совершенствование предполагается и в ближайшие два года.

Как сообщает "Коммерсант" в 2024 году пенсии в России будут проиндексированы на 7,5%. В результате размер фиксированной выплаты к страховой пенсии увеличится до 8134,88 рубля, а средний размер страховой пенсии по старости, как отмечал глава Минтруда Антон Котяков, вырастет на 1628 рублей и составит 23 405 рублей. По словам спикера Госдумы Вячеслава Володина, это решение коснется 32 миллионов россиян. На их пенсии дополнительно выделят из бюджета порядка 234 миллиардов рублей, уточнил он [7].

Одновременно с этим, в 2024 году планируется увеличение возраста выхода на пенсию. Женщины смогут выйти на пенсию в возрасте 60 лет, а мужчины - в возрасте 65 лет. Это изменение вызвало споры между депутатами и профсоюзами. Депутаты считают, что повышение возрастной планки позволит сэкономить значительную часть пенсионных средств, которые можно направить на повышение социальных выплат. Профсоюзы же опасаются, что количество людей, оставшихся без работы, возрастет, так как предпенсионерам будет сложно трудоустроиться.

С 1 января 2024 года пенсионерам Крайнего Севера не нужно будет подавать заявление в Социальный фонд для получения надбавок за длительный стаж работы в северных районах, так как надбавка будет предоставляться автоматически. Пенсионеры будут уведомлены о перерасчете через портал госуслуг или Почту России. Аналогичные нормы для пенсионеров, работавших в сельском хозяйстве, вступят в силу с 1 января 2026 года [2].

Также вице-премьер Татьяна Голикова ранее сообщила, что планируется модернизировать систему расчета пенсий после 2025 года. На этот счет высказался Александр Сафанов. По его мнению, балльная формула расчета должна быть ликвидирована в пользу зарплатно-стажевой формулы, которая будет зависеть от размера стажа и заработной платы.

Размер пенсии и сейчас определяется с учетом отработанных лет и заработной платы, но расчет для граждан становится менее понятным из-за повышающих и понижающих коэффициентов. Если зарплата ниже определенного уровня, используется понижающий коэффициент, но индексация этих коэффициентов не прописана, что вызывает проблемы с применением балльной формулы. Раньше было проще, поскольку человек знал, сколько денег начисляется в пенсионный фонд с его зарплаты и сколько он будет получать в месяц [5].

На основании вышеизложенного можно сделать вывод, что пенсионная система находится в постоянном процессе развития и это позволяет ей постепенно адаптироваться к меняющемуся миру. Со стороны государства, ответственных специалистов и ученых видны постоянные усилия в сторону улучшения качества жизни граждан пенсионного возраста, из-за чего происходит индексация выплат и их увеличение в абсолютном выражении. Тем не менее, размер пенсии все еще находится на достаточно низком уровне и не позволяет обеспечить высокий уровень жизни людям, которые уже завершили свою трудовую деятельность. Поэтому каждому также стоит брать ответственность за свое будущее и с первых трудовых лет начиная инвестировать небольшие суммы в различные активы, чтобы к старости накопленный капитал мог обеспечить всем необходимым для существования, что уже применяется в зарубежной практике.

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ПРИМЕНЕНИЕ И ОБОСНОВАНИЕ ИНГИБИРОВАННЫХ БУРОВЫХ РАСТВОРОВ ДЛЯ УКРЕПЛЕНИЯ СТВОЛА СКВАЖИНЫ

Аннотация. В статье рассматриваются требования к буровому раствору, его приготовлению, водопроницаемости, плотности, вязкости буровых растворов, статическим сдвиговым параметрам и добавляемым к ним смазочным материалам, а также определение параметров фильтрации.

Ключевые слова: горизонтальный ствол, контакт, отложения, эрозия, коллекторские свойства, смачивание, свойства горных пород, гидратация.

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APPLICATION AND JUSTIFICATION OF INHIBITED DRILLING FLUIDS FOR STRENGTHENING A WELL HOLE

Annotation. The article discusses the requirements for drilling fluid, its preparation, water permeability, density, viscosity of drilling fluids, static shear parameters and lubricants added to them, as well as the determination of filtration parameters.

Key words: horizontal trunk, contact, deposits, erosion, reservoir properties, wetting, rock properties, hydration.

Введение

В процессе бурения встречаются пласты с различной геологической структурой. Для каждого геологического пласта подбираются подходящие буровые растворы. Механическая прочность стенки скважины напрямую связана с механическими свойствами горной породы и составом применяемого бурового раствора.

В настоящее время в практике широко применяется процесс наклонного бурения скважин, то есть строительство скважины с большим отклонением от вертикальности. Эти методы строительства скважин очень эффективны и экономичны после ввода в эксплуатацию по сравнению с

бурением вертикальных скважин. При строительстве скважин такого типа поверхность контакта с продуктивным пластом большая и дебит скважины высокий. [1].

В большинстве случаев скважины, заканчивающиеся горизонтальным стволом, бурятся параллельно плоскости расслоения коллекторов. Другими словами, образуется большая площадь контакта с коллектором. Что касается вертикальных скважин, то эта скважина пересекает плоскость стратифицированных коллекторов под углом 90°. Поэтому в настоящее время целесообразно проектировать скважины с горизонтальным стволом или заканчиванием с большим углом отклонения от вертикали. Строительство скважин данного типа целесообразно, когда коллекторы расположены вертикально, а траектория скважины пересекает несколько вертикальных зон бурения. С точки зрения бурения наиболее эффективным является контроль за траекторией скважины.

При выполнении строительства скважин с горизонтальным стволом это связано с прочностью стенки скважины, процессом очистки горизонтальной или наклонной части скважины от накипи, а также проблемами вывода накипи на поверхность. Для поиска решения этих проблем проводится множество исследований.

Устойчивость (прочность) стенки скважины связана со следующими процессами: эрозией стенки скважины, сжатием труб, потерей циркуляции жидкости. Эти перечисленные процессы занимают 40-44% всего продуктивного времени, то есть в течение этого времени камнеомы не перемещаются в течение времени, указанного в проекте. Такие финансовые ситуации влекут за собой значительные затраты, и для их покрытия сервисные и частные компании взимают 10-20% авансовых затрат.

Давайте рассмотрим три фактора, разрушающих прочность горных пород и снижающих их прочность:

1. Механическая промывка горных пород потоком промывочной жидкости. При этом под действием бурового раствора вымываются слабые породы и их цементы, то есть повреждается стенка скважины.

2. Изменение напряженного состояния в зоне ствола скважины. Горизонтальное, вертикальное, латеральное (горное) давление вызывает деформацию горных пород при их раскрытии, особенно при наличии в сдвигах влажных и пластичных глин.

3. Физико-химическое и химическое воздействие промывочной жидкости на горные породы ствола скважины в призабойной зоне скважины. Химическая эрозия определяется физико-химическими процессами, которые происходят при взаимодействии стенок с фильтратом раствора. Эти процессы зависят от типа параметров, состава используемого бурового раствора, минеральности породы и химического состава пластовых флюидов [2].

Решение этих проблем связано с повышением эффективности строительства скважин с большим отклонением от крутизны, снижением финансовых затрат и сокращением периода простоя.

Исследование проблем прочности стенок скважин. Механическая прочность стенки скважины тесно связана с механическими свойствами породы. Породы располагаются в земной коре в виде плотных или мягких агрегатов.

Известно, что по происхождению горные породы делятся на метаморфические, магматические и остаточные (осадочные) типы. Основными породообразующими минералами являются: гидрофильные глинистые минералы (монтмориллонит, каолинит и др.), силикаты (полевые шпаты, слюды, пироксены, амфиболы), группы кварца (кварц, кремень, халцедон и др.), карбонаты (кальцит, доломит). и водорастворимые материалы (гипс, галит и др.) [1].

В данной работе основное внимание уделено изучению осадочных горных пород. Осадочные породы образуются в результате постепенного накопления осадков. К таким типам горных пород относятся песчаник, сланец, известняк, торф, бурый уголь, бурый уголь, антрацит, каменная соль и другие. При бурении нефтяных и газовых скважин часто встречаются породы, состоящие из следующих минералов: карбонатных (кальцит, доломит), оксидных (кварц и др.), глинистых (каолинит, монтмориллонит и др.), сульфатных (гипс, ангидрит, барит). Глинистые минералы представляют собой водные алюмосиликаты, характеризующиеся небольшими размерами и зернистой структурой.

По строению горные породы подразделяются на кристаллические, аморфные и зернистые. Кристаллические горные породы образуются в результате химических реакций и образуются в земной коре или осаждаются из водных растворов. К этим типам горных пород относятся соли, гипс, мел, доломиты, ангидриты, известняки и органические породы, являющиеся последними продуктами жизнедеятельности организмов.

Породы бывают однородными (однородными), неоднородными, изотропными и анизотропными. Изотропные породы обладают одинаковыми свойствами во всех направлениях, тогда как анизотропные породы имеют разные свойства в разных направлениях. Прочностные и упругие свойства горных пород отличаются друг от друга в зависимости от направления силы, действующей на плоскость расслоения.

Характерной особенностью горных пород является изменение формы, целостности и размеров под действием внешних сил, а также их механических свойств.

Механические свойства включают в себя следующие понятия: прочность горных пород (теоретическая и техническая), твердость, упругость, пластичность.

Прочность горных пород – это способность воспринимать воздействие силы при определенных условиях, не нарушая структуру.

Твердость породы – это свойство устойчивости к воздействию инородных тел.

Упругость — свойство изменять форму и размеры горной породы под действием силы, а также восстанавливать исходное состояние после снятия с нее силы.

Пластичность — это способность горной породы изменять свою форму и размеры под действием силы, а также сохранение остаточной деформации после снятия с нее силы.

В нормальных условиях принято делить горные породы на хрупкие и пластичные. По мнению российского ученого В.С. Федорова, эти параметры рассматриваются как состояние тела, а не свойство материала. Понятие о состоянии горной породы состоит из следующего: структура, дефекты и смещения принадлежат самим зернам, их поверхности и веществу, температуре и действию на них сил и их величине. тело [3].

Хрупкое выветривание – это внезапное, неожиданное разрушение горной породы. Этот процесс предназначен для твердых пород.

Пластическая деформация — это процесс быстрого увеличения деформации, когда напряжение увеличивается или уменьшается незначительно, что в конечном итоге приводит к разрыву. Этот тип излома характерен для пластичных пород, таких как соляные и глинистые сланцы.

Тектоническое напряжение – это давление, оказываемое подстилающей горной породой, а состояние, рассматриваемое при испытании горных пород, называют напряженными состояниями под действием гравитационных сил [2]. Суммарная сумма этих факторов определяет горное давление $R_{гр}$, которое представляет собой объемную плотность расположенных выше горных пород, определяемую в зависимости от плотности ρ_0 .

$$P_{zp} = \rho_0 g H, (1)$$

где g - ускорение свободного падения; H - рассматриваемая глубина.

Горные давления влияют на боковые давления, в основе которых лежит сопротивление изолированного массива горных пород радиальным деформациям. Значение плотности ρ_0 обычно принимают равным $2,3 \text{ г/см}^3$, поэтому градиент геостатического давления $S/H = 22,6 \text{ кПа/м}$. В осадочных бассейнах, образовавшихся в сравнительно недавнее время, объемная плотность породы на поверхности невелика, а по мере углубления ее плотность увеличивается.

$$P_{\sigma} = J / (1 - \mu) - P_{г}, (2)$$

где μ — коэффициент Пуассона.

Тогда остаточная порода достаточно уплотняется, между зернами образуется контакт и она воспринимает горное давление, независимое от твердого скелета и жидкости.

$$P_f = \rho_f g H, (3)$$

где ρ_f – плотность жидкости в пористой среде; H – глубина.

Породы по своей природе вязкоупругие, и вертикальные напряжения вызывают горизонтальные образования. По мнению Итона, горизонтальные составляющие распределены равномерно и определяются с помощью коэффициента Пуассона:

$$W = C_p / C_v, (4)$$

Здесь C_p – относительная поперечная деформация; C_v – относительная продольная деформация.

Это выражение основано на том же предположении, что осадочные породы помещены в замкнутый твердый объем, в котором не происходит латеральных смещений. При этом возникновение крупных смещений земной коры указывает на противоположные факторы. Исследователи Уиллис и Хабберт отмечают в своей работе, что горизонтальные напряжения меняют проявление тектонических сил на протяжении геологического времени. Это три неравных составляющих напряжения в породе, действующие друг на друга под прямым углом и фактически сливающиеся в одну точку: напряжения, не зависящие от наибольшего главного направления – a_z , амплитуда согласно напряжению в главном пролете – a_u , наименьшее напряжение – топор. Когда разница между a_z и a_u превышает прочность породы, напряжение падает и уменьшается, а затем медленно возрастает.

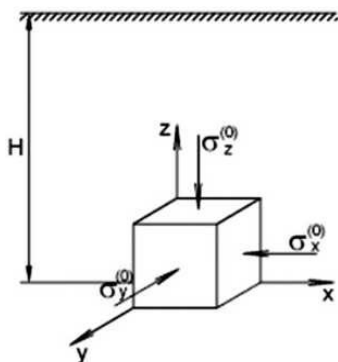


Рис. 1. Схемы возникновения главных напряжений в земной коре.

Мы рассмотрим состояние породы во всех аспектах, ее сжатие под воздействием жидкостей и воды. От ученых Л.А. Шрейнер и Б.В. Байдюк исследовали влияние напряженного состояния и влаги на прочность глинистых пород в скважинах. Они пришли к выводу, что пластичные породы сохраняют свою прочность в отсутствие влаги до определенной глубины.

В настоящее время для поддержания параметров растворов и эффективной очистки скважин от отложений в раствор добавляют поверхностно-активные вещества (СФМ), которые при растворении в водном буровом растворе с СФМ фактически уменьшают поверхностную

энергию породы и понижают ее прочность и твердость (по эффекту П.А. Ребиндера) [4].

Наклонно-направленное бурение скважин требует циркуляции высокого давления для качественной очистки скважины от отложений и высокоскоростного бурения. Но для достижения высоких результатов учитываются следующие факторы: копание, скорость перемещения, изменение пространственного угла (искривление), зажатие и ожидаемый абразивный износ бурового инструмента, контроль давления.

При проектировании скважин с большим отклонением от вертикали очень важно определить плотность бурового раствора, то есть обеспечить прочность стенки в открытом стволе. Во многих случаях плотность бурового раствора, необходимая для стабилизации в вертикальных разведочных и оценочных скважинах, отличается от плотностей, используемых для диагностики таких скважин.

Основными задачами бурового раствора являются непрерывная очистка забоя скважины от мусора, вывод его на поверхность, очистка рабочего этапа породоразрушающего оборудования. Основная функция бурового раствора – охлаждение и смазка бурового инструмента (бурового долота, бурильной колонны), уменьшение сил трения о стенку скважины, предотвращение преждевременного расползания инструментов.

Кроме того, важнейшей функцией бурового раствора является создание давления на стенку скважины, что предотвращает попадание ненужных жидкостей в скважину и повреждение стенки скважины. Следует подчеркнуть, что величина давления, создаваемого буровым раствором, не должна превышать давление гидроразрыва пласта.

Вышеупомянутые задачи бурового раствора и его совместимость с состоянием бурящихся горных пород, стабильность, стойкость к коррозии, неосложненность и другие условия определяются физико-химическими свойствами раствора. Плотность, реологические свойства, фильтрация раствора-емкость, удельное электрическое сопротивление, теплопроводность и удельная теплоемкость.

Фильтрационные и коагуляционные свойства. Как мы обсуждали выше, буровой раствор предотвращает потоки пластового флюида через ствол скважины. Вместо этого раствор проникает в проницаемые слои, а твердая фаза раствора проникает в поры и трещины стенки ствола и образует грязевые корки. Поскольку эта оболочка имеет низкую проницаемость, через нее проходят только фильтраты. Фильтрация делится на два типа: статическую и динамическую. Первый возникает при отсутствии циркуляции, то есть буровой раствор не препятствует росту фильтрующих оболочек. Описан второй тип, при котором происходит циркуляция, рост фильтрационной оболочки ограничен за счет эрозионного воздействия потока бурового раствора.

Все гидроксиды реагируют с глинистыми минералами при температуре выше 95 °С. Он слабо влияет на реологические свойства слабощелочных растворов, но при уменьшении щелочности эффективность понизителя вязкости снижается и наблюдается также обратное связывание. В зависимости от типа иона металла в гидроксиде это явление может оказывать существенное влияние на сильнощелочные растворы.

При повышении температуры возрастает ионная активность любого электролита и ионов солей, растворимых в любом растворителе.

Поведение различных типов буровых растворов сильно различается при высоких температурах. Растворы, приготовленные на минерализованной воде, относительно устойчивы, то есть высокое содержание в них электролитов препятствует диспергированию грязи. Растворы известняка имеют более высокое предельное статическое напряжение сдвига из-за реакции между гидроксидом и глинистыми минералами, но растворы кальция, обработанные SFM, остаются полностью стабильными при 180 °С.

В скважинах с большим отклонением от крутизны колебание плотности при циркуляции имеет более быстрые свойства по сравнению со скважинами с крутым заканчиванием.

Инженеры установили, что колебание эквивалентной плотности (ОЭЗ) в циркуляции существенно отличается от ранее запланированных значений. Концепция использования СЭЗГ в буровой деятельности заключается в учете влияния дополнительного давления, которое в любом случае возникновение циркуляции бурового раствора во времени связано с наличием давления на скважину.

Циркуляция эквивалентной плотности представляет большой риск в скважинах с большим отклонением от крутизны, поэтому величина колебания велика, а допустимое отклонение при большом значении мало.

При большой величине вибрации расстояние прохождения жидкости также велико, а вертикальная глубина значительно меньше. Особенно когда параметры буровых растворов слишком быстрые для поддержания качества процесса очистки ствола скважины, система бурового раствора имеет мало возможностей для управления параметрами. Температура и давление существенно влияют на параметры бурового раствора в скважинах с большим уклоном, чем крутизной.

Очень важно качественное планирование гидропромывки в скважинах с большим отклонением от крутизны, наличием ограничений по расходу и давлению насоса. Применяется в длинных скважинах с большим отклонением от крутизны и в коротких скважинах в зависимости от возможностей буровой установки.

В скважинах с большим отклонением от крутизны его можно использовать и для скважин небольшой глубины. Проблема расположения таких скважин на небольшой глубине подтверждается циркуляцией

эквивалентной плотности (ЭЗТС), при которой пласты бурятся инструментами, часто расположенными на небольшой глубине, при этом соответствующие породы имеют низкую плотность (связность).

В результате используются бурильные трубы большого диаметра, чтобы избежать проблем с изгибом в таких скважинах.

Постоянное колебание эквивалентной плотности циркуляции разрушает устойчивость скважины, то есть такая ситуация связана с постоянным подключением и отключением насоса, а давление в стволе скважины постоянно колеблется. Такая ситуация часто возникает, когда горные породы хрупкие.

Ствол колодца деформируется из-за усталости, например, изгибается и гнется, как скребок. Его можно сгибать и сгибать несколько раз, не повреждая при этом структуру скребка. Аналогичные ситуации возникают в стволе скважины и при эквивалентной плотности циркуляции. Ствол скважины деформирован литологией, размерами и частотами колебаний эквивалентной плотности циркуляции.

Нестабильность ствола скважины вызвана взаимодействием бурового раствора и пластов глины.

Нестабильность ствола скважины возникает при несбалансированных операциях бурения и ГРП, а также при процессах гидротизации, что приводит к образованию грязевых пород. Процессы гидратации в одном случае приводят к увеличению объема породы, а в другом - к нарушению целостности породы.

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ПРИРОДНО-РЕСУРСНЫЙ ПОТЕНЦИАЛ В ПРИРОДОПОЛЬЗОВАНИИ КАШКАДАРЬИНСКОЙ ОБЛАСТИ

Аннотация. В данной статье анализируются территориальные особенности природопользования в Кашкадарьинской области, взаимосвязь между человеком и природой, ее последствия, а также научно-теоретические и практические вопросы оптимизации.

Ключевые слова: природная среда, система, земельный фонд, дефляция, адыр, богарная земля, засоление, переувлажнение, эрозия, дегуманизация.

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NATURAL RESOURCE POTENTIAL IN THE NATURE MANAGEMENT OF KASHKADARYA REGION

Annotation. This article analyzes the territorial features of nature management in the Kashkadarya region, the relationship between man and nature, its consequences, as well as scientific, theoretical and practical issues of optimization.

Keywords: natural environment, system, land fund, deflation, adyr, rain-fed land, salinization, waterlogging, erosion, dehumanization.

Природопользование — это междисциплинарное научное направление, направленное на всестороннее удовлетворение материальных, духовных потребностей нынешнего и будущих поколений.

Соответственно, главной целью изучения природопользования является изучение закономерностей природопользования, антропогенных и природных факторов окружающей среды, проведение системного анализа современного процесса природопользования с целью обеспечения

устойчивого развития, а также развитие методов географических и других наук в изучении природопользования

Термин и понятие «природопользование» впервые ввел Ю. Н. Куражковский [3], его в научный обиход. Первоначальное значение этого термина было введено как использование природных ресурсов для ведения хозяйства и здоровья. Объект природопользования, по Н. Ф. Реймерсу, представляет собой комплекс взаимосвязей между природными ресурсами, природными условиями жизни общества и его социально-экономическим развитием. В то время как усилия, направленные на оптимизацию этих отношений, сохранение и восстановление среды обитания, служат предметом природопользования [11].

Основным объектом природопользования в пределах географической оболочки является природная среда. Природная среда — это среда, в которой живет человеческое общество и преобразуется в процессе хозяйственной деятельности человека, то есть та часть географической оболочки, которая является непосредственным условием социального развития.

Географы считают, что природопользование — это многоуровневая система, в которой социальная, экологическая, экономическая эффективность коллективной деятельности на высоком уровне зависит от культурного характера управления и условий окружающей среды [2].

Географы всегда уделяли большое внимание вопросам охраны природы и рационального использования ее ресурсов и воспроизводства природы. Несколько наших ученых-географов работали над вопросами природопользования и принимали активное участие в его практическом применении. Из них В. А. Анучин, Ю. К. Ефремов, А. А. Комар, А. А. Минц, Т. Г. Рунова, В. С. Преображенский и др.

Ю.П. Михайлов (1998) рассматривает отрасль природопользования в системе географических наук как география природопользования. Основная задача географии природопользования основана на связи с конкретной территорией определенного таксономического размера. По этой причине исследования природопользования проводятся в географических системах глобального, национального и территориального масштаба [6].

В географическом анализе природопользования важное значение имеют территориальные исследования. При природопользовании необходимо проводить необходимые мероприятия с учетом географических условий территории. Перспективные возможности развития территории определяются составом, технико-экономическим уровнем, особенностями размещения социальных, экономических и природных ресурсов данной территории.

На любой территории основным звеном, «ядром» природопользования является использование природных ресурсов. В процессе природопользования важно знать точно оцененный потенциал

природных ресурсов. Потенциал природных ресурсов той или иной территории отличается от экологического потенциала. К потенциалу природных ресурсов относятся природные ресурсы общественного производства, а к экологическому потенциалу — ресурсы, обеспечивающие жизнедеятельность общества в составе живой природы, то есть биологического вида.

При использовании природных ресурсов экономические и экологические цели должны совпадать, но во всех условиях и в любое время трудно достичь сбалансированности этих целей. Интересы экономического развития противоречат решению главной экологической задачи — сохранению оптимальных условий среды жизнедеятельности человека. Поэтому в процессе общественного производства оно требует применения специальных мер по охране окружающей среды. Следовательно, объект охраны окружающей среды-это сам человек, его здоровье и будущая генетическая программа.

В Кашкадарьинской области, обладающей значительно большими запасами минеральных, земельных и климатических ресурсов, имеющиеся ресурсы служат основой социально-экономического развития. В этой области также существуют территориальные проблемы совершенствования системы природопользования, такие как повышение использования и эффективности земельных и водных ресурсов, ожидающих своего решения, защита природы горных районов, предотвращение загрязнения окружающей среды, бережное использование минеральных ресурсов, восстановление нарушенных ландшафтов, повышение производительности биологических ресурсов.

Земельный фонд Кашкадарьинской области, по данным на 2020 год, составляет 2 856 800 га. По условиям рельефа большая часть земельного фонда области состоит из равнин, имеющих благоприятные возможности для использования для сельскохозяйственного производства.

В Кашкадарьинской области большая часть земельного фонда приходится на сельскохозяйственные угодья — 2 322 800 га (81,3%). В расчете на душу населения Кашкадарьинской области (3 334,5 тыс. человек) на душу населения в среднем приходится 0,7 га сельскохозяйственных угодий, 0,20 га пахотных земель (675,7 тыс. га), 0,12 га орошаемых земель (417,3 тыс. га) и 0,42 га пастбищных земель (1 407,3 тыс. га) [13]. Область обладает большими земельными ресурсами, пригодными для использования в различных отраслях экономики. Организация эффективного использования земельных ресурсов в развитии экономики области — одна из актуальных проблем сегодняшнего дня.

В связи с низкой урожайностью пастбищных массивов равнинных и предгорных районов Кашкадарьинской области важно разработать и применить на практике систему мероприятий по повышению их продуктивности. Количество выпаса скота на пастбищах во многих местах

превышает их вместимость. В среднем на пастбищах области на одну условную голову скота приходится 1,2–1,3 га площади, т. е. выпасается в 2,0–2,5 раза больше крупного рогатого скота и овец, чем на норме. Непрерывное крупномасштабное выпас скота приводит к резкому снижению урожайности пастбищ, увеличению количества сорняков вместо качественных кормовых трав. На землях с большим количеством скота по сравнению с пастбищами естественный травяной покров чрезвычайно редок. На пастбищах истончение растительного покрова развивается и усиливается на гораздо больших площадях под влиянием эрозии почвы на склонах холмов, низких и средних гор, а в пустынных районах — ветровой эрозией (дефляцией). Отступление пастбищ происходит также из-за деятельности геологоразведочных экспедиций на территории области и влияния добычи, транспортировки нефти и газа и других техногенных факторов.

Одновременно с расширением площади орошаемых земель в Кашкадарьинской области расширилась и площадь земель, требующих проведения мелиоративных работ. Площадь земель, подверженных повторному засолению, переувлажнению, эрозии, дегуманизации почв и другим процессам, неблагоприятно влияющим на сельскохозяйственное производство, также увеличивается. Усиление неблагоприятных процессов усугубляется процессом ирригационного опустынивания, который привел к снижению продуктивности орошаемых земель, деградации и, в конечном итоге, к выходу земель из сельскохозяйственного использования. По имеющимся данным, в настоящее время 40% орошаемых земель провинции засолены в различной степени, при этом на орошаемой площади в 25 тыс. га происходит водная эрозия, а на площади в 20 тыс. га — водная и ветровая эрозия. Из-за обострения взаимодействия человека и природной среды на орошаемых землях возникли экологические проблемы различного характера, внешнего вида и масштаба.

Движущей силой всех природных процессов в географической оболочке является солнечная радиация.

Из-за своего южного географического положения Кашкадарьинская область имеет наибольшее количество солнечных часов в Узбекистане (2600–3000 часов), где их больше всего. Из-за этого количество солнечного тепла в этой области также намного больше. В равнинных и предгорных районах общее количество активных температур выше 5 °С составляет не менее 5000 °С, причем самые высокие значения характерны для адыров (Гузар - 5750 °С).

Кашкадарьинская область с благоприятным климатом (жарой) и земельными ресурсами в настоящее время бедна водными ресурсами, имеющиеся водные ресурсы способны удовлетворить лишь 20–22% потребности в орошении, так как запасы водных ресурсов в области не превышают 1,2–1,3 км³. В то время как орошение в области составляло 1,5–

1,8 млн га, пригодных для земледелия по геоморфологическим (рельефным) и почвенным условиям земель существует.

В настоящее время подземные воды используются в гораздо больших количествах для орошения, обеспечения населения питьевой водой, водоснабжения промышленных предприятий, жилищно-коммунального хозяйства. По последующим данным, всего в области пробурено 5552 скважины, из которых 2853 дают воду. Из этих скважин и 3 родников в течение года добывается около 913,7 м³ подземных вод. Но необходимо провести большую работу по эффективному, комплексному использованию и охране водных ресурсов. Предложение о таких мероприятиях в первую очередь должно заключаться в строгом соблюдении правил полива и экономии воды за счет этого.

В области на орошение расходуется 11,5–12,5 м³ воды на гектар. Это количество, превышающее норму, не только приводит к чрезмерному расходу воды, но и вызывает деградацию земель в результате усиления различных процессов. Из-за сброса сточных вод в Кашкадарью через канавы-дренажи с орошаемых полей уровень минерализации в речной воде также значительно увеличился.

По данным отдела инспекции по контролю за охраной и рациональным использованием воды Комитета по охране природы Кашкадарьинской области, в области функционирует 41 механическое, биологическое, физико-химическое и другие виды водоочистных сооружений.

В настоящее время зарегистрировано 68 организаций, предприятий, которые ежегодно сбрасывают в окружающую среду через открытые водоемы 1,35 млрд м³ сточных и более 17,5 млн м³ неочищенных и не полностью очищенных сточных вод.

Флора Кашкадарьинской области по С. М. Мустафаеву насчитывает около 1200 видов высших растений, из которых 106 видов используются в пищу и в качестве корма в животноводстве, 138 видов являются ценными лекарственными растениями, 26 видов — эфирно-масличными, 61 вид — медоносными, 62 вида — дубильными растениями (или танноиды), 53 вида — красящими, 19 видов — сапониновыми растениями [8]. Помимо этих видов, во флоре области много декоративных, лекарственных (витаминных) и волокнистых растений, мероприятия по эффективному использованию, воспроизводству и воспроизводству биологических ресурсов в области не могут полностью удовлетворить спрос. В связи с этим необходима научно обоснованная практическая работа по организации рационального использования биологических ресурсов. Это особенно важные задачи, стоящие перед хозяйствами, специализирующимися на рыболовстве, пчеловодстве, выращивании лекарственных растений [8].

Многолетняя экстенсивная организация природопользования в Кашкадарьинской области обусловила развитие здесь процессов,

неблагоприятных для промышленного и сельскохозяйственного производства, возникновение геоэкологических проблем. Одним из серьезных и заметных недостатков, допускаемых и допускаемых в природопользовании, является невозможность непрерывного, взаимосвязанного осуществления процессов изучения, максимально возможного комплексного использования, воспроизводства и охраны природных ресурсов. В процессе природопользования основное внимание уделяется потреблению природных ресурсов с недостаточным вниманием к составляющим звеньям природопользования — научному изучению природных ресурсов, их воспроизводству и охране. Также допускается неэффективность использования природных ресурсов, поскольку каждая отрасль, участвующая в природопользовании, ставит свои интересы выше. В условиях недостаточного использования некоторых природных ресурсов области, особенно ресурсов строительных материалов, минеральных солей, ресурсов флоры и фауны, не используются даже «бесплатные» блага природы, такие как солнечная и ветровая энергия. Главное, чтобы комплексное использование природных ресурсов не было организовано.

Современное состояние предгорных ландшафтов бассейна Кашкадарьи требует научно обоснованной организации природопользования. На наш взгляд, при правильной организации природопользования в предгорных ландшафтах целесообразно в первую очередь реализовать следующие основные задачи:

- усиление научных исследований распределения природных ресурсов, запасов и их оценки в предгорных районах;
- составление ландшафтных и экологических карт на их основе, отражающих территориальное распределение и запасы природных ресурсов в предгорных районах, и организация природопользования на основе материалов этих карт;
- в этих регионах каждое производственное предприятие должно иметь комплексный план природопользования, а не только по охране природы, и на основе этого плана должны проводиться геоэкологические мероприятия;
- в горнодобывающей, нефтегазовой отраслях необходимо уделять серьезное внимание работам по рекультивации (повторному озеленению) ландшафтов в районах добычи природных ресурсов и геологоразведочных работ;
- необходимо не допустить дегрессии пастбищ, улучшить их водоснабжение, повысить продуктивность пастбищ с искусственной посадкой кормовых растений и наладить севооборот пастбищ, организовать сенокосы на орошаемых землях;
- осуществление агротехнических и гидромелиоративных мероприятий по защите плодородия и структуры почв на богарных землях

от водной и ветровой эрозии, пересоления и переувлажнения (подъема уровня сизотных вод);

- организация геоэкологического мониторинга с целью эффективного использования земельных ресурсов;

- расширение площадей Гиссарского и Китабского заповедников в горных районах области.

Решение территориальных геоэкологических задач совершенствования системы природопользования в предгорных районах бассейна Кашкадарьи обеспечивает эффективность эколого-экономических систем, возникающих в совокупности производства и природы (природных ресурсов).

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**“МОР” ТЕХНОЛОГИЯСИДА ИШЛАБ ЧИҚАРИЛГАН, МАНТИҚИЙ
ЭЛЕМЕНТЛАРДАН ТУЗИЛГАН СУММАТОРЛАРНИ “PROTEUS”
ДАСТУРИДА ТАҲЛИЛ ҚИЛИШ**

Аннотация. Мақолада “Proteus” дастурида “МОР” технологиясида ишлаб чиқарилган мантиқий элементлардан тузилган сумматорларни виртуал компонентлари моделлари асосида принципиал схемасини тузиш, уни симуляция қилиш орқали анализ қилиш усуллари келтирилган.

Таянч сўзлар: мантиқий элемент, “МОР” технологияси, принципиал схема, сумматор, “Proteus” дастури.

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**ANALYSIS OF SUMMATORS MADE OF LOGIC ELEMENTS,
PRODUCED IN “MOP” TECHNOLOGY, IN “PROTEUS”**

Abstract. In this paper presents the methods of creating a principle scheme based on the models of virtual components of summatoms made of logical elements produced by MOP technology in the "Proteus" program and analyzing it through simulation.

Keywords: logical element, "MOP" technology, principle circuit, summatoms, "Proteus" program.

Электрон ҳисоблаш машиналари (ЭҲМ) яратилмаган даврда мураккаб математик ёки арифметик ҳисоб-китоб ишлари жуда кўп меҳнат меҳнат ва вақтни талаб қилар эди. ЭҲМнинг яратилиши математик

масалаларни сонли ёки тақрибий усулларда ечиш имкониятини оширди. Бунинг учун масаланинг ҳисоблаш схемасини яратиш ва унинг алгоритмини тузиш талаб этилади. ЭҲМларда барча ҳисоблаш амалларини процессор бажаради. Процессор таркибида эса арифметик ва мантиқий амалларни арифметик мантиқий қурилма бажаради [1-4].

Арифметик мантиқий қурилмада арифметик амаллар сумматор деб аталувчи махсус рақамли схемалар ёрдамида амалга оширилади. Сумматор схемалари мантиқий элементларни комбинатцияланган кўринишда улаш орқали амалга оширилади. Сумматорлар маносига кўра қўшувчи деган маънони англатади. Сумматорларга турлича сумматор киритиш ва комбинацион улаш орқали барча арифметик амалларни бажарувчи рақамли электрон қурилмани яратиш мумкин.

Ҳозирги кунда ЭҲМ янги авлодларининг яратилиши ва ривожланиши, арифметик-мантиқий қисмларининг схемларини компьютерда моделлаштириш ва симуляция қилиш орқали уни анализ қилишни тақозо этади.

“МОР” технологияси асосида ишлаб чиқарилган мантиқий элементлардан тузилган рақамли қурилмаларнинг ишончилиги юқори ва тежамкор ҳисобланади [5-6]. Бунга сабаб “МОР” технологиясида ишлаб чиқарилган интеграл схемада майдонли транзисторлардан фойдаланилади. Майдонли транзисторларнинг бошқарувчи электроди сифатида ишлатиладиган “затвор” қисмидан деярли ток оқмайди, балки уни кучланиш билан бошқариш мумкин. “МОР” транзисторларнинг бундай қулайлигидан ушбу технология асосида ишлаб чиқарилган интеграл схемаларни бирданига кўп сонлисини ҳам кириш сигнаliga параллел улаш ва кириш сигналини кучайтирмасдан тўғридан тўғри улаш мумкин.

Майдонли транзисторларнинг кириш қаршилиги жуда катта бўлганлигидан жуда заиф бўлган кириш сигналнинг ҳам кучланишига таъсир қилмайди. Бундай схемалар ҳозирги кунда деярли барча электрон қурилмаларда фойдаланилади. “МОР” технологияси асосида ишлаб чиқарилган интеграл схемаларнинг асосий камчиликлари, юқори кучланишга чидамсизлиги ва ишлаш тезлигининг “TTL” технологияси асосида ишлаб чиқарилган интеграл схемаларга қараганда пастлигидир.

Ҳозирги пайтда қуйидаги сериядаги “МОР” интеграл схемалар ишлаб чиқарилмоқда ва уларнинг виртуал моделлари ва корпус маълумотари “Proteus” дастурида берилган:

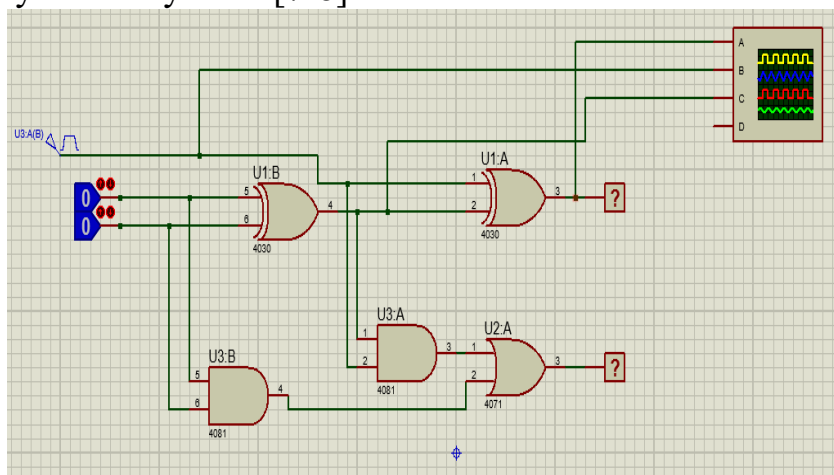
4030: истисноли “ЁКИ” элементи 4 дона битта дип. корпусда

4071: “ЁКИ” элементи 4 дона битта дип. 16 корпусида

4081: “ВА” элементи 4 дона битта дип. 16 корпусида.

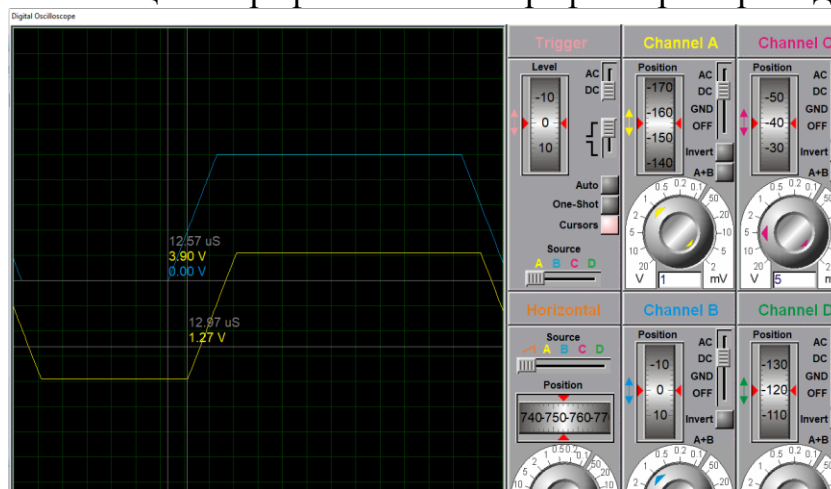
Ушбу мантиқий элементлардан тузилган сумматор схемаси қуйидаги расмда кўрсатилган (1-расм). Ушбу схемада кўрсатилган барча мантиқий элементлар “МОР” технологияси асосида ишлаб чиқарилган элементлардир. Бунда ҳар бир компонентдаги майдонли транзисторларнинг

кириш сиғими ҳисобига чиқишда сигналнинг кўтарилишида кечикиш содир бўлишини кузатиш мумкин [7-8].



1-расм. “MOR” технологияси асосида ишлаб чиқарилган мантиқий элементлар асосида йиғилган сумматорни текшириш схемаси.

1-расмда кўрсатилган схемада оциллограф ёрдамида сумматорга берилган сигналнинг чиқишда қандай кечикиши мумкинлигини кўриш мумкин. Бунда оциллографнинг В-канали кириш сигналига, А-канали эса чиқишга уланган. Оциллографнинг сигнал графиклари 2-расмда берилган.



2-расм. Кириш сигналнинг чиқишидаги кечикиш оциллограммаси.

2-расмда кўрсатилган гарфикда оциллограф курсорларининг фарқи 0.4 микросекунд эканлигини кўриш мумкин. Бунда киришга берилган сигналнинг частотаси 110 кГц ни ташкил қилади [9-10]. Бундай схемаларда кечикиш сабаб, юқори частотали схемаларда масалан бир неча юз ёки ўн МГц ли частоталарда схеманинг ёмон ишлашини кузатиш мумкин.

Хулоса қилиб айтиш мумкинки, арифметик-мантиқий қурилмалар қисмларининг схемларини компьютерда моделлаштириш ва симуляция қилиш бундай қурилмаларнинг ишончилигини текширишга имкон яратади.

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ТОЛАЛИ ЧИҚИНДИЛАРНИ ЙИГИРИШГА ТАЙЁРЛАШНИНГ ИП СИФАТИГА ТАЪСИРИ

Аннотация. Ушбу мақолада ип йигириш учун тажрибаларда тайёрлов бўлимнинг толали чиқиндилардан (33%) ва ўрта толали пахтадан (67%) иборат аралашмаси ҳосил қилиниб Uster лаборатория ускуналарида ип сифат кўрсаткичлари таҳлил этилган.

Калит сўзлар: вариация коэффициенти, толали чиқинди, йигириш.

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STUDY OF THE INFLUENCE OF THE PREPARATION OF FIBER WASTE OF SPINNING PRODUCTION ON THE QUALITY OF YARN

Annotation. This article examines the quality indicators of yarn, determined on the laboratory equipment of the company Uster, developed from a mixed composition of fibrous waste from the preparatory workshop (30%) and medium-staple cotton (70%).

Keywords: coefficient of variation, fibrous waste, spinning, quality.

Технологик тизимларнинг ўзига хос фарқли жиҳати улардаги толали материални қайта ишлаш жадаллигидир. Иккинчи тизимда ишлов бериш интенсивлиги арра тишли тозалагич кўшилиши билан оширилади. Учинчи тизимда тараш машинасида қабул қилувчи барабанлар сонини кўпайтириш орқали интенсивлик янада оширилади. Ип йигириш учун тажрибаларда тайёрлов бўлимнинг толали чиқиндилардан (30%) ва ўрта толали пахтадан (70%) иборат аралашмаси ҳосил қилинди. Uster лаборатория ускуналарида пахта толаси ва толали чиқиндиларнинг таркибидаги толаларнинг хоссалари аниқланди. Маълумки, пневмомеханик ипларнинг таркибий

тузилишини белгилайдиган асосий омиллар - бу йигириш учун тайёрланган пилтанинг сифати ва йигирув камерасида пилтача ҳосил бўлиш параметрлари ҳисобланади. Тадқиқот мақсадига мувофиқ, толали материални қайта ишлаш иш^нсивлигини баҳолаш учун пилта тузилишининг комплекс кўрсаткичи (КПС) ўрганилди. КПС толалар тутамлари комплексларини элементар толаларга ажратилишини билвосита характерлайди. Пилталар намуналарини ташкил этувчи толаларни ажратилганлигини кўрсатиш учун узиш машинасида пилтани узилишида сарфланадиган кучи КПС кўрсаткичи сифатида қабул қилинди. Пахта толаси ва толали чиқиндилар аралашмасидан тайёрланган пилтанинг КПС кўрсаткичини баҳолаш учун РМ-3-1 узиш машинасида амалий тадқиқотлар ўтказилди. Тадқиқот натижалари 1-жадвалда келтирилган.

Турли технологик тизимларда ишлаб чиқарилган пилталарнинг КПС кўрсаткичлари

1-жадвал

Технологик тизимлар	Пилтанинг комплекс кўрсаткичи, сН /текст			КПС бўйича вариация коэффициенти, %		
	Тараш пилтаси	1-ўтим пилтаси	2-ўтим пилтаси	тараш пилтаси	1 -ўтим пилтаси	2-ўтим пилтаси
1-тизим	365	244	206	24,6	23,8	19,4
2-тизим	278	215	168	19,7	21,1	18,2
3-тизим	264	179	136	18,8	17,7	16,1

Бу камайишни нисбий жиҳатдан баҳоланганда 1-ўтим пилталашда тараш пилтасига нисбатан 33,2% га, 2-ўтим пилталашда эса 1-ўтимга нисбатан 15,5% га тенглиги кўринади.

КПС бўйича вариация коэффициентлари пилталарнинг узунликлари бўйича тақсимланиш бир текисда бўлмаслиги, технологик босқичларда эса уни ўзгариши содир бўлади. Толаларни яхши текисланиши ва қайта қўшилишда пилта нотекислигини камайиши вариация коэффициентини ижобий томонга ўзгартиришга олиб келади. Юқоридаги учта технологик тизимларда қайта ишланган аралашмалардан тайёрланган пилталардан карда йигириш тизими бўйича йигириб олинган ипларнинг физик-механик хусусиятлари 2-жадвалда келтирилган.

Карда йигириш тизимида олинган ипларнинг физик-механик хусусиятлари

Кўрсаткичлар	Технологик тизимлар		
	1-тизим	2-тизим	3-тизим
Ипнинг номинал номери (Ne)	20,1	20,2	20,2
Ипнинг чизиқли зичлиги, текс	29,5	29,7	29,4
Нотекислик, U%	12,24	11,04	10,7
Uster бўйича вариация коэффиценти, CV%	16,63	14,01	13,26
Нисбий узилиш кучи (Tenacity), Rkm	10,81	11,63	11,02
Эластиклиги (Elongation), %	5,84	4,64	5,03
Бурамлар сони, м-1	828	791	840
Ингичка жойлари (Think -50% /km)	4	3	4
Йўғон жойлари (Thick +50% /km)	66	45	62
Тугунчалар (Neps +200 /km)	71	38	38
Туклилик (Hairness H)	8,37	8,10	7,33

Толаларни йигиришга тайёрлаш тизимининг муҳим ва асосий кўрсаткичи ҳисобланадиган тозалаш самарадорлиги ўрнатилган жиҳозларнинг конструктив ва технологик имкониятларига боғлиқ.

Ташкил этилган технологик жиҳозлар комплексларининг умумий тозалаш самарадорлигини қуйидаги формуладан аниқланди:

$$\mathcal{E}_k = [1 - (1 - 0,01\varepsilon_1)(1 - 0,01\varepsilon_2)] \cdot 100 \quad (2)$$

бунда $\varepsilon_1, \varepsilon_2$ -мос равишда ТТА ва тараш машиналарининг тозалаш самарадорлиги, %. Тарамдаги нуқсонларнинг умумий миқдорининг меъерий қиймати белгиланган ҳол учун муайян жиҳозлар комплексида қайта ишлаш мумкин бўлган толалар аралашмаси таркибидаги нуқсонларнинг меъерий чегарасини қуйидаги ифода орқали аниқлаш мумкин:

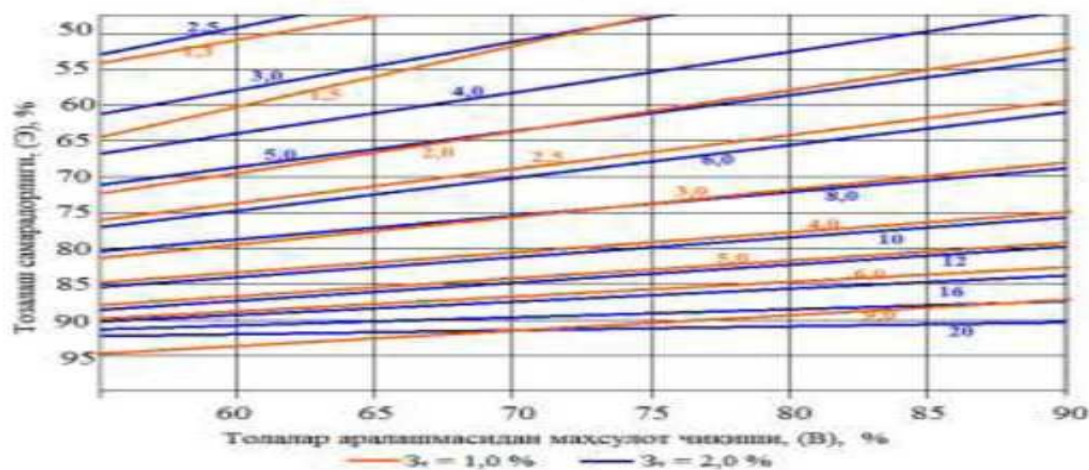
$$\mathcal{Z}_a = \frac{\mathcal{Z}_T \cdot B}{100 - \mathcal{E}_k} \quad (3)$$

бунда \mathcal{Z}_a ва \mathcal{Z}_T -мос равишда толалар аралашмаси ва тарамдаги хор-хас ҳамда нуқсонлар миқдори, %; B- аралашмадан маҳсулот чиқиши, %.

Ушбу ифодага мувофиқ тайёрланган компьютер дастури асосида \mathcal{Z}_a ни B ва \mathcal{E}_k га боғлиқлигини кўрсатувчи графикда \mathcal{Z}_T нинг меъерини 1% ва 2 %

белгиланган ҳол учун \mathcal{Z}_a ни ўзгариш соҳаси тасвирланган (1-расм).

Боғланиш чизиқларининг йўналиши ва олинган қийматлардан кўриниб турибдики, кўрсатилган шароитлар учун таркибида 20% гача нуқсонлар бўлган аралашмаларни қайта ишлаш мумкин.



1-расм. Z_a ни B ва \mathcal{E}_k га боғлиқлигини кўрсатувчи график.

Хулоса. Шундай қилиб, толалар аралашмасини қайта ишлаш натижасида олинадиган тарамнинг таркибидаги нуқсонлар миқдори белгиланган ҳол учун жиҳозларнинг умумий самарадорлиги, тарам чиқиш миқдорини боғланиш мавжудлиги аниқланди.

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ЕР ФОНДИ ТАРКИБИЙ ЎЗГАРИШЛАРИНИНГ ИҚТИСОДИЙ ХУСУСИЯТЛАРИ (ҚАШҚАДАРЁ ВИЛОЯТИ МИСОЛИДА)

Аннотация. Мақолада Қашқадарё вилоятида ер фондининг фойдаланиш турлари бўйича ҳамда қишлоқ хўжалик ерларининг, хусусан, сугориладиган ерларнинг туманлар кесимида тақсимланганлиги иқтисодий-статистик таҳлил ва географик таққослаш методлари орқали баён қилинган.

Калит сўзлар. Ер фонди, қишлоқ хўжалиги, сугориладиган ерлар, экин ерлари, яйловлар.

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ECONOMIC CHARACTERISTICS OF STRUCTURAL CHANGES OF THE LAND FUND (EXAMPLE OF KASHKADARYA REGION)

Annotation. The article describes the distribution of agricultural land, especially irrigated land, in the districts of Kashkadarya region by types of land use, through economic-statistical analysis and geographic comparison methods.

Keywords. Land fund, agriculture, irrigated land, arable land, pastures.

Ер ресурсларидан фойдаланиш самарадорлигини ошириш кўп жиҳатдан ер фонди таркибига, ер ресурсларининг ердан фойдаланувчилар, ҳудудлар, ер участкалари ижарачилари ва мулкдорлар ўртасида тўғри ва оқилона тақсимланишига боғлиқ. Шу нуқтаи назардан Қашқадарё вилояти ер фонди ва унинг таркибидаги таркибий ўзгаришларни таҳлил қилиш, уларнинг асосий ва устувор йўналишлари ҳамда тенденцияларини аниқлаш вилоят ер ресурсларидан самарали фойдаланишда муҳим ўрин тутди. Маълумки, Ўзбекистон Республикасининг Конституцияси ва “Ер Кодексига” мувофиқ ер умуммиллий бойлик ҳисобланади. Шу сабабли ҳозирги ва келажак авлодларнинг манфаатларини кўзлаб, ундан илмий

асосда табиий-иқтисодий ва ҳудудий омилларни ҳисобга олиб оқилона фойдаланиш ва уни муҳофаза қилиш, тупроқ унумдорлигини тиклаш ва ошириш, табиий муҳитни асраш ва яхшилаш, хўжалик юритишнинг барча шакллари тенг ҳуқуқлилик асосида ривожлантириш учун шароит яратиш, юридик ва жисмоний шахсларнинг ер участкаларига бўлган ҳуқуқларини ҳимоя қилишни таъминлаш иқтисодий муносабатларни эркинлаштириш жараёнлари изчиллик билан амалга оширилаётган бугунги кунда ҳал этилиши лозим бўлган муҳим вазифалар жумласига киради.

Ер хўжалик ишлаб чиқариши воситаси сифатида миқдорий жиҳатдан чекланган табиий ресурслардан биридир, ҳамда ижтимоий ишлаб чиқариш ривожланиши билан танқис бўлиб боради. Ер ресурсларидан, айниқса уларнинг иқтисодий жиҳатдан энг қимматли бўлган қисми-суғориладиган ерлардан фойдаланишда нафақат республикада, балки бутун дунёда ҳам қатор муаммолар мавжуд бўлиб, бу муаммолар ўзининг илмий-амалий ечимини кутмоқда. Аграр соҳада олиб борилаётган ислохотларнинг асосий этибори ҳам суғориладиган ерлардан самарали фойдаланишни ташкил этишга қаратилган [3; 28 б.].

Жаҳон миқёсида ер ресурсларидан фойдаланишда уларни маълум бир турларга, яъни ер фондига ажратиб ўрганилади. Ер фонди бу маълум ҳудудда, унинг чегаралари ичидаги (мамлакатда, вилоятда, туманда ва ҳоказо) хўжалик юритиш, мулкга эгалик қилиш, фойдаланиш, ижара объектлари ҳисобланган барча ерларнинг йиғиндисидир [9; 5 б.]. Ўзбекистонда ҳам ердан фойдаланишни тартибга солиш мақсадида ер фонди ташкил этилган.

Ер фонди таркибини турли гуруҳларга ажратиб ўрганиш мумкин. Хусусан, қишлоқ хўжалигида ердан фойдаланиш самарадорлигини ошириш нуктаи назаридан ер фонди таркибини қуйидаги белгилари бўйича ўрганиш мақсадга мувофиқ:

- белгиланган мақсадга кўра;
- сифат ҳолатига кўра;
- маъмурий-худудий бўлинишига кўра;
- хўжалик мақсадида фойдаланишига кўра;
- ердан фойдаланувчилар таркибига кўра.

Ишлаб чиқариш жараёнида фойдаланиш хусусиятига кўра ер фондини икки гуруҳга ажратиб ўрганиш мумкин: асосий ишлаб чиқариш воситаси сифатида фойдаланилаётган ерлар ва иқтисодиётнинг саноат ва бошқа тармоқларини жойлаштириш учун макон вазифасини бажараётган ерлар. Жами ер фондида иккинчи гуруҳ ерлари улушининг ўсиб бориши қонуният ҳисобланади, чунки саноат, транспорт ва бошқа тармоқларнинг ривожланиши, йўллар қурилиши каби жараёнлар ҳамда ер ресурсларининг чекланганлиги қишлоқ ва ўрмон хўжалик ерларининг бир қисмини улар учун ажратиб беришни тақозо этади. Бу ҳолат ер ресурсларидан самарали фойдаланишни шарт қилиб кўювчи объектив сабаблардан бири

ҳисобланади. Шунинг алоҳида таъкидлаш лозимки, ер фонди таркибини бундай гуруҳлаш умумий характерга эга бўлганлиги боис ердан оқилона фойдаланиш ва уни ҳуқуқий жиҳатдан тартибга солиш билан боғлиқ амалий вазифаларни ҳал этиш имконини бермайди. Шу сабабли ер фондини мақсадли фойдаланиш йўналишига кўра ўрганиш илмий ва амалий жиҳатдан муҳим аҳамиятга эга.

Ўзбекистон Республикаси “Ер Кодекси”га мувофиқ ер фонди ерлардан фойдаланишнинг белгиланган асосий мақсадига кўра 8 тоифага ажратилган:

1) қишлоқ хўжалигига мўлжалланган - қишлоқ хўжалиги эҳтиёжлари учун берилган ёки ана шу мақсадга мўлжалланган ерлар. Қишлоқ хўжалигига мўлжалланган ерлар суғориладиган ва суғорилмайдиган (лалмикор) ерлар, ҳайдаладиган ерлар, пичанзорлар, яйловлар, кўп йиллик мевали дов-дарахтзорлар ва тоқзорлар эгаллаган ерларга бўлинади;

2) аҳоли пункт (шаҳарлар, посёлкалар ва қишлоқ аҳоли пункт)ларининг ерлари – шаҳарлар ва посёлкалар, шунингдек қишлоқ аҳоли пунктлари чегараси доирасидаги ерлар;

3) саноат, транспорт, алоқа, муҳофаа ва бошқа мақсадларда мўлжалланган ерлар – кўрсатилган мақсадларда фойдаланиш учун юридик шахслар учун берилган ерлар;

4) табиатни муҳофаза қилиш, соғломлаштириш, рекреация мақсадларига мўлжалланган ерлар – алоҳида муҳофаза этиладиган табиий ҳудудлар эгаллаган, табиий даволаш омилларига эга бўлган ерлар, шунингдек, оммавий дам олиш ва туризм учун фойдаланиладиган ерлар;

5) тарихий-маданий аҳамиятга молик ерлар, тарихий-маданий ёдгорликлар жойлашган ерлар;

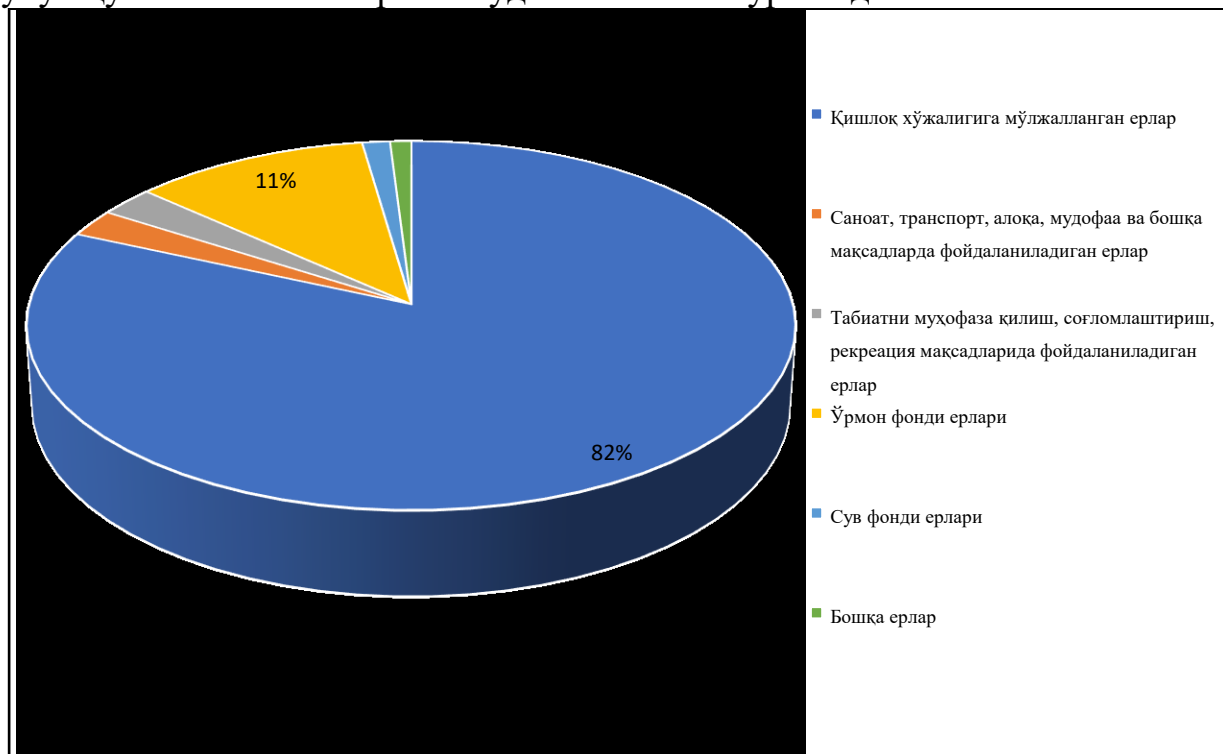
6) ўрмон фонди ерлари – ўрмон билан қопланган, шунингдек, ўрмон билан қопланмаган бўлса ҳам, ўрмон хўжалиги эҳтиёжлари учун берилган ерлар;

7) сув фонди ерлари – сув объектлари, сув хўжалиги иншоотлари эгаллаган ерлар ва сув объектларининг қирғоқлари бўйлаб ажратилган минтақадаги ерлар;

8) захира ерлар.

2022 йил 1 январь ҳолати бўйича Қашқадарё вилоятининг умумий ер майдони 2856,8 минг гектарни ташкил этиб, умумий ер майдонининг 82,0 фоизини қишлоқ хўжалик мақсадлари учун ажратилган. Бундан ташқари умумий ҳайдалма ерларининг 99,5 фоизи, дарахтзорларнинг 98,2 фоизи, бўз ерларнинг жами ҳамда, яйлов ва пичанзорларнинг 91,8 фоизи қишлоқ хўжалик мақсадларида фойдаланилади. Шунингдек, ўрмон фонди ерлари қишлоқ хўжалиги ерларидан кейин иккинчи ўринда турган бўлиб, умумий ер майдонининг 11,0 фоизини (326,9 минг га) ташкил қилади. Табиатни муҳофаза қилиш, соғломлаштириш, рекреация мақсадларига мўлжалланган ерлар – алоҳида муҳофаза этиладиган табиий ҳудудлар эгаллаган, табиий

даволаш омилларига эга бўлган ерлар, шунингдек, оммавий дам олиш ва туризм учун фойдаланиладиган ерлар умумий ер фондининг 3,0 фоизини (75,1 минг га) ташкил қилган бўлса, саноат, транспорт, алоқа, муҳофаа ва бошқа мақсадларда мўлжалланган ерлар – кўрсатилган мақсадларда фойдаланиш учун юридик шахслар учун берилган ерлар 2,0 фоизни (67,9 минг га) ташкил этади. Қолган тоифадаги ерларнинг улуши эса анча паст бўлиб, жами 2,0 фоизни ташкил этади, холос (1-расм). Бу маълумотларнинг барчаси келажакда вилоятда қишлоқ хўжалиги ишлаб чиқаришини юритиш учун қулай имкониятлар мавжуд эканлигини кўрсатади.



1-расм. Қашқадарё вилоятида ер фондининг фойдаланиш турлари бўйича тақсимланиши (2022 й. 1 январ ҳолатига, % ҳисобида)

Қашқадарё вилоятида қишлоқ хўжалик ерларидан фойдаланиш ҳолатини баҳолашда албатта мазкур ҳолатнинг вилоят туманлари бўйича тақсимланишини ҳамда мавжуд қишлоқ хўжалик ерларининг таркибида қишлоқ хўжалиги ишлаб чиқариши учун асосий восита бўлган суғориладиган ерларнинг улушини алоҳида эътиборга олиш мақсадга мувофиқдир. Маълумотлардан кўринадики, 2022 йилда вилоят бўйича умумий ер майдонининг 18,0 фоизи, экин майдонларининг эса 61,8 фоизини суғориладиган ерлар ташкил этган (1-жадвал). Бу кўрсаткич туманлар бўйича кескин фарқ қилиб, вилоят текислик ҳудудидаги яъни, ўзлаштирилган туманларда суғориладиган ерлар улушининг юқорилигини кўриш мумкин [4, 6]. Масалан, қишлоқ хўжалиги ишлаб чиқариши учун ажратилган экин майдонлари таркибида суғориладиган ерлар улуши Касби, Миришкор, Нишон туманларида 100 фоизни, Муборак туманида 94,1

фоизни, Қарши туманида 93,0 фоизни, Косон туманида 83,8 фоизни ташкил қилган.

1-жадвал

Қашқадарё вилояти туманлари бўйича жами қишлоқ хўжалик ерларининг тақсимланиши (2022 йил 1 январ ҳолатига)

№	Туманлар	Умумий ер майдони			Экин ерлари		
		жами, минг га	шу жумладан		жами, минг га	шу жумладан	
			Суғори- ладиган, минг га	жамига нисбатан, % ҳисобида		Суғори- ладиган, минг га	жамига нисбатан, % ҳисобида
1	Ғузор	265,230	34,979	13,2	61,453	31,104	50,6
2	Дехқонобод	395,652	2,926	0,7	44,561	1,868	4,2
3	Қамаши	245,735	34,844	14,1	62,886	28,027	44,5
4	Қарши	91,633	48,622	53,1	43,609	40,502	93,0
5	Косон	187,241	73,632	39,3	73,172	61,288	83,8
6	Касби	73,479	50,537	68,8	44,527	44,527	100
7	Китоб	174,269	20,282	11,6	20,260	8,313	41,0
8	Миришкор	312,538	63,358	20,3	55,924	55,924	100
9	Муборак	307,013	35,014	11,4	33,592	31,612	94,1
10	Нишон	211,128	57,235	27,1	52,132	52,132	100
11	Чироқчи	283,686	30,227	10,6	122,993	22,705	18,5
12	Шахрисабз	165,472	25,587	15,4	24,405	17,470	71,6
13	Яккабоғ	134,947	34,598	25,6	35,658	21,308	60,0
14	Қарши ш.	7,551	1,735	23,0	0,534	0,503	94,0
15	Шахрисабз ш.	1,215	0,538	44,3	-	-	-
	Жами	2856,799	514,114	18,0	675,706	417,283	61,8

Ҳозирги кунда ердан қишлоқ хўжалигида оқилона фойдаланишни энг тўғри йўлларида бири фойдаланишни ҳудудий ташкил этишдир [1; 36 б.]. Бунга қуйидагилар сабаб бўлади:

- Ердан фойдаланиш доимий ўзгармас жой билан боғлиқ. Уни ишлаб чиқариш воситаси сифатида бир жойдан иккинчи жойга кўчириб бўлмайди, табиат томонидан яратилган тупроқ унумдорлиги қаерда мавжуд бўлса, ўша ердагина фойдаланиш мумкин. Бу эса ишлаб чиқариш кучларини жойлаштиришга, айниқса, қишлоқ хўжалигига катта таъсир кўрсатади.

- Ер ресурсларидан фойдаланиш бошқа агроиклимий омиллар (ёруғлик, ҳарорат, намлик) ва ўсимлик ўсиши мумкин бўлган даврий маром билан боғлиқ. Шу ўринда меҳнат жараёнини ташкил этиш ҳам фаслий маромга мос ҳолда бўлиши лозим.

- Қишлоқ хўжалиги ишлаб чиқариш жараёнида табиатдан ресурснинг ўзи эмас, фақатгина унинг ёрдами билан маҳсулот олинади ва шу боис асосий хусусияти унумдорлик ҳисобланади. Ваҳоланки бошқа ишлаб чиқариш воситалари фойдаланиш жараёнида табиатдан узиб олинади,

эскиради ва тугайди. Ер эса табиат измида қолади ва ундан тўғри фойдаланилганда янгилаиб, унумдорлиги ортиб боради [2, 6].

Ер фондининг тоифалари кўп жиҳатдан иқтисодиётнинг асосий тармоқлари таркиби билан белгиланади. Шу сабабли улар ўзгармас ҳисобланмайди ва бир тоифадан иккинчи тоифага ўтиб туриши мумкин. Ерларнинг бир тоифадан бошқа тоифага ўтиб туриши натижасида ер фондида таркибий ўзгаришлар юз беради. Қашқадарё вилояти географик ва ҳудудий жойлашувининг ўзига хос жиҳатлари, яъни унинг тоғ ва тоғолди зоналарида жойлашганлиги ўрмон хўжалиги ерлари улушининг нисбатан юқори бўлишига олиб келиб, бу борада катта имкониятлар борлигидан далолат беради. Бу эса вилоят ер ресурслари қишлоқ хўжалигини юритиш учун қулай имкониятларга эга эканлиги ва бу ерда деҳқончилик ҳамда чорвачилик тармоқларини ривожлантириш истиқболлари юқори эканлигини кўрсатади.

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ОСНОВНЫЕ ТЕНДЕНЦИИ РАЗВИТИЯ МИРОВОГО ИНДУСТРИИ ТУРИЗМА И ГОСТЕПРИИМСТВА

Аннотация. В статье рассматриваются проблемы оценки конкурентоспособности услуг на гостиничных предприятиях, в которых качество рассматривается как важный фактор конкурентоспособности объекта. В статье используются экспертный, факторный и параметрический методы оценки конкурентоспособности услуг на гостиничных предприятиях, также изучаются вопросы формирования требований и продаж через регрессионные ссылки.

Ключевые слова: обеспечение качества, «входящие», «исходящие», «общие» и «специфические» факторы, качество обслуживания, согласованность, надежность, точность, распознавание, скорость передачи данных, регрессия, соответствие цены и качества.

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MAIN TRENDS IN THE DEVELOPMENT OF THE GLOBAL TOURISM AND HOSPITALITY INDUSTRY

Abstract. The article deals with the problems of assessing the competitiveness of services at hotel enterprises, in which quality is considered as an important factor in the competitiveness of an object. The article uses expert, factorial and parametric methods for assessing the competitiveness of services in hotel enterprises, and also studies the formation of requirements and sales through regression links.

Keywords: quality assurance, "inbound", "outbound", "general" and "specific" factors, quality of service, consistency, reliability, accuracy, recognition, baud rate, regression, value for money

Туристический бизнес — одна из наиболее быстро развивающихся отраслей мирового хозяйства. По некоторым оценкам, международный туризм входит в число трех крупнейших экспортных отраслей, уступая нефтедобывающей промышленности и автомобилестроению.

Всемирный совет по путешествиям и туризму, промышленная группа со штаб-квартирой в Лондоне оценивают экономическую деятельность в области путешествий и туризма в 2017 г. в 3,6 трлн. долл., то есть

приблизительно 11% валового мирового продукта, что делает ее самой крупной отраслью в мировой экономике. Современные доходы от туризма оценивают в триллионы долларов США, что сопоставимо с ВВП «великих» держав⁵⁷.

Вклад индустрии туризма в структуру ВВП стран, наиболее популярных для посещения, пока весьма скромнен.

Наибольшие доходы от туризма в ВВП имеют Австрия (8%), Испания (5,8%), Швейцария (5,2%). По темпам развития туризма выделяются Китай, Мексика, США. Вместе с тем в некоторых странах доходы от туризма являются определяющей статьей ВВП: Бермудские острова — 34,7%, Сейшельские острова — 27,4%, Антигуа — 58,5%, Багамы — 52,1%. По статистике в 49 наименее развитых странах мира туризм занимает второе место после нефти в качестве источника поступлений в иностранной валюте⁵⁸.

Туризм, как доходная и инфраструктурная сфера экономики, еще с советских времен обладал преимущественной базой в Узбекистане, что выгодно отличало эту центрально-азиатскую республику от большинства бывших союзных субъектов. Обусловлено это явление, прежде всего, географическим положением республики, большим потенциалом в области организации туристических привлекательных маршрутов и т.д.

Все это полностью объясняет то, что туризм на сегодняшний день играет одну из главных ролей в мировой экономике и является в настоящее время одним из самых прибыльных видов бизнеса в мире. Поэтому вопросы о будущем данной отрасли мирового хозяйства, о ее перспективах и динамике ее развития в наступающем третьем тысячелетии столь важны. В результате – туризм является сейчас одним из самых динамично развивающихся видов международного бизнеса. Интерес к туризму предпринимателей очевиден и объясняется рядом факторов. Во-первых, для того, чтобы начать заниматься туристским бизнесом, не требуется слишком больших инвестиций. Во-вторых, на туристском рынке вполне успешно взаимодействуют крупные, средние и малые фирмы. И при этом данный вид бизнеса позволяет быстро оборачивать капитал, а также (в сфере международного туризма) извлекать известные выгоды за счет валютных операций.

Ожидается постепенное смещение акцентов в развитии туризма от традиционных рынков Западной Европы, США, Японии и Канады к альтернативным рынкам, таким как Центральная и Восточная Европа, включая Россию, Китай, Южная Корея, Мексика, а также некоторые страны Ближнего Востока (табл.1.1.1.).

Таблица 1.1.1. Распределение объемов въездного туризма по регионам мира (международные туристские прибытия, млн. чел.)

Регионы мира	Прибытия				Прогноз	
	2010	2012	2015	2019	2020	2025
Всего	327,1	457,2	565,4	667,7	1006,4	1561,1
Африка	9,7	15,0	20,2	27,4	47,0	77,3
Америка (Северная и Южная)	64,3	92,8	108,9	130,2	190,4	282,3
Восточная Азия (Тихоокеанский регион)	31,1	54,6	81,4	92,9	195,2	397,2
Европа	212,0	282,7	338,4	393,4	527,3	717,0
Ближний Восток	7,5	9,0	12,4	18,3	35,9	68,5
Южная Азия	2,5	3,2	4,2	5,5	10,6	18,8

Одной из наиболее значимых тенденций развития мирового туризма является резкое усиление конкуренции на рынке туристического предложения как следствие появления все большего числа растущих стран с амбициозными планами привлечения туристов, а также перенасыщения на рынке однотипного туристского предложения. Рынок туризма весьма динамичен и незамедлительно реагирует на изменения условий приема туристов в туристских центрах. Например, цунами 2004 года в Тихоокеанском регионе серьезно пошатнуло позиции таких развитых туристских центров как Тайланд, Малайзия и Индонезия. В результате этого страны, стремящиеся сохранить, либо упрочить свои позиции на международном рынке, осуществляют планирование туризма на основе принципов устойчивого развития, предусматривают долгосрочные инвестиции в данную сферу и имеют четкие государственные стратегии развития туризма.

Основные составляющие стратегий, которые используются в мировой практике: детальный анализ собственных рынков с оценкой соотношения традиционных и перспективных направлений, учет общемировых тенденций и мультипликативного эффекта от развития туризма, проведение ежегодных международных кампаний под определенными запоминающимися девизами, а также широкое использование возможностей передовых информационных технологий как базовой платформы общения с потребителями туристских услуг. Сфера туризма при успешном развитии может стать одним из ключевых элементов, позволяющих создать условия для достижения стратегических целей развития страны, а именно, повышения благосостояния населения на основе динамичного и устойчивого экономического роста, обеспечения занятости населения, повышения уровня удовлетворения социальных и духовных потребностей, создания потенциала для будущего развития государства и укрепления международных позиций. Немаловажной тенденцией

современного туризма является повышение роли государственной политики развития туризма страны в целом, а также целевого продвижения отдельных туристских продуктов на отечественном и международном рынках (рис. 1).

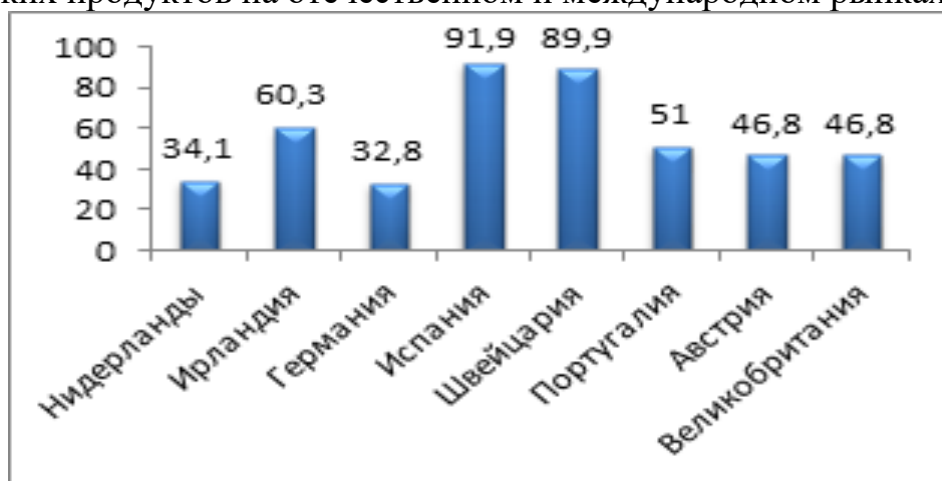


Рисунок 1.1. Бюджеты национальных туристских организаций, выделяемые на рекламу, млн. евро, 2018 г.

При условии проведения эффективной государственной политики туристская индустрия обеспечивает рост качества услуг, стимулирует развитие человеческого капитала, повышает качество жизни, создает и совершенствует инфраструктуру.

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ЛЕКАРСТВЕННЫЕ ТРАВЫ РАСТОРОПШИ, ЧИСТОТЕЛА И ВЛИЯНИЕ ИХ НА ФУНКЦИЮ ПЕЧЕНИ

Аннотация. Издавна люди называли печень «источником жизненного начала» и знали, что это самый главный орган в организме человека. Сейчас учёные и медики имеют полную картину о том, как работает эта железа, что выделяет и отчего может пострадать. Благодаря этому мы имеем возможность поддерживать печень в хорошем состоянии на протяжении долгих десятилетий. Печень считается самой большой железой в организме человека. Главная функции печени – метаболизм, нейтрализация токсинов, поддержание обмена веществ. Клетки печени отвечают за обезвреживание токсичных веществ и выработку желчи. Печень не зря называют «депо жира» - она отвечает за жировой обмен [1,2]. Кроме того, в печени осуществляется метаболизм витаминов и гормонов. Печень расщепляет яды, токсины и вещества, способные вызвать аллергию на более безвредные вещества. Лишние витамины в организме так же проходят через печень и расщепляются там. В среднем, за один час этот орган способен пропустить через себя около 90 литров крови. В экономически развитых странах хронические заболевания печени входят в число шести основных причин смерти пациентов от 35 до 60 лет, составляя 14-30 случаев на 100 тыс. населения. Употребление медикаментов так же отрицательно отражается на печени, она как губка впитывает все вредные элементы, не позволяя им поступить в другие органы с кровью [3,4].

Ключевые слова: Расторопша, гепатит, печень, чистотел.

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MEDICINAL HERBS OF MILK THISTLE, CELANDINE AND THEIR EFFECT ON LIVER FUNCTION

Annotation. Since ancient times, people have called the liver the "source of life" and knew that it is the most important organ in the human body. Now scientists and doctors have a complete picture of how this gland works, what it secretes and why it can suffer. Thanks to this, we have the opportunity to maintain the liver in good condition for many decades. The liver is considered the largest gland in the human body. The main functions of the liver are metabolism, neutralization of toxins, and maintenance of metabolism. Liver cells are responsible for neutralizing toxic substances and producing bile. The liver is not

called the "fat depot" for nothing - it is responsible for fat metabolism [1,2]. In addition, vitamins and hormones are metabolized in the liver. The liver breaks down poisons, toxins and substances that can cause allergies to more harmless substances. Excess vitamins in the body also pass through the liver and are broken down there. On average, in one hour this organ is able to pass through about 90 liters of blood. In economically developed countries, chronic liver diseases are among the six main causes of death in patients aged 35 to 60 years, accounting for 14-30 cases per 100,000 population. The use of medicines also negatively affects the liver, it absorbs all harmful elements like a sponge, preventing them from entering other organs with blood [3,4].

Key words: Milk thistle, hepatitis, liver, celandine.

Цель исследования – Коррекция нарушенной функции печени на фоне воспроизведенной модели гепатита с лекарственным растением расторопшей и чистотелом.

Материалы и методы Эксперименты проведены на 80 белых беспородных крыс мужского пола массой 200–220 г. 1 группе 40 крысам с помощью специального зонда в пищевод вводили тетрахлорметан (CC14) в вазелиновом масле в соотношении 1:1 (доза – 0,064 мл на 100 г веса животного). 2 группе 40 крыс в месте с тетрахлорметаном (CC14) так же давали лекарственные растения расторопшу в виде порошка разбавленной водой и настой из травы чистотела вводили крысам (10 г) перорально через зонд по 3 мл 2 раза в день [5,6]. Были изучены следующие биохимические показатели крови: первой и второй группы соответственно: количество общего билирубина, аланинаминотрансаминазы (ALT), аспартатаминотрансаминазы (AST), активность щелочной фосфатазы (ЩФ), γ -глутаминтрансферазы. Для подтверждения модели патологии печени биоптат органа подвергали гистоморфологическому анализу. Методика заключается в следующем. Срезы ткани печени крыс размером 5 см фиксировали в 10% растворе формалина не менее чем 3 суток. Затем исходный материал помещали в 20% раствор формалина на 1 сутки, промывали проточной водой еще 1 сутки [7,8]. По истечении фиксации материалов на микротоме производили срезы препаратов печени, которые были изучены под микроскопом. Фиксированный материал для обезвоживания и подготовки к заливке чистым парафином помещали в спиртовой раствор в возрастающей крепости: 70% – 86% – 96% – 100% по 7 часов в каждой концентрации. Затем материал переносили в смесь хлороформа и 100% раствора спирта на 9 часов, отдельно в хлороформе выдерживали еще 10 часов [9,10]. Смесь хлороформа и парафина при +37 °С помещали в термостат на 12 часов. Для изготовления блоков заливку чистым парафином производили в бумажные коробки, из которых в дальнейшем изготавливали парафиновые блоки. Нарезку производили на микротоме МС-2. Для окраски срезов использовали гематоксилин,

препараты держали в красителе в течение 5 мин, затем промывали дистиллированной водой. Полученные препараты фотографировали. Анализ полученных результатов оценивали микроскопированием материала [11]. Все исследования проведены в соответствии с этическими требованиями к работе с экспериментальными животными.

Результаты и обсуждение. В первой группе лабораторных крыс под действием тетрахлорметана через 7 суток наблюдался цитолиз значительной части гепатоцитов, повреждались клетки Купфера, ядра клеток уплотнялись, начался воспалительный процесс и дистрофия клеток печени. Биохимические изменения в этих же условиях выражались в увеличении активности АЛТ и АСТ в 3,2 и 2,8 раза соответственно. Повышение активности γ -ГТ в 3,2 раза, являющимся главным маркером гепатита, и ЩФ на 6% может свидетельствовать о массивном некрозе гепатоцитов, возникающих под действием тетрахлорметана. На 30-е сутки эксперимента активность ферментов АЛТ, АСТ, ЩФ и γ -ГТ продолжало нарастать и составило АЛТ-385 ме/л, АСТ-274 ме/л, γ -ГТ -188 ме/л, ЩФ-667 ме/л, общий билирубин -86 мкмоль/л. В условиях экспериментального моделирования токсического гепатита тетрахлорметаном получена устойчивая форма поражения гепатобилиарной системы крыс, которая характеризовалась гибелью части гепатоцитов. Картина поражения выражалась разрушением наружной мембраны гепатоцитов, в результате которого ядро клеток уплотнялось, начинался воспалительный процесс и дистрофия клеток печени. Некроз и гибель клеток преимущественно происходили в центральной зоне печеночной доли [12,13]. В результате разрушения стенок кровеносных сосудов кровь смешивалась с желчью, у подопытных животных возникал острый токсический гепатит. Данное положение свидетельствует о повреждении мембран гепатоцитов, повышении их проницаемости, а также гибели клеток печени, вызванных введением тетрахлорметана, которое сопровождается выходом внутриклеточных субстанций в кровь и лимфу [14]. Увеличение активности γ -ГТ и ЩФ также может свидетельствовать о массивном некрозе гепатоцитов, возникающих под воздействием тетрахлорметана. На фоне высокой активности γ -ГТ происходит повышение концентрации общего билирубина, что дает основание утверждать, что у подопытных крыс имеет место не только формирование цитолиза, но и развитие синдрома внутриклеточного холестаза [15].

Во второй группе в условиях воспроизведенного гепатита с применением лекарственных средств расторопши и чистотела в течении 30 дней, выявило значимую защиту гепатобилиарной системы, которая выражалась существенным улучшением биохимических показателей: количество АЛТ, АСТ и щелочной фосфатазы увеличивались с менее агрессивными показателями и составило соответственно АЛТ-215 ме/л,

АСТ-145 ме/л, γ -ГТ -167 ме/л, ЩФ-255 ме/л, общий билирубин -78 мкмоль/л.

При сопоставлении результатов 1 и 2 группах выявлено, что лекарственные растения расторопша и чистотел обладают существенными гепатопротекторными свойствами, способствуя уменьшению проявлений токсических, цитолитических и холестатических эффектов тетрахлорметана у экспериментальных крыс. Исходя из полученных результатов по применению расторопши и чистотела в месте, их действие направлено на поддержанию гомеостаза в печени, поврежденного тетрахлорметаном, повышению ее устойчивости к действию токсического фактора, нормализацию функциональной активности и стимуляцию в печени процессов регенерации. Перечисленные эффекты под действием травяных растений указывают на значимую защиту гепатобилиарной системы крыс на фоне токсического гепатита, вызванного тетрахлорметаном [16,17]. Лекарственное растение расторопша и чистотел, содержащие большое количество флавоноидов, обладают существенными гепатотропными и детоксикационными действиями. Учитывая значимое повреждение печеночной ткани тетрахлорметаном, даже незначительная защита гепатоцитов лекарственными растениями может считаться патогенетически приемлемой из-за частичного восстановления количества и функции гепатоцитов. Это подтверждается тем, что препараты растительного происхождения, обладающие мембраностабилизирующим действием, защищают клетки от проникновения в них токсинов [18,19]. Средства этой группы стимулируют также систему антиоксидантной защиты, способствуя повышению содержания восстановленного глутатиона в печени, а также синтез белка, что ускоряет регенерацию поврежденных гепатоцитов [17]. Подводя итоги по данным исследования лекарственные растения расторопша и чистотел, обладают уникальными фитотерапевтическими свойствами направленными на защиту функций печени, так как в них содержится наибольшее количество полезных веществ, в частности флавоноидов [20].

Заключение В условиях воссозданного токсического гепатита тетрахлорметаном получена устойчивая форма поражения гепатобилиарной системы крыс, которая характеризовалась гибелью части гепатоцитов и некрозом. Применение лекарственных растений расторопши и чистотела в комбинации в течении воссозданного токсического гепатита, способствовало менее выраженному токсическому действию, уменьшению выраженности проявлений цитолитических и холестатических эффектов тетрахлорметана. Учитывая значимое повреждение печеночной ткани тетрахлорметаном, даже незначительная защита гепатоцитов лекарственными растениями считаться патогенетически эффективным для защиты печени не только от токсических веществ но и от лекарственных препаратов имеющие гепатотоксические эффекты.

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СИСТЕМА СОДЕЙСТВИЯ РЕШЕНИЮ ЖИЛИЩНЫХ ПРОБЛЕМ МОЛОДЫХ СЕМЕЙ НА РЕГИОНАЛЬНОМ УРОВНЕ

Аннотация. В статье рассматриваются виды государственной поддержки молодых семей, претендующих на улучшение жилищных условий, проведен анализ реализации регионального комплекса процессных мероприятий «Обеспечение жильем молодых семей в Оренбургской области» государственной программы «Стимулирование развития жилищного строительства в Оренбургской области», выявлены недостатки и предложены меры по совершенствованию региональных мер государственной поддержки молодых семей для решения жилищных проблем.

Ключевые слова: молодая семья, жилищные условия, жилищные проблемы, жилищная политика, государственная поддержка.

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THE SYSTEM OF ASSISTANCE IN SOLVING HOUSING PROBLEMS OF YOUNG FAMILIES AT THE REGIONAL LEVEL

Abstract. The article examines the types of state support for young families applying for better housing conditions, analyzes the implementation of the regional complex of process measures "Providing housing for young families in the Orenburg region" of the state program "Stimulating the development of housing construction in the Orenburg region", identifies shortcomings and suggests measures to improve regional measures of state support for young families to solve housing problems.

Keywords: young family, housing conditions, housing problems, housing policy, state support.

Государственная поддержка молодых семей актуальна в современной России, так как целью любого государства является повышение качества жизни населения. Тема, связанная с молодыми семьями, поднимается

довольно часто и связано это с тем, что будущее страны напрямую зависит от того, как и в каких условиях живут молодые семьи. В настоящее время, в России, каждая семья стремится приобрести собственное жилье, так как его наличие является определяющим фактором имущественного статуса семьи. Однако, при решении проблем жилищного вопроса молодая семья сталкивается с такими трудностями, как:

- высокая цена на покупку собственного жилья;
- отсутствие полной информации и правовой помощи со стороны государства и органов местного самоуправления в вопросе приобретения собственного жилья;
- низкий уровень доходов молодой семьи;
- трудности с арендой и съемом жилья;
- высокие тарифы на жилищно-коммунальные услуги;
- состояние жилого фонда;
- невозможность получения бесплатного жилья [1].

Для реализации жилищной политики в целях решения жилищных проблем молодых семей введены федеральные и региональные программы, позволяющие уменьшить ставки по ипотечным кредитам и займам или получить субсидию на жилую площадь. Перечень основных федеральных программ, реализуемых государством, для улучшения жилищных условий молодых семей представлен на рисунке 1.

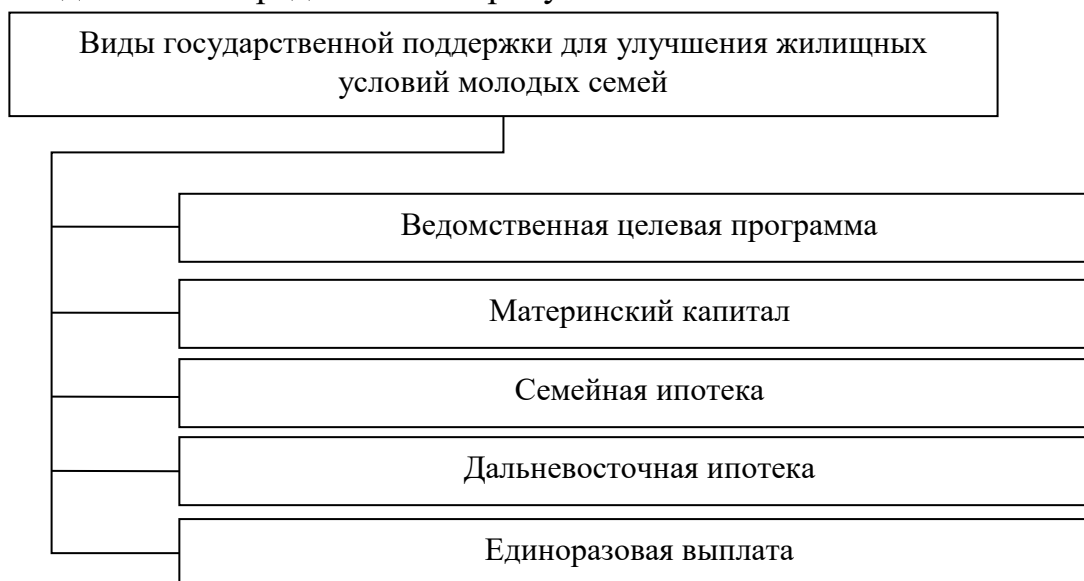


Рисунок 1 – Виды улучшения жилищных условий молодых семей [2]

Меры социальной поддержки, оказываемые на региональном уровне, хотя и не покрывают полностью потребность в жилье, но являются большим подспорьем молодым семьям. Обязательства по обеспечению жильем молодых семей в субъектах Российской Федерации выполняются с использованием различных «обусловленных», то есть направленных на конкретную категорию получателей, мер социальной поддержки. Наиболее

эффективным инструментом в решении вопросов обеспечения жильем молодых семей на сегодняшний день являются государственные жилищные программы.

В Оренбургской области продолжает действовать комплекс процессных мероприятий (подпрограмма) «Обеспечение жильем молодых семей в Оренбургской области» государственной программы «Стимулирование развития жилищного строительства в Оренбургской области» [3]. Участникам подпрограммы может быть предоставлена одна из трех видов социальных выплат:

– **социальная выплата на приобретение (строительство) жилья**, которая предоставляется за счет трех бюджетов: федерального, областного и местного. **Условия, при выполнении которых молодая семья может встать на учет:**

а) возраст каждого из супругов или родителя в неполной семье не превышает 35 лет;

б) все члены молодой семьи постоянно проживают на территории Оренбургской области;

в) молодая семья является нуждающейся в улучшении жилищных условий. Нуждающимися признаются семьи, которые не имеют в собственности жилых помещений либо площадь имеющихся жилых помещений не превышает учетную норму, установленную в месте постоянного проживания молодой семьи, либо превышает учетную норму, но жилое помещение приобретено с помощью жилищного кредита (займа);

г) молодая семья ранее не получала от органа государственной власти или органа местного самоуправления бюджетных средств на приобретение или строительство жилого помещения.

Также для участников подпрограммы департамент молодежной политики Оренбургской области за счет средств областного бюджета предоставляет две дополнительные социальные выплаты:

– **социальная выплата при получении кредита на приобретение жилья**, которая используется в качестве первоначального взноса для приобретения жилья с помощью жилищного кредита;

– **социальная выплата на погашение части стоимости жилья в случае рождения (усыновления) ребенка**, которая может быть использована для погашения уже имеющегося кредита, в случае если после приобретения жилья молодая семья осталась нуждающейся в улучшении жилищных условий и на момент подачи документов возраст рожденного (усыновленного) ребенка не превышает 3 лет.

В результате реализации подпрограммы «Обеспечение жильем молодых семей в Оренбургской области» государственной программы «Стимулирование развития жилищного строительства в Оренбургской области» за 2018-2022 гг. были достигнуты результаты, представленные в таблице 1.

Таблица 1 – Результаты реализации подпрограммы «Обеспечение жильем молодых семей в Оренбургской области» государственной программы «Стимулирование развития жилищного строительства в Оренбургской области» за 2018-2022 гг. [4]

Наименование показателя	В единицах					2022 г. / 2018 г., %
	2018 г.	2019 г.	2020 г.	2021 г.	2022 г.	
1	2	3	4	5	6	7
Количество молодых семей, улучшивших жилищные условия при помощи социальной выплаты молодым семьям на приобретение (строительство) жилья	380	322	424	481	437	115,00
Количество молодых семей, улучшивших жилищные условия при помощи социальной выплаты на приобретение (строительство) жилья отдельным категориям молодых семей	75	108				-
Количество молодых семей, улучшивших жилищные условия при помощи социальной выплаты молодым семьям при получении кредита на приобретение жилья	20	150	139	9	81	405,00
1	2	3	4	5	6	7
Количество молодых семей, улучшивших жилищные условия при помощи социальной выплаты на погашение части стоимости жилья в случае рождения	51	323	106	27	71	139,22

(усыновления) ребенка						
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Таким образом, в результате реализации комплекса процессных мероприятий (подпрограммы) «Обеспечение жильем молодых семей в Оренбургской области» за 2018-2022 гг. были достигнуты положительные результаты, позволившие улучшить жилищные условия молодых семей региона. Так за 2018-2022 гг. количество молодых семей, улучшивших жилищные условия при помощи социальной выплаты молодым семьям на приобретение (строительство) жилья, выросло с 380 ед. до 437 ед. или на 15 %. В 2018-2019 гг. молодые семьи Оренбургской области улучшили жилищные условия за счет социальной выплаты на приобретение (строительство) жилья отдельным категориям молодых семей: в 2018 г. таких семей было 75 ед., а в 2019 г. их число выросло до 108 ед. Улучшались жилищные условия молодых семей региона и при помощи социальной выплаты молодым семьям при получении кредита на приобретение жилья: наибольшее число семей, получивших такую помощь было в 2019 г. (150 ед.), наименьшее – в 2021 г. (9 ед.). Кроме того, молодым семьям Оренбургской области для улучшения жилищных условий в течение анализируемого периода предоставлялись социальные выплаты на погашение части стоимости жилья в случае рождения (усыновления) ребенка: также в 2019 г. больше всего семей (323 ед.) получили такую социальную выплату, а в 2021 г. – наименьшее число семей (27 ед.).

Несмотря на то, что в Оренбургской области реализуются меры поддержки молодых семей для улучшения жилищных условий, существуют проблемы, которые делают данные меры несовершенными: недостаточный размер социальной выплаты, недостаточность наличия у молодых семей средств для приобретения жилья, длительное ожидание в очереди для получения меры социальной поддержки от государства и в итоге, как правило, ее неполучения из-за превышения возрастного порога молодой семьи, правовая неграмотность населения и недостаточная информированность о существующих мерах государственной поддержки, необоснованный отказ в обеспечении жильём молодых семей. Для поддержки молодых семей на региональном уровне необходимо увеличить долю государственных субсидий и создать кредитные программы с более низкими процентными ставками. В целях улучшения информированности населения о существовании различных государственных программ для молодых семей предлагается разработать новую услугу для граждан «Молодая семья» на едином портале государственных услуг. Для стимулирования процессов решения жилищных проблем молодых семей в сельской местности необходима разработка новых программ, которая, в

свою очередь, будет включать в себя организационно-экономический механизм, направленный не на выдачу денежных сертификатов или выплаты материального характера молодым семьям, а на предоставление нового, комфортного жилья, соответствующего требованиям безопасности, энергоэффективности. Для более эффективной помощи молодым семьям в рамках комплекса процессных мероприятий (подпрограммы) «Обеспечение жильем молодых семей в Оренбургской области» государственной программы «Стимулирование развития жилищного строительства в Оренбургской области» следует учитывать возраст на момент подачи заявки, а не на текущий момент, так как долгое ожидание исключает молодую семью из претендентов на получение субсидии по программе [5].

Таким образом, в решении жилищной проблемы молодых семей поддержка государства выступает основой для комфортной и стабильной жизни молодого слоя населения, что также влияет и на демографическую составляющую семьи, а в дальнейшем позволит сформировать экономически активный слой населения. На территории Оренбургской области в 2018-2022 гг. реализовалась подпрограмма «Обеспечение жильем молодых семей в Оренбургской области» государственной программы «Стимулирование развития жилищного строительства в Оренбургской области», в результате которой молодые семьи получали социальные выплаты на приобретение (строительство) жилья, на приобретение (строительство) жилья отдельным категориям молодых семей, при получении кредита на приобретение жилья и на погашение части стоимости жилья в случае рождения (усыновления) ребенка и улучшали свои жилищные условия. Однако, реализуемая подпрограмма в Оренбургской области имеет недостатки, в связи с чем, можно предложить следующие меры по ее совершенствованию: увеличить долю государственных субсидий и создать кредитные программы с более низкими процентными ставками, учитывать возраст на момент подачи заявки, а не на текущий момент, так как долгое ожидание исключает молодую семью из претендентов на получение субсидии по программе.

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СТИЛИСТИЧЕСКИЕ ОСОБЕННОСТИ ИНТЕРНЕТ-ОБЩЕНИЯ НА РУССКОМ ЯЗЫКЕ

Аннотация. В статье представлены результаты контент-анализа интернет-общения подростков. Основой исследования послужили школьные чаты с определенной тематикой контента, что позволило выявить лексические категории, дополняющие и трансформирующие стилистические средства в зависимости от ситуации общения.

Ключевые слова: интернет-стилистика, интернет-коммуникация подростков, особенности коммуникации в чате, лексика эмоциональной оценки.

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STYLISTIC FEATURES OF INTERNET COMMUNICATION IN RUSSIAN

Abstract. The article presents the results of a content analysis of Internet communication among teenagers. The research was based on school chats with a specific content topic, which allowed us to identify lexical categories that complement and transform stylistic means depending on the communication situation.

Keywords: Internet stylistics, Internet communication of teenagers, features of chat communication, vocabulary of emotional assessment.

Развитие цифровых технологий и их применение в области гуманитарных наук открывает принципиально новые возможности для получения информации о языковых особенностях представителей различных возрастных групп. Распространенной формой общения являются

чаты в интернет-мессенджерах, то есть тематические объединения людей для обмена сообщениями в режиме реального времени.

Основной особенностью категории экспрессивной лексики, не дифференцированной по значению, является характерная стилистическая нюансированность и экспрессивность слов в номинативном значении того или иного слова и, как следствие, повышение степени эмоционального напряжения.

Таким образом, в эту категорию мы включили:

- лексику мотивации и деятельности (добиваться, успевать);
- сленговую лексику, которая объединила школьный, молодежный, компьютерный, криминальный и многие другие жаргоны (клява, лох, ржать и др.);
- нецензурную лексику; и лексика с усиливающим значением (никогда, точно, весь и т.д.).

Категория оценочных единиц - это совокупность единиц различных уровней языка, которые связаны оценочным значением и передают негативное или позитивное отношение субъекта общения к содержанию произносимого высказывания. Оценочные высказывания разнообразны и включают в себя не только конструкции, непосредственно содержащие оценочные лексемы "плохой/хороший", но и множество выражений или слов, содержащих оценку и оценочные семы.

Язык содержит ряд многоуровневых средств, которые служат для передачи категории оценки. В нашей работе реализация лингвистической оценки рассматривается в основном на лексическом уровне.

Лексика негативной эмоциональной оценки часто представляет собой вербальную агрессию. Вербальная агрессия - это вид речевого поведения, основной целью которого является оскорбление, унижение и причинение морального дискомфорта непосредственно объекту агрессии.

Доминирующим типом вербальной агрессии является наступление, характеризующееся спонтанностью, импульсивностью и аффектацией, и представляющее собой средство языковой "атаки" на собеседника, включающее инвективы (ряд слов или выражений, семантика которых передает намерение вытеснить, оскорблять или унижать человека. В словаре под редакцией А. А. Грицанова приведены наглядные примеры инвективных признаков различных аксиологических понятий:

- трудовые навыки (например, некомпетентность);
- чистоплотность – приписывание несоблюдения гигиены (грязный, немывтый);
- семейные узы - исключение адресата из семьи (ублюдок, сукин сын).

Исследователями были приняты некоторые категории общения на разговорном уровне.

Первая категория - это словарный запас выражений, который не дифференцируется с точки зрения значения. В языке младших и старших

подростков, независимо от их пола, преобладает жаргонная лексика (23,08 %) как средство демонстрации принадлежности к определенной группе и выражения солидарности с одноклассниками. В существующей выборке наименее частотной является лексика мотивации и деятельности (1,26 %). Мы полагаем, что это связано со спецификой тематической сферы общения в чатах и лексическими особенностями личной переписки или разговоров. Говоря о гендерных различиях, можно сделать вывод, что нецензурную лексику чаще употребляют мальчики (13,74 %), что свидетельствует об их выраженном желании преодолеть запрет на употребление табуированных в культуре слов, выразить свои сильные эмоции и оказать резкое эмоциональное воздействие на собеседника. Девушки (3,7%) используют лексику, повышающую экспрессию, что подтверждает большую эмоциональность женского языка и его более глубокую гиперболизацию.

Материал показал, что в речи девочек-подростков преобладают инвективы (4,85 %), что объясняется высокой степенью негативизма и эмоциональности, а также отсутствием зрелых навыков самоконтроля и терпимости. В большинстве случаев подростками движет желание нагрубить и оскорбить, чтобы показать свое превосходство и принадлежность к миру взрослых.

В настоящее время Интернет является одной из основных коммуникационных платформ для подростков, чей язык претерпевает определенную трансформацию. Особенности языка школьников позволяют сделать гипотетические выводы об их психологическом состоянии, уровне зрелости, способности/неспособности поддерживать благоприятную атмосферу в коллективе, а также об актуальных темах общения исследуемой возрастной группы.

Перспективными направлениями исследований являются:

- 1) кросс-культурный анализ степени сходства или различий в языке подростков из разных стран в контексте цифровой коммуникации;
- 2) онтогенетическое изучение языка подростков;
- 3) расширение исследования за счет включения чатов, охватывающих другие темы.

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ПРЕИМУЩЕСТВА ВОЗВЕДЕНИЯ НАРУЖНЫХ ОГРАЖДАЮЩИХ КОНСТРУКЦИЙ ИЗ ГАЗОБЕТОНА В СОВРЕМЕННОМ СТРОИТЕЛЬСТВЕ

Аннотация. Статья рассматривает преимущества использования газобетона в современном строительстве для возведения наружных ограждающих конструкций. Описываются теплоизоляционные свойства материала, его легкость, прочность, экологичность, долговечность, простота обработки и пожаробезопасность.

Ключевые слова: газобетон, наружные ограждающие конструкции, строительство, теплоизоляция, легкость, прочность, экологичность, долговечность, пожаробезопасность.

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ADVANTAGES OF CONSTRUCTION OF EXTERNAL ENCLOSING STRUCTURES FROM AEROSHED CONCRETE IN MODERN CONSTRUCTION

Abstract. The article is devoted to the advantages of using aerated concrete in construction projects for the construction of external enclosing structures. Important thermal insulation properties of the material are its lightness, strength, environmental friendliness, ease of use, ease of processing and fire safety.

Key words: aerated concrete, external enclosing structures, construction, thermal insulation, lightness, strength, environmental friendliness, environmental friendliness, fire safety.

Газобетон — материал, который широко используется в современном строительстве. Он обладает множеством преимуществ, которые делают его привлекательным выбором для возведения наружных ограждающих конструкций. Вот некоторые из них:

1. Теплоизоляция: Газобетон обладает отличными теплоизоляционными свойствами благодаря своей пористой структуре. Это позволяет снизить затраты на отопление и кондиционирование воздуха, так как материал хорошо сохраняет тепло зимой и прохладу летом.

2. Легкость: Газобетон легкий материал, что облегчает его транспортировку и установку. Это также уменьшает нагрузку на фундамент здания, что может привести к экономии средств на его сооружение.

3. Прочность: Газобетон обладает достаточной прочностью для использования в качестве наружных ограждающих конструкций. Он способен выдерживать значительные нагрузки и не подвержен деформации под воздействием влажности или температуры.

4. Экологичность: Газобетон производится из природных материалов, таких как цемент, песок и вода. Он не содержит вредных веществ и не загрязняет окружающую среду.

5. Долговечность: Газобетон является долговечным материалом, который может служить десятилетиями без потери своих свойств. Он устойчив к воздействию атмосферных условий, гниению и коррозии.

6. Простота обработки: Газобетон легко обрабатывается, что позволяет создавать разнообразные архитектурные формы и элементы. Его можно резать, сверлить и шлифовать без особых усилий.

7. Пожаробезопасность: Газобетон является негорючим материалом, что делает его безопасным для использования в зданиях. Он не поддерживает горение и не выделяет токсичных веществ при нагревании.

Газобетон обладает значительно лучшими теплоизоляционными свойствами по сравнению с жжёным кирпичом. Это связано с его пористой структурой, которая образуется в процессе производства. Поры заполнены воздухом, который является плохим проводником тепла. Благодаря этому,

стены из газобетона могут эффективно сохранять тепло внутри помещения, что позволяет снизить затраты на отопление.



Рис.1. Внешний вид газобетона и здание, выполненное из газобетонных блоков.

Газобетон — это ячеистый бетон автоклавного твердения. В его состав входят цемент, кварцевый песок, вода, алюминиевая пудра и специализированные добавки. Материал отличается высокой прочностью, небольшим весом и низкой плотностью. Благодаря этому он обладает рядом преимуществ перед другими строительными материалами. Например, обычно плотность газобетона составляет от 300 до 1200 кг/м³, газобетон имеет низкую теплопроводность, благодаря чему стены из него хорошо сохраняют тепло зимой и прохладу летом, газобетон относится к негорючим материалам, поэтому его можно использовать для строительства зданий любой категории огнестойкости, газобетон способен пропускать пар, что обеспечивает комфортный микроклимат внутри помещений, газобетон может выдерживать многократные циклы замораживания и оттаивания без потери своих свойств.

В отличие от газобетона, жжёный кирпич обладает меньшей теплоизоляцией. Кирпич изготавливается из глины и обжигается при высоких температурах, что приводит к образованию плотной структуры. Такая структура хуже удерживает тепло, поэтому стены из кирпича требуют дополнительного утепления.

Кроме того, газобетон обладает большей толщиной, что также способствует улучшению теплоизоляции. Например, стена из газобетона толщиной 30 см может иметь такую же теплоизоляцию, как стена из кирпича толщиной 1 метр.

Таким образом, газобетон является более предпочтительным материалом для строительства стен с точки зрения теплоизоляции по сравнению с жжёным кирпичом.

В целом, использование газобетона для возведения наружных ограждающих конструкций представляет собой выгодное решение, которое

сочетает в себе высокую эффективность, экологическую безопасность и экономичность.

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ПРОЧНОСТЬ И ДЕФОРМАТИВНОСТЬ СТРОИТЕЛЬНЫХ МАТЕРИАЛОВ И КОНСТРУКЦИЙ

Аннотация. Статья посвящена изучению свойств прочности и деформативности строительных материалов и конструкций. Рассматриваются основные понятия, методы определения этих характеристик, а также влияние различных факторов на их изменение.

Ключевые слова: прочность, деформативность, строительные материалы, конструкции, механические свойства, испытания.

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STRENGTH AND DEFORMABILITY OF BUILDING MATERIALS AND STRUCTURES

Abstract. The article is devoted to the study of the properties of strength and deformability of building materials and structures. Basic concepts, methods

for determining these characteristics, as well as the influence of various factors on their change are considered.

Keywords: strength, deformability, building materials, structures, mechanical properties, tests.

Введение: Строительные материалы и конструкции играют важную роль в строительстве зданий и сооружений. Они должны обладать определенными механическими свойствами, такими как прочность и деформативность, чтобы обеспечить безопасность и долговечность конструкций. В данной статье мы рассмотрим основные понятия, связанные с этими свойствами, а также методы их определения.

Основная часть: Прочность – это способность материала сопротивляться разрушению под действием внешних сил. Она зависит от многих факторов, таких как состав материала, его структура, условия эксплуатации и др. Для определения прочности используются различные методы испытаний, например, испытание на растяжение или сжатие.

Испытание на растяжение или сжатие является одним из наиболее распространенных методов определения прочностных характеристик строительных материалов и конструкций. Этот метод позволяет определить максимальную нагрузку, которую материал способен выдержать до разрушения, а также его деформационные свойства.

Для проведения испытания на растяжение или сжатие используется специальное оборудование - разрывная машина. Она представляет собой устройство, которое создает равномерное усилие на образец материала и регистрирует его деформации. Образец материала закрепляется между двумя захватами машины, после чего начинается процесс нагружения.

При испытании на растяжение образец подвергается постепенному увеличению нагрузки до момента его разрушения. При этом регистрируются значения нагрузки и деформации. На основе полученных данных строятся графики зависимости нагрузки от деформации, которые позволяют определить модуль упругости, предел текучести и предел прочности материала.

При испытании на сжатие образец подвергается постепенному увеличению нагрузки до момента его разрушения. Регистрируются значения нагрузки и деформации. На основе полученных данных строятся графики зависимости нагрузки от деформации, которые позволяют определить модуль упругости, предел текучести и предел прочности материала.

Важно отметить, что результаты испытаний зависят от многих факторов, включая качество материала, его геометрию, условия окружающей среды и т.д. Поэтому перед проведением испытаний необходимо тщательно подготовить образцы и соблюдать все требования методики испытаний.

Деформативность – это способность материала изменять свою форму под действием внешних сил без разрушения. Она также зависит от состава материала, его структуры и условий эксплуатации. Определение деформативности осуществляется путем измерения относительного удлинения или сжатия образца при нагрузке.

Определение деформативности строительных материалов и конструкций осуществляется путем измерения относительного удлинения или сжатия образца при нагрузке. Это свойство характеризует способность материала изменять свою форму под воздействием внешних сил без разрушения.

Для проведения измерений используются специальные приборы и методы. Один из самых распространенных методов - это испытание на растяжение или сжатие. Образцы материала подвергаются постепенно увеличивающейся нагрузке до момента разрушения. Во время этого процесса регистрируется изменение длины образца.

Полученные данные затем анализируются и обрабатываются. На основе этих данных строится график зависимости деформации от нагрузки. По этому графику можно определить предел текучести и предел прочности материала. Эти параметры характеризуют способность материала противостоять деформациям и разрушению.

Знание деформативности строительных материалов и конструкций очень важно при проектировании и строительстве зданий и сооружений. Оно позволяет оценить устойчивость конструкций к различным видам нагрузок и выбрать оптимальный материал для конкретного проекта.

Заключение: Таким образом, прочность и деформативность являются важными свойствами строительных материалов и конструкций. Их определение необходимо для обеспечения безопасности и долговечности зданий и сооружений.

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ЖИЗНЕННЫЕ ПРИНЦИПЫ И ТВОРЧЕСТВО ТУРКМЕНСКОГО ПОЭТА

Аннотация. В статье говорится о творческих взглядах Махтумкули Фраги, о его принципах, в результате которых творил прекрасные стихотворения.

Ключевые слова: литература, творчество, эстетика, эстетические взгляды.

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THE LIFE PRINCIPLES AND CREATIVITY OF THE TURKMEN POET

Abstract. The article talks about the creative views of Makhtumkuli Fraga, about his principles, as a result of which he created wonderful poems.

Keywords: literature, creativity, aesthetics, aesthetic views.

Махтумкули Фраги – великий туркменский поэт, философ и гуманист, чье творчество стало бесценным сокровищем для туркменского народа. Его поэзия, пронизанная глубокими чувствами любви к Родине, свободолюбия и стремления к справедливости, на протяжении веков вдохновляла людей на благородные поступки и служила мудростью.

В период возрождения новой эпохи нашего государства проводится большая работа по изучению жизненного пути и творчества наших туркменских мыслителей, а также литературного наследия наших

туркменских поэтов. Жизненная философия туркменского народа, разумные традиции, мечты о процветающем государстве с высокими духовными и гуманитарными ценностями нашли отражение в богатой и многогранной поэзии нашего знаменитого соотечественника. Сегодня эти добрые пожелания стали реальностью. Гуманитарные идеи Махтумкули легли в основу национальной политики независимой, нейтральной страны.

Международная организация турецкой культуры (ТЮРКСОЙ) объявила 2024 год «годом Махтумкули Фраги, великого поэта и мыслителя турецкого мира», а также включила его коллекцию рукописей в программу Организации Объединенных Наций по вопросам образования, науки и культуры (ЮНЕСКО) «Память мира». Международный список показывает, что работа известного мастера слова имеет всемирное значение. В этой связи особое внимание уделяется богатому и ценному литературному наследию Махтумкули Фраги, которое является частью золотой сокровищницы мировой литературы, его светским взглядам, философскому миру его стихов, огромному влиянию, которое он оказал на туркменскую жизнь в XVIII-XIX веках на научной основе, его творчеству и научным достижениям.

Произведения вдохновенного поэта, истинного патриота туркменской земли Махтумкули Фраги служат повышению сознательности, нравственному развитию, прославлению патриотизма, свободы, единства, дружбы и высокой человечности народа.

В творчестве Махтумкули Фраги наряду с бытовыми темами особое место занимают стихи патриотического характера. В разные эпохи учеными было написано множество работ, в которых исследовались стихотворения, созданные великим мыслителем.

Силой своей поэзии он боролся за правду и справедливость. Гениальному поэту доступны все темы. В его стихах - звон сабель и грозный клич, призыв к свободе, размышления о судьбе Родины, о нравственности, чести и достоинстве.

Поэт наставляет своих читателей быть верными родной земле, бороться на благо Отечества. Каждый проповедник и наставник должен быть примером для подражания. В этом плане, как известно, Махтумкули был всесторонне развитым совершенством, личностью.

Как известно, стихи Махтумкули в разные годы были переведены на многие языки мира. Информации о жизни и творчестве поэта отведено большое место в словарях и энциклопедиях на туркменском и иностранных языках. В связи с этим сегодня стихам Махтумкули уделяется большое внимание в Западной Европе. В качестве примера можно привести самый древний перевод стихов Махтумкули на западный язык, выполненный востоковедом А. Вамбери (1832-1913) была опубликована в 1879 году, а первый перевод на английский язык Юсуфа Азему был опубликован в 1995 году. Немецкий перевод 41 стихотворения из «Дивана» венгерского

востоковеда А. Вамбери (1832-1913) был опубликован в 1879 году в "Журнале немецкого восточного общества" в Лейпциге. А также некоторые из его стихотворений были переведены сначала на испанский, а затем на немецкий языки. Его стихи на испанском языке были опубликованы Академией наук Туркменистана в мае 2014 года по случаю 290-летия Махтумкули.

Махтумкули Фраги – поэт мирового масштаба, который оставил после себя клад прекрасных стихотворений. Сегодня он считается отцом туркменской литературы и национальной культурной иконой. Его известность во многом объясняется богатой, укоренившейся традицией туркменских бардов или бахши воплощать свои стихи в песнях.

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ВОПРОСЫ УПРАВЛЕНИЯ ВНЕШНЕЭКОНОМИЧЕСКОЙ ДЕЯТЕЛЬНОСТИ В ПРЕДПРИНИМАТЕЛЬСТВО

Аннотация. В статье рассмотрены вопросы организации и управления деятельностью предпринимательских предприятий. Уделяется внимание вопросам совершенствования управления внешнеэкономической деятельностью предпринимательских предприятий.

Ключевые слова: предпринимательство, организация, управление, внешнеэкономическая деятельность, качество, лидеры, экономическая эффективность.

ISSUES OF MANAGEMENT OF FOREIGN ECONOMIC ACTIVITY IN ENTREPRENEURSHIP

The summary. The article deals with the issues of organization and management of entrepreneurial enterprises. Attention is paid to the issues of improving the management of foreign economic activity of entrepreneurial enterprises

Keywords: entrepreneurship, organization, management, foreign economic activity, quality, leaders, economic efficiency.

Введение (Introduction). В направлении развития экономики нашей страны большое значение придается предпринимательской деятельности. В принятых планах и программах определено, что перед сектором стоит задача дальнейшего повышения уровня жизни населения и обеспечения развития экономики высокими темпами, за счет высокой доли в создании значительной части ВВП страны. В нашей стране поставлена задача довести объем экспорта до 30 миллиардов долларов США к 2026 году. Для выполнения этой задачи поставлена задача поддержать предприятия, выпускающие продукцию на экспорт, внедрить стандарты, отвечающие требованиям внешнего рынка, и наладить производство продукции на их основе, а также увеличить долю малого бизнеса и предпринимательских предприятий в экспорте. Малый бизнес и индивидуальные предприниматели нацелены на обеспечение 60% общего объема экспорта

страны. Для выполнения этой задачи, которая ставится перед малым бизнесом и хозяйствующими субъектами, требуется организовать деятельность в них и управлять ею, совершенствовать их внешнеэкономическую деятельность.

Основная часть (Main part). В нашей стране за годы независимости большими темпами развивается малый бизнес и предпринимательство. Их число неуклонно растет. Значительная часть региональной внешней торговли осуществляется этими предприятиями. В 2022 году 42,8% от общего объема экспорта Наманганской области и 72,3 % импорта осуществляются предпринимательскими предприятиями (таблица 1). 72,4% валового регионального продукта области создается предпринимательскими предприятиями. В 2018 году эти предприятия обеспечили 80,0% регионального валового регионального продукта, в то время как в последующие годы эта доля несколько снизилась. Это было вызвано пандемией, имевшей место в эти годы. Доля малого бизнеса и индивидуальных предпринимателей, которые обеспечивали около 80,0% экспорта области в 2017 и 2018 годах, к 2022 году составила 42,8%.

Таблица 1

Доля предприятий малого бизнеса и предпринимательства в
Наманганской области, в %

№	Годы	В валовом внутреннем продукте	В экспорте	В импорте
1	2000	38,2	16,9	38,2
12	2011	78,7	54,1	53,7
13	2012	78,4	48,6	62,0
14	2013	79,5	52,4	75,5
15	2014	79,7	74,3	68,2
16	2015	77,6	77,8	74,5
17	2016	78,7	87,4	90,9
18	2017	79,6	90,6	88,7
19	2018	80,0	83,6	45,9
20	2019	79,2	80,1	70,7
21	2020	70,1	53,3	73,4
22	2021	71,2	51,3	79,0
20	2022	72,4	42,8	72,3

Если во внешнеэкономической деятельности малого бизнеса и предпринимательских предприятий участвуют крупнейшие торговые партнеры области из зарубежных стран, таких как Россия, Казахстан, Китай, Армения, Кыргызстан, Германия, Южная Корея, Латвия, то из них только с Казахстаном, Арменией, Кыргызстаном достигается положительное сальдо.

Хотя Наманганская область установила экспортные отношения с более чем 50 странами, с большинством из них экспорт осуществлялся только в течение года, то есть продолжительность экспортных отношений

не была достигнута. Показатели экспорта в СНГ и другие зарубежные страны г. Намангане, в Касансайском, Учкурганском и Чустском районах, напротив, в Мингбулакском и Янгикурганском районах наблюдается тенденция к резкому снижению этих показателей по обоим направлениям.

Несмотря на то, что значительная доля импорта из стран СНГ приходится на Россию и Казахстан, с ними достигнуто положительное сальдо внешнеторгового оборота. Напротив, наблюдается относительно высокий импорт из Беларуси, Туркменистана и Украины. С большинством других зарубежных стран наблюдалась лишь резкая тенденция роста импорта, в результате чего был зафиксирован отрицательный товарооборот.

Некоторые районы области, в том числе Наманганской, Нарынской, Учкурганской районы, вообще не участвуют в экспортной деятельности в сфере услуг. Необходимо изучить возможности этого, а также определить возможности увеличения показателей экспорта в районах Касансай, Пап, Туракурган, Чартак и Чуст доля которых не является относительно высокой, в качестве одной из возможностей дальнейшего увеличения этого показателя экспорта.

Экспорт машин и инструментального оборудования был очень незначительным. Изучение причин этого и анализ возможностей в этой области также остается одним из важнейших вопросов на сегодняшний день. В настоящее время необходимо устранить эти недостатки за счет разработки мер по устранению этих недостатков и их реализации.

Результаты и дискуссия (Results and discussion). В нынешний период, когда происходит глобализация экономики, важно наращивать экспортный потенциал, который рассчитывается предприятиями малого бизнеса как возможность производить экспортные товары, поставлять конкурентоспособную продукцию на мировые рынки и продавать ее по мировым ценам. На современном этапе внешняя торговля считается наиболее быстро развивающейся формой международных экономических отношений. Возрастающее значение внешнеторговых операций - это процесс, непосредственно связанный с необходимостью, в первую очередь, сбыта национальной продукции на внешних рынках разных стран, необходимостью импорта определенных товаров извне и, наконец, стремлением получать высокую прибыль за счет международного разделения труда. Экспортные практики во внешнеторговой деятельности следует считать приоритетными, что всегда было и остается актуальным вопросом национального развития. Увеличение объемов экспорта и укрепление экспортного потенциала страны является одним из важнейших направлений экономической политики на современном этапе. На внешнеэкономическую деятельность малого бизнеса оказывают влияние стимулирующие и ограничивающие факторы внешней среды.

Заключение (Conclusions). Мы считаем, что для повышения эффективности внешнеэкономической деятельности на предприятиях

предпринимательской деятельности необходимо осуществлять следующие мероприятия:

1. Стремиться к созданию высокой потребительской стоимости.
2. Стремиться к снижению потребительских цен.
3. Обращать внимание на качество сырья и материалов, необходимых при производстве продукции. Уделяя особое внимание качеству и стоимости сырья, используемого в производственном процессе на предприятии.
4. Проводить исследовательские, опытно-конструкторские работы, проводимые по повышению качества на предпринимательских предприятиях. На предприятии необходимо составить специальный план этих работ и обеспечить участие каждого руководителя, специалиста и персонала в выполнении этой работы.
5. Формирование системы, которая отслеживает и следит за качеством выпускаемой продукции. Это нахождение инструментов, используемых при выполнении работ, создание недостающих и внедрение в производство.

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ОСНОВНЫЕ ПРОБЛЕМЫ ИСПОЛЬЗОВАНИЯ УЧЕБНЫХ ПЛАТФОРМ В ПРОЦЕССЕ ОБРАЗОВАНИЯ

Аннотация: современную образовательную систему трудно представить без применения образовательных платформ, как в управлении образовательным процессом, так и в индивидуализации и повышении эффективности образовательного процесса. Данная статья посвящается и изучению возникающих проблем при применении образовательных платформ, также анализируются факторы, влияющие на эффективное использование этих платформ и предлагаются возможные решения для повышения продуктивности применения образовательных платформ в процессе образования.

Ключевые слова: образовательные платформы, проблемы платформ, индивидуальность, управления образования, факторы эффективности, продуктивность образовательных платформ.

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MAIN PROBLEMS OF USING E-LEARNING PLATFORMS IN THE EDUCATIONAL PROCESS

Annotation. It is difficult to imagine a modern educational system without the use of educational platforms, both in managing the educational process and in individualizing and increasing the efficiency of the educational process. This article is devoted to the study of emerging problems in the use of educational platforms, it also analyzes the factors influencing the effective use of these platforms and proposes possible solutions for increasing the productivity of the use of educational platforms in the educational process.

Keywords: educational platforms, platform problems, individuality, education management, efficiency factors, productivity of educational platforms.

Введение. Образовательные платформы являются важным инструментом в современном образовании, предоставляя доступ к

образовательным материалам и возможность обучения в любое время и в любом месте. Однако, несмотря на их потенциальные преимущества, использование образовательных платформ сопровождается рядом проблем, которые могут затруднить эффективность обучения и преподавания (Wu, 2021). Образовательные платформы становятся все более популярными как средство обучения и преподавания, особенно в условиях распространения цифровых технологий и роста интернета. Однако, несмотря на их распространенность, исследования показывают, что существует несколько ключевых проблем, которые ограничивают их эффективность и препятствуют полноценной реализации потенциала, который они могут предложить в сфере образования.

Обзор основных проблем использования образовательных платформ. Технические проблемы являются одной из основных проблем, с которыми сталкиваются пользователи образовательных платформ. неполадки в работе платформы, нестабильное интернет-соединение, а также ограниченные возможности доступа к техническим средствам (например, компьютерам или мобильным устройствам) могут значительно затруднить процесс обучения и преподавания. Психологические и педагогические проблемы также играют важную роль в использовании образовательных платформ [2]. Некоторые преподаватели и студенты могут испытывать неудовлетворенность качеством онлайн обучения, поскольку оно отличается от традиционного классового формата. Более того, отсутствие возможности личного взаимодействия и обратной связи может снизить мотивацию и эффективность обучения.

Проблемы доступности и равенства возможностей являются еще одной серьезной проблемой, связанной с использованием образовательных платформ. Неравномерный доступ к интернету и техническим средствам, а также различия в уровне подготовки и обучения могут создавать барьеры для определенных групп обучающихся, таких как студенты с ограниченными возможностями или из малообеспеченных семей.

Анализ факторов, влияющих на успешное использование образовательных платформ. Успешное использование образовательных платформ зависит от различных факторов. Технические аспекты, такие как стабильное интернет-соединение и удобный интерфейс платформы, играют важную роль в обеспечении эффективного обучения и преподавания. Методическая подготовка преподавателей и студентов также имеет большое значение для успешного использования образовательных платформ. Преподаватели должны обладать достаточными навыками и компетенциями для эффективного использования онлайн инструментов и технологий в образовательном процессе [1]. Студенты, в свою очередь, должны быть готовы к самостоятельной работе и обучению в онлайн среде.

Психологические и социокультурные аспекты также играют важную роль в успешном использовании образовательных платформ. Необходимо

учитывать индивидуальные особенности студентов и преподавателей, а также обеспечить инклюзивную образовательную среду, способствующую равенству возможностей и уважению к различиям.

Пути решения проблем использования образовательных платформ. Для решения проблем использования образовательных платформ необходим комплексный подход, включающий в себя технические улучшения, повышение компетенций преподавателей и обучающихся, а также создание инклюзивной образовательной среды. В первую очередь, необходимо проведение технических улучшений и инноваций, направленных на улучшение стабильности и функциональности образовательных платформ. Это может включать в себя разработку более удобных и интуитивно понятных интерфейсов, оптимизацию работы платформы под различные устройства и операционные системы, а также улучшение качества интернет-соединения.

Повышение компетенций преподавателей и обучающихся также играет важную роль в успешном использовании образовательных платформ [4]. Преподаватели должны проходить специальную подготовку и обучение по использованию онлайн инструментов и технологий в образовательном процессе. Студентам необходимо обеспечить поддержку и ресурсы для эффективного обучения в онлайн среде, включая обучающие материалы и руководства по использованию платформы.

Создание инклюзивной образовательной среды, способствующей доступности и равенству возможностей, также является важным аспектом решения проблем использования образовательных платформ. Необходимо предоставить дополнительные ресурсы и поддержку для студентов с ограниченными возможностями, а также обеспечить равный доступ к образовательным материалам и возможностям обучения для всех групп обучающихся [3].

Заключение. Обобщая, можно сказать, что успешное использование образовательных платформ требует комплексного подхода к решению проблем, учитывая технические, педагогические, психологические и социокультурные аспекты. Только через совместные усилия преподавателей, студентов, администрации и разработчиков образовательных платформ можно обеспечить эффективное и доступное образование для всех. Необходимо признать, что образовательные платформы представляют собой не только средство доставки знаний, но и инструмент для преодоления географических, временных и социокультурных барьеров в образовании. Однако, чтобы максимально раскрыть их потенциал, необходимо активно работать над решением существующих проблем и постоянно совершенствовать технологии и методики обучения.

Исследование и преодоление проблем использования образовательных платформ требует совместных усилий со стороны

образовательных учреждений, разработчиков платформ, преподавателей, студентов и общественных организаций. Только через взаимодействие всех заинтересованных сторон можно создать благоприятную образовательную среду, в которой каждый обучающийся имеет равные возможности для получения качественного образования. Таким образом, дальнейшие исследования и разработки в области образовательных платформ должны быть направлены на устранение существующих проблем и создание условий для эффективного обучения, и развития каждого обучающегося, независимо от его индивидуальных особенностей и обстоятельств.

В заключении по теме "Основные проблемы использования образовательных платформ в процессе образования" важно подчеркнуть, что несмотря на существующие трудности, образовательные платформы представляют огромный потенциал для преобразования образовательной среды и повышения доступности образования для всех. Необходимо продолжать работу над решением технических, педагогических и социокультурных проблем, с тем чтобы обеспечить эффективное и инклюзивное образование для всех категорий обучающихся. Образовательные платформы могут стать мощным инструментом для развития гибких образовательных моделей, учитывающих потребности различных групп, обучающихся и обеспечивающих доступ к качественному образованию независимо от места и времени. Однако для достижения этой цели необходимо не только разработка новых технологий, но и активное вовлечение всех заинтересованных сторон в процесс обсуждения, адаптации и внедрения инноваций в образовательную практику.

Только через совместные усилия преподавателей, студентов, администрации и разработчиков образовательных платформ мы сможем создать образовательную среду, которая будет открыта для всех и каждого, способствуя развитию индивидуальных способностей, обогащению знаний и повышению уровня образования в обществе.

Использованные источники:

1. ОБЗОР ПЛАТФОРМ ЭЛЕКТРОННОГО ОБУЧЕНИЯ: ИНСТРУМЕНТЫ, ПРЕИМУЩЕСТВА, НЕДОСТАТКИ – тема научной статьи по наукам об образовании читайте бесплатно текст научно-исследовательской работы в электронной библиотеке КиберЛенинка. (б. д.). Извлечено 14 март 2024 г., от <https://cyberleninka.ru/article/n/obzor-platform-elektronnogo-obucheniya-instrumenty-preimuschestva-nedostatki>

2. ПРОБЛЕМЫ ИСПОЛЬЗОВАНИЯ ОСНОВНЫХ ДОСТУПНЫХ ОБРАЗОВАТЕЛЬНЫХ ПЛАТФОРМ, НЕОБХОДИМЫХ ДЛЯ ОРГАНИЗАЦИИ УЧЕБНОГО ПРОЦЕССА В ДИСТАНЦИОННОЙ ФОРМЕ, В УСЛОВИЯХ COVID-2019 – тема научной статьи по наукам об образовании читайте бесплатно текст научно-исследовательской работы в электронной библиотеке КиберЛенинка. (б. д.). Извлечено 14 март 2024 г., от <https://cyberleninka.ru/article/n/problemy-ispolzovaniya-osnovnyh->

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УРОВЕНЬ КОМПЕТЕНТНОСТИ ПРЕПОДАВАТЕЛЕЙ ВЫСШИХ УЧЕБНЫХ ЗАВЕДЕНИЙ В ПРИМЕНЕНИИ ИНФОРМАЦИОННЫХ ТЕХНОЛОГИЙ В ОБРАЗОВАТЕЛЬНОМ ПРОЦЕССЕ

Аннотация. В данной статье рассматривается проблема недостаточной компетентности преподавателей высших учебных заведений в применении информационных технологий в образовательном процессе. В работе анализируются основные аспекты этой проблемы, включая причины её возникновения и негативное влияние на качество обучения. Подчёркивается важность принятия комплексных мер для эффективного использования информационных технологий в образовательном процессе и подготовки студентов к современным вызовам.

Ключевые слова: образование, преподаватели, информационные технологии, компетентность, обучение, качество, студенты, программы, администрация, ресурсы.

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LEVEL OF COMPETENCE OF TEACHERS OF HIGHER EDUCATIONAL INSTITUTIONS IN THE APPLICATION OF INFORMATION TECHNOLOGY IN THE EDUCATIONAL PROCESS

Abstract. This article examines the problem of insufficient competence of teachers of higher educational institutions in the use of information technologies in the educational process. The paper analyzes the main aspects of this problem, including the reasons for its occurrence and the negative impact on the quality of education. The importance of taking comprehensive measures for the effective use of information technologies in the educational process and preparing students for modern challenges is emphasized.

Key words: education, teachers, information technology, competence, training, quality, students, programs, administration, resources.

В современном образовании информационные технологии (ИТ) играют ключевую роль, трансформируя традиционные методы обучения и предоставляя новые возможности для улучшения качества образования. Однако, несмотря на их потенциальные преимущества, эффективное использование ИТ в образовательном процессе требует высокого уровня компетентности со стороны преподавателей в высших учебных заведениях. Многочисленные исследования показывают, что многие преподаватели высших учебных заведений испытывают трудности в успешном интегрировании информационных технологий в свою педагогическую практику. Некоторые из основных причин этой проблемы включают ограниченные знания и навыки в области ИТ, недостаточное обучение и подготовка преподавателей, а также сопротивление изменениям со стороны некоторых преподавателей, которые предпочитают традиционные методы преподавания. Недостаточная компетентность преподавателей в области информационных технологий может привести к нескольким негативным последствиям для образовательного процесса. Во-первых, она может ограничить доступ студентов к современным образовательным ресурсам и инструментам, что может снизить их мотивацию и интерес к учёбе. Во-вторых, это может сказаться на качестве обучения, так как преподаватели могут быть неспособны эффективно использовать ИТ для создания интерактивных учебных материалов или проведения онлайн-обучения. Наконец, недостаточная компетентность в области ИТ может препятствовать развитию цифровой грамотности среди студентов, что остаётся важным аспектом их подготовки к будущей профессиональной деятельности. Для решения проблемы недостаточной компетентности преподавателей в применении информационных технологий необходимо принятие комплексных мер. Это может включать в себя проведение систематического обучения и повышения квалификации преподавателей в области ИТ, разработку специализированных программ обучения, а также создание мотивационных программ, поощряющих преподавателей к активному использованию информационных технологий в образовательном процессе. Кроме того, важно обеспечить преподавателей доступом к необходимым ресурсам и поддержкой со стороны администрации учебных заведений.

Недостаточная компетентность преподавателей в применении информационных технологий представляет серьёзную проблему, которая может негативно сказываться на качестве образования. Для её решения необходимо принятие комплексных мер со стороны учебных заведений, администрации и самих преподавателей. Только таким образом можно обеспечить эффективное использование информационных технологий в

образовательном процессе и подготовить студентов к вызовам современного мира.

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ЭНЕРГЕТИЧЕСКИЕ СПЕКТРЫ ПОВЕРХНОСТИ ТВЕРДЫХ ТЕЛ, ИМПЛАНТИРОВАННЫХ ИОНАМИ НИЗКИХ ЭНЕРГИЙ

Аннотация. При использовании монокристаллических пленок CaF₂ возникает необходимость контролируемого изменения электронной структуры, параметра кристаллической решетки и других свойств поверхностных слоев. Наши исследования показали, что для этого можно использовать имплантацию низкоэнергетических ионов Ba⁺ в сочетании с отжигом.

Ключевые слова: ионная имплантация, нанопленки, эпитаксиальных пленок, гетероэпитаксиальных систем, фотон, концентрация.

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ENERGU SPECTRA OF THE SURFACE OF SOLIDS IMPLANTED WITH-LOW ENERGU IONS

Abstract. The using of monocrystalline CaF₂ films the necessity of the inspected alteration of the electron structure, crystalline lattice parameter and other surface layers` properties appears. Our investigations have showed that the low energy Ba⁺ ion implantation combined with annealing can be employed to this effect.

Key words: ion implantation, nanofilms, epitaxial films, heteroepitaxial systems, photon, concentration.

Известно, что метод низкоэнергетической ионной имплантации является одним из эффективных методов направленного изменения состояния и свойств приповерхностных слоев различных материалов и тонких пленок [1]. В последние годы метод ионной имплантации в сочетании с другими видами технологических обработок широко используется в создании многослойных гетероэпитаксиальных систем, необходимых для больших и ультрабольших интегральных схем, оптоэлектронных приборов, солнечных элементов, запоминающих устройств [2]. В указанных системах наряду с Si, GaAs и CoSi₂, имеют большие перспективы пленок CaF₂ [3]. Однако при использовании этих пленок во многих случаях возникает необходимость контролируемого

изменения параметров решетки, электронной структуры и других свойств их поверхности. Для этих целей мы использовали метод ионной имплантации в сочетании с отжигом.

Технологические обработки (ионная имплантация, отжиг) и исследования структуры и свойств образцов проводились в универсальном экспериментальном приборе [4]. Источниками ионов служили таблетки титаната бария. Ионная пушка формировала моноэнергетический ионный пучок с плотностью тока $J=0,5\div 20$ мкА см⁻² в области энергий $E_0=0,5\div 5$ кэВ. Диаметр пучка на мишень составлял 4 мм. Прогрев при каждой температуре продолжался в течение 30 мин. Измерения проводилось после остывания мишени до комнатной температуры. Элементный и химический состав определялся методом оже-электронной спектроскопии (ЭОС). Фотоэмиссионные характеристики измерялись при фиксированных значениях энергии фотонов в интервале $\hbar\omega=4\div 11$ эВ. Источниками фотонов служили стандартные газоразрядные лампы линейчатого спектра КрР, КсР, ВмФ. На мишень кванты излучения попадали через магний фторидовое окошко, которое является прозрачным для фотонов до энергий 12 эВ. Диаметр пучка фотонов на мишень составлял ~ 1 мм. При этом число фотонов, падающих в одну секунду, было равно $1 \cdot 10^{14}$.

Степень разупорядочения поверхности CaF₂ при ионной имплантации и его кристаллизация при отжиге, типы и параметры решетки изучались методом дифракции быстрых электронов (ДБЭ) на стандартной установке. При снятии картины ДБЭ (электронограмм) пучок электронов с энергией 75 кэВ направлялся на поверхность мишени под углом ~ 1 градус.

По оси абсцисс отложена энергия связи $E_{св}$ электронов. На всех КЭВ фотоэлектронов использован один и тот же масштаб по вертикали, выбранный таким образом, что площадь под кривой пропорциональна величине квантового выхода электронов из образцов [5]. Видно, что ионная имплантация приводит к изменению структуры спектра фотоэлектронов. С ростом дозы ионов происходит уширение спектра, увеличение площади под КЭР (увеличение квантового выхода), изменения интенсивности и смещения положения основных пиков матрицы, появление новых пиков. Эти изменения происходят до дозы $(5\div 8) \cdot 10^{16}$ см⁻². Анализ структуры и спектров фотоэлектронов, совместно с данными ОЭС и ДБЭ, показали, что в процессе имплантации ионов Ва⁺ в пленке CaF₂ сопровождается разупорядочением приповерхностного слоя, образованием новых соединений (примерно 15-20% атомов Ва внедренных в приповерхностные слои образуют соединения типа Ва+F, Ва+Са+F) и обогащением поверхности несвязанными атомами бария. Отметим, что в запрещенной зоне нелегированного CaF₂ на расстоянии 2,5 эВ от верхнего края валентной зоны содержатся глубокие уровни дырочного типа [6]. Наличие этих уровней может быть связано с некоторой дефектностью кристаллической структуры. После имплантации ионов Ва⁺ с достаточно высокой дозой

($D \geq 5 \cdot 10^{15} \text{ см}^{-2}$), начало спектра фотоэлектронов смещается примерно до этого уровня, т.е. на 2,5 эВ.

Мы предполагаем, что изменение положения верхнего края валентной зоны после ионной имплантации связано с разупорядочением приповерхностного слоя. Аналогичные разрешенные уровни появляются и вблизи дна зоны проводимости, что приводит к увеличению кажущей величины электронного сродства [7]. Появление в спектре новых пиков, нами объясняется обогащением поверхности атомами Ва, а сдвиг пиков матрицы образованием новых соединений. Во всех случаях доза ионов составляла $8 \cdot 10^{16} \text{ см}^{-2}$. Видно, что при низких энергиях ионов ($E_0 \leq 1 \text{ кэВ}$) Сва (d) имеет ступенчатый вид, а при энергиях $E_0 \geq 1 \text{ кэВ}$ представляет собой кривую с максимумом. С ростом энергии ионов наблюдается уменьшение концентрации бария вблизи поверхности, уширение максимума распределения ионов и сдвиг его в сторону больших глубин. В области энергией ионов $E_0 = 3 \div 5 \text{ кэВ}$ доля атомов легирующего элемента, входящих в химическую связь с атомами матрицы, может увеличиваться до $20 \div 30 \text{ ат. \%}$ (здесь за 100 ат. \% принимается общая концентрация внедренной примеси). Однако с ростом E_0 содержание внедренной примеси в приповерхностном слое быстро убывает (рис.2), что приводит к уменьшению концентрации новых соединений в этих слоях [8].

В силу большой химической активности почти все освободившиеся атомы фтора вновь входит в химическую связь как атомами кальция. Следовательно, в приповерхностном слое образуются и трехкомпонентные системы. Как следует из экспериментов [8], при $E_0 \leq 1 \text{ кэВ}$, одновременно с образованием различных соединений возникают “избыточные” атомы легирующего элемента, концентрация которого с ростом дозы увеличивается. При высоких энергиях ионов ($E_0 \geq 3 \text{ кэВ}$) происходит заметная десорбция фтора с поверхности, что приводит к накоплению атомов Са вблизи поверхности. Наибольшая концентрация последнего составляет $40 \div 45 \text{ ат. \%}$.

Для направленной модификации физико-химических свойств поверхности ионно-легированной пленки CaF_2 можно применять постимплантационный высокотемпературный отжиг. При этом меняя температуру прогрева можно создавать слои с монотонно изменяющейся концентрацией активного элемента. Наши исследования показали, что до $T=600 \text{ К}$ не происходит заметное изменение состава и свойства поверхности ионно-легированного CaF_2 . Дальнейшее увеличение температуры приводило к перераспределению атомов Ва СВа (ат. %) и кристаллизации приповерхностного слоя, увеличению доли атомов Ва образующих химическую связь с атомами матрицы. При температуре $T=1000 \text{ К}$ все атомы бария входят в химическую связь с атомами матрицы и образуется эпитаксиальная пленка $\text{Ba}_{1-x} \text{Ca}_x \text{F}_2$ с перестраиваемой постоянной решетки. При этом, на поверхности образуют соединение типа Ва $0.6\text{Са}0.4$

F2 с постоянной решетки $\sim 5,73 \text{ \AA}$ [9]. При одинаковой температуре отжига соотношение концентрации атомов Ва и Са на поверхности для разных доз легирования будет разным. Во всех случаях с ростом глубины концентрация бария и следовательно, значение постоянной решетки, монотонно уменьшается.

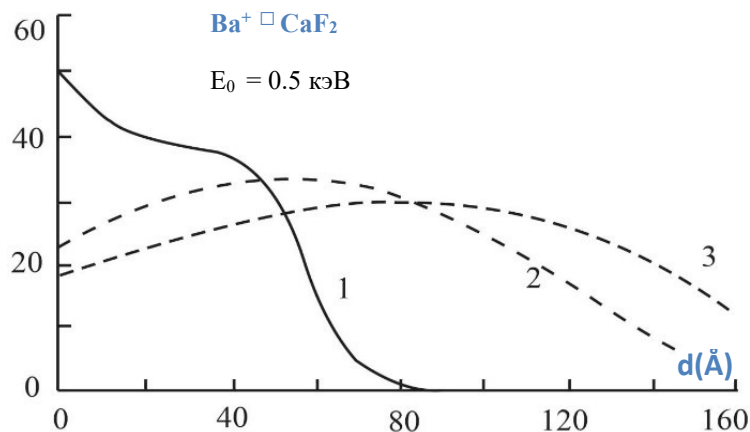


Рис. 1. Концентрационные профили распределения бария по глубине для CaF2 легированного ионами Ва⁺ с E₀,кэВ (D=8*10¹⁶см⁻²) 1-0.5; 2-3; 3-5.

На рис 2. приведены концентрационные профили распределения атомов бария по глубине для пленок CaF₂, легированного ионами Ва⁺ с энергиями 0,5; 3 и 5 кэВ.

В табл.1 приведены основные электронно-зонные и оптические параметры поверхности, ионно- легированной пленки CaF₂., измеренные до и после прогрева (T=1000 K): Ф-Фотоэлектронная работа выхода, φ - термоэлектронная работа выхода, E_g –ширина запрещенной зоны, ℜ-сродство к электрону, r- коэффициент отражения света, n-коэффициент преломления. Из этой таблицы следует, что ионная имплантация существенно изменяет величины указанных параметров, однако степень их изменения различна для разных энергий ионов [10]. Так, например, при E₀=0,5 кэВ ширина запрещенной зоны уменьшается на 5эВ, а при E₀=3 кэВ- 2,3 эВ. После прогрева при T~1000 K состав и структура приповерхностного слоя пленки CaF₂ легированного с разными энергиями, существенно не отличались друг от друга.

Параметры	CaF2	E0 = 0,5 кэВ		E0 = 3 кэВ	
		T=300 К	T=1000 К	T=300 К	T=1000 К
Ф, эВ	10,1	6,2	9,2	8,3	9
φ, эВ	4,2	2,5	4,0	3,2	3,8
Eg, эВ	9,1	4	8,2	6,8	8
ℜ, эВ	1	2,2	1	1,5	1
n	1,45	1,8	1,48	1,75	1,5
r, %	8	22	10	20	11

Таблица 1. Электронно-зонные и оптические параметры пленки CaF2, легированной ионами Ba⁺

При этом, на поверхности этих пленок образуется трехкомпонентное соединение с примерным составом Ca 0,4 Ba 0,6 F2. Из данных, приведенных в табл.1, видно, что указанная система обладает широкой запрещенной зоной ($E_g = 8$ эВ) и малым сродством к электрону (1 эВ), т.е. является хорошим изолятором. Поэтому можно полагать, что трехкомпонентные соединения типа Ca_{1-x}Ba_xF2 с перестраиваемой структурой могут успешно применяться в качестве согласующих слоев в системах металл- диэлектрик, полупроводник-диэлектрик.

Ионная имплантация также приводила к существенному изменению значения оптических параметров пленок CaF2 (таб.1.) Значения n и r определялись в области УФ – излучения (1050 Ао). Видно, что после ионной имплантации величина показателя преломления и коэффициента отражения света увеличивается, что объясняется изменением оптической прозрачности пленки, вследствие частичной металлизации ее приповерхностной области. Прогрев ионно-легированного образца приводит к уменьшению показателя преломления и коэффициента отражения света, однако их значения остаются несколько большими, чем для чистой пленки CaF2. Эффект резкого увеличения отражательной способности пленки после высокодозной имплантации (металлизация поверхности и ее избирательность к частоте света) может применяться при разработке и создании оптических резонаторов, запоминающих устройств, лазерных источников и волноводов [11]. Возможность управления величиной n пленок в широких пределах с помощью ионной имплантации и последующего отжига очень важны для создания оптических приборов с переменной диэлектрической проницаемостью, светофильтров, преобразователей световой энергии и элементов связи.

Вывод

Впервые определены профили распределения примесных атомов Ba по глубине ионно- легированной пленки CaF2. Показано, что в процессе ионной имплантации только небольшая часть (15- 20 ат. %) атомов бария входит в химическую связь с атомами матрицы.

Впервые получена информация о распределении плотности электронных состояний и о параметрах энергетических зон ионно-легированной пленки CaF₂. В частности, показано, что после ионной имплантации ширина запрещенной зоны уменьшается в 2,5 раза.

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ЗЎРАКИ ЎЛИМ СТРУКТУРАСИДА ТЕРМИК ОМИЛЛАРНИНГ ҲИССАСИ

Аннотация. Ушбу илмий ишда зўраки ўлим структурасида физик омиллар таъсири, хусусан термик омилларнинг ҳиссаси ўрганилган. Бунда 2023-йилда аутопсия қилинган 1198 та мурдалар суд тиббий текшируви, шундан 908 таси зўраки ўлим ҳолатлари, уларнинг хусусиятлари ва таркиби таҳлил этилган. Аниқланишича: 23% ҳоллардаги ўлимга термал омиллар (куйиш, иссиқлик уруши); 5% ҳоллардаги ўлимга совуқ омиллар (музлаш); қолган 72% ҳоллардаги зўраки ўлимга бошқа омиллар сабабчи бўлган.

Калит сўзлар. зўраки ўлим, физик омиллар, термик омиллар, куйиш, иссиқ уриш, совуқ уриш, совуққотиш.

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INFLUENCE OF THERMAL FACTORS ON THE STRUCTURE OF VIOLENT DEATH

Annotation. The work studied the influence of physical factors, especially the contribution of thermal factors, on the structure of violent death. A forensic medical study was carried out on 1,198 corpses autopsied in 2023, of which 908 were cases of violent death. It was found that: thermal factors (burns, heat shock) were the cause of death in 23% of cases; cold factors (frostbite) were the cause of death in 5% of cases; in the remaining cases (72%), violent death was caused by other factors.

Key words: violent death, physical factors, thermal factors, burns, heat stroke, cold stroke, frostbite.

Кириш. Физик омиллар таъсиридаги шикастланишлар муаммоси охирги йилларда долзарб бўлиб қолмоқда. Ҳозирги замонавий интенсив саноатлаштириш шароитида ишлаб чиқаришда ва кундалик ҳаётда электр энергияси манбаларидан фойдаланиш кўпаймоқда, шу сабабли куйиш билан боғлиқ шикастланишлар сони ошиши кузатилмоқда.

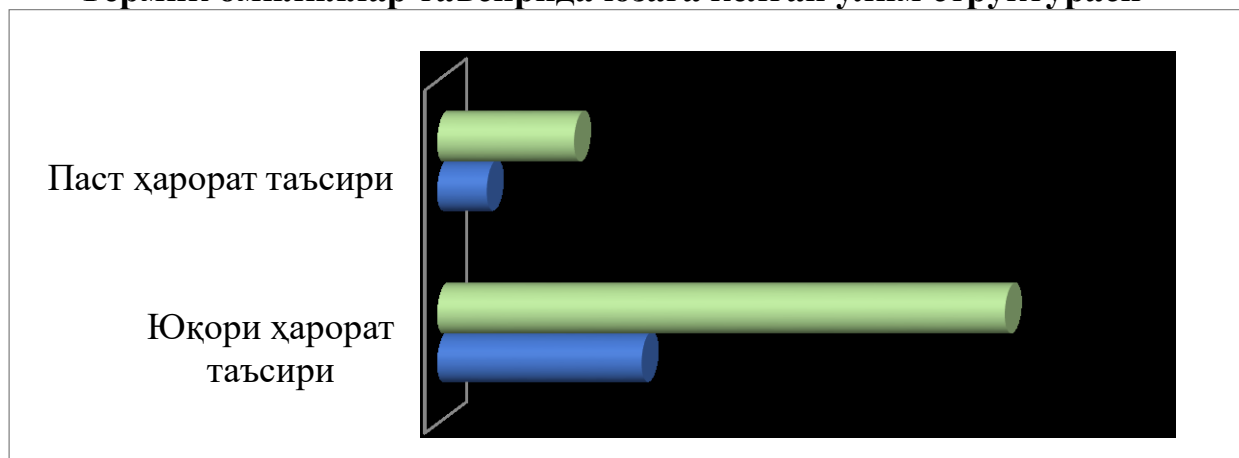
Чуқур термик куйишларда умумий ўлим кўрсаткичи, механик шикастларга нисбатан бир неча барабар юқорилиги қайд этилган. Тана юзасининг 40% дан кўп қисми чуқур шикастланган бўлса, ҳатто ихтисослаштирилган куйиш марказларида малакали тиббий ёрдам кўрсатилаётганлигига қарамасдан ўлим кўрсаткичлари 50% ташкил қилмоқда. Ҳар йили Ўзбекистон ҳудудида куйиш оқибатида тиббиёт муассасаларида 520 дан 920 нафаргача (590 нафар катталар, 230 нафар болалар), ҳодиса жойда эса 200 дан ортиқ киши вафот этмоқда (Р. Т. Султонов, С. Н. Наврузов), (Б. С. Турсунов).

2018-2023 йилларда Иркутск шаҳар клиник касалхонасининг куйиш марказига ётқизилган 3352 нафар физик омиллар таъсиридаги жароҳатлар билан даволанаётган беморлар орасида куйиш - 2564 (78,60%), иссиқ уриш - 29 (0,89%), совуқ уриш - 586 (17,96%), совуққотиш - 83 (2,55%) ташкил этган.

Тадқиқотнинг мақсади – физик омиллар таъсиридаги жароҳатлар структураси, хусусиятлари ва таркибини ўрганиш.

Тадқиқот натижалари: 2023-йилда Республика суд тиббий экспертиза илмий амалий маркази Самарқанд филиали ва бўлинмаларида 1198 та мурдалар суд тиббий текшируви ўтказилган, шундан 908 таси (75,8 %) зўраки ўлим ҳолатлари эканлиги кузатилди. Зўраки ўлим структурасида термик омиллар таъсирида юзага келган ўлим 36 (3,9%) ҳолатни ташкил қилган. Шулардан, юқори ҳарорат таъсири оқибатидаги ўлим - 29 (80,6%), паст ҳароратнинг таъсири - 7 (19,4 %) ташкил этган.

Термик омиллар таъсирида юзага келган ўлим структураси



Термик омиллар таъсири оқибатидаги ўлим кўрсаткичлари таққосланганда 2021 йилда 28 тани, 2022 йилда 23 тани ташкил этганлиги қайд этилди.

Эркаклар ва аёллар ўртасидаги кўрсаткичларларнинг ўзаро қиёсида 1:3 нисбат қайд этилди. Термик омиллар таъсири оқибатидаги ўлганларнинг ёши эркакларда ўртача 45 ёшни, аёлларда ўртача 38 ёшни ташкил этди.

Термик омиллар таъсири оқибатидаги ўлим сабаблари ўрганилганда, иситиш қурулмалари ва ошхона жиҳозлари носозлиги (38%), олов ва иссиқ воситалардан эҳтиётсизлик билан фойдаланиш (34%), транспорт ва техник авариялар (3%), ҳамда ўз жонига қасд қилиш (25%) оқибатида ёнгин таъсирида ўлим юз берган.

Термик омиллар таъсири оқибатидаги ўлим сабаблари



Жорий йилда термик омил натижасидаги ўз жонига қасд қилиш ҳолатлари жами 9 тани ташкил қилди, бу ҳолат 2021 йилда 6 та, 2022 йилда 8 та ҳолатда кузатилган бўлиб, уларнинг барчаси аёллар бўлган.

Хулоса.

1) Зўраки ўлим структурасида термик омиллар таъсиридаги ўлим 3,9% ташкил этди;

2) Термик омиллар таъсиридаги ўлим структурасида юқори харорат таъсири 80,6% ташкил этди;

3) Зўраки ўлим таркибида эса - ўз жонига қасд қилиш - 55,3% ҳолларда ташкил қилди;

4) Эркаклар ва аёллар ўртасидаги нисбати - 1:3 бўлди.

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**СУДЕБНО-МЕДИЦИНСКАЯ ОЦЕНКА ДАННЫХ
УЛЬТРАЗВУКОВОГО ИССЛЕДОВАНИЯ ПЕЧЕНИ В СВЯЗИ С
ТУПОЙ ТРАВМОЙ ЖИВОТА**

Аннотация. В работе представлены результаты нового метода ультрасонографического исследования с целью выявления повреждений печени, в частности гематом, при диагностике в судебно-медицинской практике для объективной оценки степени тяжести телесных повреждений при тупой травме живота. Гематомы печени при ультразвуковом исследовании - эхонегативные образования округлой или овальной формы с четкими и ровными контурами, тонкими стенками.

Ключевые слова: судебная медицина, гематомы, печен, ультрасонографического исследования, кровоподтек, травмы.

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**FORENSIC MEDICAL EVALUATION OF DATA OF ULTRASONIC
EXAMINATION OF THE LIVER IN CONNECTION WITH BLUNT
ABDOMINAL TRAUMA**

Annotation. The paper presents the results of a new method of ultrasonographic research for the purpose of identifying liver damage, in particular hematomas, during diagnostics in forensic practice for an objective assessment of the severity of injuries in blunt abdominal trauma. Liver hematomas during ultrasound examination are echo-negative formations of a round or oval shape with clear and even contours and thin walls.

Key words: forensic medicine, hematomas, liver, ultrasonographic examination, bruising, trauma.

Актуальность. До настоящего времени недостаточно изученной проблемой являются функционально-морфологические изменения, возникающие в печени и в окружающих тканях после воздействия травматического фактора. Не разработаны методы их оценки в ближайшее время после травмы, отсутствуют критерии выбора операции и прогнозирования результатов оперативного лечения. Недостаточно изучены морфофункциональные изменения в паренхиме печени в различные сроки посттравматического периода (М.И. Пыкова, К.В. Ватолина, 2018, 2021; С.Г. Бурков, 2021; Д.В. Романов, 2023 и др.).

Частым проявлением механической травмы тупыми предметами являются кровоизлияния, встречающиеся как изолированно, так и в комбинации с другими повреждениями. В связи с этим, они могут быть наиболее приемлемыми объектами исследования с целью установления наличия повреждения.

В судебно-медицинской практике чаще встречаются повреждения, которые не дают клинической симптоматики, повреждения в виде небольших гематом, расположенные под капсулой или в паренхиме органов. Если у потерпевшего имеются наружные повреждения в виде ссадин, кровоподтеков, ран, то учитываются только эти повреждения и в большинстве случаев небольшие гематомы паренхиматозных органов остаются нераспознанными, что приводит к ошибочной оценке степени тяжести полученных повреждений. При отсутствии наружных повреждений и наличии перечисленных выше внутренних признаках, дается заключение о том, телесные повреждения отсутствуют (Г.А. Баиров 2017, Хван, Б.А. Ешмуратов, 2020 и др.).

Цель исследования. Разработка новых методов диагностики в судебно-медицинской практике для объективной оценки степени тяжести телесных повреждений при тупой травме живота

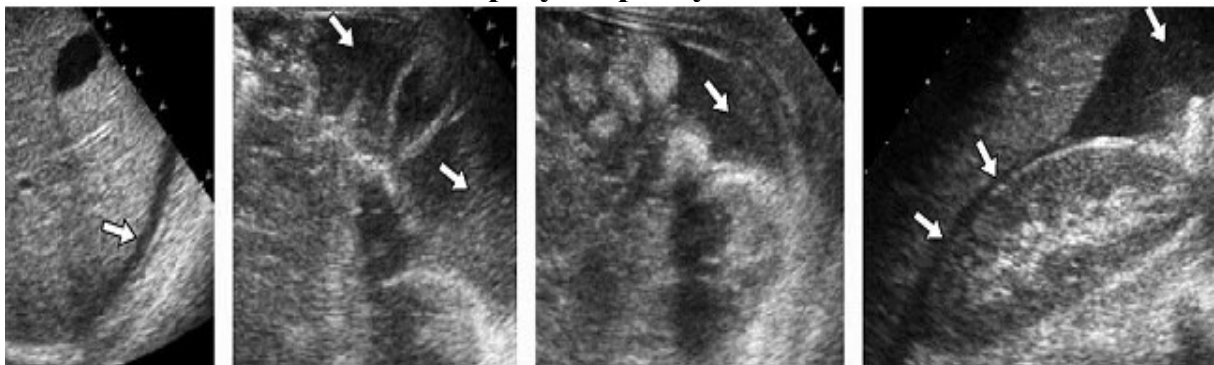
Материал и методы. Обследованы 20 потерпевших, обратившихся по поводу тупой травмы живота в отдел освидетельствования живых лиц в Бюро судебно медицинской экспертизы г. Самарканда. С целью выявления у них повреждений печени, а именно гематом, был применен метод ультразвукового исследования (УСГ). Эти исследования проводились на базе клиники СамДТУ.

Результаты исследования. У 17 потерпевших при осмотре были выявлены наружные повреждения в виде ссадин, кровоподтеков, а у 3-х наружные повреждения отсутствовали. Из 17 больных с наружными повреждениями у 9 при ультразвуковом исследовании были обнаружены гематомы печени, расположенные под капсулой и в паренхиме. Из 3

потерпевших без видимых наружных повреждений у одного была обнаружена гематома печени.

При обнаружении гематомы печени при ультразвуковом исследовании отмечается увеличение размеров печени, неоднородность паренхимы и наличие анэхогенных компонентов в ней. Гематома проявляется как гиперэхогенная или анэхогенная структура, наполненная жидким содержимым. Как и в случае с гематомами селезенки, гематомы печени подразделяются на четыре стадии в зависимости от времени с момента получения травмы. На первой стадии ультразвукового исследования выявляются участки повышенной эхогенности с неровными контурами. На второй стадии наблюдаются неоднородные участки повышенной эхогенности с внутренними гипоэхогенными включениями, что является проявлением жидкостного компонента. На третьей стадии ультразвуковая картина характеризуется преимущественно наличием жидкостного образования с однородными или неоднородными внутренними структурами. В течение указанного периода (5 суток с момента получения травмы) отмечается 2-3-кратное увеличение размеров ультразвуковых образований до $61,8 \pm 3,34$ мм в среднем.

Гематомы печени при ультразвуковом исследовании



Гематомы печени при ультразвуковом исследовании - эхонегативные образования округлой или овальной формы с четкими и ровными контурами, тонкими стенками. Минимальный диаметр выявленных гематом печени 1-1,5 см. Ультразвуковое исследование с целью дифференциальной диагностики другими образованиями печени проводилось в динамике: в день травмы, на 3-й и на пятые дни после повреждения.

Выводы. Таким образом, полученные результаты позволяют диагностировать гематомы печени малых размеров (1-1,5 см), а также наблюдать динамику процесса. Данный метод не имеет противопоказаний и позволяет исследовать даже беременных женщин при наличии у них тупых повреждений живота. Кроме того, этот метод является более дешевым методом исследования, чем компьютерная томография. В связи с этим он может быть рекомендован для практического применения в амбулаторных условиях бюро судебно-медицинской экспертизы.

Следовательно, эхографическое исследование позволяет идентифицировать травму и интактную зону даже при отсутствии клинических проявлений травмы.

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ЯНГИ ТУРДАГИ ПАЛЬТОБОП ТРИКОТАЖ ТЎҚИМАЛАРИНИНГ ФИЗИК-МЕХАНИК ХУСУСИЯТЛАРИ ТАДҚИҚИ

Мазкур мақолада хозирги кунда долзарб бўлган пальтобоп трикотаж тўқималарининг физик-механик хусусиятлари ўрганилган. Бунда хомашё сифатида акрил ипидан фойдаланилди. Жами 6 та наъмуна олинди ва уларнинг лабораторияда физик ва механик хусусиятлари ўрганилди.

Калит сўзлар: Трикотаж, тўқима, пальтобоп, акрил, физик-механик.

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RESEARCH OF PHYSICAL-MECHANICAL PROPERTIES OF NEW VARIOUS COAT KNITTED FABRICS

In this article, the physical and mechanical properties of knitted fabrics for coats, which are relevant today, are studied. Acrylic yarn was used as raw material. A total of 6 samples were taken and their physical and mechanical properties were studied in laboratory conditions.

Key words: Knit, knitted fabric, coat, acrylic, physical-mechanical.

Янги турдаги пальтобоп трикотаж тўқималарни ишлаб чиқиш ва маҳаллий ишлаб чиқарилган хом ашё турларидан самарали фойдаланган ҳолда хаво ўтказувчанлиги, киришувчанлиги, шунингдек кам чўзилувчан, иссиқлик сақлаш хусусияти юқори бўлган трикотаж тўқималарини ишлаб чиқарилиши соҳада ассортимент турини кенгайтиришга олиб келади.

Трикотаж тўқималари ассортиментини кенгайтириш, хом ашё сарфини тежаш ва сифат кўрсаткичлари юқори бўлган трикотаж тўқималарини ишлаб чиқариш долзарб муаммолардан бир ҳисобланади.

Келтириб ўтилган вазифа ва муаммоларни қисман бўлсада ечишда замонавий STOLL CMS русумли икки ясси игнадонли трикотаж тўқув

машинасида янги турдаги ластик трикотажа тўқималарини 6 хил варианты ишлаб чиқарилиб, уларнинг физик-механик хусусиятлари тадқиқ этилди.

Ишлаб чиқарилган намуналар бир-биридан тўқима турига кўра фарқланади. Трикотаж тўқима намуналарини ишлаб чиқаришда ҳам ашё сифатида чизикли зичлиги 57 x 3 текс бўлган полиакрилонитрил ипларидан фойдаланилди.

Янги тузилишли полиакрилонитрил ипидан тўқилган ластик трикотаж тўқималари тузилиши ўзгаришини унинг физик-механик хусусиятларига таъсири ўрганилди [1].

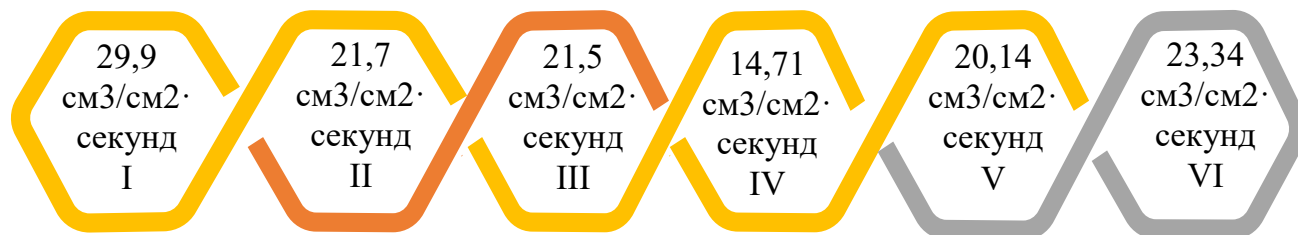
Ишлаб чиқарилган янги тузилишли ластик трикотаж тўқима намуналарининг физик-механик хусусиятлари стандарт услуб бўйича ТТЕСИ қошидаги “CentexUz” синов лабораториясида мавжуд замонавий асбоб-ускуналарда синовдан ўтказилди [2, 3].

Трикотаж тўқима ассортимент турларини кенгайтиришда маҳаллий ҳам ашё турлари ва тўқув трикотаж машинасининг технологик имкониятлари самарали фойдаланган ҳолда ҳаво ўтказувчанлиги, иссиқлик сақлаш хусусияти, киришувчанлиги, шунингдек кам чўзилувчан, шакл сақлаш хусусияти юқори бўлган янги турдаги трикотаж тўқималарини ишлаб чиқарилишига замин яратади.

Трикотаж матоларининг иссиқлик сақлаш хусусияти ва ишқаланишга чидамлик хусусиятлари куз-бахор устки трикотаж кийим маҳсулотлари учун муҳим аҳамиятга эга бўлган сифат кўрсаткичларидан бири ҳисобланади [4].

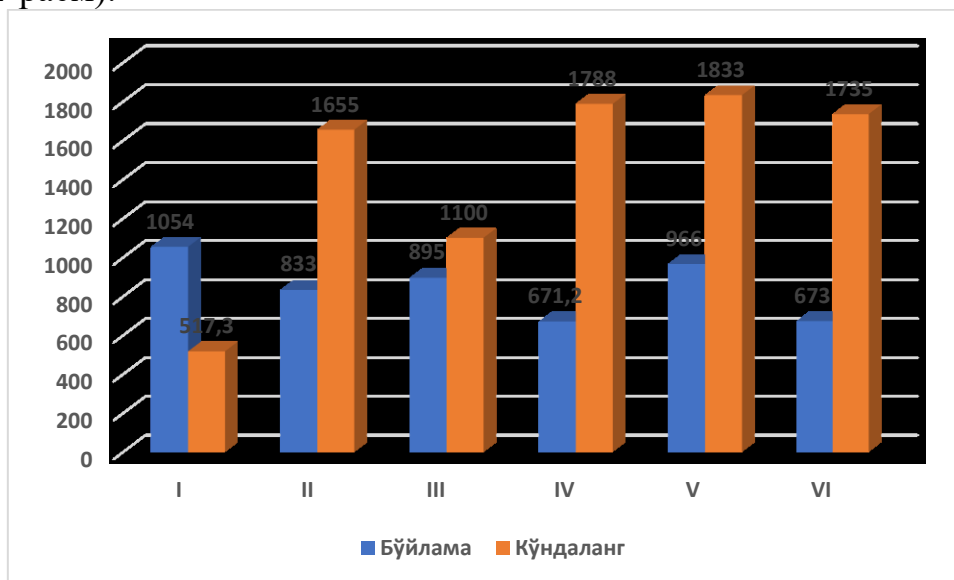
Ҳаво ўтказувчанлик деганда материалларнинг ўзидан ҳаво ўтказиш қобилияти тушунилади. Материалнинг иккала томонидаги ҳаво босимларининг маълум бўлган фарқ шароитида бир секунд вақт ичида 1 см² юзадан ўтган ҳаво ҳажмининг миқдорини кўрсатади. Янги тузилишли ластик трикотаж тўқималарининг ҳаво ўтказувчанлиги тўқима тузилишига боғлиқ бўлган ҳолда 29,9 дан то 14,71 см³/см²·секундгача ораликда ўзгарди.

I-вариант асос тўқимасининг ҳаво ўтказувчанлик кўрсаткичи энг катта 29,9 см³/см²·секунд қийматга эга бўлди. Ушбу вариантнинг тўқимаси 1x1 ластик асосида ишлаб чиқарилган. Янги турдаги ластик тўқимаси акрил ипидан ташкил топган IV вариантнинг ҳаво ўтказувчанлик кўрсаткичи энг кичик 14,71 см³/см²·секунд қийматга эга бўлиб, у асос тўқимасига нисбатан 49% га камдир. (1-расм).



1-расм. Пальтобоп трикотаж тўқималарининг ҳаво ўтказувчанлик кўрсаткичлари.

Трикотаж тўқималарининг бўйи бўйича узилиш кучи кўрсаткичлари 671,2 Н дан 1054Н гача, эни бўйича узилиш кучи кўрсаткичлари эса 517,3 Н дан 1833 Н гача ораликда ўзгарди. IV-вариант тўқимасининг бўйи бўйича узилиш кучи кўрсаткичи энг кичик 671,2 Н қийматга, эга бўлиб. асос тўқима кўрсаткичидан 36% га камлиги аниқланди. Бўйи бўйича энг катта узилиш кучи қиймати I вариантда қайд этилиб, унинг қиймати 1054Н ни ташкил этди. (2-расм).



2-расм. Пальтобоп трикотаж тўқима намуналарининг бўйламасига ва кўндалангига узилиш кучларининг ўзгариши гистограммаси.

Тадқиқ этилаётган янги турдаги пальтобоп трикотаж тўқима намуналарининг иссиқлик ўтказувчанлик кўрсаткичлари аниқланди. Унга кўра, трикотаж тўқима намуналарининг иссиқлик сақлаш кўрсаткичлари 48,67% дан 61,86% гача ораликда ўзгарди. Трикотаж намуналари ичида энг юқори иссиқлик ўтказиш кўрсаткичи V-вариантга тегишли бўлиб, у 61,86 ни ташкил этди ва бу асос тўқимасидан 21% га юқори. Энг кам кўрсаткич 54,17% бўлиб, у III вариантда қайд этилди ва бу кўрсаткич асос тўқимасига нисбатан 10,1% га юқори эканлиги маълум бўлди.

Тажрибавий янги турдаги пальтобоп трикотаж тўқима намуналарининг бўйи бўйича қайтар деформация улуши 62,5% дан то 77% гача ўзгарди, эни бўйича қайтар деформация улуши эса, 66,7% дан то 93% гача ўзгарди.

Трикотаж намуналари ичида бўйи бўйича энг кам қайтар деформация улушига эга бўлган намуна бу VI вариант бўлиб, у 62,5%ни ташкил этади. Энг юқори қайтар деформация улуши тўқима III-вариантга тегишли бўлиб, у 77% ни ташкил этди ва бу асос тўқимасининг қайтар деформация улушидан 35% га кўпдир.

Тадқиқ қиланаётган янги турдаги пальтобоп трикотаж тўқима намуналарининг сифат кўрсаткичлари белгиланган талабларга тўлиқ мувофиқ келади.

Тадқиқ этилаётган янги турдаги пальтобоп трикотаж тўқима намуналари куз-бахор устки кийим учун мўлжалланган. Шунинг учун иссиқлик сақлаш хусусияти, пишиқлиги ва шакл сақловчанлиги жуда муҳим хусусиятлардан бири бўлиб ҳисобланади. Трикотаж хусусиятларига қўйиладиган талабларни ўрганиб чиқиш ва натижада трикотаж матоларини қайси хусусиятлари бўйича баҳолашни ва тегишли кўрсаткичлар қандай аҳамият касб этишини аниқлаш осонлашади.

Таклиф этилган трикотаж тўқималарининг физик-механик хусусиятлари таҳлили асосида намуналарнинг узилиш кучи, ҳаво ўтказувчанлиги, қайтар деформация улуши, иссиқлик ўтказувчанлик кўрсаткичлари яхшилангани маълум бўлди.

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РОЛЬ ДИКТАНТА В ОБУЧЕНИИ РУССКОМУ ЯЗЫКУ

Аннотация. В статье рассматриваются вопросы о роли и значении проведения диктантов как вида и способа обучения.

Ключевые слова: диктант, вид, способ, орфография, пунктуация, тексты, навыки, формирование.

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THE ROLE OF DICTANT IN TEACHING THE RUSSIAN LANGUAGE

Abstract. The article discusses questions about the role and significance conducting dictations as a type and method of teaching.

Key words: dictation, type, method, spelling, punctuation, texts, skills, formation.

Одной из самых злободневных проблем современной жизни является совершенствование изучения языков в системе образования. Диктанты играют значительную роль не только в развитии речи, но и в формировании орфографических и пунктуационных навыков студентов. Они “диктанты” являются одним из видов письменных работ при обучении орфографии и пунктуации, который используется для тренировки и проверки навыков правописания.

Диктанты учат систематически развивать у студентов умение связно излагать свои мысли. С этой целью для диктантов целесообразно подбирают, главным образом, связные тексты, эти тексты должны быть понятны студентам, интересные по содержанию и форме изложения, а также должны давать новую информацию грамотной письменной русской речи. Тексты обучающих диктантов по усмотрению учителя могут быть сокращены или расширены и, кроме того, они могут быть использованы и для проведения других видов работ: опросов, тренировочных упражнений, различных видов разбора и т. п. При подборе текстов для диктантов могут быть использованы произведения художественной литературы, научно-популярные тексты и материалы периодической печати некоторые тексты могут быть составлены самими авторами.

Для формирования навыков правильного письма у нерусских учащихся, необходимо проведение систематической целенаправленной работы, включающие различные упражнения и диктанты. Наиболее часто учителя русского языка, работающие со студентами с узбекским языком обучения, используют предупредительные, объяснительные, творческие и свободные диктанты.

На современном этапе развития студенческого лингвистического образования текст становится центром внимания при обучении русского языка. Фактически текстовая деятельность это сегодня цель студенческого лингвистического образования. Современная методика преподавания русского языка имеет ряд научных исследований которые рассматривают вопросы. Обучения орфографии и развития речи.

Разнообразное проведение диктантов повысит интерес к изучению русского языка. Диктант – это не просто записывание начитанного текста, а он может быть многосторонним и, даже занимательным способом обучения. Главное в этом процессе – тщательный выбор текста, который наиболее полно реализует задачи по совершенствованию грамматических и речевых навыков.

При диктовке текста учитель должен выдержать равномерный темп чтобы не было отстающих в письме. Важно читать текст достаточно громко, внятно. Чтение текста должно быть помогающим, подсказывающим, или, на оборот “подавляющим” учеников. Если в диктанте встречаются слова на ещё не изученные правила, то эти слова нужно выписывать на доске. После записи всего текста студентам учитель прочитывает его целиком. Студенты в это время следят по тетрадям проверяя написанное. Использование диктантов на занятиях по русскому языку практикует навыки письма и аудирование, пополнения словарного запаса студентов, стимулирует речевую активность и потребность в фиксации собственных мыслей и идей на письме,

и конечно, является основным средством проверки и контроля грамотности студентов.

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ПРОБЛЕМА ПРОФЕССИОНАЛЬНОГО ВЫГОРАНИЯ ВОЕННОГО ПРЕПОДАВАТЕЛЯ

В статье раскрыты значения таких понятий, как синдром профессионального и эмоционального выгорания, особенности педагогической деятельности военного педагога. Раскрыты причины, приводящие к профессиональному выгоранию преподавателя военного образовательного учреждения.

Ключевые слова: профессиональная деформация, синдром профессионального и эмоционального выгорания, военное образовательное учреждение, военный педагог, признаки профессионального выгорания.

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THE PROBLEM OF PROFESSIONAL BURNOUT MILITARY TEACHER

The article reveals the meaning of such concepts as the syndrome of professional and emotional burnout, features of the pedagogical activity of a military teacher. The reasons leading to professional burnout of a teacher at a military educational institution are revealed.

Key words: professional deformation, professional and emotional burnout syndrome, military educational institution, military teacher, signs of professional burnout.

Профессия преподавателя высшего военного образовательного учреждения по многим параметрам можно отнести к профессиям наиболее интеллектуальных, высокоинформативных, стрессогенных, эмоционально и физически напряжённых. Специфика данной профессии часто требует от военного преподавателя осуществления деятельности в экстремальных условиях или приближенных к ним, сопряженных с риском для жизни и здоровья. Военно-педагогическая деятельность насыщена с запланированными или неожиданными сложными ситуациями разной продолжительности, возникающими в учебно-воспитательном процессе, которая может быть подвержена постепенному эмоциональному

утомлению, что отрицательно сказывается на качестве исполнения профессиональной деятельности, ухудшении психического и физического самочувствия. Также, деятельность военного преподавателя непрерывно связана с общением с различными категориями военнослужащих, требующего строгого соблюдения субординации и требований общевоинских уставов.

Эти особенности военно-педагогической деятельности создают условия для развития профессионально-личностных деформаций, проявления стрессовых ситуаций, синдрома профессионального и эмоционального выгорания.

Анализ научной литературы по психологии, педагогике, социологии показывает, что несмотря на общее и схожее определение синдрома выгорания нет единого подхода к его содержанию.

Выгорание – это дезадаптационный феномен, проявляющийся на всех уровнях функционирования личности: индивидуально-психологическом, социально-психологическом и организационном - и оказывающий негативное влияние на показатели профессиональной эффективности, удовлетворенности трудом, а также имеющий отрицательные последствия и в сферах «профессиональной» жизни, где наблюдается дифференцированное влияние его составляющих на разные показатели качества жизни [4, С.121].

Р.А. Березовская и Т.Н. Кишка пишут, что **синдром эмоционального выгорания** – это состояние эмоционального, умственного истощения, физического утомления, возникающее в результате хронического стресса на работе. В современных исследованиях представлена общая точка зрения и на структуру выгорания, согласно которой этот синдром включает в себя следующие основные составляющие:

эмоциональное истощение, опустошенность и усталость, вызванные собственной работой;

деперсонализация, циничное отношение к труду и объектам своего труда, бесчувственное, негуманное отношение к клиентам;

обесценивание профессиональных достижений, возникновение у работников чувства некомпетентности в своей профессиональной сфере, ощущение личной не успешности, недовольства результатами работы. [1, С.10].

И.А. Маликова в своей статье основываясь на труды ученых приводит отдельное определение синдромам профессионального и эмоционального выгорания.

«Синдром профессионального выгорания – это неблагоприятная реакция на рабочие стрессы, включающая в себя психологические, психофизиологические и поведенческие компоненты. По мере того, как усугубляются последствия рабочих стрессов, истощаются моральные и физические силы человека, он становится менее энергичным, ухудшается

его здоровье. У «сгоревших» на работе людей снижается трудовая мотивация, развивается безразличие к работе, ухудшаются качество и производительность труда» [5, С.289]

«Эмоциональное выгорание - специфический вид профессиональной деформации лиц, работающих в тесном эмоциональном контакте с клиентами и пациентами, при оказании профессиональной помощи» [5, С.289]

С.Г. Елизаров определил, что предрасполагающими факторами формирования эмоционального выгорания в процессе выполнения специалистами своей профессиональной деятельности являются следующие личностные качества,: чувство высокой ответственности, высокий уровень тревожности, высокий уровень социальной напряжённости, низкий уровень стрессоустойчивости, низкая самооценка, прямолинейность, зависимость от мнения других, подозрительность, эмоциональность, склонность к подчинению, повышенный самоконтроль [2, С.56].

А.В. Логинова выделяет 10 признаков профессионального выгорания преподавателя [3, С.1409]:

1. Усталость.
2. Отсутствие мотивации.
3. Разочарование, цинизм и другие отрицательные эмоции.
4. Познавательные проблемы.
5. Ухудшающаяся производительность.
6. Межличностные проблемы дома и на работе.
7. Отсутствие заботы о себе.
8. Занятость работой, когда не на работе.
9. Общее снижение удовлетворенности.
10. Проблемы со здоровьем.

Используя данные признаки выделяем причины, приводящие к состоянию профессионального выгорания военного преподавателя в процессе педагогической деятельности:

1. Напряженный и часто ненормированный рабочий день, сильная физическая, эмоциональная и умственная нагрузка, в зависимости от преподаваемой учебной дисциплины возможные полевые выходы, ночные занятия и др. приводят к усталости.

2. Если неинтересна педагогическая работа, отсутствует желание работы с личным составом, нет перспективы профессионально-педагогического роста и карьеры, то здесь у офицера не будет мотивации для преодоления негативного эмоционального настроения.

3. Переоценка своих сил и возможностей в преподавательской сфере, отсутствие успехов в работе, преобладание негативных эмоций, пессимистический настрой к деятельности и т.п. приводят к разочарованию, цинизму и другим отрицательным эмоциям.

4. Недостаточность психолого-педагогических знаний для эффективного проведения занятий и общения с обучаемыми, отсутствие опыта преподавательской и исследовательской работы говорят о наличии познавательных проблем.

5. Неудовлетворение от результатов своего педагогического труда из-за недостаточности опыта преподавательской работы, частое отвлечение на выполнение служебных задач, не связанных с преподавательской деятельностью, способствуют ухудшению производительности педагогического труда.

6. Отсутствие взаимопонимания с коллегами по педагогическому коллективу, недостаточная поддержка молодого преподавателя со стороны опытных педагогов, не обустроенность быта после перевода офицера на службу из другого гарнизона (нерешённость вопросов жилья, работы супруги, детского сада или школы детей и т.п.) могут стать причиной межличностных проблем дома и на работе.

7. Когда военный педагог больше внимания уделяет к выполнению служебных задач, много времени проводит на службе, у него остаётся мало времени на заботу о себе, о своём здоровье, о семье, вопросы отдыха или лечения постоянно откладываются на потом.

8. Большой объём задач, связанных и не связанных с основным родом деятельности, подготовка к проведению занятий, частые служебные командировки, работа над диссертацией и другими видами научной работы заставляет офицера думать о работе даже в внеслужебное время, дома.

9. На фоне постоянной напряжённой учебной и служебной работы, перегруженности дополнительными обязанностями и задачами, не связанными с преподавательской деятельностью, отсутствие перспективы карьеры, иногда проблемы в семейной жизни усиливают чувство неудовлетворённости от результатов своей деятельности.

10. Умственная, эмоциональная и физическая нагрузка, стресс, несоблюдение режима питания, неполноценный сон во время ночных занятий или несения службы в наряде и др. могут привести к проблемам со здоровьем.

Профессиональное и эмоциональное выгорание негативно воздействует на общее самочувствие, здоровье и работоспособность личности преподавателя и педагогический коллектив в целом. В целях профилактики проявления данного синдрома у военного преподавателя можно рекомендовать следующие:

оказание методической помощи вновь назначенным на должность преподавателям;

профессиональное обучение и систематическое повышение квалификации;

сплочение педагогического коллектива;

всемерная забота о подчинённых со стороны руководства кафедры,

факультета и командования военно-образовательного учреждения;
справедливое и равномерное распределение учебных и служебных задач; предоставление возможности для карьерного роста и т.д.
надлежащие питание, поддержание себя в физической форме с помощью физических упражнений, заниматься любимым делом и др.;

выделение времени для заботы о себе, слушать музыку, смотреть любимые передачи, фильмы, читать книги;

заниматься активным отдыхом (походы в театры, концерты, выставки, поездки за город и т.д.);

освоить использование различных психологических техник и т.д.

Специфика профессионально-педагогической деятельности военного преподавателя имеет свои особенности, определяющиеся из таких обстоятельств, как сложные условия осуществления педагогической деятельности, отсутствие профессионально-педагогической подготовки у большинства офицеров, соблюдение строгих уставных взаимоотношений и выполнение требований субординации, параллельное выполнение обязанностей педагогической деятельности и военно-служебных обязанностей, нестандартные условия проведения определённых видов занятий (полевые занятия в разных погодных условиях днём и ночью, многокилометровые марши т.д.). В процессе педагогической деятельности некоторые из этих обстоятельств могут привести преподавателя в состояние профессиональной деформации, выгоранию. И проблема предупреждения, профилактики неблагоприятных функциональных состояний является актуальной как для самих офицеров-преподавателей педагогов, так и для руководителей педагогического коллектива.

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ФАКТОРЫ РАЗВИТИЯ ПРОМЫШЛЕННОСТИ В АНДИЖАНСКОЙ ОБЛАСТИ

Аннотация. В статье освещены экономические тенденции и факторы, влияющие на развитие промышленности в Андижанской области Республики Узбекистан, основанные на весе промышленного производства и региональной специализации. В ходе развития региона отрасль изучалась и анализировалась. На основе доходов региона предложены направления развития.

Ключевые слова: региональная промышленность, промышленное производство, региональная промышленная специализация, внутренние возможности и возможности.

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FACTORS AFFECTING INDUSTRIAL DEVELOPMENT IN ANDIJAN REGION

The article highlights economic trends and factors influencing the development of industry in the Andijan region of the Republic of Uzbekistan. During the development of the region, the industry was studied and analyzed. Based on the region's income, development directions are proposed.

Key words: regional industry, industrial production, regional industrial specialization, internal capabilities and capabilities.

Комплексное и пропорциональное социально-экономическое развитие Андижанской области – это эффективное и оптимальное использование существующего потенциала: обеспечение комплексного и эффективного использования природного, минерального сырья, промышленного потенциала каждого региона; расширение масштабов модернизации и диверсификации региональной экономики, ускоренное развитие районов и городов с относительно низким уровнем развития, прежде всего, за счет увеличения промышленного и экспортного потенциала, сокращения различий в уровне социально-экономического развития регионов, новые промышленные предприятия и организация

малых промышленных зон; сокращение дотационных районов и городов за счет бурного промышленного развития и расширения доходной базы местных бюджетов, создания благоприятных условий для размещения промышленных предприятий и других производственных объектов [3].

Исходя из вышеизложенного, сегодня «Стратегии действий» развития экономики Узбекистана, разработанный нашим правительством – это, прежде всего, развитие промышленного сектора, а с другой стороны, обеспечение социально-экономической стабильности за счет быстрого развития этого сектора. сектор как важное направление зафиксировано. В новой политике развития упоминаются 22 цели развития промышленности [1].

Как показывает анализ, обеспечению стабильного увеличения объёма производства промышленной продукции в Андижанской области способствовали следующие факторы:

1. Активная инвестиционная политика, направленная на ускорение структурных преобразований, модернизации и ввода в эксплуатацию важных высокотехнологичных производств.

2. Постепенное расширение уровня локализации производства и освоение новой промышленной продукции.

3. Финансовая поддержка отечественных производственных предприятий и выделение кредитов коммерческими банками с целью приобретения технологического оборудования и пополнения оборотных средств предприятий, производящих потребительскую продукцию [2, 8].

Одним из важных факторов устойчивого развития промышленности в регионах является удобное географическое расположение регионов, и эта совокупность факторов определяет конкурентное преимущество и стратегический потенциал региона.

Анализ показывает, что природные и минеральные ресурсы и их использование в Андижанской области характеризуются следующими особенностями:

- природные и минеральные запасы сырья собраны в крупных месторождениях, имеющих возможность комплексной переработки на месте добычи;

- многие виды полезных ископаемых содержат не только высокий уровень полезных компонентов, но и большое количество сопутствующих микроэлементов;

- многие месторождения полезных ископаемых глубоко изучены и находятся в густонаселённых регионах. и густонаселены. расположены в регионах. У них есть транспортные пути и средства транспортировки ресурсов между регионами, в том числе трубопроводы для жидких и газообразных полезных ископаемых;

- для подготовки квалифицированных кадров в производственной и социальной инфраструктуре создана система высших и средних

специальных учебных заведений. [5].

Одним из важнейших показателей развития промышленности региона является уровень индустриализации промышленного сектора, а системные изменения в структуре промышленного сектора региона показывают, что доля промышленности в этой структуре характеризуется тенденция к снижению в последующие годы. В частности, в период 2020-2022 годов доля промышленности в структуре ВРП Андижанская область имеет тенденцию к росту (см. табл. 1).

Таблица-1

Изменение и динамика доли промышленности в ВРП Андижанской области⁵⁹

Индикаторы	млрд.сумов			Относительно к 2022 год, в процентах	
	2020 год	2021 год	2022 год	К 2020 году	К 2021 году
I. Валовой региональный продукт, общий	38008,5	43332,5	54464,0	143,3	125,7
	100%	100%	100%	Икс	Икс
Чистые налоги на продукты	1755,9	1211,9	2255,5	128,5	186,1
	4,6	2,8	4,1	Икс	Икс
II. Валовая добавленная стоимость сферы	36252,6	42120,6	52208,5	144,0	124,0
	95,4	97,2	95,9	Икс	Икс
Рыболовство, лесное и сельское хозяйство	15485,1	18232,0	21544,9	139,1	118,2
	40,7	42,1	39,6	x	x
Промышленность (строительство добавлен без)	10332,2	10904,7	15135,1	146,5	138,8
	27,2	25,2	27,8	x	x
промышленность	8289,3	8450,2	12208,8	147,3	144,5
	21,8	19,5	22,4	x	x
Строительство	2042,9	2454,5	2926,3	143,2	119,2
	5,4	5,7	5,4	x	x
Услуги	10435,3	12983,9	15528,5	148,8	119,6
	27,5	30,0	28,5	x	x
торговля, жилищные услуги и общепит	2239,7	2767,7	3383,9	151,1	122,3
	5,9	6,4	6,2	x	x
транспорт и хранилище, информация и связь	1852,0	2210,3	2608,4	140,8	118,0
	4,9	5,1	4,8	x	x
Другие сферы услуги	6343,6	8005,9	9536,2	150,3	119,1
	16,7	18,5	17,5	x	x

Согласно таблице, доля промышленности в ВРП Андижанской области в 2020 году увеличилась на 21,9%, в 2021 году - на 19,5%, в 2022 году - на 22,4%. Производство промышленной продукции в 2020 году

выросло на 147,3% по сравнению с 2022 годом или на 144,5% по сравнению с 2021 годом. С другой стороны, доля обрабатывающей промышленности в общей промышленности Андижанской области (доля этой отрасли в общей промышленности составляет 47,4 процента) очень высока по сравнению с другими регионами республики. Поэтому рекомендуется развивать перерабатывающую промышленность и активно привлекать в этот город инвестиции [3,4,5,8].

В настоящее время в городе производятся следующие основные виды промышленной продукции (см. табл. 2).

Таблица-2

Производство промышленной продукции по видам экономической деятельности в Андижанской области (млрд сумов)

Индикаторы	2020 год	2021 год	2022 год	относительно к 2022 году, в процентах	
				К 2020 году	К 2021 году
Объем производства промышленной продукции по отдельным видам экономической деятельности	22573,3	28310,2	42600,9	188,7	150,5
Перерабатывающая промышленность	20746,1	26274,7	38737,8	186,7	147,4
<i>Из этого:</i>					
Продукты питания, напитки, табак	5238,9	6059,0	6882,9	131,4	113,6
Одежда, текстиль, кожа и её производные	1116,3	2909,8	3231,7	289,5	111,1
Предметы деревообработки: резание, гнутьё, склеивание, сборка и отделка, целлюлозно-бумажная продукция, производство мебели	1226,7	1949,5	2096,9	170,9	107,6
Публикация	758,0	1154,7	1203,5	158,8	104,2
Переработка нефти и кокса	123,4	144,1	133,1	107,9	92,4
Химические продукты, производство резины и пластмассовых предметов	486,2	3164,3	3974,3	817,4	125,6
Производство медикаментов и основных фармацевтических продуктов	621,6	1041,7	1054,1	169,6	101,2
Производство других продуктов минералов неметаллов	1200,9	1243,8	2049,3	170,6	164,8
Металлургия	1396,6	2559,5	5007,0	3,6 раз	1,95 раз
Производство средств автотранспорта, трейлеров, и полуприцепов, а также ремонт и монтаж машин и оборудования, производство готовых металлических предметов	722,8	2613,1	1690,6	2,3 раз	64,7
Электро-, газо-, пароснабжение и кондиционирование воздуха	1319,9	1388,1	1607,1	121,8	115,8
Водоснабжение, канализация, сбор и утилизация мусора	361,3	529,3	906,5	2,5 раз	171,3

Индикаторы	2020 год	2021 год	2022 год	относительно к 2022 году, в процентах	
				К 2020 году	К 2021 году
Производство товаров широкого потребления	10794,2	12870,8	19927,5	184,6	154,8
<i>в том числе</i>					
Продовольственные товары	4614,3	5751,7	6106,8	132,3	106,2
Непродовольственные товары	5731,1	6605,5	13186,4	2,3 раз	2,0 раза

Согласно данным таблицы, при изучении в разрезе отраслей экономики продукция, произведенная предприятиями электро-, газо-, пароснабжения и кондиционирования, составила 1607,1 млрд сомов (3,8 от общего объема произведенной продукции). В 2022 году производство этой отрасли выросло на 103,8% по сравнению с соответствующим периодом прошлого года. Видно, что по сравнению с 2022 годом он составил 121,8% в 2020 году и 115,8% в 2021 году по сравнению с 2022 годом. Отмечено, что предприятиями водоснабжения, канализации и утилизации отходов произведено продукции на 906,6 млрд сумов (2,1% от общего объема произведенной продукции). В 2022 году объем продукции, произведенной предприятиями водоснабжения, канализации и утилизации отходов, увеличился на 102,3% по сравнению с соответствующим периодом предыдущего года. В 2022 году это было в 2,5 раза больше, чем в 2020 году, и на 171,3 процента больше, чем в 2017 году [3,4,5].

В 2022 году объем продукции, произведенной промышленными предприятиями, составит 38737,8 миллиарда сумов и темп роста по сравнению с прошлым годом составил 108,0%. С другой стороны, в обрабатывающей промышленности производство пищевых продуктов сократилось на 2,4%, производство мебели - на 11,1%, табачных изделий - на 2,0%, текстильных изделий - на 2,0%. Замечено, что производство автотранспортных средств, прицепов и т.д. полуприцепы подорожали на 16,1%, основные фармацевтические продукты и препараты – на 7,6%, на 88,7%. В обрабатывающей промышленности доля высокотехнологичных производств сети составила 4,9%, средне-высокотехнологичных 23,8%, средне-низкотехнологичных 34,9%, низкотехнологичных 36,4%.

Однако если принять во внимание, что эти отрасли относятся к числу низших отраслей промышленности по «технологической сложности», то уровень возможностей найти путь через эти отрасли в глобальную интеграцию региональной экономики считается ограниченным. Поэтому мы считаем целесообразным обратить особое внимание на развитие отраслей, обеспечивающих технический прогресс в экономике региона, а именно: электротехнического машиностроения, фармацевтической и

химической промышленности, и резко увеличить долю этих отраслей в промышленном секторе. структуры с точки зрения занятости и инвестиций.

Основным фактором роста промышленного производства является повышение на 8,0% обрабатывающая (перерабатывающая) промышленность, на 3,8% электро-, газо-, пароснабжения и кондиционирования, а также увеличение на 2,3% водоснабжения, канализации, вывоза мусора [4,5].

Наибольшая доля производства потребительских товаров в общем объеме области в разрезе регионов соответствует 70,1% в Асакинском районе, 4,8% в городе Андижане, 1,6% в Пахтаабадском районе, 1,6% в Ходжаабаде, 5,9% в районе и 2,4% в Балыкчинском районе. Также в области на 143,1% увеличился темп роста производства потребительских товаров. Высокий темп роста наблюдался в Асакинском (147,2%), Мархаматском (125,0%), Пахтаабадском (144,5%), Джалакудукском (193,5%), Балыкчинском (178,2%) и Избосканском районах (178,8%) [6].

При изучении раздела отраслей экономики установлено, что необходимо увеличить объемы добычи природного газа и сырой нефти в 3,8 раза, другой промышленной деятельности - на 6,6%.

По сравнению с соответствующим периодом предыдущего года в промышленности если производство продовольственных продуктов сократилось на 2,4%, производство мебели на 11,1%, необходимо увеличить объем табачных изделий на 2,0%, текстильных изделий на 16,1%, производство фармацевтических препаратов и медикаментов – на 7,6%, производство автомобилей, трейлеров и полуприцепов – на 88,7%; инвестиции [4].

Повышение уровня диверсификации экономики города, расширение номенклатуры производимых товаров и услуг, устранение доминирования той или иной отраслевой продукции или группы продукции в таких показателях, как ВРП, экспорт[5];

Обеспечение высокой доли ВРП и занятости отраслей производства, менее чувствительных к изменениям внешних рынков, производящие готовую продукцию, а также увеличение доли предприятий поставщиков сырья и комплектующих для предприятий отраслей экспортирующих готовую продукцию;

Увеличение промышленности, вооруженного высокими технологиями и современным оборудованием в показателях производства недорогих и качественных продукций, способных легко конкурировать на внешнем рынке, необходимо начинать с увеличения доли в валовом экономическом показателе отраслей с низкой капиталомкостью, быстро адаптирующихся к изменениям внешнего рынка

В программе по развитию индустрии региона, разрабатываемой в Андижанской области, предусмотрены следующие предложения [7]:

- рациональное использование источников богатых сырьем и ресурсами, неиспользованных резервов и возможностей региона;
- обеспечить целостное развитие отраслей в регионе;
- использование на полной мощности существующие промышленные предприятия, организация производства в пустующих зданиях и сооружениях;
- производство высокотехнологичной продукции с высокой добавленной стоимостью за счет диверсификации производства и глубокой переработки доступного сырья;
- повысить уровень занятости населения за счет создания новых рабочих мест.

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ДЕТЕКТОР ДЛЯ ИЗМЕРЕНИЯ АБСОЛЮТНОЙ СВЕТИМОСТИ НА NICA

Аннотация. В работе предложен детектор для измерения светимости в точках сведения пучков на коллайдере NICA. Предложен детектор, основанный на сцинтилляционных счётчиках, который является компактным и может использоваться как автономно, так и в составе базовых детекторов NICA.

Ключевые слова: NICA, Абсолютная светимость, Детектор, Измерение, Физика высоких энергий, Ядерная физика, Ускоритель частиц.

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DETECTOR FOR MEASUREMENT OF ABSOLUTE LUMINOSITY AT NICA

Annotation. The work proposed a detector to measure the luminosity at the points of convergence of beams at the collider NICA. The proposed detector, based on scintillation counters is compact and can be used both independently and as part of the base detectors NICA.

Keywords: NICA, Absolute luminosity, Detector, Measurement, High energy physics, Nuclear physics, Particle gas pedal.

Введение

Светимость (L) определяет среднее число взаимодействий в единицу времени (dR/dt) для реакции с известным сечением σ [1]:

$$dR/dt = L \cdot \sigma. (1)$$

Для измерения светимости используются сантиметры и секунды [L] = $\text{см}^{-2}\text{с}^{-1}$.

В некоторых случаях, например, для фиксированной мишени, светимость можно вычислить, исходя из параметров ускорителя и условий измерения. По измеренной скорости счёта для реакции с известным сечением абсолютная светимость вычисляется из уравнения (1).

В работе обсуждаются возможности определения абсолютной светимости для коллайдера NICA. Без знания абсолютных сечений невозможно проведение «разностных» измерений. Например, изучение анализирующих способностей для рассеяния нейтронов из измерений на пучках поляризованных дейтронов и протонов [2].

Из определения (1) следует, что абсолютную светимость можно вычислить, измеряя с известной эффективностью скорость счёта для реакции с известным сечением. Для коллайдера НИКА планируется программа исследований в широком диапазоне энергий (для тяжёлых ионов $4 \text{ ГэВ} \leq \sqrt{S_{NN}} \leq 11 \text{ ГэВ}$) и большим набором сталкивающихся ядер (от протонов до золота).

В этом случае скорость счёта записывается в виде:

$$d\tilde{R}/dt = \varepsilon_D L \cdot \tilde{\sigma} = k \cdot L; k = \varepsilon_D \cdot \tilde{\sigma}, (2)$$

где ε_D – эффективность регистрации соответствующим детектором. Нормировочный коэффициент k , зависит от эффективности регистрации ε_D и сечения реакции, события от которой регистрирует выбранный детектор. Измерения скорости счёта $d\tilde{R}/dt$ при известном нормировочном коэффициенте k позволяют определить абсолютную светимость:

$$L = \frac{1}{k} d\tilde{R}/dt. (3)$$

Детектор для измерения и контроля светимости.

Реализацию процедуры контроля и измерения абсолютной светимости обсудим для детектирующей системы, показанной на Рис.1. Система будет состоять из двух сцинтилляционных детекторов (условно левого и правого), расположенных на одинаковом расстоянии L по разные стороны от точки взаимодействия вдоль оси столкновения. Предварительные параметры детекторной системы приведены в Таблице 1.

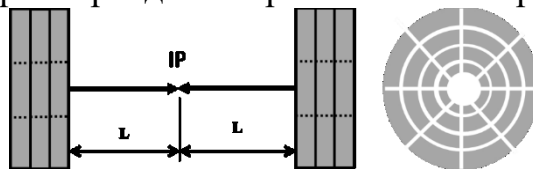


Рис.1. Схема сцинтилляционного детектора для измерения светимости.

Центральное отверстие сделано для ионпровода.

Таблица 1

Кольцо №	Расстояние до IP	Перекрываемая область	Площадь	Толщина
1.	300 см	$R_1 = 7 \text{ см} \leq r \leq R_2 = 11 \text{ см}$	$S_1 = 226.2 \text{ см}^2$	0.5 см

2.	300 см	$R_3 = 11.3 \text{ см} \leq r \leq R_4$ $= 15.3 \text{ см}$	S_2 $= 343.3 \text{ см}^2$	0.5 см
3.	300 см	$R_5 = 15.6 \text{ см} \leq r \leq R_6$ $= 19,6 \text{ см}$	S_3 $= 442.3 \text{ см}^2$	0.5 см
4.	300 см	$R_7 = 19.9 \text{ см} \leq r \leq R_8$ $= 24 \text{ см}$	S_4 $= 565.4 \text{ см}^2$	0.5 см

Остановимся подробнее на параметрах этой системы:

1. Система является мобильной и компактной:

а. толщина сборки из трёх плоскостей не превышает 2.5 см (с учётом поддерживающих конструкций);

поперечный размер $\varnothing \leq 25 \text{ см}$ (с учётом поддерживающих конструкций);

б. масса трёх собранных плоскостей $m \leq 3 \text{ кг}$ (с учётом поддерживающих конструкций); с.из-за малых габаритов и веса система может располагаться автономно, что позволяет вести наладку пучков без смонтированных детекторов;

2. Сцинтилляционные детекторы имеют высокую эффективность при регистрации заряженных частиц в области энергий NICA.

3. Сцинтилляционные счётчики имеют высокое быстродействие (длительность сигнала по основанию 10-15 нс, и время нарастания фронта 1-2 нс [3]).

Приведём оценки скорости счёта для при AuAu столкновениях граничных энергий NICA

Начнём с pp столкновений. Предложенная схема детектора подходит для регистрации упругих pp столкновений в области углов рассеяния $0.023 \text{ рад} \leq \theta \leq 0.08 \text{ рад}$. При этом, конструкция детекторной системы такова, что «левый» и «правый» сцинтилляционные детекторы могут быть включены на совпадение. Это заметно уменьшит величину фона от рассеяния на остаточном газе, практически не уменьшая скорость счёта упругих столкновений.

При оценке скорости счёта исходим из аппроксимации сечения упругого рассеяния зависимостью от квадрата переданного четырёхимпульса [4-7]: $\frac{d\sigma}{dT} = A \cdot \exp(B \cdot T)$, (4)

где T – квадрат переданного четырёхимпульса. В кинематике NICSF он равен: $T = (P_b - P')^2 = -2p_b^2(1 - \cos(\theta)) \cong -p_b^2\theta^2$. (5)

Здесь p_b обозначает импульс пучка и для предложенной схемы регистрации угол рассеяния мал (см. таблицу 1). Для энергий НИКА $B \cong 10 \text{ ГэВ}^{-2}$ [4-6]. Значения квадрата переданного четырёхимпульса лежат интервале $-4 \cdot p_b^2 \leq T \leq 0$. (6)

Из-за резкого падения сечения как функции переданного импульса можно принять следующее условие нормировки:

$$\int_{-\infty}^0 \frac{d\sigma}{dT} dT = \sigma_{el}. (7)$$

что даёт: $\frac{d\sigma}{dT} = \sigma_{el} \cdot B \cdot \exp(B \cdot T), (8)$

В области энергий НИКА упругое протон-протонное сечение равно [4-6]:

$$\sigma_{el} \cong 10 \text{ мбн}, (9)$$

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ИСПОЛЬЗОВАНИЕ ГУМАНИТАРНЫХ ПАРАДИГМ В ОБРАЗОВАНИИ

Аннотация. В данной статье рассматривается значимость гуманитарных парадигм в образовании с точки зрения формирования гармоничного общества. Обсуждаются особенности гуманитарных наук, их интердисциплинарный характер и влияние на развитие критического мышления, эмпатии, социальной ответственности, культуры мышления и общения. Отмечается, что несмотря на важность гуманитарных дисциплин, они часто оказываются на втором плане в образовательных программах. В заключении подчеркивается необходимость изменений как на уровне учебных планов, так и на уровне методик преподавания для более полного и гармоничного образования студентов.

Ключевые слова: гуманитарные парадигмы, образование, интердисциплинарность, критическое мышление, эмпатия, социальная ответственность.

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USING HUMANITARIAN PARADIGMS IN EDUCATION

Abstract. This article examines the importance of humanitarian paradigms in education from the point of view of the formation of a harmonious society. The features of the humanities, their interdisciplinary nature and influence on the development of critical thinking, empathy, social responsibility, culture of thinking and communication are discussed. It is noted that despite the importance of the humanities, they often find themselves in the background in educational programs. In conclusion, the need for changes both at the level of curricula and at the level of teaching methods for a more complete and harmonious education of students is emphasized.

Key words: humanitarian paradigms, education, interdisciplinarity, critical thinking, empathy, social responsibility.

В современном обществе образование играет ключевую роль в формировании личности, ее мировоззрения, ценностных установок и способностей. Однако эффективность образовательного процесса не оценивается только по уровню знаний, полученных студентами, а также по

их способности критически мыслить, адаптироваться к изменяющемуся миру, развивать социальную ответственность и эмпатию. В этом контексте гуманитарные парадигмы в образовании становятся важным инструментом формирования гармоничного общества. Гуманитарные науки охватывают широкий спектр дисциплин, таких как философия, литература, история, социология, психология и др. Они направлены на изучение человеческого бытия, его культуры, ценностей и социальных взаимодействий. Именно через призму гуманитарных знаний студенты могут понять суть человеческого существования, осознать свою роль в обществе и развить глубокое уважение к разнообразию культур и мнений. Одной из ключевых особенностей гуманитарных парадигм является их интердисциплинарность. В процессе изучения гуманитарных наук студенты учатся видеть связи между различными аспектами человеческой деятельности и культуры. Например, изучая историю, они могут понять, как социокультурные процессы влияли на развитие общества, а изучая литературу – понять, какие ценности были актуальны в определенный исторический период. Одним из важнейших аспектов гуманитарных парадигм в образовании является развитие критического мышления. Способность анализировать информацию, выделять главное, оценивать доводы и аргументы – все это навыки, которые развиваются благодаря изучению гуманитарных дисциплин. Критическое мышление позволяет студентам не просто запоминать факты, но и осознанно оценивать их, выстраивать собственные мнения и аргументированно их защищать. Еще одним важным аспектом гуманитарных парадигм является развитие эмпатии и социальной ответственности. Изучение человеческой природы, истории и культуры других народов позволяет студентам развивать понимание и уважение к различиям, а также осознавать свою роль в формировании гармоничного общества. Эмпатия и социальная ответственность помогают студентам стать более толерантными, открытыми и готовыми к сотрудничеству. Гуманитарные парадигмы также способствуют формированию культуры мышления и общения. Изучение языка, литературы и культуры разных народов позволяет студентам расширить свой кругозор, научиться выражать свои мысли более точно и ясно, а также лучше понимать и воспринимать точки зрения других людей. Культура мышления и общения играет важную роль в формировании успешной карьеры и личной жизни. Однако несмотря на все преимущества гуманитарных парадигм, в современном образовании часто уделяется недостаточное внимание этим дисциплинам. В связи с акцентом на технические науки и профессиональную подготовку, гуманитарные дисциплины часто оказываются на втором плане. Однако именно гуманитарные знания и навыки могут сделать образование более глубоким, целостным и гармоничным.

Роль гуманитарных парадигм в современном образовании, Гуманитарные парадигмы играют ключевую роль в современном образовании, поскольку они представляют собой фундаментальные знания о человеческом бытии, культуре и обществе. В связи с этим, мы можем выделить несколько важных аспектов, которые подчеркивают их роль в формировании гармоничной и толерантной личности. Формирование культуры мышления и аналитических навыков: Гуманитарные дисциплины, такие как философия, литература, история и социология, помогают студентам развивать критическое мышление и аналитические способности. Изучение различных точек зрения, анализ текстов и дискуссии о сложных проблемах позволяют студентам учиться видеть мир не только через призму фактов, но и через контекст, ценности и интерпретации. Развитие эмпатии и культуры межличностного взаимодействия: Изучение гуманитарных наук способствует развитию эмпатии и пониманию других культур и точек зрения. Студенты, знакомясь с разнообразными культурными контекстами и историческими событиями, научаются понимать и уважать различия, а также

Интердисциплинарность гуманитарных наук, Одной из ключевых особенностей гуманитарных наук является их интердисциплинарность. Изучение гуманитарных дисциплин не ограничивается изучением отдельных предметов, а включает в себя анализ взаимосвязей между различными аспектами человеческого бытия. Например, изучение истории в контексте литературы может помочь понять, как социокультурные процессы влияли на литературное творчество определенной эпохи. Такой подход позволяет студентам развивать системное мышление и видеть мир в его целостности.

Развитие критического мышления, Гуманитарные парадигмы способствуют развитию критического мышления у студентов. Изучение различных точек зрения, анализ текстов и источников, а также выработка собственных аргументов помогают студентам не только понимать информацию, но и критически оценивать ее. Этот навык критического мышления необходим не только в академической сфере, но и в повседневной жизни, помогая принимать обоснованные решения и выстраивать свою точку зрения.

Эмпатия и социальная ответственность, Изучение гуманитарных наук также способствует развитию эмпатии и социальной ответственности у студентов. Через изучение различных культур, истории и литературы они начинают понимать и уважать точки зрения других людей, а также осознают свою роль в формировании гармоничного общества. Развитие этих качеств помогает студентам стать более толерантными и готовыми к сотрудничеству, что является важным аспектом в мире, сталкиваемом с разнообразием культур и мнений.

Культура мышления и общения, Гуманитарные дисциплины также способствуют формированию культуры мышления и общения у студентов. Изучение литературы и языка разных народов помогает им расширить свой кругозор, научиться адекватно выражать свои мысли и воспринимать точки зрения других. Это особенно важно в современном мире, где коммуникация и межкультурное взаимодействие играют все более важную роль. Первым важным элементом культуры мышления, который формируется благодаря гуманитарным дисциплинам, является способность анализировать информацию критически и логически. Изучение литературы, истории и философии требует от студентов умения анализировать тексты, выделять главные идеи, оценивать доводы и аргументы. Такой аналитический подход не только помогает понять изучаемый материал глубже, но и развивает навыки самостоятельного мышления и рассуждения. Вторым важным аспектом культуры мышления, который формируется через гуманитарные дисциплины, является креативность и гибкость мышления. Изучение искусства, литературы и культуры разных народов расширяет кругозор студентов, помогает им видеть мир с разных точек зрения и мыслить нестандартно. Эти навыки критического мышления и творческого подхода к решению задач являются важными для успешной карьеры в современном мире, где все чаще ценятся инновационные идеи и нестандартные подходы.

Оценка значимости гуманитарных парадигм в образовании, Неоспоримо, гуманитарные парадигмы играют ключевую роль в современном образовании. Они помогают студентам развивать критическое мышление, эмпатию, социальную ответственность, культуру мышления и общения, что важно для их успешного функционирования в обществе. Тем не менее, в современном образовательном процессе часто недооценивается роль гуманитарных дисциплин, что может привести к неравномерному развитию личности и недостаточной подготовке к сложностям современного мира. Гуманитарные парадигмы играют важнейшую роль в современном образовании, поскольку они не только предоставляют студентам знания о человеческой культуре, истории и обществе, но и способствуют формированию целостной и толерантной личности. Оценка их значимости в образовании представляет собой комплексный анализ влияния гуманитарных дисциплин на различные аспекты студенческой жизни и общественной деятельности. Во-первых, гуманитарные парадигмы способствуют развитию критического мышления у студентов. Изучение различных точек зрения, анализ текстов и источников, а также выработка собственных аргументов позволяют студентам не просто запоминать факты, но и осознанно оценивать информацию, критически мыслить и анализировать. Такие навыки критического мышления важны как для академического роста, так и для принятия обоснованных решений в повседневной жизни.

Необходимость усиления гуманитарных дисциплин в образовании, Для того чтобы эффективно использовать гуманитарные парадигмы в образовании, необходимо предпринять ряд мер. Во-первых, следует уделить больше внимания гуманитарным дисциплинам при разработке учебных программ. Это позволит студентам получить более полное и целостное образование. Во-вторых, необходимо разработать и внедрить новые методики преподавания, которые бы активно использовали принципы гуманитарных наук. Такие методики могут включать в себя интерактивные уроки, дискуссии, проектную деятельность и т.д. Такой подход поможет сделать образовательный процесс более увлекательным и эффективным.

В заключении, гуманитарные парадигмы играют неотъемлемую роль в современном образовании, обогащая студентов не только знаниями, но и ценностями, мышлением и межличностными навыками. Они способствуют развитию критического мышления, эмпатии, культуры общения и межкультурного взаимодействия. Гуманитарные дисциплины необходимы для формирования гармоничной личности, способной к осознанному участию в общественной жизни, культурному диалогу и построению мира. Поэтому важно продолжать укреплять и увеличивать вес гуманитарных наук в образовательных программах, чтобы обеспечить студентам всеобъемлющее и глубокое образование, необходимое для успешной адаптации в современном мире.

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Тошкент тўқимачилик ва енгил саноат институти

TOLANI TOYLASH JARAYONIDA ISHCHI BOSIM KUCHINING TOLA DEFORMATSION XOSSALARIGA TA'SIRI

Аннотация. Ушбу мақолада толани тойлаш жараёнида ишчи босим кучининг тола деформацион хоссаларини ўрганиш борасида илмий тадқиқот ишлари “Тўқимачилик материалишунослиги” кафедрасида мавжуд СВ-1 ускунасида олиб борилган бўлиб, унда Порлоқ-4 ва Наманган-77 селекция навли пахта толасининг бир даврли сиқилиш деформацияси ўрганилган.

Калит сўзлар: тола, йигириш, сифат.

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INFLUENCE OF WORKING PRESSURE ON THE DEFORMATION PROPERTIES OF FIBER DURING THE FIBER SPINNING PROCESS

Annotation. In this state, scientific research is carried out on the study of deformation properties of fibers under the power of labor pressure and the process of weaving fibers is carried out on the equipment of SV-1, which is located in the department of "Textile Material Science", which includes "Porlok-4" and "Namangan-77". Izucheno klopkovoe fiber otbornogo sorta -77, podvergnutloe odnotsiklovoy deformatsii szhatiya.

Keywords: fiber, spinning, quality.

Тўқимачилик толаларни дастлабки ишлаш технологик жараёни толали маҳсулотларни преслаш билан яқунланади. Толаларни пресслашда уларнинг ҳажми камаяди. Прессланган толаларни ташиш, омборларда сақлаш ҳар томонлама иқтисодий самарадорли бўлади. Бундан ташқари прессланган толаларни ифлосланишдан ва ёнғиндан сақлаш учун яхши

яхши шароит яратилади. Толалардан ярим ва тайёр маҳсулот ишлаб чиқариш жараёнида улар ҳар хил чўзувчи, таъминловчи валиклар орасидан ўтганда сиқилиш деформациясига учрайдилар.

Сиқилиш деформациясида толаларнинг тузилиши ва физик-механик хусусиятлари ўзгариши мумкин. Сиқилиш деформациясида пахта толасининг хусусиятларини ўзгаришини проф. П.В.Байдюк, Е.Н.Чернов ва бошқалар ҳар томонлама ўрганишган. Зиғир толасининг хусусиятларини проф. Б.П.Комаров кимёвий толаларнинг хусусиятларини Э.А.Немченко таҳил қилишган.

Толаларни пресслашда ва технологик жараёнда сиқилиш деформацияси натижасида ҳар хил толаларнинг хусусиятларини проф. П.Д.Балясов тўлиқ ўрганган. Сиқилиш деформацияси ҳам учта синфга бўлиб ўрганилади. Ярим даврли, бир даврли ва кўп даврли сиқилиш деформациясида олинadиган кўрсаткичлар.

Ярим даврли сиқилиш деформация ҳар хил турдаги (тўрт бурчакли, цилиндр шаклдаги) пресс камераларда ўрганилади. Натижада мутлоқ ва нисбий деформация миқдори олинади.

Мутлоқ сиқилиш деформация қуйидаги формула билан аниқланади:

$$C = V_0 - V_K \text{ [sm}^3 \text{ ёки mm}^3\text{]} \quad (1)$$

бу ерда: V_0 -намунанинг сиқилишдан олдинги бошланғич ҳажми; V_K -намунага босим берилганда кейинги ҳажми.

Нисбий сиқилиш деформация миқдори намунанинг ҳажми ёки баландлиги бўйича аниқланиши мумкин.

$$\varepsilon = \frac{V_0 - V_K}{V_0} \cdot 100 = \frac{S \cdot h_0 - S' \cdot h_K}{S \cdot h_0} \cdot 100 = \frac{h_0 - h_K}{h_0} \cdot 100 = \left(1 - \frac{h_K}{h_0}\right) \cdot 100 \quad (2)$$

бу ерда: h_0 -намунанинг сиқилишдан олдинги баландлиги, sm; h_K -намунанинг сиқилишдан кейинги баландлиги, sm; -камеранинг юзаси, sm².

Сиқилиш деформациясининг миқдорини намунага таъсир этувчи босимнинг ўсиши билан толаларнинг ҳажм массасини кўтарилиши орқали ҳам ифодалаш мумкин.

Толаларни катта босим билан прессланганда уларнинг тузилишида салбий ўзгаришлар ҳосил бўлади, яъни эзилади, дарз кетади ва парчаланиб фибрилларга бўлинади.

Е.Н.Чернов ва П.Д.Балясовнинг маълумотлари бўйича пахта толасини $270 \cdot 10^5 \text{ Pa}$ (270 dan/sm^2) кучланиш билан прессланганда унинг мустаҳкамлиги

10-15 фоизга камайган. Шу босимда прессланган пахта толасининг ҳажм массаси $1,0 \text{ g/sm}^3$ бўлган.

Амалда пахта заводларида прессланган толанинг ҳажм массаси $0,4 \div 0,8 \text{ g/sm}^3$ дан ошмайди. Демак пресслаш жараёни пахта толасининг хусусиятларига таъсир қилмайди.

Тола, ипларнинг ярим даврли сиқилиш деформациясида олинадиган кўрсаткичларга нисбий сиқилиш деформацияси киради.

$$\varepsilon = \frac{d_0 - d_k}{d_0} \quad (3)$$

bu yerda: d_0 -тола, ипларнинг бошланғич кўндаланг ўлчами, mm;
 d_k -тола, ипларнинг сиқилгандан кейинги кўндаланг ўлчами.

Бу кўрсаткични тўқувчиликда тола, ипларнинг эзилиш коэффиценти деб аталади. Тола, ипларнинг ярим даврли сиқилиш деформациясини ўрганиш учун стандартли асбоб-ускуналар яратилган эмас. Чунки сиқилиш деформациясида олинадиган кўрсаткичлар тола, ипларни баҳолашда стандартга киритилган эмас. Лекин олимлар ўзлари яратган лаборатор ускуналарида ярим даврли сиқилиш деформацияда олинадиган кўрсаткичларни таҳлил қилишган.

Бир даврли сиқилиш деформацияда толаларнинг сиқилишдан кейин тикланиш хусусияти ўрганилади. Бу жараёни проф. П.Д.Балясов пахта толаси учун батафсил таҳлил қилган. Тўлиқ сиқилиш деформацияси учта қисмдан иборат. Қайишқоқ, эластик ва қолдиқ-пластик.

Толани тойлаш жараёнида ишчи босим кучининг толанинг деформацион хоссаларини ўрганиш борасида илмий тадқиқот ишлари “Тўқимачилик материалшунослиги” кафедрасида мавжуд СВ-1 ускунасида олиб борилди.

Тажриба учун Порлоқ-4 ва Наманган-77 селекция навли пахта толасидан ЎзДст 614-2014 стандарти бўйича намуналар олиниб бир даврли сиқилиш деформацияси ўрганилди. Олинган натижалар қуйидаги 1 ва 2-жадвалларда келтирилди.

1-жадвал

Порлоқ-4 селекция навли пахта толасининг бир даврли чўзилиш деформациясининг о‘згариши

t/r	Ишчи босим кучи, Pa	Бир даврли чўзилиш деформацияси таркиби		
		қайишқоқ	эластик	пластик (қолдиқли)
1.	95	0.36	0.07	0.57
2.	115	0.345	0.065	0.59
3.	135	0.332	0.063	0.605
4.	155	0.327	0.058	0.615

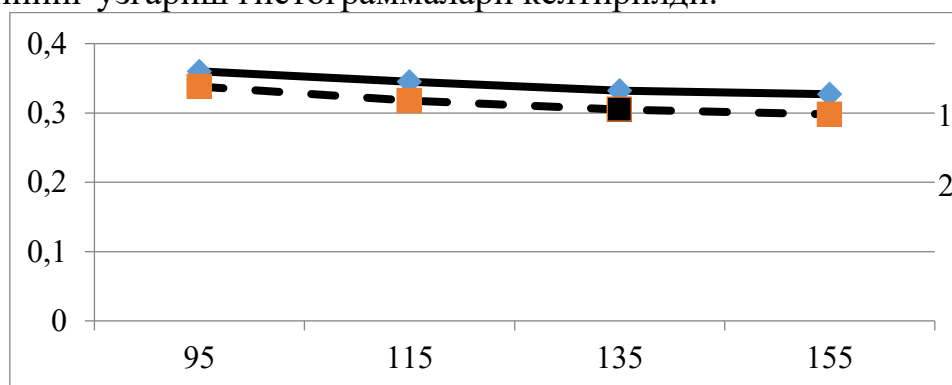
2-жадвал

Наманган-77 селекция навли пахта толасининг бир даврли чўзилиш деформациясининг ўзгариши

t/r	Ишчи босим кучи, Pa	Бир даврли чўзилиш деформацияси таркиби		
		қайишқоқ	эластик	пластик (қолдиқли)
1.	95	0.338	0.077	0.584
2.	115	0.315	0.070	0.615

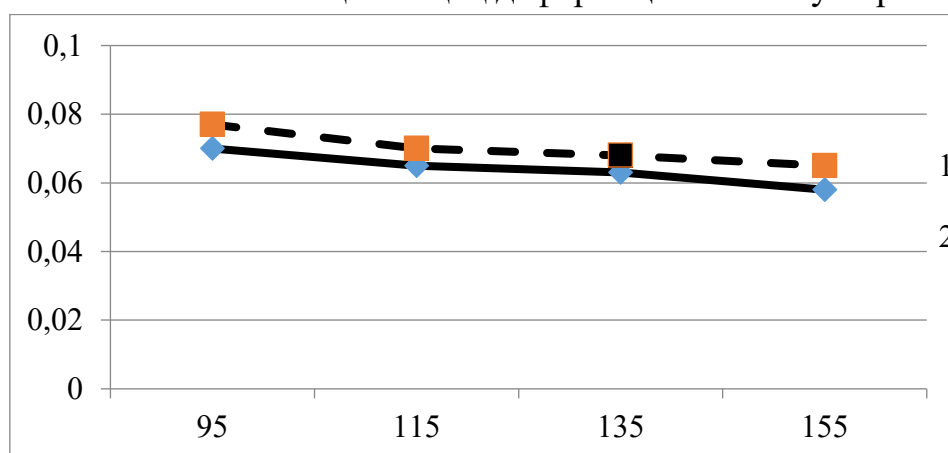
3.	135	0.305	0.068	0.627
4.	155	0.298	0.065	0.637

Олиб борилган тадқиқот натижалари асосида 1-3-расмларда турли селекция навлари толасининг бир даврли чўзилиш деформацияси таркибининг ўзгариш гистограммалари келтирилди.



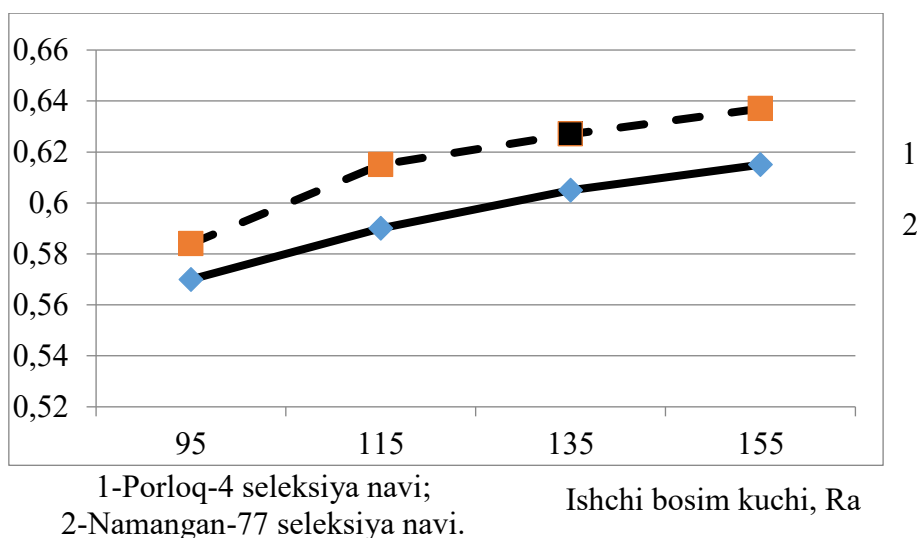
1-Porloq-4 seleksiya navi; Ishchi bosim kuchi, Ra
2-Namangan-77 seleksiya navi.

1-расм. Тойлаш жараёнида ишчи босим кучи турлича бўлганда пахта толаси қайишқоқ деформациясининг ўзгариши.



1-Porloq-4 seleksiya navi; Ishchi bosim kuchi, Ra
2-Namangan-77 seleksiya navi.

2-расм. Тойлаш жараёнида ишчи босим кучи турлича бўлганда пахта толаси эластик деформациясининг ўзгариши.



3-расм. Тойлаш жараёнида ишчи босим кучи турлича бўлганда пахта толаси пластик деформациясининг ўзгариши.

Тадқиқот натижалари таҳлилидан кўриниб турибдики, ишчи босим кучи 95 Па бўлганда, Порлоқ-4 селекция навли пахта толасининг деформацион хоссаларига нисбатан солиштирсак, ишчи босим кучи 115 Па бўлганда қайишқоқ деформация таркиби 4,2% га, эластик деформация таркиби 7,1% га камайди, пластик деформация таркиби 3,4% га ошди, ишчи босим кучи 135 Па бўлганда қайишқоқ деформация таркиби 7,8% га, эластик деформация таркиби 10,0% га камайди, пластик деформация таркиби 5,8% га ошди, ишчи босим кучи 155 Па бўлганда қайишқоқ деформация таркиби 9,2% га, эластик деформация таркиби 17,1% га камайди, пластик деформация таркиби 7,3% га ошди, ишчи босим кучи 95 Па бўлганда, Наманган-77 селекция навли пахта толасининг деформацион хоссаларига нисбатан солиштирсак, ишчи босим кучи 115 Па бўлганда қайишқоқ деформация таркиби 6,8% га, эластик деформация таркиби 9,1% га камайди, пластик деформация таркиби 5,1% га ошди, ишчи босим кучи 135 Па бўлганда қайишқоқ деформация таркиби 9,8% га, эластик деформация таркиби 11,2% га камайди, пластик деформация таркиби 6,9% га ошди, ишчи босим кучи 155 Па бўлганда қайишқоқ деформация таркиби 11,8% га, эластик деформация таркиби 15,6% га камайди, пластик деформация таркиби 9,3% га ошди. Бундан келиб чиқадики, толани тойлаш жараёнида ишчи босим кучининг ортиши ҳисобига қайишқоқ, эластик деформация таркиби камайиб, пластик деформация таркиби ошганлиги кузатилди.

Хулоса. Ишчи босим кучи ортиши билан Порлоқ-4 селекция навли пахта толасининг қайишқоқ деформация таркиби 4,2% дан 9,2% гача, эластик деформация таркиби 7,1% дан 17,1% гача камайганлиги, пластик деформация таркиби 3,4% дан 7,3% гача ошганлиги, Наманган-77 селекция навли пахта толасининг қайишқоқ деформация таркиби 6,8% дан 9,8% гача,

эластик деформация таркиби 9,1% дан 11,2% гача камайганлиги, пластик деформация таркиби 5,1% дан 9,3% гача ошганлиги аниқланди.

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ОСОБЕННОСТИ СИСТЕМЫ ДОШКОЛЬНОГО ОБРАЗОВАНИЯ ЗА РУБЕЖНЫХ СТРАН (НА ПРИМЕРЕ ЯПОНИИ,КИТАЯ,ГЕРМАНИИ И США)

Аннотация. В данной статье проанализированы особенности системы дошкольного образования зарубежных стран. Выделен положительный опыт и особенности образовательной системы некоторых стран, проведено сравнение системы дошкольного образования нашего и зарубежных стран.

Ключевые слова: педагогический опыт; детство; охрана здоровья детей; развивающая среда; игровая деятельность; воспитатель.

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FEATURES OF THE PRESCHOOL EDUCATION SYSTEM IN FOREIGN COUNTRIES (USING THE EXAMPLE OF JAPAN, CHINA, GERMANY AND THE USA)

Abstract. This article analyzes the features of the preschool education system in foreign countries. The positive experience and features of the educational system of some countries are highlighted, and the preschool education system of ours and foreign countries is compared.

Key words: speech development, form of education, education, communication, exemplary speech, requirements.

В стандарте дошкольного образования выделяются требования к образовательной программе, к условиям ее реализации и результатам освоения. Образовательная программа дошкольного образования рассматривается как программа психолого-педагогической поддержки позитивной социализации и индивидуального развития детей. Здоровье один из самых важных и значимых факторов в жизни ребенка. Здоровый ребенок – счастливый ребенок и это залог успеха. Главной задачей взрослых является воспитать у детей с самых ранних лет жизни уважение к собственному здоровью и способность беречь его. Особо серьезное отношение к здоровью ребенка можно отметить в Японии. В каждом детском саду есть коллектив медицинских работников, в состав которых

входит: доктор, медицинская сестра, стоматолог, фармацевт, куратор здоровья. Каждый детский сад оснащен бассейном и даже во время каникул дети могут приходиться и плавать в нём.

В Германии для поступления ребенка в сад не требуется никаких справок и анализов. На карантин группы не закрывают. Просто у входа вывешивают объявление для родителей, чтобы те обратили внимание на своих детей. Почти в каждой группе можно встретить ребенка с кашлем, насморком и даже температурой, он спокойно играет с другими детьми и никаких ограничений для него нет. Шапки признаются немцами только при пятиградусном морозе и то не всегда, однако, в России, при нуле градусов ребенок одет уже достаточно тепло и обязательно в головном уборе.

В Китае особое внимание уделяется зрению. Здесь имеются большие проблемы со зрением уже с раннего возраста, не редко даже в фильмах можно увидеть китайского ребенка в очках. Для зрения детей в группе должна быть создана комфортная среда: без ярких цветов, которые бросаются в глаза, без тусклости, развивающая эстетический вкус.

В Соединенных Штатах Америки не только заботятся о здоровье дошкольников, но и введено правило: включение в обычную группу детского сада детей с ограниченными возможностями здоровья. Вместе с ними находятся тьюторы. Дети как правило проходят через те же ситуации, что и остальные члены группы, и только при необходимости им оказывается помощь.

По мнению Л.С. Выготского игра – «это творческая переработка пережитых впечатлений, комбинирование их и построение из них новой действительности, отвечающей запросам и влечениям самого ребенка.» Эту же мысль можно проследить в определении Ж. Фабру игра – «окно в мир взрослой жизни». «Игра – это искра, зажигающая огонек пытливости и любознательности». В.А. Сухомлинский. Таким образом игра – основной вид деятельности на всём протяжении дошкольного детства. Она является эффективным средством формирования личности дошкольника, его морально-волевых качеств, в игре реализуется потребность воздействия на мир. В детских садах Японии распространена свободная игра. Свободная игра заключается в том, что ребенок делает, что хочет – рисует, строит модели, участвуют в сюжетно-ролевых и в дидактических играх. Свободная игра заключается в том, что она свободна от вмешательства взрослого и все возникшие ситуации, конфликты дети решают самостоятельно, учатся находить компромисс, налаживать отношения между собой. Дети не жалуются воспитателю. Что касается совместной игры с воспитателем, то здесь идёт упор на игры с большой физической активностью – бег, танцы, игра с мячом. Каждая игра направлена на решение проблемы с лишним весом, которая актуальна не только в Японии, но и всём мире. Если воспитатель заметит, что ребенок играет с каким-то предметом, не предназначенным для игр или для какой-то деятельности, то он предложит

детям оформить этот предмет и придумать всем вместе игры с ним. Так же дети играют в игры, в которых они выполняют реальные действия. Детям могут дать краску и кисти и сказать, что необходимо покрасить забор на участке. Дети сталкиваются с настоящей задачей и с большим удовольствием выполняют ее тщательно и до конца. Детские сады Японии так же поощряют детей за бег и крик, воспринимая детей такими, какие они есть. Драки разрешаются, воспитатель не лезет в них, а только дает понять после как сделать лучше обеим сторонам в решении конфликта, так как виноват каждый. Драка является важным социальным опытом, а не асоциальным поведением. Ставя в сравнение Японии Китай, необходимо отметить, что каждое действие ребенка находится под строгим наблюдением. В играх дети пассивны, послушны, соблюдают дисциплину и всегда находятся возле взрослого. В детском саду запрещено плохое поведение, отказ от подчинения взрослому. Плохое поведение пресекается тут же. В ссоры детей воспитатель вмешивается сразу, не давая им разгореться. Весь день, который проводит китайский ребенок в детском саду, очень загружен и поэтому время на игру остается мало. По нашему мнению, китайская система в отношении игры очень сурова, ведь нельзя ребенка лишать самого главного в его детстве, необходимо стараться включать игровые моменты даже на занятиях. Требования к воспитателю. Воспитатель – ключевая фигура в воспитании ребенка дошкольного возраста. Родители приводят ребенка в детский сад утром и забирает вечером. Воспитатель заменяет маму и папу ребенку на момент его нахождения в детском саду. На него накладываеся огромная ответственность за моральное состояние ребенка, за его настрой, комфорт, да и за саму жизнь. Требования, предъявляемые к педагогам детского сада Китая, достаточно высоки, поскольку воспитатели играют важную роль в реализации задач дошкольного образования. Воспитатели должны быть последовательными, спокойными и твердыми и никогда не должны сердиться. Им следует абсолютно ясно давать понять детям, что от них требуется, а что нельзя делать. Главная задача – занять детей полностью. В китайском детском саду у воспитателя и детей нет свободного времени. Свободное времяпровождение считается бесцельным. В китайском детском саду можно встретить мужчину-воспитателя и это не редкость. Это положительно влияет на процесс гендерного воспитания детей. Группа похожа на семью: мама, папа и дети. В Японии большинстве же детских садов придерживаются главной задачей воспитателей – научить детей быть послушными. Постоянная смена воспитателя на группе способствует не привыканию ребенка к нему, так как по мнению японцев, привязанность приводит к слишком сильной зависимости ребенка от взрослого. Если же педагог по каким-то причинам невзлюбил ребенка, эта ситуация тоже не будет очень тяжелой. Возможно, с другим воспитателем у ребенка сложатся дружеские отношения и он не будет думать, что все взрослые его не любят. Чтобы стать воспитателем детского сада в Японии,

нужно отучиться два года в институте или в университете. Квалификация присваивается по результатам письменного тестирования. С помощью тестов проверяются информированность и память. А вот отношение к детям и способность с ними работать таким способом проверить невозможно. Поэтому в японских детских садах работает много людей, которые не любят детей. Таким образом, теоретический анализ опыта зарубежных систем позволяет нам сделать вывод, что элементы данных систем, несмотря на множество отличительных черт, могут быть полезными для отечественного дошкольного образования и способствовать повышению его эффективности.

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ВНЕДРЕНИЕ ИННОВАЦИЙ НА ЗАНЯТИЯХ ПО МАТЕМАТИКЕ

Аннотация. В статье рассматривается формирование познавательных интересов и познавательных действий ребёнка в различных видах деятельности, в том числе по математике.

Ключевые слова: математические решения; инновационные технологии; охрана здоровья детей; развивающая среда; игровая деятельность; воспитатель-педагог.

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INTRODUCING INNOVATIONS IN MATHEMATICS CLASSES

Abstract. The article discusses the formation of cognitive interests and cognitive actions of a child in various types of activities, including mathematics.

Key words: speech development, form of education, education, communication, exemplary speech, requirements.

На современном этапе развития дошкольного образования проблеме познавательного развития дошкольников уделяется большое внимание. ДОО в качестве одного из принципов дошкольного образования рассматривает формирование познавательных интересов и познавательных действий ребёнка в различных видах деятельности. Кроме того, стандарт предусматривает развитие интеллектуальных качеств дошкольников. Концепция дошкольного образования, ориентиры и требования к обновлению содержания дошкольного образования очерчивают ряд достаточно серьёзных требований формы к познавательному развитию первого дошкольников, частью которого является формирование элементарных математических представлений исходя.

Таким мышления образом, проблема развития познавательных прежним способностей дошкольников творчески требует особого отношения со стороны простейших педагогов, поиска и применения эффективных инновационных технологий тем и методов работы с дошкольниками. Инновацией называют создание и цель использование нового компонента, вызывающего изменения среды из одного состояния в другое. Соответственно под инновационными технологиями в образовательном процессе понимаются создание нового, ранее не

существующего компонента. Проблема использования инновационных технологий, способствующих развитию математических детьми способностей детей является одной из важных и актуальных в современный период. Это вызвано целым рядом причин: метод высоким уровнем требований к выпускнику-дошкольнику, обилием информации, получаемой ребёнком, повышенным вниманием к компьютеризации, желанием сделать процесс обучения более игра интересным и интенсивным. Поэтому игровые использование современных эффективных инновационных были технологий в дошкольном возрасте по математическому развитию дает высокую результативность, цель так как современные дети живут в быстромеменяющейся эпохе информационного общества. В этих условиях математическое развитие дошкольника не может сводиться к обучению счёту, измерению и вычислению. Особую ценность имеет развитие способности самостоятельно и творчески мыслить, владеть игровые способами эффективной переработки информации. Как же «разбудить» познавательный интерес ребенка? Необходимо сделать обучение занимательным. Сущностью занимательности является мышления новизна, необходимость, неожиданность, несоответствия прежним представлениям. При занимательном обучении обостряются эмоционально-мыслительные процессы, старшего заставляющие пристальнее всматриваться фигурам в предмет, наблюдать, догадываться, вспоминать, сравнивать, искать объяснения. В развивающую основу проводимого связи исследования положена идея о том, что игра что разработка обучения инновационных подходов получаемая к организации и методике следующего проведения занятий креативного с детьми старшего дошкольного возраста установленного по математике с использованием логических игр, эффективному развитию простейших математических способностей. Применение игровой технологии детьми обусловлено тем, что у детей дошкольного возраста ведущей деятельностью является игровая. Именно поэтому игровое использование инновационной игровой технологии является эффективным занимающимся способом реализации задач формы по развитию математических представлений у детей дошкольного возраста. В игровой технологии присутствуют игры, способствующие именно обогащению бытового словаря, детьми связной речи, игры, позволяет развивающая наблюдательность, укрепляющие волю большое и развивающее вариативное мышление. Поэтому, в соответствии обучения с требованиями государственных задач образовательных стандартов дошкольного образования, родители должны быть были активными и полноценными участниками образовательного боле процесса, так активное как они простейших являются основными дети заказчиками ДОО

Математика занимает особое место в науке, культуре и общественной жизни, являясь одной из важнейших составляющих мирового научно-технического прогресса. Изучение математики играет системообразующую

роль в образовании, развивая познавательные способности человека, в том числе к логическому мышлению, влияя на преподавание других дисциплин. Качественное математическое образование необходимо каждому для его успешной жизни в современном обществе. Процесс математического развития ребенка связан, прежде всего, с развитием его познавательной сферы (разнообразных способов познания, познавательной деятельностью и т.д.), а также с развитием математического стиля мышления. Целью математического развития дошкольника является знакомство с азами математической культуры и привитие интереса к дальнейшему познанию окружающего мира с использованием элементов этой культуры. Математическое развитие детей в дошкольном образовательном учреждении проектируется на основе концепции дошкольного воспитания и обучения, программы учреждения, целей и задач развития детей, данных диагностики, прогнозируемых результатов. Концепцией определяется соотношение предматематического и предлогического компонентов в содержании образования. От этого соотношения зависят прогнозируемые результаты: развитие интеллектуальных способностей детей, их логического, творческого или критического мышления; формирование представлений о числах, вычислительных или комбинаторных навыках, способах преобразования объектов и т. д.

Сегодня необходимо вывести российское математическое образование на лидирующее положение в мире. Математика в России должна стать передовой и привлекательной областью знания и деятельности, получение математических знаний – осознанным и внутренне мотивированным процессом.

Приобретение знаний и умений формируется под влиянием развивающего обучения и благодаря особой организации учебного процесса развиваются все познавательные психические процессы, связанные с ощущением, восприятием, памятью, вниманием, речью, мышлением, а также волевые и эмоциональные процессы в целом. Развивающий эффект обучения должен быть сориентирован на «зону ближайшего развития». Детям предлагается, наряду с заданиями, которые они могут выполнять сейчас самостоятельно, и такие задания, которые требуют от них догадки, смекалки, наблюдательности. Приобретенные таким образом знания, а главное – систематическое совершенствование их качества, плюс развитие мышления, обеспечивают общее развитие ребенка.

Благодаря математическому развитию у дошкольников развиваются личностные качества: активность, любознательность, настойчивость в преодолении трудностей, самостоятельность и ответственность. В процессе математического развития происходит общее интеллектуальное и речевое развитие ребенка (доказательной и аргументированной речи, обогащение словаря).

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ХОДИМЛАРНИ БОШҚАРИШНИ ТАКОМИЛЛАШТИРИШНИНГ ЗАМОНАВИЙ ЙЎНАЛИШЛАРИ

Аннотация. Ходимларни бошқариш тизимини такомиллаштириш самарали фаолиятнинг зарурий шартидир. Мақолада компания ходимларидан фойдаланиш самарадорлигини оширишнинг мумкин бўлган усуллари кўриб чиқилган. Ходимларни бошқариш тизимини такомиллаштириш бўйича маслаҳатлар ва тавсиялар берилган.

Калит сўзлар: Бошқариш тизими, компания ходимлари, меҳнат унумдорлиги, кадрлар алмашинуви, ижтимоий пакет, вазифалар, масъулият, рағбатлантириш, самарадорлик.

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MODERN DIRECTIONS OF PERSONNEL MANAGEMENT IMPROVEMENT

Annotation. The improvement of the personnel management system is a prerequisite for effective operation. The article discusses possible ways to improve the efficiency of using the company's employees. Tips and recommendations on improving the personnel management system are given.

Key words: Management system, company employees, labor productivity, staff turnover, social package, tasks, responsibility, rationalization, efficiency.

Ҳозирги вақтда ташкилот ходимларини бошқариш концепциясининг асоси ходимнинг шахсиятининг тобора ортиб бораётган роли, унинг психологиясини билиш, ташкилот олдида турган муаммоларни ҳал қилишга мувофиқ тўғри мотивацион муносабатларни шакллантириш ва унинг фаолиятини бошқариш қобилиятидир.

Турли корхоналар учун ходимларни бошқариш тизимининг мақсадлари корхона фаолиятининг хусусиятига, ишлаб чиқариш ҳажмига ва тузилишига боғлиқ. Ходимларни бошқариш тизимининг асосий мақсади

ташкилотни ходимлар билан таъминлаш, улардан самарали фойдаланиш, шунингдек касбий ва ижтимоий ривожланишдир.

Ходимларни бошқариш тизимини такомиллаштириш самарали фаолиятнинг зарурий шартидир. Жамоанинг мувофиқлаштирилган иши ва ишлаб чиқаришнинг барча босқичларида ходимларнинг самарали ўзаро таъсири инқироз ва бозордаги глобал ўзгаришлар даврида ҳам етакчилик қилишга имкон беради агар носозлик юзага келса, жараёнларнинг кенг қамровли аудитини ўтказиш ва унинг давомида топилган камчиликларни иложи борича тезроқ бартараф этиш керак.

Ходимларни бошқариш тизимини такомиллаштириш қандай ҳолларда амалга оширилади, ходимларни бошқариш тизими - бу корхона ходимларининг еҳтиёжлари, хатти-ҳаракатлари, қизиқишлари ва фаолиятига улардан максимал даражада фойдаланиш учун таъсир қилиш усуллари, принциплари ва воситалари мажмуи. Уни такомиллаштириш деганда белгиланган тартиблар, меъёрлар, бошқарув услублари ва бошқаларни глобал қайта кўриб чиқиш тушунилади. Мавжуд тизим қанчалик самарали эканлигини ва уни яхшилашга арзийдими ёки йўқлигини тушуниш учун корхонанинг кадрлар сиёсатини мунтазам равишда таҳлил қилиш керак.

Такомиллаштиришга кўпинча муҳтож бўлган кадрлар сиёсатининг асосий йўналишлари:

Кадрлар соҳасида маркетинг фаолиятини олиб бориш;

Янги технологияларни жорий этиш ва ишга қабул қилишни режалаштиришни ҳисобга олган ҳолда янги иш жойларига бўлган еҳтиёжни таҳлил қилиш;

Ходимларни ёллаш, танлаш, баҳолаш ва сертификатлашни ташкил этиш, ходимларни касбга йўналтириш ва меҳнатга мослаштириш

Ходимларни ёллаш ва жойлаштириш

Иштирок этиш, садоқат ва ишдан қониқиш, иш ҳақини ошириш учун рағбатлантириш тизимлари ва мотивацион механизмларни ишлаб чиқиш

Ташкилот ходимларининг харажатларини рационализация қилиш

Олинган натижалар асосида ходимларни бошқариш тизимини такомиллаштириш йўллари танлашга шошилманг. Маълумотларни яна бир бор текшириш керак. Бунинг учун ходимларнинг хатти-ҳаракатларини кузатиш керак. Агар сиз ҳақиқий муаммоларни топмоқчи бўлсангиз-қўшимча равишда бир қатор сўровлар, вақтни сақлаш, кадрлар ҳаракати жараёнини, мотивация даражасини, меҳнат унумдорлигини баҳоланг. Ходимларни бошқариш тизимини такомиллаштириш зарурлигининг аниқ белгилари мавжуд: ташкилот ўсди ва ягона бошқарув тизимини яратиш зарурати пайдо бўлди; ходимлар сонининг кўпайиши билан иқтисодий кўрсаткичларнинг ўсиши йўқ; ходимлар корхонани ривожлантириш масалаларида ташаббус кўрсатмайдилар; мутахассисларнинг малакасининг паст даражаси мавжуд; ходимлар мавжуд касбий ўсиш, иш ҳақи тизимидан

норозилигини намойиш етадилар; жамоада кескин муносабатлар, доимий можаролар мавжуд бўлиб, улар ҳақиқий урушларга айланади; янги ишчилар ёмон мослашмоқда, кадрлар алмашинуви кучаймоқда. Ташкилотдаги муаммоларнинг сабаблари ва вазиятни қандай ҳал қилиш керак.

Ташкилотдаги муаммоларнинг сабаблари ва вазиятни ҳал қилиш усуллари:

- HR маълумотни етарлича таҳлил қилмаслик. Натижада кабел телеканалдаги иш эълонлари ишламайди, чунки мақсадли аудитория уни томоша қилмайди, шунингдек, янги мослашувчанлик дастури паст кўрсаткичларга эга, чунки у кекса ходимлар учун мўлжалланган, жамоаларда эса асосан 60% дан кўпроқ ёшлар мос келишини ҳисобга олмайди. Бу ҳолда вакансияни эълон қилишдан олдин, уларнинг ҳар бири учун мақсадли аудитория, номзоднинг портрети, қайси маълумот манбаларидан фойдаланишларини таҳлил қилиш керак. Ёш аудитория эҳтиёжларини таҳлил қилиб, ёшлар ва етук ходимлар учун мос равишда содиқлик тизимининг иккита версиясини яратиш мақсадга мувофиқдир.

- HR махфий маълумотларни бепарволик билан бошқариши. Агарда келажакдаги лойиҳаларни ва меҳнат шароитларининг ўзгаришини олдиндан муҳокама қилинса, қимматбаҳо мутахассислар истеъфога чиқиши мумкин. Натижада қимматбаҳо ходимларнинг оқиши келиб чиқади. Бу ҳолда расмий эълон қилинишидан олдин, сахна ортидаги ўзгаришларни муҳокама қилмасликка ҳаракат қилиш керак.

- HRни ҳиссиётларга жуда кўп эътибор бериши. Келишишнинг иложиси бўлмаган ҳолатларда, ўзини йўқотиб, мунозара пайтида залдан югуриб чиқиб кетиш кабиларга олиб келади. Бунда албатта ҳамкасблар олдида кечирим сўраш, муаммони ҳамма билан алоҳида муҳокама қилиш ва келажакда ҳиссиётларни бошқариш керак.

Агар тавсифланган муаммолардан бири сурункали бўлса, унда ходимларни бошқариш тизимини такомиллаштириш зарурати пайдо бўлди. Бунинг учун менежмент менежмент стратегиясини ва ходимлар билан муносабатлар тамойилларини ўзгартириши, жараёнлар ва функцияларни оптималлаштириши, кадрларни танлаш ва ўқитиш бўйича кадрлар сиёсатини ўзгартириши, мотивация дастурларини кўриб чиқиши керак.

Ходимларни бошқариш тизимини такомиллаштириш бўйича тадбирлар

Ходимларни бошқариш тизимини такомиллаштириш бўйича чора — тадбирлар корхонанинг кадрлар сиёсатининг турли соҳаларига, энг муҳими, ташкилотнинг ўсиши ва ривожланишига халақит берадиган омилларни баргараф этишга қаратилган. Энг кўп ишлатиладиган бир нечта чораларни кўриб чиқиш мумкин.

Ихтиро қилиш истагини камайтирадиган омилларга қуйидагиларни киритишимиз мумкин:

Корхонада ходимлар ўртасидаги норасмий алоқани чеклайдиган жуда кўп қоидаларнинг мавжудлиги натижасида ходимлар ўртасида инсоний муносабатлар ривожланмайди, ҳиссий алоқа йўқ, чунки улар учун ишдан ташқари мавзулар ҳақида гапириш қийин (айниқса, тақиқланган бўлса). Уларнинг ҳар бири ўзининг "қобиғида" ўтиради ва баъзида пайдо бўладиган ноанъанавий ғояларини кимдир билан баҳам кўриш истаги йўқ бўлади;

Бошқарувчилар ихтиро жуда фойдали нарса эканлигини ва ундан компания афзаллик ва фойда олишини тушунмасликлари натижасида янгиликлар яратувчи ходимлар ихтирочилик ғояларини амалга ошириш учун зарур бўлган ресурсларни олмайдилар ва улар менежерлар томонидан ҳурматсизликни ҳис қилишади: истехзодан ғазабланиш ва нафратгача. Бу эса ўз навбатида ходимларни демотивациялайди.

Ходимларни бошқариш тизимини такомиллаштиришнинг кенг тарқалган усуллари

Ходимларни танлаш ва ёллаш тартибини такомиллаштириш. Бунга абитуриентларни танлаш қоидаларидаги ўзгаришлар ва танлаш усулларини такомиллаштириш киради. Эски тизимдаги кўплаб корхоналар ҳали ҳам танишиш бўйича ходимларни ёки мутахассисларни фақат қизил диплом билан ёллашади. Бироқ, мукамал ўрганилган талаба ёмон мутахассис бўлиб чиқиши мумкин ва лавозимга қабул қилинган "ўз" ишчилари янада ёмонроқ танлов бўлиши мумкин, бундан ташқари улар кўпинча самарали ишлаш учун етарли мотивацияга эга эмаслар.

Кадрлар алмашинувини камайитириш бўйича чора-тадбирларни ишлаб чиқиш. Бунга ушбу корхонада ишлаган тажрибаси учун бонус тизимини жорий этиш киради. Ишга қабул қилинган ишчиларни самарали мослаштириш тизимини яратишга алоҳида эътибор бериш муҳим, эҳтимол янги бошланувчилар учун мураббийлик тизимини жорий этиш мантиқан тўғри келади.

Корпоратив маданият ва қадриятлар тизимини ривожлантириш. Ташкилотнинг пайдо бўлиш босқичида пайдо бўлган нормалар ва қоидалар вақт ўтиши билан эскиради. Ходимлар уларни тушунмайдилар ёки қабул қилмайдилар ва шу сабабли норозилик билдирадилар. Бунга йўл қўймаслик учун 20-асрда корпоратив маданият қолган-қолмаганлигини, унинг рақобатчилардан қандай фарқ қилишини таҳлил қилиш керак. Олинган маълумотларга асосланиб, ҳаракатлар режасини ишлаб чиқиш керак.

Мунтазам ўқитишни жорий этиш, ходимларнинг малакасини ошириш. Бунга ишчи ходимларнинг тегишли касбларини қайта тайёрлаш ва ўзлаштириш ҳам киради. Тренинглар нафақат ходимларга ишлаб чиқаришда янада муваффақиятли ишлашга, янги технологиялар ва жорий этилаётган ускуналарни ўзлаштиришга имкон беради. Бу ишчиларнинг ҳар томонлама ривожланишига ёрдам беради, айтиқса янги ўқитиш усуллари қўлланилган бўлса.

Кенг мотивация дастурини яратиш. Ишдаги ҳақиқий натижа учун бонуслар, савдо фоизлари ва бонуслар асосий иш ҳақиға қўшилганда, моддий рағбатлантиришнинг мослашувчан тизимини ишлаб чиқиш муҳимдир. Ходимларни рағбатлантиришнинг номоддий шакллариға эътибор бериш бир хил даражада муҳимдир. Миннатдорчилик, "фахрий кенгаш", "ойнинг энг яхши мутахассиси" унвонлари кўринишидаги рағбатлантириш кўпинча жуда самарали ишлайди ва деярли ҳеч қандай харажатларни талаб қилмайди.

Ходимларнинг мартаба ўсишиға қизиқишини ошириш. Ходимларни иерархик зинапояда илгари суришға ҳисса қўшган ҳолда, менежер нафақат менежерлар штатини шакллантиради, балки жамоадаги психологик муҳитни яхшилади. Юқори лавозимға эға бўлиш истаги одамларда масъулиятни ривожлантиради, жамоанинг ҳис-туйғуларини кучайтиришға ёрдам беради. Бундан ташқари, очиқ истиқболлар ишчиларни илҳомлантиради, бу ҳатто қийин инқироз даврида ва нокулай шароитларда ҳам мураккаб ишлаб чиқариш муаммоларини муваффақиятли ҳал қилишға имкон беради.

Корпоратив маданиятға татбиқ этилиши керак бўлган асосий қадриятлар ва корпоратив нормалар:

- фаол ҳаёт (ҳаётнинг тўлиқлиги ва ҳиссий тўйинганлиги);
- ҳаётий донолик (ҳаётий тажриба орқали эришилган қарор ва соғлом фикрнинг етуклиги);
- саломатлик (жисмоний ва руҳий)
- қизиқарли иш;
- табиат ва санъатнинг гўзаллиги (табиатда ва санъатда гўзалликни бошдан кечириш);
- севги (яқин одам билан руҳий ва жисмоний яқинлик);
- моддий таъминланган ҳаёт (моддий қийинчиликларнинг йўқлиги);
- яхши ва содиқ дўстларға эға бўлиш;
- оммавий тан олинис (атрофдагилар, жамоа ва ҳамкасблар томонидан ҳурмат);
- билим олиш (ўз таълимини, дунёқарашини, умумий маданиятини, интеллектуал ривожланишини кенгайтириш имконияти);
- самарали ҳаёт (имкониятлар, куч ва қобилиятлардан максимал даражада фойдаланиш);
- ривожланиш (ўз-ўзини такомиллаштириш, доимий жисмоний ва маънавий такомиллаштириш);
- ўйин-кулги (ёқимли вақт ўтказиш, масъулиятдан вақтинча бўлса ҳам озод бўлиш);
- эркинлик (мустақиллик, ҳукм ва ҳаракатлардаги эркинлик);
- бахтли оилавий ҳаёт;
- юқори талаблар (ҳаётға юқори талаблар ва юқори даъволар);

Ходимларни бошқариш тизимини такомиллаштириш бўйича тавсиялар

Ходимларни бошқариш тизимини такомиллаштириш йўналишини танлаш ходимларнинг самарасиз ишлашининг асосий сабабларини ва муаммоларни ҳал қилиш усулларини аниқлаш учун мавжуд тизимни тўлиқ таҳлил қилишни ўз ичига олади. Аксарият корхоналар кадрлар сиёсатида шунга ўхшаш хатоларга йўл қўйишади, шунинг учун ходимларни бошқариш тизимини такомиллаштириш бўйича одатий тавсиялардан фойдаланиш мумкин.

Бошқаларга қараганда тез-тез таҳлил қилиниши керак бўлган муаммоли кадрлар йўналишлари, ички алоқаларни ривожлантириш;

корпоратив маданиятни бошқариш, ишни тўғри тартибга солиш, ходимларнинг номоддий рағбатланиши;

Ходимларни бошқариш тизимини такомиллаштириш бўйича маслаҳатлар

⇒ Танлов асосида бир неча босқичда кадрлар танлашни амалга ошириш. Бу тасодифий одамларни ёллашдан қочади, лекин ушбу корхонада маълум бир лавозим ва иш топишга энг кўп туртки берадиганларни танлайди. Шундай қилиб, ходимларни танлаш муаммоси ҳал қилинади ва компания энг яхши мутахассисларни олади.

⇒ Санкциялардан фойдаланиш чекланган. Кечикишлар, ишдаги кўполлик ва компаниянинг ички тартибидаги бошқа қоидабузарликлар учун жарималар раҳбариятнинг эътиборидан четда қолмаслиги керак. Аммо баъзида бундай жазоларда аниқ бузилиш кузатилади, бу ходимларнинг рағбатланиши ва жамоадаги психологик муҳитга жуда салбий таъсир қилади. Шунинг учун санкцияларга фақат ўта оғир ҳолатларда мурожаат қилиш яхшироқдир.

⇒ Раҳбарлар ва ходимлар учун мунтазам равишда тренинглар ташкил этиш. Ушбу турдаги машғулотлар корпоратив муҳитда муносиб равишда тобора оммалашиб бормоқда. Тренингда тушунилган вазиятларнинг бир қисми сифатида ходимлар нафақат иш муаммоларини ҳал қилишни ўрганадилар, балки ҳамкасблар, потенциал мижозлар ва бошқалар билан яқин алоқада бўлишади. Амалий машғулотларни ўқитиш жараёнига кириш тезкор ижобий таъсир кўрсатади.

⇒ Жамоани бирлаштириш учун бир қатор тадбирларни ўтказинг. Улар ягона жамоавий руҳнинг ривожланишига ҳисса қўшиши, салбий харажатларни камайтириши муҳимдир. Бунинг учун турли хил корпоратив тадбирларни тақдим этишингиз мумкин: табиатга саёҳатлар, маданий ва оммавий ўйин-кулгиларга ташриф буюриш.

Хулоса қилиб шуни таъкидлаш керакки, корхона раҳбарияти жамоадаги ижобий ахлоқий ва психологик иқлимнинг устуворлигини ёдда тутиши керак. Ҳар қандай ходимларни бошқариш тизимини

такомиллаштириш ушбу омилни иқтисодий жиҳатлар билан бир қаторда ҳисобга олиши керак.

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АНАЛИЗ СОВРЕМЕННОГО СОСТОЯНИЯ НАЦИОНАЛЬНОЙ СИСТЕМЫ КВАЛИФИКАЦИЙ УЗБЕКИСТАНА: ПРОБЛЕМЫ И РЕШЕНИЯ

Аннотация. Статья посвящена анализу проблемы, возникающие при развитии механизмов национальной системы квалификаций и полноценном внедрении системы в Республике Узбекистан.

Ключевые слова: национальная система квалификаций, национальная рамка квалификаций, центр оценки квалификаций, профессиональный стандарт.

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ANALYSIS OF THE CURRENT STATE OF THE NATIONAL QUALIFICATIONS SYSTEM OF UZBEKISTAN: PROBLEMS AND SOLUTIONS

Annotation. The article is devoted to the analysis of problems arising in the development of mechanisms of the national qualifications system and the full implementation of the system in the Republic of Uzbekistan.

Key words: national qualifications system, national qualifications framework, qualifications assessment center, professional standard.

Одной из основных задач для большинства стран в мире является устойчивое развитие экономики, при этом, как правило, залогом успеха для достижения данной задачи является наличие в стране достаточного количества высококвалифицированных кадров, отвечающих потребностям работодателей. Это, в частности, подтверждается тем фактом, что в XX веке мировой рост ВВП обеспечили всего 25 стран, в которых более 25% от всего занятого населения – это специалисты самой высокой квалификации, способные выполнять аналитическую работу и самостоятельно принимать решения в условиях неопределенности [1].

С первых дней независимости Республика Узбекистан поставила перед собой задачу интеграции всех сфер жизни страны в мировую

экономическую систему. Система образования тоже не является исключением. Учитывая развитие глобализации и современные интеграционные процессы в мире, задача интеграции в мировое образовательное пространство становится все более актуальной. Для многих стран за последние два десятилетия ключом к такой интеграции и развитию государства была Национальная система квалификаций.

Национальная система квалификаций зародилась в 1960-1980 годы, и сегодня существует необходимость в новых подходах к ее развитию и совершенствованию.

Национальная система квалификаций - это посредник между рынком труда и системой образования. Фактически это инструмент согласования спроса со стороны рынка труда и предложения со стороны системы образования. Ключевое понятие здесь "квалификация", под которой понимают готовность работника выполнять качественно работу в границах своей трудовой деятельности, профессии.

Национальная система квалификаций включает ряд инструментов и механизмов: национальную рамку квалификаций, отраслевые советы, Национальный орган по вопросам развития квалификаций, квалификационные справочники, профессиональные и образовательные стандарты, органы по сертификации и квалификаций, классификаторы, позволяющие выявлять необходимые для рынка труда профессии и готовить кадры.

Какая ценность НСК? Что она нам дает? НСК предоставляет лицам, отвечающим за разработку политики в сфере образования и обучения, огромная база данных для формирования образовательных программ, включая программы непрерывного профессионального образования и обучения, а также мощный рычаг управления этой системой. А также работодателям надежные индикаторы для понимания уровня компетенций у кандидатов на рабочие места и работников, возможность ориентира при сопоставлении квалификаций, средства выявления недостатка в компетенциях и потребностей в обучении (формальном и неформальном, включая обучение на рабочем месте), кроме того, индикаторы качества квалификаций и их значимости на национальном уровне.

Когда речь идет о ценности НСК для работников, что это для них большая возможность обоснованно планировать собственное обучение и карьеру.

В настоящее время НСК формируется во всем мире для повышения качества и производительности труда и максимального вовлечения в рынок труда граждан (старший возраст, безработные) и не граждан (мигрантов).

Итак, какова данная система в Узбекистане?

Правовые и организационные основы Национальной системы в Узбекистане, а также порядок и направления подготовки, переподготовки и повышения квалификации определены Указом Президента Республики

Узбекистан «О дополнительных мерах по дальнейшему совершенствованию системы профессионального образования» от 6 сентября 2019 года № ПФ-5812 и внедрении Национальной системы развития профессиональных навыков, знаний и умений в Республике Узбекистан определены Постановлением Кабинета Министров Республики Узбекистан «О мерах по организации деятельности национальной системы профессиональных навыков, знаний и умений в Республике Узбекистан» от 15 мая 2020 года № 287 [2].

Согласно ему, целями и задачами Национальной системы квалификаций Узбекистана являются:

- улучшение условий труда населения, контроль качества рабочей силы, подготовка кадров к экспериментальной профессии, переподготовка и получение квалификации;

- единая платформа приобретения профессиональных квалификаций и формы обучения на рынке труда, национально совместимые, обучение по труду и обучению;

- формирование правовых, институциональных и структурных механизмов в виде пожизненной поддержки, повышения квалификации и переподготовки, и на этой основе рынок труда и образование обеспечивают обоснованность и эффективность предоставления;

- Институциональная поддержка занятости населения посредством обучения, подготовки и переподготовки, особенностей репутации трудовой профессии и внедрения профессиональных стандартов, мониторинг и обслуживание систем и инфраструктуры;

- организация профессиональной подготовки, повышения квалификации и переподготовки незанятого населения, особенно молодежи, в центрах профессиональной подготовки безработных и незанятого населения;

- работать на основе профессиональных стандартов и обеспечивать квалификацию и внедрение инфраструктуры согласно квалификации;

- создание и организация центров оценки квалификаций на основе современных стандартов;

- обеспечить равные условия, основанные на добровольных возможностях получения повышения квалификации и всех желающих;

- организация и контроль центров управления компетенциями для обеспечения правдивого, беспристрастного и безопасного процесса реализации компетенций;

- внедрение современных методов формирования соответствующих навыков для использования центров оценки квалификаций;

Национальная рамка квалификаций Узбекистана является частью Национальной системы квалификаций. Национальная рамка квалификаций является инструментом интеграции рынка труда и сектора образования и определяет основу для оценки обобщенных уровней квалификации.

На основании вышеуказанных нормативных документов в Национальной системе квалификаций Узбекистана были осуществлены следующие мероприятия:

Утверждена Национальная рамка квалификаций Республики Узбекистан;

создан республиканский совет по развитию профессиональных квалификаций, разработан регламент его деятельности;

созданы отраслевые советы по развитию профессиональных знаний и навыков;

Созданы центры профессиональной подготовки для безработных и безработного населения;

налажена деятельность центров оценки компетенций;

установлен порядок аккредитации центров оценки компетенций;

введен порядок разработки, представления и утверждения профессиональных стандартов;

запущено «Обучение на протяжении всей жизни»;

разработана и внедрена электронная платформа национального реестра профессиональных стандартов;

разработан и внедрен реестр юридических лиц, осуществляющих деятельность по оценке компетенций;

введен национальный реестр профессиональных стандартов;

Разработан национальный реестр лиц с подтвержденной квалификацией и внедрена электронная платформа.

Однако при анализе элементов Национальной системы квалификаций и фактического состояния механизмов ее реализации на основе международного опыта установлено, что существуют следующие проблемы, ожидающие своего решения:

На основе развития национальной системы квалификаций Узбекистана проводятся научно-исследовательские работы по созданию научно-методической основы создания национальной рамки квалификаций, сетевых рамок квалификаций, профессиональных стандартов, образовательных программ и инструментов оценки. квалификация не была проведена в достаточной степени;

Отсутствие механизма интеграции национальной системы квалификаций и системы профессионального обучения;

Тот факт, что Национальная рамка квалификаций Республики Узбекистан не сравнивалась и не совершенствовалась с квалификационными рамками зарубежных стран (Европа, Азия) с привлечением международных экспертов;

недостаточная роль отраслевых советов в разработке профессиональных стандартов на основе отраслевых квалификационных рамок;

отсутствие формирования системы оценки и сертификации, обеспечивающей международное признание квалификационных документов.

На основании вышеизложенного можно сделать вывод о необходимости разработки стратегии развития и совершенствования национальной системы квалификаций на основе международного опыта.

Развитие национальной системы квалификаций способствует достижению национальных целей и реализации стратегических национальных приоритетов для всей Республики Узбекистан, создает возможности для научно-технологического, социально-экономического и информационного развития.

В качестве основных направлений развития национальной системы квалификаций мы предлагаем следующие:

Совершенствование методологических, нормативных, правовых и организационных основ национальной системы квалификаций;

Совершенствование механизмов разработки и применения профессиональных стандартов и независимой оценки квалификаций;

Усиление связи рынка труда и системы подготовки кадров;

Развитие инфраструктуры Национальной системы квалификаций;

Обеспечение граждан и работодателей достоверной и актуальной информацией, а также услугами, которые могут быть использованы в сфере получения и подтверждения современной квалификации на основе широкого использования цифровых технологий;

Поддерживать повышение квалификации персонала на основе применения профессиональных стандартов в целях повышения эффективности и безопасности производства, качества продукции и услуг;

Снижение барьеров для доступа молодежи на рынок труда, предотвращение бедности и сокращение социального неравенства.

Необходимость сотрудничества страны с крупнейшими экономиками мира, создания высокотехнологичных предприятий в базовых отраслях, цифровизации национальной экономики и массового внедрения технологических инноваций предъявляет новые требования к человеческим ресурсам, поскольку возможно увеличение рабочей силы, производительности труда и обеспечить высокие темпы экономического роста без изменения качества рабочей силы.

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НЕКОТОРЫЕ ВОПРОСЫ ОБУЧЕНИЯ МАТЕМАТИКЕ ФИЛОЛОГОВ

Аннотация. В данной статье рассматривается Логика, алгебра рассуждений в «Математике для филологов», кванторы, предикаты, элементы теории множеств, функции, элементы комбинаторики, отношения, бинарные отношения, теория вероятностей рассматриваются основные понятия об элементах и вопросы, связанные с ними.

Ключевые слова: математика, высказывание, логические операции, тавтология, равносильность, множество, операции над множествами, равные множества, бинарные отношения, отношения рефлексивности, антирефлексивности, симметричности, антисимметричности, транзитивности, эквивалентности, толерантности, порядка.

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SOME ISSUES FOR TEACHING MATHEMATICS TO PHILOLOGISTS

Annotation. This article discusses Logic, algebra of reasoning in “Mathematics for Philologists”, quantifiers, predicates, elements of set theory, functions, elements of combinatorics, relations, binary relations, probability theory, and examines the basic concepts of elements and issues related to them.

Key words: mathematics, statement, logical operations, tautology, equivalence, set, operations on sets, equal sets, binary relations, relations of reflexivity, anti-reflexivity, symmetry, antisymmetry, transitivity, equivalence, tolerance, order.

Актуальный вопрос всех времен, нужно ли обучать математике студентов гуманитарных специальностей высших учебных заведений, обучающихся по направлениям филология, история, философия, психология, социология, юриспруденция и др. Ответ однозначен, да нужно обучать математике студентов всех направлений и специальностей высших учебных заведений. Этого требует даже название дисциплины. Математика

— слово греческого происхождения, *mathema* — познание, наука, присуще всем дисциплинам. (1)

Огромное значение математики в гуманитарных науках тоже требует обучать математике гуманитариев. Гуманитарные науки изучают свойства и отношения, общность объектов. А математика изучает упорядоченные совокупности объектов, всевозможные структуры. Математика может дать гуманитарным наукам эффективный математический аппарат для исследования, с помощью которого можно установить правила и порядок в гуманитарных структурах.

Естественно, кто не владеет математикой, не имеет способности и возможности проникать в структурные отношения объектов. Владение математическим языком даёт возможность глубоко проникать в суть реальных процессов, так как математический язык создаётся посредством изучения математических моделей реальных процессов.

Математика — это феномен общемировой культуры, в ней отражена история развития человеческой мысли. Математика, с ее строгостью и точностью, формирует личность, предоставляет в ее распоряжение важнейшие ресурсы, столь необходимые для обеспечения наилучшего будущего. (1)

Итак, математическое образование важно с различных точек зрения:
логической — изучение математики является источником и средством активного интеллектуального развития человека, его умственных способностей;

познавательный — с помощью математики познается окружающий мир, его пространственные и количественные отношения;

прикладной — математика является той базой, которая обеспечивает готовность человека как к овладению смежными дисциплинами, так и многими профессиями, делает для него доступным непрерывное образование и самообразование;

исторической — на примерах из истории развития математики прослеживается развитие не только ее самой, но и человеческой культуры в целом;

философской — математика помогает осмыслить мир, в котором мы живем, сформировать у человека развивающиеся научные представления о реальном физическом пространстве. (1)

Математизация гуманитарного образования ориентирована не только на обучение математическому мышлению, но и на развитие с помощью математики самого профессионального мышления гуманитариев. В соответствии с чем приоритетной задачей обучения математике в гуманитарных вузах становится не изучение основ математической науки как таковой, а обще интеллектуальное развитие — формирование у студентов в процессе изучения математики мышления, необходимого для полноценного функционирования человека в современном обществе.

Конкретные математические знания выступают базой организации полноценной в интеллектуальном и идейном отношении деятельности. (1)

Теперь речь пойдет о конкретных математических знаниях, о некоторых из них приведем примеры.

Первое математическое понятие, которое используется в филологии – высказывание. Высказывание это простое повествовательное предложение, которое может принимать истинное или ложное значение. Высказывания обозначаются заглавными латинскими буквами А, В, С,.... Из высказываний с помощью бинарных логических операций конъюнкция (\wedge , и), дизъюнкция (\vee , или), импликация (\rightarrow , если..., то...), эквивалентность (\leftrightarrow , тогда и только тогда) создаются сложные высказывания. Над высказываниями установлена унарная логическая операция-отрицание высказывания (союз не или неверно что). Другими словами, из простых высказываний (предложений) можно получить сложные предложения используя союзы, которые мы перечислили.

Приведем примеры.

А: “Студент совершенно владеет английским языком”;

В: “Студент закончит университет”;

С: “Студент продолжит обучение в магистратуре”;

Д: “Студент будет работать по специальности”.

С помощью этих высказываний можно получить следующие высказывания:

$A \Rightarrow B$: “Если студент совершенно владеет английским языком, то он закончит университет”.

$A \wedge B \Rightarrow C$: “Если студент совершенно владеет английским языком и закончит университет, то он продолжит обучение в магистратуре”.

$B \Rightarrow C \wedge D$ “Если студент закончит университет, то он продолжит обучение в магистратуре и будет работать по специальности”.

$B \Rightarrow C \vee D$ “Если студент закончит университет, то он продолжит обучение в магистратуре и будет работать по специальности”.

$D \Leftrightarrow B$ “Студент будет работать по специальности только в том случае, если он закончит университет”. (2)

В математике импликацию высказываний А и В $A \Rightarrow B$ называют теоремой. А называем условием теоремы, В заключением теоремы. Из теоремы можно получить следующие виды теорем:

$B \Rightarrow A$ обратная к данной теореме теорема.

$\neg A \Rightarrow \neg B$ противоположная к данной теореме теорема

$\neg B \Rightarrow \neg A$ противоположная к обратной теореме теорема. (2).

Пусть даны высказывания:

А: “Слово является прилагательным”

В: “Слово обозначает признак предмета”.

Тогда высказывание $A \Rightarrow B$ читается: “Если слово является прилагательным, то слово обозначает признак предмета”. (истинное

высказывание).

$B \Rightarrow A$: “Если слово обозначает признак предмета, то слово является прилагательным”. (истинное высказывание).

$\neg A \Rightarrow \neg B$: “Если слово не является прилагательным, то слово не обозначает признак предмета”. (истинное высказывание).

$\neg B \Rightarrow \neg A$: “Если слово не обозначает признак предмета, то слово не является прилагательным”. (истинное высказывание).

Рассмотрим еще один пример.

A : “Предложение состоит из двух или более простых предложений” и
 B : “Предложение составное”. Тогда:

$A \Rightarrow B$: “Если предложение состоит из двух или более простых предложений, то это предложение составное”. (истинное высказывание).

$B \Rightarrow A$: “Если предложение составное, то это предложение состоит из двух или более простых предложений” (истинное высказывание).

$\neg A \Rightarrow \neg B$: “Если предложение не состоит из двух или более простых предложений, то это не предложение составное”. (истинное высказывание).

$\neg B \Rightarrow \neg A$: “Если предложение составное, то это предложение состоит из двух или более простых предложений” (истинное высказывание).

Понятно, что все высказывания истинны.

Тавтологией или логическим законом называется формула, которая всегда принимает истинное значение. Тавтологии являются законами мышления.(2)

Если высказывание $A \Leftrightarrow B$ тавтология, то высказывания A и B называются равносильными и обозначается как $A \equiv B$. (1)

Рассмотрим некоторые законы логики.

1. $A \vee \neg A \equiv 1$ (1) – закон исключения третьего. Высказывание может быть либо истинным, либо ложным, третьего варианта нет.

“Это предложение либо простое либо не простое”. (истинно)

2. $A \& \neg A \equiv 0$ ($A \wedge \neg A \equiv 0$) – закон непротиворечия. Высказывание не может быть одновременно истинным и ложным.

“Это предложение простое и не простое”.(ложно)

3. $\neg(\neg A) \equiv A$ - закон двойного отрицания.

A : “Студент отличник”, $\neg A$: “Студент не отличник”, тогда $\neg(\neg A)$: “Неверно, что студент не отличник” и отсюда следует, что “Студент отличник”.

Примеров использования элементов математической логики в филологии можно привести очень много.

Следующее математическое понятие, которое используется в филологии – понятие множество.

Понятие множества является ключевым в математике, без которого невозможно изложение ни одного из ее разделов. (1) Множество является одним из первичных, неопределяемых понятий математики. Множественно-совокупность предметов, объектов, имеющих какое-то общее свойство. (3)

В качестве примеров можно рассматривать множество натуральных чисел, множество студентов группы, жителей многоквартирного дома, плодовых деревьев сада. Предметы, объекты, входящие в данное множество, называются элементами множества. Множества обозначаются заглавными латинскими буквами, элементы – строчными.

Из способов задания множеств мы рассмотрим только перечисление элементов и задание характеристических свойств.

Например, можно задать множество A перечислением элементов – множество букв слова “лето” $A = \{л, е, т, о\}$. Так же множество – это алфавит, гласные, согласные звуки языка. Со свойством: множество прилагательных русского языка, множество имен, глаголов и т.д. (3)

Можно составить огромное количество множеств: женские имена, начинающиеся с буквы A , прилагательные с буквы k , слова, состоящие из четырех букв, двух слогов, слова палиндромы и т.д.

Запись $a \in A$ означает, что a является элементом множества A . Запись $a \notin A$ означает, что элемент a не является элементом множества A (не принадлежит множеству A).

Пример. $A = \{л, е, т, о\}$, $о \in A$, $к \notin A$.

Если все элементы множества A принадлежат множеству B , то множество A называют подмножеством множества B и обозначают $A \subset B$.

$A = \{л, у, ч\}$, $B = \{л, у, ч, и, к\}$ (слова и корни слов).

Введем понятие равенство множеств. Множества A и B равны, если состоят из одинаковых элементов ($A=B$). Понятие равенства множеств можно рассмотреть, как слова, состоящие из одинаковых букв. Равными являются множества, состоящие из букв слов сокол, осколок, колос. $A = \{с, о, к, л\}$,

$B = \{о, с, к, л\}$, $C = \{к, о, л, с\}$. (Если в слове есть повторяющиеся буквы, из них пишется только одна буква). Таких примеров очень много. Пары слов: лето-тело, сон-нос, ток-кот, бар-раб, сила-лиса.

Рассмотрим операции над множествами.

Объединение множеств A и B ($A \cup B$) это множество, элементы которого все элементы, принадлежащих A или B , $A \cup B = \{x \in A \text{ или } x \in B\}$. Например, $\{к, и, н, о\} \cup \{л, е, т, о\} = \{к, и, н, о, л, е, т, о\}$. (В филологии это можно рассмотреть как все буквы этих слов)

Пересечение множеств A и B ($A \cap B$) $A \cap B = \{x \in A \text{ и } x \in B\}$ – одинаковые элементы множеств A и B .

$\{н, е, б, о\} \cup \{л, е, т, о\} = \{е, о\}$ (Одинаковые буквы этих слов)

Разность множеств A и B ($A \setminus B$) есть множество, состоящее из всех элементов A , не входящих в B , т. е. $A \setminus B = \{x \in A \text{ и } x \notin B\}$. (1)

$A \setminus B \neq B \setminus A$

$A \setminus B$: $\{н, е, б, о\} \setminus \{л, е, т, о\} = \{н, б\}$ (Каких букв первого слова нет во втором слове).

$B \setminus A: \{л, е, т, о\} \setminus \{н, е, б, о\} = \{л, т\}$ (Каких букв слова лето нет в слове небо).

Третье математическое понятие, которое широко используется в филологии – бинарное отношение.

Бинарное отношение-это отношение между двумя предметами.

Примерами бинарных отношений:

Между числами: равенства чисель, деления без остатка, число на единицу больше другого, быть меньшим или большим.

Между людьми: быть одноклассником, соседом, коллегами, знакомым.

Между государствами: сотрудничать, иметь общую границу, во флагах есть одинаковые цвета.

Можно привести очень много примеров на бинарные отношения между буквами, звуками, словами, предложениями. Например, две последовательные буквы алфавита, составление слога из двух букв, отношения между словами быть антонимом, синонимом, омонимом, паронимом, однокоренными словами, быть предложением, словосочетанием и т.д. (4)

Отношение между элементами a и b принято обозначать в виде aRb , это обозначение является очень удобным аппаратом при выражении свойств бинарных отношений.

Свойство рефлексивности - $\forall a \in A (aRa)$ – любой элемент множества A находится в отношении R с самим собой. Например, отношения равенства, подобия между геометрическими фигурами, быть равесником между людьми, равенства между числами и т.

Антирефлексивности - $\forall a \in A \neg(aRa)$ никто не выше себя, не старше себя.

Свойство симметричности - $\forall a, b \in A (aRb \Rightarrow bRa)$ - от того что между любыми двумя элементами a и b множества A имеет место отношение R , следует, что отношение выполняется и между элементами b и a . (равенство, ровесник, подобие, одноклассник, сосед, родственник, проживать в одном доме).

Свойство транзитивности- из отношений aRb и bRc следует отношение aRc . ($\forall a, b, c \in A (aRb \& bRc \Rightarrow aRc)$) (равенство, ровесник, подобие, одноклассник, сосед, родственник, проживать в одном доме).

Если отношение имеет свойства рефлексивности, симметричности и транзитивности, то это отношение называется эквивалентным бинарным отношением. (4)

Отношение быть синонимом между словами является эквивалентным бинарным отношением. Проверим.

$\forall a \in A (aRa)$ Каждое слово синоним себе, каждое слово выражает тот смысл, которое у него есть-рефлексивно.

$\forall a, b \in A (aRb \Rightarrow bRa)$ Если слова a и b являются синонимами, то следует, что слова b и a тоже являются синонимами-симметрично.

Если слова a и b являются синонимами, и слова b и c являются синонимами, то слова a и c тоже будут синонимами.

$$\forall a, b, c \in A (aRb \& bRc \Rightarrow aRc) \quad (4)$$

Отношение эквивалентности разбивает множество на классы эквивалентности. Верно и обратное: если множество разбить на классы, то задано отношение эквивалентности. (Деление на классы — деление данного множества на непересекающиеся множества, сумма которых равна заданному множеству.)(5)

Например, отношение проживать на одной улице — эквивалентное бинарное отношение, разбивает людей проживающих на этой улице на непересекающиеся множества соседей (соседи не проживающие в одном доме).

Рассмотрим некоторые бинарные отношения из филологии. Отношение “существительные принадлежат к одному роду” на русском языке разбивает множество имен существительных на три класса эквивалентности-мужской род, женский род, средний род.

Приведем примеры на разбиение классов эквивалентности - главные члены и второстепенные.

Главные члены—подлежащее и сказуемое.

Второстепенные члены— определение, дополнение, обстоятельство.

Глаголы: определенная форма и неопределенная форма глаголов.

Бинарное отношение называется толерантным бинарным отношением, если имеет свойства рефлексивности и симметричности. (5)

Рассмотрим отношение между четырехбуквенными словами “слова отличаются только одной буквой” и п можно “превратить муху в слона”:

Муха-мура-тура-тара-кара-кафе-кафр-каюр-каюк-крюк-крок-срок-сток-стон-слон (1).

Также, используя это отношение можно день превратить в ночь и обратно.

День-тень-течь-точь-ночь.

Использование этого отношения в изучении языков —это очень удобный и полезный аппарат.

Отношение называется отношением порядка, если оно антисимметрично и транзитивно.(6) Отношение следует является отношением порядка и решает многие задачи, заполнение фамилий в журнале, расположение учеников по росту на уроках физкультуры, словарь, алфавит...

Мы постарались на примере трех математических понятий, какие широкие возможности имеет математика в филологии и как можно использовать филологические понятия в объяснении математических понятий. Можно и показать применение в филологии таких математических

понятий как, функция, граф, комбинаторные формулы, формулы теории вероятностей и т.д.

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МОДЕЛИРОВАНИЕ ЗАПЫЛЕННОСТИ АТМОСФЕРЫ КАРАКАЛПАКСТАНА ПУСТЫНЕЙ КЫЗЫЛКУМ

Аннотация. В данной статье представлены результаты предварительных расчетов загрязнения атмосферного воздуха Нижнеамударьинского оазиса пылью с Кызылкумов. В качестве базовой модели выбрано приближение Ермака с учетом скорости сухого осаждения. Модельные расчеты, например, за апрель месяц показали, что вклад только Кызылкумов составляет в среднем для Нижнеамударьинского оазиса $95,8 \text{ мкг/м}^3$, при среднемесячной предельно допустимой концентрации пыли (PM10) 100 мкг/м^3 , установленной СанПиН Республики Узбекистан.

Ключевые слова: пыль, запыленность атмосферы, Нижнеамударьинский оазис, окружающая среда, Кызылкум, математическая модель, база данных.

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MODELING OF DUST CONTAINMENT IN THE ATMOSPHERE OF KARAKALPAKSTAN IN THE KYZYL KUM DESERT

Annotation. This article presents the results of preliminary calculations of atmospheric air pollution in the Lower Amudarya oasis with dust from the Kyzylkum desert. The Ermak approximation taking into account the dry deposition rate was chosen as the base model. Model calculations, for example, for the month of April showed that the contribution of the Kyzylkum alone averages $95.8 \text{ }\mu\text{g/m}^3$ for the Lower Amudarya oasis, with an average monthly maximum permissible dust concentration (PM10) of $100 \text{ }\mu\text{g/m}^3$, established by the SanPiN of the Republic of Uzbekistan.

Key words: dust, atmospheric dustiness, Lower Amudarya oasis, environment, Kyzylkum, mathematical model, database.

Введение. Моделирование запыленности атмосферы, обусловленной выносом аэрозолей из крупных пустынь, представляет собой важную

область исследований в современном моделировании динамики экосистем, особенно в контексте изменения климата и его воздействия на окружающую среду. Пустыни являются значимыми источниками частиц, которые могут влиять на состояние атмосферы, климата, а также на здоровье человека и экосистемы в целом. Это в полной мере относится и к взаимодействию геосистемы пустыни Кызылкум с Нижнеамударьинским оазисом (НО).

Пыль, выносимая ветрами из пустыни Кызылкум, состоит из мельчайших частиц минерального происхождения, в основном из кварца и полевых шпатов, а также некоторого количества глинистых частиц. Эти частицы могут быть различного размера и иметь разные свойства, включая светоотражающие или поглощающие характеристики, что приводит к влиянию на солнечное излучение и тепловой баланс Земли, а также климатические процессы.

Для решения задач моделирования запыленности атмосферы под влиянием выноса аэрозолей из пустынь в настоящее время используются различные программные комплексы, основанные на разных подходах (Shao et al., 2011; Sorek-Hamer et al., 2013; Amgalan et al., 2017; Checa-Garcia et al., 2021). Входные параметры таких моделей учитывают множество факторов - географические особенности пустынь, сезонные, изменения ветровых условий, характеристики пыли и её воздействие на атмосферу.

Методы исследования. Задача моделирования стационарного распределения пустынных аэрозолей может быть решена как в аналитическом приближении, с помощью уравнения для Гауссова шлейфа, так и численно. Особенностью постановки задачи о стационарном распределении примеси для Южного Приаралья являются большая расчетная площадь и недостаточно точно определяемые входные параметры задачи, такие как мощность источника в зависимости от скорости ветра, динамическая скорость, шероховатость поверхности и детальные данные о профиле скорости ветра. В этом случае разумно строить структуру вычислительной модели как набор аналитических функций, входные параметры и результаты которых могут быть сверены и нормированы по неконсистентным наборам экспериментальных данных, причем в ряде случаев такая операция должна быть применена к группам последовательных вычислений с оценкой систематической ошибки. Создание такой вычислительной структуры с помощью традиционных императивных языков программирования сталкивается с большими трудностями, поэтому нами была выбрана реализация вычислительной архитектуры как части базы данных проекта.

Такое решение также позволяет интегрировать расчетный блок непосредственно в базу данных, в виде SQL запросов, обеспечивать высокую гибкость и модульность, а также автоматически формировать наборы метеорологических параметров для различных условий усреднения

или конкретных метеоситуаций, а также легко решать задачи локального суммирования и пространственного анализа результатов вычислений.

Вся расчетная область была разделена на элементарные площадки 18×25 , площадь каждой ячейки 25 км^2 (рис.1). Формируются подмассивы источника $M_{КЗ}$ (Кызылкум) и области воздействия этих источников M_B (Нижнеамударьинский оазис), при расчетах из всего множества элементарных площадок расчетной области.

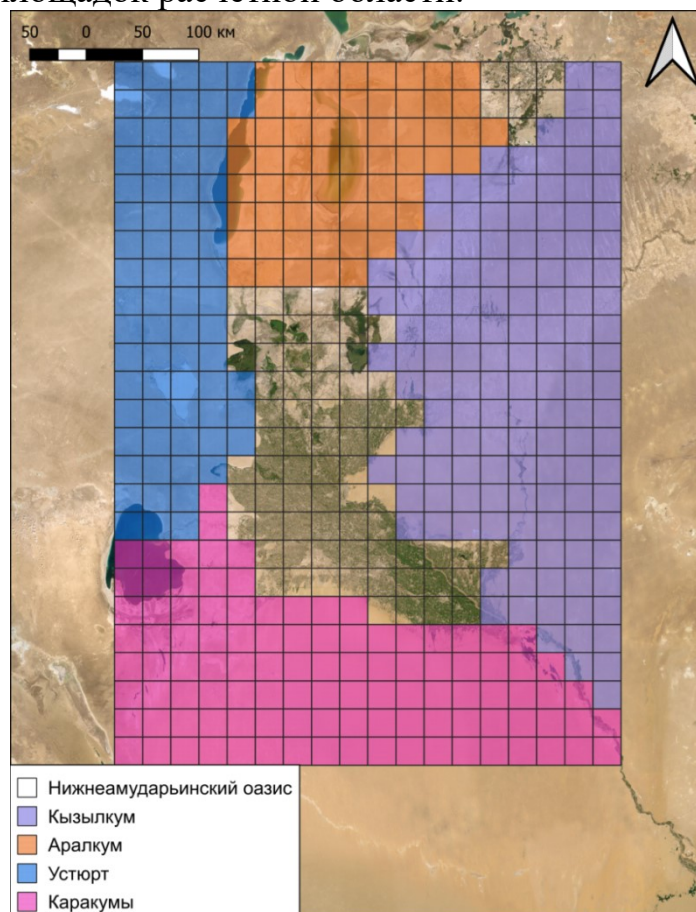


Рис. 1. Нижнеамударьинский оазис и источники запыленности воздуха

В качестве базовой модели было выбрано приближение Ермака (Ermak, 1977), учитывающее скорость сухого осаждения, преобладающего механизма в регионе с аридным климатом.

$$C(x, y, z) = \frac{Q}{2\pi\sigma_y\sigma_z u} \exp\left\{-\frac{y^2}{2\sigma_y^2}\right\} \exp\left\{\frac{-V_g(z-h)}{2K} - \frac{V_g^2\sigma_z^2}{8K^2}\right\} \times \left[\exp\left\{-\frac{(z-h)^2}{2\sigma_z^2}\right\} + \exp\left\{-\frac{(z+h)^2}{2\sigma_z^2}\right\} - \sqrt{2\pi} \frac{V_1\sigma_z}{K} \exp\left\{\frac{V_1(z+h)}{K} + \frac{V_g^2\sigma_z^2}{2K^2}\right\} \right] \quad (1)$$

где $C(x, y, z)$ – концентрация ($\text{г}/\text{м}^3$), Q – интенсивность выноса ($\text{г}/\text{м}\cdot\text{с}$) (Lu, Shao, 2001), u – скорость ветра ($\text{м}/\text{с}$), σ_y – коэффициент горизонтальной дисперсии (м), σ_z – коэффициент вертикальной дисперсии

(м), V_1 – скорость сухого осаждения частицы (м/с), V_g – скорость гравитационного осаждения частицы (м/с), K – коэффициент турбулентной диффузии (м²/с) (Meister et al., 2000; Droppo, 2006; Venkatram, 1980).

По формуле (1) вычисляется пространственное распределение концентрации пыли $C_j(x, y, z, S_i)$ с каждой элементарной площадки j -го подмассива-источника. Таким образом, определяется концентрация пыли в элементах M_B от данной элементарной площадки в конкретном месяце года с заданным для него ветровым режимом. Общая концентрация пыли от j -го источника в элементе (x, y) массива M_B определяется суммированием:

$$C_{Tj}(x, y, z, M_j) = \sum C_j(x, y, z, S_i)$$

Результаты и обсуждение. Модельные расчеты для апреля месяца показали, что при любой скорости ветра пыль с Кызылкумов покрывает весь Нижнеамударьинский оазис (рис.2).

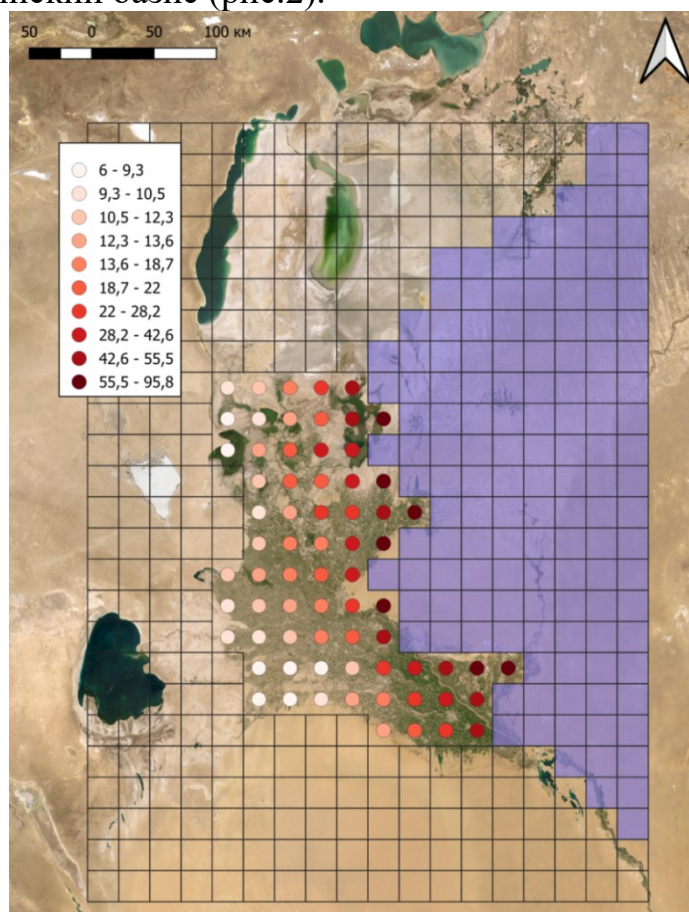


Рис. 2. Среднемесячная концентрация (мкг/м³) пыли за апрель 2023г. в зоне оазиса.

В периоде наибольшей дефляции Кызылкума (апрель-октябрь) преобладают восточное (20%) и северо-восточное направления (19%) ветра. Наибольшая запыленность атмосферы в восточной части Нижнеамударьинского оазиса, наименьшая – в западной части. В

зависимости от скорости ветра за апрель месяц запыленность атмосферы восточной части НО возрастает от 5,6 до 88,9 мкг/м³, запыленность атмосферы северо-восточной части НО – от 0,4 до 6,9 мкг/м³ при среднемесячной ПДК пыли 100 мкг/м³ (Гигиенические нормативы, СанПиН РУз, №0293-11). Южная часть Нижнеамударьинского оазиса подвержена большей запыленности с Кызылкума, чем северная ввиду преобладания северо-восточного направления.

Заключение. Запыленность атмосферы Нижнеамударьинского оазиса, где проживает большая часть населения Каракалпакстана, Хорезма и Ташаузской области Туркменистана, определяет актуальность исследований, направленных на количественную оценку пространственно-временной динамики концентраций пыли, источниками которого являются обширные пустынные территории, окружающие оазис. По модельным расчетам выявлено, что вклад только Кызылкумов за апрель месяц составляет в среднем для Нижнеамударьинского оазиса 95,8 мкг/м³. Построена карта запыленности атмосферы Нижнеамударьинского оазиса Кызылкумами.

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ИЗУЧЕНИЕ РОЛИ ДОБАВОК DHEA В КОМПЛЕКСНОМ ЛЕЧЕНИИ ПРИ НЕДОСТАТОЧНОМ УРОВНЕ АМГ

Резюме. DHEA является регулятором фолликулярной динамики, действующим на ранней прегонадотропинзависимой стадии рекрутирования и роста начальных примордиальных фолликулов. Применение в комбинированной терапии биодобавки DHEA способствует увеличению АМГ у женщин в позднем репродуктивном возрасте.

Ключевые слова: Бесплодие, экстракорпоральное оплодотворение, антимюллерова гормон, дигидроэпиандростендион.

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STUDYING THE ROLE OF DHEA SUPPLEMENTS IN COMPLEX TREATMENT FOR INSUFFICIENT AMH LEVELS

Summary: DHEA is a regulator of follicular dynamics, acting at the early prigonadotropin-dependent stage of recruitment and growth of initial primordial follicles. The use of DHEA supplements in combination therapy contributes to an increase in AMH in women of late reproductive age.

Key words: Infertility, in vitro fertilization, anti-Mullerian hormone, dihydroepiandrosterone.

Введение. Бесплодие – одна из наиболее важных проблем современного человечества. Всемирная Организация Здравоохранения определяет бесплодие как болезнь репродуктивной системы, приводящую к неспособности достичь клинической беременности в течение года и более лет при регулярном незащищённом половом акте. Прогрессирующее ухудшение репродуктивного здоровья является проблемой медицинской, социальной, а в ряде стран, где высока частота бесплодия и резко снижены демографические показатели, проблеме придают экономическое значение [1,5,8]. Современные исследования показывают, что около 48,5 млн пар во всем мире бесплодны, из них 19,2 млн не могут родить первого ребенка, а 29,3 -второго [2]. Интересен тот факт, что при таком глобальном росте

бесплодия этот показатель в развитых странах не меняется на протяжении последних лет. В основном увеличение количества пар, не способных зачать ребенка, наблюдается в странах Южной Азии и Африки [1]. Экстракорпоральное оплодотворение (ЭКО) - это процедура оплодотворения яйцеклеток вне организма женщины с последующим переносом эмбрионов в полость матки (ПЭ) [3]. В настоящее время ЭКО достаточно широко используется во всем мире, однако эффективность этой программы составляет от 20 до 40 % [4]. Причиной таких цифр в большинстве случаев женского бесплодия является истощения овариального резерва, синдром резистентных яичников, гиперандрогения, дисфункция эндометрия. Дегидроэпиандростерон (DHEA) впервые был выделен из мочи человека А. Butenandt и Н. Dannenbaum в 1934 г. Спустя 10 лет Р. Munson и соавт. (1944) изолировали сульфат дегидроэпиандростерона (DHEAS), а в 1954 г. С. Migeon и J. Plager идентифицировали его в крови человека. Французский эндокринолог Е. – Е. Baulieu (1960) доказал, что прогормон секретируется надпочечниками [2]. До недавнего времени считалось, что мужские половые гормоны оказывают отрицательное влияние на фолликулогенез, рассматриваются как причина различных метаболических и функциональных нарушений. При нормальном менструальном цикле главными мужскими половыми гормонами являются тестостерон и дигидротестостерон. К прогормонам относятся DHEA, DHEAS и андростендион. Их андрогенные свойства проявляются после конверсии в тестостерон. Прогормон DHEA является одним из главных предшественников половых стероидов, синтезируется в сетчатой зоне надпочечников, в текаклетках яичников, а также в печени. В постменопаузе почти все эстрогены и андрогены производятся локально в периферических тканях-мишенях из DHEA.

Цель исследования. Выяснить роль DHEA в динамике роста фолликулов в яичниках женщин и изучить взаимодействие добавок DHEA с другими методами индукции овуляции, особенно у женщин старшего репродуктивного возраста у которых снижен уровень антимюллера гормона.

Материал и методы исследования. Нами были исследованы группа женщин состоящие из 70 лиц страдающие диагнозом бесплодия по типу снижения уровня антимюллера гормона. Возраст женщин составляет от 38 до 45 лет. Мы разделили женщин на две группы. 1-группу составили женщины, которым назначалась биодобавка DHEAS в виде капсул в дозе 75мг в сутки. 2-группе назначили DHEAS в дозе 75 мг в сутки плюс дополнительные 150 единиц ФСГ в день первые 5 дней менструального цикла. Использовали лабораторные и инструментальные методы исследования. Проверяли анализ крови на уровень АМГ и DHEA, эстрадиола до и после терапии, а также делали фолликулометрию в динамике на УЗИ исследовании.

Результаты. ДНЕА является регулятором фолликулярной динамики, действующим на ранней прегонадотропинзависимой стадии рекрутирования и роста начальных примордиальных фолликулов. Результаты собственных наблюдений были следующими: у всех 70 женщин был снижен уровень АМГ в сыворотке крови $>1,0$ нг/мл и наблюдался ановуляторный менструальный цикл в течении 6 циклов подряд. Диаметр антральных фолликулов не достигал 10 мм. Многие из них были согласны на процедуру ЭКО. После всех клинико-лабораторных анализов мы назначили 1-группе женщин биодобавку ДНЕА в виде капсул по 75 мг каждое утро в течении 2х месяцев с контрольным УЗИ исследованием фолликулов на 9-12-14 дни менструального цикла. Посчитали количества и диаметр фолликул. их количества составило 8-10 штук с диаметром по 8-15 мм, с одним или двум доминантными фолликулами размером 18-20 мм в обоих яичниках. Второй группе женщин мы назначили препарат фоллитоп (ФСГ) 150 ед с первого дня цикла 5 дней внутримышечно наряду с препаратом ДНЕА в виде капсул по 75 мг в сутки каждый день в течении 2х месяцев. На фолликулометрии на 9-12-14 дни цикла количество фолликулов составило 10-15 штук с диаметром по 10-12-16 мм. Определялись доминантные фолликулы размером 20-22 мм в количестве 2 и более в обоих яичниках. Эти данные были сопоставлены с лабораторными данными крови на уровень АМГ. После двух месяцев лечения уровень АМГ значительно возрастало в крови исследуемых женщин в обеих группах (2-3.2 нг\мл).

Обсуждения. Контрацептивы не могут оказывать какого-либо влияния на фолликулярный резерв вообще. Это распространенное заблуждение женщин, принимающих КОК, не только в целях предохранения, но и в целях «сохранения» яйцеклеток. ДНЕАС и ДНЕА свободно и непрерывно взаимопревращаются. Процесс катализируется гидроксистероидной сульфотрансферазой и стероидной сульфатазой. Концентрация ДНЕАС не меняется в течение дня, в то время как секреция ДНЕА имеет суточный ритм, аналогичный секреции кортизола, но в отличие от последней снижается в утренний период [7]. ДНЕАС является циркулирующей гидрофильной формой и более стабильным маркером свободного ДНЕА, так как не связан ни с каким белком и не изменяется в течение менструального цикла. При наличии специфических ферментов в любой клетке ДНЕА трансформируется в андростендион и тестостерон, которые могут превращаться в эстрогены.

Выводы. Основываясь на данные собственных наблюдений нами было установлено: Лечение с ДНЕА повысит частоту наступления беременности среди женщин в возрасте от 40 до 45 лет, увеличивает количество антральных фолликулов, приведет к повышению уровня антимюллера (АМГ) гормона. А также лечение с биодобавками ДНЕА увеличивает средний и пиковый уровень эстрадиола в фолликулярной фазе,

увеличит количество ооцитов, полученных в циклах ЭКО, по сравнению с плацебо. Два месяца предварительной обработки ДНЕА приведут к: - увеличению количества антральных фолликулов, увеличению АМГ, - увеличению среднего и пикового уровня эстрадиола и увеличению производства ооцитов.

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АНАЛИЗ НАУЧНЫХ ИССЛЕДОВАНИЙ ПРИМЕНЕНИЯ ЗОНИСАМИДА ПРИ ФОКАЛЬНОЙ ЭПИЛЕПСИИ

Аннотация. В обзоре представлен противоэпилептический препарат нового поколения зонисамид. История введения в клинику, фармакодинамические особенности, фармакологические эффекты, фармакокинетика, описание эффективности применения зонисамида в сравнении с другими традиционными противоэпилептическими препаратами.

Ключевые слова: фокальная эпилепсия, вторичная генерализация, эффективность, безопасность, зонисамид

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ANALYSIS OF SCIENTIFIC STUDIES ON THE USE OF ZONISAMIDE IN FOCAL EPILEPSY

Annotation. The review presents new generation of antiepileptic drug zonisamide. History of introduction to the clinic, pharmacodynamic features, pharmacological effects, pharmacokinetics, description of the effectiveness of zonisamide in comparison with other traditional antiepileptic drugs.

Key words: focal epilepsy, secondary generalization, efficiency, safety, zonisamid.

За последние годы было внедрено почти два десятка противоэпилептических препаратов (ПЭП) с различными механизмами действия с целью обеспечения более высокой эффективности и безопасности по сравнению с предыдущими препаратами. В настоящем обзоре мы рассмотрели недавние исследования, посвящённые клиническому применению одного из таких препаратов — зонисамиду (ЗНС). ЗНС является одним из первых представителей генерации противоэпилептических препаратов (ПЭП) нового поколения, который обладает широким спектром терапевтического действия, имеет благоприятный профиль переносимости и простой режим дозирования (1 раз в сутки) по сравнению с ПЭП предыдущих поколений. Препарат был синтезирован в 70-х гг. прошлого века в лаборатории Daiipron Pharmaceutical Company (г. Осака, Япония) и с 1989 года назначался как дополнительная терапия, затем — как монотерапия (МТ) фокальной и генерализованной эпилепсии. В качестве противоэпилептического препарата ЗНС был одобрен в Корее с 1992 года. Позже ЗНС был зарегистрирован к применению в режиме дополнительной терапии парциальных эпилептических приступов с вторичной генерализацией или без у взрослых в США (2000 г.), а затем в ЕС (2005 г.) и других странах мира, в том числе в РФ (с 2011 г.). Зонисамид с 2013 года был внесён в список Международной противоэпилептической лиги (ILAE) в качестве начальной монотерапии с доказательной эффективностью уровня А для взрослых с фокальными приступами. В Узбекистане препарат был зарегистрирован в феврале 2021 года (лицензирован под торговым названием Зоресан). Таким образом, к настоящему времени накоплен более чем 30-летний клинический опыт широкого применения данного препарата во всём мире. ЗНС показал высокую клиническую эффективность, переносимость и ретенцию у пациентов с фармакорезистентной эпилепсией в рандомизированных клинических исследованиях (РКИ) и клинической практике [1,2].

Относительно фармакодинамики данного препарата можно сказать, что ЗНС имеет оригинальную химическую структуру, является производным сульфонида бензисоксазола с противосудорожными свойствами. В отличие от других противосудорожных препаратов ЗНС обладает широкой комбинацией механизмов действия, в чём и проявляется его преимущество. Препарат имеет способность блокировать как кальциевые, так и натриевые каналы, усиливает высвобождение гамма-аминомасляной кислоты и подавляет высвобождение глутамата. Кроме этого ЗНС имеет способность изменять метаболизм дофамина, серотонина и ацетилхолина. Это определяет его эффективность при некоторых резистентных к терапии случаях, а также при лечении других заболеваний нервной системы в частности эссенциального тремора и болезни Паркинсона, мигрени и нейропатической боли, мании, биполярных и

тревожных расстройств, ожирении и конечно открывает новые горизонты в условиях коморбидности [3,4].

На основании знаний основ нейронных изменений при эпилепсии Kumar В. и соавторы изучили механические пути нейропротекторных агентов при эпилепсии. Они выявили молекулярные и биохимические механизмы, которые участвуют в нейропротективном потенциале зонисамида при эпилепсии. Результаты их исследования показали, что лечение зонисамидом предотвращало развитие судорог у животных. Вызванный судорогами выброс свободных радикалов и нейровоспаление заметно уменьшались при введении зонисамида. Исследователи связывают механизмы выявленного нейропротекторного потенциала зонисамида с ослаблением окислительного стресса, и, следовательно, воспалительного каскада и гибели нейронов, связанных с прогрессированием судорог. Это свидетельствует о том, что зонисамид может быть использоваться в качестве нейропротекторного средства при эпилепсии и других нейродегенеративных расстройствах [5].

Исследование, проведённое He J. и соавторами на мышах, показало, что ЗНС ингибирует апоптоз нейрональных клеток при церебральной ишемии, улучшает исход церебральной ишемии и, таким образом, может быть многообещающей терапевтической стратегией при церебральном инсульте [6].

Благоприятный фармакокинетический профиль ЗНС обусловлен удобством применения, хорошей переносимостью, стабильностью клинических эффектов и низким потенциалом лекарственного взаимодействия. Однократный приём препарата повышает комплаентность терапии, а относительно низкий процент связывания с белками плазмы крови (40%) и незначительное влияние на ферменты печени обеспечивают минимальное взаимодействие с другими ПЭП (при политерапии) и оральными контрацептивами.

Результаты многих клинических исследований показали эффективность применения ЗНС в сравнении с другими традиционными АЭП. Так Зонисамид не уступал карбамазепину с контролируемым высвобождением в 3 фазе рандомизированного двойного слепого параллельного группового исследования, проведённого Baulac M. и соавторами, и был рекомендован исследователями в качестве начальной монотерапии для пациентов с впервые диагностированной парциальной эпилепсией [7,8,9].

Оценку эффективности и безопасности противоэпилептической терапии с применением ЗНС в Корее провели Lee H.J. и соавторы. В исследование было включено всего 1948 пациентов, эффективность ЗНС оценивалась у 1744 больных. ЗНС был назначен в качестве монотерапии у 1095 пациентов и в качестве дополнительного препарата у 853 пациентов. У 1345 (69,1%) из общего числа пациентов были зарегистрированы

парциальные припадки, у 563 пациентов - генерализованные приступы, у 40 пациентов приступы были неопределенными. Нежелательные реакции были отмечены у 65 пациентов (3,34%), при этом о серьезных неожиданных побочных реакциях на лекарственные средства не сообщалось. У 755 пациентов (43,29%) приступы прекратились при лечении ЗНС, а еще у 322 пациентов (18,41%) наблюдалось заметное улучшение. Результаты данного исследования показали переносимость и безопасность терапии ЗНС в реальных клинических условиях. Кроме того, они обнаружили, что ЗНС является эффективным вариантом монотерапии и у пациентов с генерализованными припадками [10].

Hubert K. и соавторы изложили клинические случаи перорального применения зонисамида при рефрактерных проявлениях эпилептического статуса (ЭС) у 34 пациентов, проходивших лечение во Франкфурте и Марбурге. При этом пациенты до начала терапии зонисамидом уже прошли безуспешное лечение в среднем тремя другими противосудорожными препаратами. Анализ результатов исследования привёл авторов к мнению, что уровень разрешения ЭС, связанный с лечением зонисамидом, можно считать значимым, а зонисамид рассматривать, как альтернативный вариант лечения ЭС и рефрактерной эпилепсии. Исследователи аргументируют данные выводы тем, что терапия ЗНС, как правило, назначалась только после того, как были опробованы несколько других препаратов, а латентный период лечения составил более шести дней [11].

Влияние монотерапии зонисамидом (ЗНС) на минеральную плотность костной ткани (МПКТ) и биомаркеры, специфичные для костного метаболизма (костноспецифическая щелочная фосфатаза, паратиреоидный гормон, остеокальцин, уровни инсулиноподобного фактора роста-1, С-телопептид и витамин D3) были изучены Коо DL и Нам Н. Для достижения цели была использована двухэнергетическая рентгеновская абсорбциометрия до и после длительной монотерапии ЗНС. При оценке полученных данных был использован ковариационный анализ. Возраст, пол, продолжительность лечения и доза ЗНС были включены в качестве ковариантов для корректировки модели ковариационного анализа. Через 13 месяцев лечения ЗНС у обоих полов не наблюдалось значительных изменений минеральной плотности кости и биомаркеров костного метаболизма. Результаты исследования показали, что длительная монотерапия ЗНС не оказывает негативного влияния на здоровье костей у пациентов с эпилепсией, ранее не получавших лечения [12].

Исследование, направленное на оценку переносимости и эффективности зонисамида (ЗНС) у взрослых пациентов с лекарственно-устойчивой эпилепсией и умственной отсталостью, было проведено Еск К. и соавторами в центре эпилепсии. Они пришли к выводу, что зонисамид может обеспечить безопасный и эффективный терапевтический вариант для пациентов с умственной отсталостью и резистентной к лекарствам

эпилепсией. К такому выводу пришли учёные, ретроспективно оценив 87 пациентов с умственной отсталостью и фармакорезистентной эпилепсией. Оценка, включая расчёт коэффициента удержания, была проведена с интервалом 3–6, 9–12 и 21–24 месяцев после начала терапии ЗНС. При этом уровень удержания через 24 месяца составил 60%. 28% пациентов прекратили терапию ЗНС из-за увеличения частоты приступов, отсутствия эффективности или нежелательных явлений. Наиболее распространёнными нежелательными явлениями оказались седативный эффект, нарушение речи, вызывающее поведение, легкая сыпь и головокружение. При этом частота ответа составила 40%, а у 9% приступы прекратились. Что касается изменений в массе тела необходимо отметить, что исследователи определили пожилой возраст как значительный фактор риска для потери веса [13].

Положительное влияние ЗНС на пациентов с эпилепсией утверждают также Huang CR. и соавторы руководствуясь выводами проспективного исследования проведённого в Тайване. К такому заключению они пришли исследовав 126 пациентов в возрасте 18- 65 лет. Они также утверждают положительное влияние ЗНС на пациентов с эпилепсией и метаболическим синдромом, особенно у пожилых пациентов с повышенным риском сосудистых заболеваний и ожирением [14].

Таким образом, широкая комбинация механизмов действия, эффективность при различных типах эпилептических приступов, линейность и предсказуемость фармакокинетики, удобный для пациента и повышающий комплаентность терапии однократный приём, минимальные лекарственные взаимодействия, высокая эффективность при различных формах эпилепсии, безопасность и хорошая переносимость определяют перспективность препарата ЗНС не только при фокальных и генерализованных, но и при резистентных формах, как в качестве добавочной, так и в качестве монотерапии.

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ПОДДЕРЖКА ФИНАНСОВЫХ УЧРЕЖДЕНИЙ В СОДЕЙСТВИИ ЦИФРОВОЙ ТРАНСФОРМАЦИИ В ОТРАСЛИ ПЧЕЛОВОДСТВА

Аннотация. В статье описаны организационные и экономические рычаги содействия трансформации цифровых технологий в отрасли пчеловодства. Описаны предложения по субсидированию внедрения цифровых технологий в сети. Также в целях поддержки структур, финансирующих внедрение цифровых технологий, раскрыта организация фонда «Технологический трансфер в пчеловодстве» и источники его финансирования.

Ключевые слова: пчеловодство, цифровизация, стимулирование, цифровые технологии, субсидии, «Технологический трансфер в пчеловодстве», 3D-устройства, спутниковая навигация, большие данные.

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SUPPORTING FINANCIAL INSTITUTIONS IN PROMOTING DIGITAL TRANSFORMATION IN THE BEEKEEPING INDUSTRY

Abstract. The article describes the organizational and economic levers for promoting the transformation of digital technologies in the beekeeping industry. Proposals for subsidizing the implementation of digital technologies in the network are described. Also, in order to support structures that finance the implementation of digital technologies, the organization of the “Technological Transfer in Beekeeping” fund and the sources of its financing are disclosed.

Keywords: beekeeping, digitalization, incentives, digital technologies, subsidies, “Technological transfer in beekeeping”, 3D devices, satellite navigation, big data.

Введение. Опыт развитых стран показывает, что деятельность, связанная с цифровизацией сельского хозяйства, всегда осуществляется под контролем государства и с помощью механизмов поддержки. В частности, в технологически развитых странах, таких как США, Германия и Япония, где высока доля частного сектора и высокое качество обслуживания, вопрос цифровизации сельского хозяйства возложен на государство.

А именно, возрастает потребность в организации и экономическом стимулировании отрасли, а целью обеспечения является потребность населения нашей страны в натуральных и органических продуктах, развитие пчеловодства и цель повышения продуктивности сельскохозяйственной культуры и внедрение современных инновационных технологий.

Основываясь на наших исследованиях, мы считаем, что организационные и экономические рычаги должны широко использоваться в качестве способов стимулирования цифровой трансформации в пчеловодстве. В частности, по организационному направлению целесообразно реализовать следующие задачи:

- организация «Умных ульев», проведение исследований и экспериментов, связанных с адаптацией к климатическим условиям нашей страны;
- совершенствование правовой базы использования цифровых устройств и пультов дистанционного управления и создание системы, простой для всех;
- проведение семинаров по популяризации, пропаганде и разъяснению использования цифровых устройств;
- организация пчелиных ферм, оснащенных интеллектуальными устройствами для целевого и упорядоченного использования лесных угодий и т.д.

Также мы считаем, что в качестве экономических направлений содействия внедрению цифровых технологий в пчеловодстве необходимо решить следующие задачи. Включая:

- внедрение системы льготного кредитования фермерских хозяйств, полностью внедривших цифровые технологии, и совершенствование системы страхования;
- финансовая поддержка предприятий, производящих интеллектуальные устройства, через кооперационные отношения с экономикой;
- введение системы стратифицированного субсидирования хозяйств, внедривших цифровые технологии, для определенного процента от общего количества пчелиных семей;
- фонды организации, развития и т.п., помогающие финансово поддерживать внедрение цифровых технологий в пчеловодстве.

Роль каждого из этих организационно-экономических рычагов на практике несопоставима, что подтверждается монографическими исследованиями. Отмечалось, что положительный эффект дадут страхование, льготное кредитование, субсидии, формирование отдельных фондов финансирования промышленности.

Поэтому наше исследование основано на научном предложении с особым упором на субсидии, создание специальных фондов и их финансирование. В частности, анализ анкет, проведенных в регионах,

показывает, что если на одной пасеке в среднем 1 павильон (32 улья, 64 семьи), то не менее 4 ульев (12,5 %) должны быть оснащены цифровой техникой под постоянным контролем. Только тогда можно будет следить за ежедневным состоянием пчел в минимальном реальном времени.

Исходя из этого, предлагается установить минимальный критерий выделения субсидий на цифровизацию пчеловодческих хозяйств. Целесообразно ввести стратифицированную систему субсидирования фермеров, соответствующих этому критерию на минимальном уровне и заинтересованных в его увеличении в соответствии с количеством ячеек в павильоне (таблица 1).

Таблица 1

Система субсидирования пчеловодческих хозяйств, внедривших цифровые технологии, и ее уровни

Размер субсидии	Минимальные критерии	Дифференцированное использование		
		Выполнено минимальное требование	введено до 30 процентов	представлено 50 процентам
В размере 5-кратной суммы основного расчета	Внедрение цифровой технологии в 12,5% от общего количества ульев.	1,0	5,0	10,0
Также возможно введение коэффициентов по региону и типу предприятия				
Для горного и предгорного пчеловодства		1,0	5,0	10,0
Для пчеловодства на хлопке		1,0	8,0	12,0
Для пустынного и полупустынного пчеловодства.		1,5	6,5	11,0

При субсидировании пчеловодческих хозяйств, внедривших цифровые технологии, предлагается выделить субсидию в размере 5 млрд кубометров исходя из фактической оценки по состоянию на 2023 год.

Эту сумму следует увеличить в 5 раз для хозяйств, внесших ее до 30% от общего количества гнезд в хозяйстве, а если она была внесена до 50%, то ее следует применить в 10 раз.

В то же время данное количество используется для горного и предгорного пчеловодства, учитывая высокое воздействие химикатов для медоносных хозяйств в хлопкосеющих районах предлагаются коэффициенты от 8 до 12, соответственно 30% и 50%.

Возрастающая роль частного сектора в рыночных отношениях является закономерным процессом и на начальных этапах государственное субсидирование служит созданию предприятий и широкому продвижению новых технологий, а в дальнейшем должно работать с помощью рыночных механизмов. Для этого целесообразно создать структуры, финансирующие

внедрение этих технологий и поддерживающие агентства. Поэтому в наших исследованиях мы считаем необходимым создать фонд «Технологический трансфер в пчеловодстве» (рис. 1).

Целью создания фонда является финансовая поддержка внедрения современных цифровых технологий в пчеловодческих хозяйствах, предоставление им льготных кредитов, содействие внедрению новых технологий в практику, а также повышение интересов и навыков пчеловодческих хозяйств.

В ходе своей деятельности данный фонд выполняет следующие задачи. В частности:

- укрепление материально-технической базы пчеловодческих хозяйств, внедрение цифровых технологий, выделение кредитных ресурсов на цели обучения и дальнейшее расширение их использования;
- финансовая поддержка инновационной деятельности медоводов, стимулирование создания, производства и внедрения современных приборов;
- финансирование целевых государственных, отраслевых и региональных программ, научно-технических проектов, направленных на развитие пчеловодства, а также участие в реализации этих мероприятий;



Рисунок 1. Техничко-экономические связи фонда «Трансфер технологий в пчеловодстве»

- поддерживать деятельность производителей, переработчиков и поставщиков меда, нуждающихся в оборотных средствах при внедрении цифровых технологий;

- налаживание лизинговой деятельности в целях предоставления специальных транспортных средств, оборудования, приспособлений для перевозки меда и продуктов пчеловодства, а также сотрудничество с заинтересованными лицами в этих целях. Цифровые технологии в пчеловодстве не только повышают эффективность производства и улучшают качество продукции, но и способствуют более точному управлению ресурсами, снижению затрат и повышению устойчивости всей отрасли. Эта тенденция набирает обороты, и ожидается, что цифровые технологии продолжат трансформировать пчеловодство в будущем.

При формировании финансовых ресурсов этого фонда совместно с целевыми и донорскими фондами государства предлагаются источники формирования фондов, направленных на специальные и общие льготы (рис. 2).

Согласно ему, в качестве специального стимула предлагается выделить населению средства в размере 20% рыночной стоимости земли, отведенной под пчеловодство, и 50% налога на добавленную стоимость и пошлины на импортную медовую продукцию и пчеловодческий инвентарь.

Также в качестве общего стимула желательно создать фонды, формируемые за счет выделения 15% стоимости коммерциализации исследований, связанных с цифровыми устройствами, а также за счет выделения 50% налоговых льгот, предоставляемых в результате внедрения умных устройств.

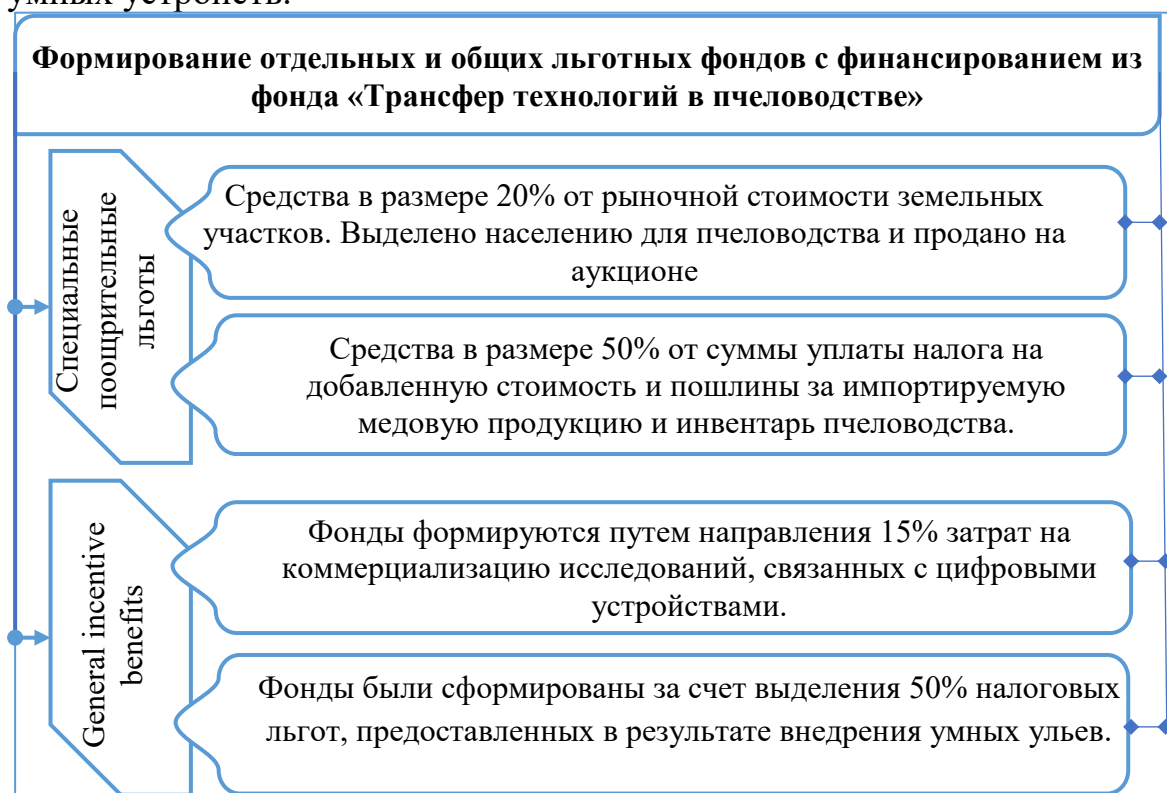


Рисунок 2. Формирование средств, выделенных со специальными льготами для финансирования Фонда «Трансфер технологий в пчеловодстве»

Выводы и предложения.

Создав фонд «Трансфер технологий в пчеловодстве», мы добьемся следующего:

- цифровизация пчеловодства;
- привлечение частного сектора к внедрению «умных» ульев;
- расширить масштабы реализации инновационных проектов, реализуемых в сфере;
- коммерциализация,
- создать условия для материально-технического и финансового стимулирования фермерских хозяйств;
- с другой стороны, оно служит созданию ряда эффектов, как социальных (продовольственная безопасность, развитие науки,

технологическое вооружение, формирование навыков), так и экономических (высокие прибыли, наличие конкурентного сегмента рынка, снижение безработицы).

Поддержка финансовых учреждений в содействии цифровой трансформации в пчеловодческой отрасли необходима для стимулирования инноваций, повышения производительности и обеспечения устойчивости практики пчеловодства. Эта инициатива потенциально может произвести революцию в традиционных методах пчеловодства за счет интеграции цифровых технологий, тем самым решая проблемы и извлекая выгоду из новых возможностей в этом секторе.

В заключение, поддержка финансовых учреждений в содействии цифровой трансформации в отрасли пчеловодства имеет важное значение для раскрытия всего потенциала цифровых технологий для улучшения практики пчеловодства, содействия экономическому росту и содействия экологической устойчивости. Реализуя эти предложения, заинтересованные стороны могут создать благоприятную среду для пчеловодов, чтобы они могли использовать цифровые инновации и процветать в эпоху цифровых технологий.

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КОМПЬЮТЕРНЫЕ МОДЕЛИ КОМБИНИРОВАННЫХ СИСТЕМ, ХАРАКТЕРНЫХ ДЛЯ КОНСТРУКЦИЙ ВЫСОТНЫХ ЗДАНИЙ

Аннотация. Статья посвящена изучению комбинированных систем компьютерной модели, характерных для конструкций высотных зданий. Рассказывается о построении конечно-элементной модели, как и любой расчетной схемы, начинается с идеализации конструкции. Этот этап настолько привычен и естественен для инженера, что, как правило, он выполняется подсознательно, хотя полезно иногда осмыслить выполняемые действия.

Ключевые слова: комбинированные системы, компьютерная модель, идеализация конструкции, высотные здания, конструкция.

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COMPUTER MODELS OF COMBINED SYSTEMS TYPICAL FOR THE STRUCTURES OF HIGH-RISE BUILDINGS

Abstract. The article is devoted to the study of combined computer model systems typical for high-rise building structures. It tells about the construction of a finite element model, like any calculation scheme, begins with the idealization of the design. This stage is so familiar and natural for an engineer that, as a rule, it is performed subconsciously, although it is sometimes useful to comprehend the actions performed.

Keywords: combined systems, computer model, idealization of construction, high-rise buildings, construction.

Построение конечно-элементной модели, как и любой расчетной схемы, начинается с идеализации конструкции. Этот этап настолько привычен и естественен для инженера, что, как правило, он выполняется подсознательно, хотя полезно иногда осмыслить выполняемые действия. При решении практических задач часто возникают вопросы, связанные с выбором типа элемента. Ведь для решения одной и той же задачи существует целый набор конечных элементов, имеющих различные свойства.

Расчет пространственных систем может выполняться методом сил и перемещений. В настоящее время, в связи с развитием численных методов, фундаментальным становится метод конечных элементов (МКЭ).

По методу конечных элементов конструкция представляется в виде совокупности отдельных конечных элементов (дискретных систем), взаимодействующих между собой в конечном числе узловых точек. Замена исходных конструкций совокупностью дискретных систем подразумевает равенство энергии конструкции и ее дискретной модели. [2]

При составлении компьютерной модели комбинированных систем (плита, подпертая ребрами, плоские или пространственные рамно-связевые системы, плита, опирающаяся на вертикальные стержни, балка-стенка, опирающаяся на плиту или наоборот и многие другие) могут возникнуть различные трудности. Трудности возникают при стыковке конечных элементов, имеющих различные базисные функции или различный набор узловых неизвестных. [1]

Стыковки рамного стержня с диафрагмой.

Здесь трудность обусловлена тем, что конечные элементы плоского напряженного состояния (балки стенки) не имеют степени свободы соответствующей углу поворота относительно оси ортогональной плоскости диафрагмы. Попытки ввести эти степени свободы, например в виде $\frac{\partial u}{\partial x} - \frac{\partial v}{\partial x}$, ни к чему не приводили, так как конечные элементы с такого типа степенями свободы не имели сходимости. Поэтому узел А (рис.а) без каких-либо дополнительных мер будет для стержня шарнирным. Для организации защемления рамного стержня в теле диафрагмы можно рекомендовать введение дополнительного стержня между узлами А и В. С одной стороны, введение такого стержня будет вносить некоторые возмущения в локальной области диафрагмы в районе узла А, но с другой стороны в ряде случаев это будет моделировать конструктивное решение узла (заведение арматуры примыкающего стержня с целью анкеровки).



Рис.а Опираение плиты на точечную опору.

Такого же типа проблема возникает в задаче опирания плиты на одиночную колонну при необходимости восприятия крутящих воздействий относительно вертикальной оси колонны. В этом случае рекомендовать введение абсолютно жестких вставок (рис. б) А-В, жестко связанного со стержнем колонны.

Такое решение с одной стороны, решает проблему учета «тела» колонны, то есть «срезки» пика моментов, возникающего при моделировании опирания на колонну как на точечную опору. С другой стороны, обеспечивает восприятие колонной крутящих деформаций. В большинстве же случаев, когда имеется по крайней мере хотя бы две колонны, этого не требуется, так как в этом случае крутящий момент от деформации в плоскости плиты будет восприниматься парами поперечных сил в колоннах, а крутящие моменты в этих случаях будут пренебрежимо малы и их наличие просто можно не учитывать (эффект пренебрежения моментами в законструированных жестких узлах ферм, когда в расчет были введены шарнирные узлы).

Аналогичный эффект наблюдается при моделировании диафрагм конечными элементами плоского напряженного состояния, хотя на самом деле плиты перекрытий, как правило, жестко связаны с диафрагмами и в последних возникают изгибающие моменты.

Опираение плиты на стену (диафрагму).

В этом случае необходимо иметь ввиду, что вдоль верхнего канта диафрагмы имеет место нестыковка базисных функций КЭ плиты (балочные функции) с базисными функциями КЭ плоского напряженного состояния, моделирующими работу диафрагмы (полилинейные функции – см. рис.в) такие нестыковки не являются препятствием для адекватности расчетной схемы, так как при сгущении сетки параметры НДС плиты и диафрагмы будут приближаться к точному решению (конечно, при использовании правильных конечных элементов) а совместность работы плиты и диафрагмы будут обеспечиваться одинаковыми линейными перемещениями в узлах стыковки.

Использование типов конечных элементов, кинематические характеристики которых наиболее близко соответствуют характеристикам реальных конструкций, приводит к более точной реализации расчета конструкции сооружения в целом.

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**ИЗМЕНЕНИЕ СТЕПЕНИ МИНЕРАЛИЗАЦИИ ПОДЗЕМНЫХ ВОД
АХАНГАРАНСКОГО БАССЕЙНА ПОД ВОЗДЕЙСТВИЕМ
АЛМАЛЫКСКОГО ГОРНО-МЕТАЛЛУРГИЧЕСКОГО
КОМБИНАТА**

Аннотация. Представлены результаты исследования некоторых физических и гидрохимических составов хозяйственно-питьевых источников воды, используемых для нужд АГМК на объектах использования подземных вод Алмалыкского горно-металлургического комбината (АГМК).

Ключевые слова: Подземные воды, бассейн, гидрохимия, измерения, скважина, водозабор. минерализация, проба, сезон.

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**CHANGES IN THE DEGREE OF MINERALIZATION OF
GROUNDWATER IN THE AKHANGARAN BASIN UNDER THE
INFLUENCE OF THE ALMALYK MINING AND METALLURGICAL
COMBINE**

Abstract. The results of a study of some physical and hydrochemical compositions of domestic and drinking water sources used for the needs of the Almalyk Mining and Metallurgical Plant (AMMC) are presented.

Key words: Groundwater, basin, hydrochemistry, measurements, well, water intake. mineralization, sample, season.

Актуальность: Среди всех водных ресурсов, ресурсы подземных вод играют ведущую роль с точки зрения водопользования. Питьевая вода – одно из основных направлений. Ведь подземные воды отличаются от поверхностных тем, что они защищены от всех открытых источников загрязнения [2].

Подземные воды используются не только в качестве питьевой воды, но и для орошения, различных промышленных предприятий, горнодобывающей промышленности. К сожалению, в большинстве случаев промышленные предприятия также являются причиной загрязнения подземных вод [4, 5].

Алмалыкский горно-металлургический комбинат (АГМК) расположен в Ахангаранском бассейне. За время своей работы завод использовал ресурсы подземных вод. Влияние растений на грунтовые воды изучено недостаточно. Изучение влияния АГМК на ресурсы подземных вод является актуальной проблемой, особенно в условиях водного дефицита. В соответствии с решением Президента Республики Узбекистан от 26 мая 2020 года № ПП-4731 «О дополнительных мерах по расширению производства цветных и драгоценных металлов на базе месторождений АО «Алмалыкский ГМК», с учетом будущего расширения Комбината, уровень актуальности вопроса еще больше возрастет.[1, 6].

Цель исследования: изучение влияния Алмалыкского горно-металлургического комбината на качество подземных вод бассейна реки Ахангаран.

Методы исследования: использованы комплексные методы исследования воды, методы исследования химических компонентов рентгеновыми лучами, методы дифракционной и атомно-эмиссионной спектроскопии. [3].

Результаты исследования: Пробы воды отбирались ежеквартально из всех (46) скважин и объектов водоснабжения (5), используемых в деятельности АГМК. Кроме того, из 12 скважин вокруг него были взяты пробы воды для определения воздействия завода по переработке меди на подземные воды. В 2023 году по сравнению с 2022 годом пробы воды, отобранные из объектов подземного водопользования АГМК, не выявили существенных изменений физического, химического и минералогического состава воды. Уровень минерализации воды в весенних пробах установлен на уровне 274-287 мг/л, а в осенних пробах - 275-353 мг/л.

Общая жесткость воды изменялась от 4,4 до 4,8 мг-экв/л в весенней пробе и с 4,1 до 4,2 мг-экв/л в осенней пробе.

Качество воды в скважинах 30 и 37 Тош-Сартамгалинского водоканала признано низким. Можно сделать вывод, что данные скважины расположены на одной территории с Алмалыкским горнорудным районом, неблагоприятным для добычи руды, в результате выхода воды из трещин, смешивания с рудами и попадания в подземные воды. В составе воды обнаружено небольшое количество цинка и марганца.

В пробе, взятой из установки добычи подземных вод Меднообогащающего завода, мы видим, что минерализация воды увеличилась до 33,80 мг/л весной и 308,4 мг/л осенью. Общая жесткость повышалась до 33,0 мг/л весной и 42,5 мг/л осенью. Суммарное количество

сульфатов магния и калия достигло 2014 мг/л. Эти показатели показывают, что качество воды стало очень плохим. Эти показатели практически не меняются в течение года.

Выводы. По данным анализа проб воды, взятых из объектов водоснабжения АГМК, качество воды меняется в течение года в весенний и осенний сезоны. То есть уровень минерализации воды составляет в среднем 280 мг/л весной и 314 мг/л осенью.

Установлено, что минерализация воды объектов подземного водопользования Меднообогатительного комбината составляет 3380 мг/л весной и 3084 мг/л осенью. В этом районе общая жесткость воды увеличилась по сравнению с нормой в 5-6 раз. Количество сульфатов магния и кальция достигло 2014 мг/л.

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ТЕОРЕТИЧЕСКИЕ И МЕТОДОЛОГИЧЕСКИЕ ОСНОВЫ ИЗУЧЕНИЯ АНТРОПОГЕННЫХ ЛАНДШАФТОВ

Аннотация. В данной статье анализируется понятие антропогенных ландшафтов, их возникновение, развитие и теоретико-методологические основы.

Ключевые слова: ландшафт, антропогенный ландшафт, культурный ландшафт, географический комплекс, геоэкологическое состояние, таксономическая единица.

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THEORETICAL AND METHODOLOGICAL FOUNDATIONS OF THE STUDY OF ANTHROPOGENIC LANDSCAPES

Abstract. This article analyzes the concept of anthropogenic landscapes, their origin, development and theoretical and methodological foundations.

Keywords: landscape, anthropogenic landscape, cultural landscape, geographical complex, geoeological condition, taxonomic unit.

Человек, как и другие живые существа, является неотъемлемой частью природы и в своей хозяйственной деятельности активно участвует в обмене вещества и энергии в природе. Для удовлетворения своих жизненных потребностей он различными способами использует природу и пытается ее изменить. К сожалению, в результате этого он вызывает некоторые негативные последствия. Это, в свою очередь, считается условием загрязнения и отравления природной среды, различными отходами и создания геэкологических и экологических ситуаций, опасных для жизни человека. В связи с чем одной из наиболее сложных и актуальных задач современности является рациональное и правильное использование таких ресурсов как воздух, вода, почва, и других минеральных ресурсов являющиеся важным для жизнедеятельности человека. Решение этой жизненно важной проблемы, возможно только при использовании научно обоснованных фактов и сведения ряда смежных наук. При этом можно использовать важные теоретические основы ландшафтоведения и её важных отраслей, таких как антропогенный и прикладной ландшафтоведение. Если мелкие ландшафтные таксономические единицы каждой изучаемой территории не будут тщательно и всесторонне изучены, то влияние природной среды на деятельность и здоровье человека, проблемы улучшения ее состояния останутся нерешёнными.

Ученые по-разному определяют понятие антропогенных ландшафтов. Понятие «антропогенный ландшафт» впервые было предложено русскими географами А.Д.Гоевым и Б.Н.Городковым. В 1930 г. А.Д. Гожев впервые выделил антропогенный ландшафт как природный комплекс (Назаров, 2012). Концепция антропогенного ландшафта была основана известным российским учёным-географом Ф.Н.Мильковым и развита представителями его научной школы [1].

Ю. Г. Саушкин (1946) выдвигает идею о том, что «должна существовать отдельная отрасль географии для изучения культурных ландшафтов». Он выдвигает идею, что «под культурным ландшафтом следует понимать ландшафт, в котором органические элементы природной среды изменены хозяйственной деятельностью человека» [3]. Эта идея указывает на то, что возникновение антропогенного ландшафтоведения является требованием того периода. А. М. Рябчиков (1972) признавал, что все ландшафты, исторически сложившиеся в ландшафтной сфере, в той или иной мере изучены влиянием человека, а современные ландшафты представляют собой территориальное сочетание в определенной степени измененных антропогенных и природных ландшафтов [2].

Ф. Н. Мильков (1970) в книге «Ландшафтная сфера земли» утверждает, что «антропогенная ландшафтоведение должно заниматься

изучением комплексов, измененных и построенных человеком» (с. 193), и это послужила началом формирования нового научного направления в науке о ландшафтоведении - антропогенного ландшафтоведения. А.А.Макунина (1974) даже назвала это направление «новой областью знаний». По мнению С. В. Калесник (1970) географические комплексы, измененные деятельностью человека, называются антропогенными ландшафтами [4]. А. Г. Саченко, утверждает, что для полного изменения ландшафта должна измениться и его геологическая основа, то есть фундамент.

Много информации об антропогенных ландшафтах можно найти в работах А.М.Рябхукова (1972), Е.В.Миланова, А.М.Рябчикова (1979), Л.И.Куракова (1976,1983) и других. Вообще многие вопросы человека и ландшафта, человека и природы всегда привлекали внимание ученых-ландшафтоведов, ученых-теоретиков естественной географии (например, И. П. Герасимова, Н. А. Воздесского, Д. Л. Арманд, Т. В. Звонковой, А. Г. Саченко, В. К. Преображенского, Н. А. Солнцева и др.). Но среди учёных нет единого мнения относительно концепции антропогенного ландшафта. Каждый учёный трактует это понятие по-своему [2].

В Центральной Азии, особенно в нашей стране, проведено множество научных исследований, касающихся возникновения и классификации антропогенного ландшафтоведения. В частности, А.А. Абдулкасимов начал изучение этого направления и основал уникальную школу. Кроме того, А.Абдулкасимов (1966, 1972, 1983, 2013), Б.Виноградов (1977), Х.Абдулкасимов, Ю.Абдурахмонова, К.Давронов (2017). Значимый роль сыграла исследовательская работа по изучению регионов Узбекистана, проведенная А.Абдулкасимовым, М.Назаровым (2012). Также большой вклад в изучение антропогенных ландшафтов внесли А.А.Рафиков, А.Максудов, Ш.С.Зокиров, С.Б.Аббасов, С.И.Абдуллаев, К.М.Боймирзаев, Р.Ю.Холиков, И.Х.Жанкобиллов, Ш.Дусанова, М.С.Шомуратов и другие исследователи [3].

Антропогенные ландшафты – это географические комплексы, первоначальная природная основа которых изменена человеком и различного происхождения [6]. В качестве примеров можно рассмотреть индустриально-техногенные ландшафты, ирригационные ландшафты, ландшафты дорожного сообщения, осадочные ландшафты, туристско-рекреационные ландшафты и др. Кроме того, надо сказать, что в каждой природно-географической области, стране или районе антропогенные ландшафты формируются в соответствии с ее природными условиями. Из приведенных примеров мы видим, что антропогенные ландшафты – это искусственные изменения природы на определенной территории и на определенном уровне в результате хозяйственной деятельности человека. Эти антропогенные ландшафты существуют, но единого мнения по систематизации и классификации этих понятий нет. По мнению

Ш.С.Зокирова, «Ландшафты, измененные под влиянием деятельности человека, правильнее было бы называть ландшафтами, измененными под влиянием антропогенных факторов, чем антропогенными ландшафтами». “Это следует считать естественным процессом под влиянием человека и внешним фактором”, - сказал он.

Поскольку антропогенное ландшафтоведение является относительно новым научным направлением, существует множество проблемных и спорных вопросов, которые до сих пор не решены. Определение структуры антропогенных ландшафтов, разработка принципов классификации ряда таксономических единиц и их разграничение, определение внутренних и внешних связей, законов обмена веществ и энергии, в том числе взаимодействия, т.е. механизма интеграции, анализ динамических особенностей, изменений ландшафтов, также разработка различных методов оценки и прогнозирования, видов деятельности человека, создающие новые формы, антропогенных ландшафтов, и совершенствование существующих методов, а также использование современных аэрокосмических и инновационных методов в их исследования, являются одними из главных проблем современности.

Изучать причины геоэкологических условий, наблюдаемых в различных регионах, изучать антропогенные ландшафты с целью разработки мероприятий, направленных на их улучшение, тщательно изучать и анализировать их современное и прошлое состояние, на основе этого осуществлять мониторинг антропогенных ландшафтов, всесторонне оценивать их деятельности и Важным периодом является проведение прогнозов антропогенных ландшафтов на разные периоды.

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ИСПОЛЬЗОВАНИЕ НАУЧНОГО НАСЛЕДИЯ АХМАДА АЛЬ-ФАРГАНИ В ИЗУЧЕНИИ ЕСТЕСТВЕННЫХ НАУК

Аннотация. В данной статье использовано научное наследие среднеазиатского учёного Ахмеда Аль-Фаргани в области естественных наук (географии, астрономии, математики и геометрии). Исследование принципа создания учёным нилометра – прибора, измеряющего уровень, объём и скорость воды в реке Нил.

Ключевые слова: Ахмад Аль-Фаргани, естественные науки, география, астрономия, математика, геометрия, нилометр.

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UTILIZATION OF SCIENTIFIC HERITAGE OF AHMAD AL-FARGHANI IN THE STUDY OF NATURAL SCIENCES

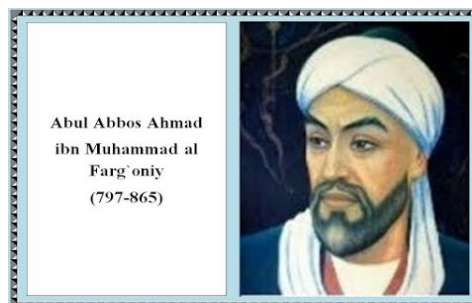
Annotation. This article uses the scientific heritage of the Central Asian scientist Ahmed Al-Fargani in the field of natural sciences (geography, astronomy, mathematics and geometry). Study of the principle of creation by a scientist of a nilometer, a device that measures the level, volume and speed of water in the Nile River.

Key words: Ahmad Al-Fargani, natural sciences, geography, astronomy, mathematics, geometry, nilometer.

Нам необходимо создать все условия для того, чтобы наша молодежь, в жилах которой течет кровь прадедов, могла стать достойными наследниками наших великих предков, стремиться к великим целям и достигать высоких целей».

Ш.М.Мирзиёев

Большое научное значение имеет изучение имен наших великих предков, имена которых не забыты в недавнем прошлом, и тех великих сокровищ, которые они внесли в сокровищницу мировой науки и культуры. Гончарное дело, архитектура, минералогия, гончарное дело, философия, музыка, языкознание, литература широко развиты. [1]



Одним из великих ученых, внесших большой вклад в развитие ряда наук в мире, является наш соотечественник Абул Аббас Ахмад ибн Мухаммад Касир аль, известный на Западе как Альфраганус, живший в 9 веке и внесший значительный вклад развитию наук географии, астрономии, математики и геометрии.

Ахмад Фергани родился в Фергане в 797 году и вырос здесь, получив первое образование. Тогда, в это время, он занимался научной работой в известной на Востоке академии «Байт аль-Хикма» в Багдаде. Ахмаду Фергани посчастливилось работать вместе с нашим соотечественником Мухаммадом ибн Мусой аль-Хоразми, известным учёным и отцом алгебры. Также Фергани проводил научно-теоретические и научно-практические исследования в Египте, на берегах реки Нил.

Действительно, вклад Ахмада Фергани в развитие астрономической науки бесподобен. Он определил расстояние между звездами, расстояние от Земли до Солнца, Луны и других планет, размеры этих небесных тел и составил таблицу. Этой таблицей пользовались все астрономы, включая Николая Коперника, которого европейцы считают «основателем» астрономии. Также Ахмад Фергани, прекрасно изучивший движения небесных тел, научно обосновал явления солнечных и лунных затмений.

За пять веков до Мирзы Улугбека Ахмад Фергани, признанный султаном астрологии, доказал направление Солнца и звезд, а также то, что Земля имеет сферическую форму и движется вокруг оси, соединяющей два полюса. Ахмад Фергани писал по этому поводу: «Учёные могут иметь разные взгляды на этот вопрос, но истина одна [2]. Одной из таких реальных идей является сферическая форма Земли и неба. Действительно, Земля вместе со всеми светилами на небе движется вокруг двух неподвижных полюсов (поперечной оси), одного в начале северного, другого в конце южного.

Ахмад Фергани был первым, кто научно доказал перекрытие полярного круга экваториального круга с кругом горизонта Земли, существование полярной ночи и полярного дня, а также равенство дня и ночи. Он писал об этом: «Но есть место, где полюс виден под 90 градусов и остается зенитом. В нем экваториальный круг всегда совпадает с кругом горизонта Земли. В этом случае северная половина неба относительно экватора всегда видна над Землей, а южная половина всегда невидима. Если Солнце находится в начале Рака, день будет длиться 24 часа и ночи не будет. Если Солнце находится в начале Джади, ночь будет длиться 24 часа и дня не будет. В местах, где высота полюса равна отклонению эклиптики от экватора, Солнце проходит зенит один раз в году.

Ахмад Фергани провел ряд научных и практических исследований в Египте, на берегах реки Нил. В результате своих исследований ученый создал структуру, измеряющую объем и скорость воды в Ниле, — ниломер. Используя показатели этого ниломера, удалось эффективно и рационально

организовать земледелие, которое считается основной отраслью сельского хозяйства Египта.

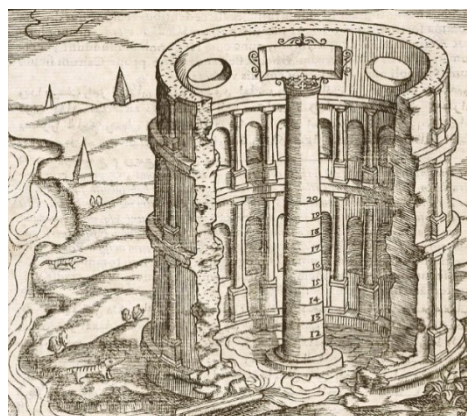
Ниломер, созданный Ахмедом Фаргани на острове рода реки Нил, представляет собой прямоугольный колодец, вырытый ниже уровня реки и соединенный с рекой каналами трех разных высот [3]. Внутренняя часть колодца сделана из камня, а на дно можно попасть по каменным ступеням. В средней части сооружения был установлен восьмиугольный каменный столб, разделенный на 19 локтей (1 локоть равен примерно 54 см.).

Согласно источникам, если уровень воды в Ниле поднимется в оросительный сезон до 12 локтей, то в стране не будет урожая и голода, посевы дали хороший урожай, и, наконец, через 16 локтей урожай был чрезвычайно обильно, и страна начала процветать. А вот подъем воды выше 19 локтей указывал на то, что в стране будут наводнения, ущерб возделываемым полям и посевам.

Как работал ниломер?

Восточные ученые в своих работах также называли ниломер «нильской шкалой». «Нильская шкала» имеет форму мураббы, то есть четырехстороннего колодца, соединенного с Нилом тремя подземными водными путями. В середине колодца находится восьмиугольный столб, покрытый белым мрамором, высотой около 10 метров. На колонке имеется крупная градуировка, позволяющая измерять уровень воды, которая разделена на мелкие деления [4]. Большой арабский локоть равен 54 сантиметрам, а маленький равен 1/24 его (кирату) – 2,25 сантиметра.

Наблюдатель спустился по винтовой лестнице, чтобы измерить уровень воды. Ниломер позволял с большой точностью измерять уровень воды в реке. Сегодня по этому принципу измеряют уровни воды водоемов (рек, озер, водохранилищ, даже морей и океанов) во всех странах, входящих во Всемирную метеорологическую организацию.



Учитывал рациональное использование воды реки Нил, сельское хозяйство и экономическое положение населения. Налогообложение фермеров в Египте осуществлялось на основе ниломерных показателей.

Стоит отметить, что эта структура, созданная Ахмадом Фаргани, не утратила своего значения и сегодня.

Правительство Египта приняло решение установить статую нашего соотечественника Ахмада Фаргани на острове рода реке Нил как символ высокого уважения к его заслугам перед этой страной [5]. Эта статуя была торжественно открыта во время официального визита президента Ислама Каримова в Египет в 2007 году.

Имя Ахмада Фаргани веками живет в его рукописных произведениях, хранящихся в крупных библиотеках Великобритании, Франции, США, Марокко, Египта, Индии, Германии, Ирана, России и ряда других стран. Эти рукописи переведены на несколько языков мира и долгое время использовались в качестве учебных пособий в ведущих учебных заведениях мира. Этот процесс все еще продолжается.

Например, Херардо из Кремоны перевел на латынь произведение Ахмада Фаргани «Джавами илм ан-нуджум валь харакат ас-самови» на латынь еще в XII веке. В 13 веке эта книга была переведена на другие европейские языки. Этот труд использовался в качестве основного учебника по астрономии вплоть до 15 века. Голландский арабист и математик Якоб Голиус опубликовал эту книгу на арабском и латыни в Амстердаме в 1667 году и представил всему миру имя Аль-Фаргани (Альфрагана по-европейски) [6]. Даже в «Божественной комедии» итальянского писателя Данте упоминается имя великого Альфрагануса. [2]

1200-летие Алломы Ахмада Фаргани, внесшего большой вклад в развитие мировой науки в нашей республике, было отмечено в 1998 году Указом Президента Республики Узбекистан в сотрудничестве с Организацией Объединенных Наций по науке, образованию и культуры (ЮНЕСКО). В связи с этим, как дань уважения нашему великому соотечественнику, в городе Фергане построен архитектурный комплекс, в центре которого гордо стоит статуя Алломы, держащей в руках карту звезд. Это место стало местом паломничества не только ферганцев, но и всех, кто посещает Ферганскую долину.

Имя Ахмада Фаргани также увековечено в космосе. По словам известного польского астронома Яна Гавели в его книге «Селенография», вышедшей в 1647 году, один из кратеров на Луне был назван в честь Ахмеда Фаргани еще в XVI веке.

Известно восемь работ Фергани, все они связаны с астрономией. Они таковы: упомянутый выше труд, широко известный как «Книга по основам астрономии» — рукописи которого имеются почти во всех библиотеках мира. «Книга по изготовлению Астурлоба» — рукописи в библиотеках Берлина, Лондона, Мешхеда, Парижа и Тегерана, «Книга по практике с Астурлобом» — единственная рукопись в Рампуре (Индия), «Таблицы Фаргани» — рукопись в Патне (Индия), «Трактат об определении времени Луны под и над Землей» — рукопись в Каире, «О подсчете семи климатов»

— рукописи в Готе и Каире, «Книга об изготовлении солнечных часов» — рукопись в Алеппо и хранится в Каире.

Таким образом, это творчество нашего великого предка сыграло значительную роль в развитии культуры в эпоху европейского Возрождения и значительно позже [7]. Имя Фергани столь же известно, как имя Хорезма, на Востоке и на Западе. Как учёный, внесший большой вклад в развитие естественнонаучных знаний в средние века, он с гордостью упоминается и изучается в источниках, трудах новейших западных и восточных авторов.

Между Узбекистаном и Египтом существуют глубокие исторические, культурные и интеллектуальные связи. Официальный визит Президента Республики Узбекистан Ш.Мирзиёева в Республику Египет 20 февраля 2023 года, посещение им памятника Ахмеда Фаргани и знакомство с установкой «Нилометр» показывают, насколько важен научный обмен то, что существовало веками, существует и сегодня. Обмен историками, музеологами, учеными и молодежью служит дальнейшему укреплению этих связей.

О жизни Ахмада Фаргани, их имя прославилось в средние века на Востоке. О нем упоминают в своих трудах такие восточные учёные, как Ибн ан-Надим (10 век), Ибн аль-Кифти (12-13 века), Абул Фарадж Барбри (13 век). Главный астрономический труд Ахмада Фергани «Книга небесных движений и общей науки астрономии» («Китаб аль-харакат ас-самовия ва джавами' илм ан-нуджум») был дважды переведен на латынь в Европе в XII веке.

«Астрономическая книга небесных движений и общих наук» преподавалась как основной учебник астрономии в европейских университетах на протяжении нескольких столетий [8]. Латинский перевод произведения Ахмада Фаргани был впервые опубликован в 1493 году и считается одной из самых ранних опубликованных книг. Тот факт, что труд Ахмада Фаргани «Основы астрономии» был переведен на латынь и иврит в XII веке и позже переиздан во многих странах, таких как Италия, Германия, Франция, Голландия и США, является доказательством его огромного значения. Знаменитый путешественник Христофор Колумб, восемьсот лет спустя практически доказавший взгляды Алломы о шарообразной форме Земли, подписал: «Я полностью убежден в правильности расчетов Ахмада Фаргани о величине одного градуса земного меридиана». В шестнадцатом веке один из кратеров на Луне был назван в честь нашего дедушки [9].

Из крупнейших представителей европейского Возрождения, читал лекции по астрономии по книгам Ахмада Фергани в австрийских и итальянских университетах XV века. Великие Данте (XV век) и Шиллер (XVIII век) также упоминали имя Ахмада Фаргани в своих произведениях.

Даламбр, Брокельман, Х. Зутер, И. Крачковский, А. Юшкевич и Б. Розенфельд, среди крупных европейских востоковедов, изучали работы Ахмада Фаргани и дали высокую оценку работе этого ученого.

Рукопись Ахмада Фаргани «Книга о создании усурлоба» находится в библиотеках Берлина, Лондона, Мешхеда, Парижа и Тегерана, только одна рукопись «Книги об усурлобе» находится в Рампуре (Индия), «Таблицы Ахмада Фаргани» [10]. Рукопись хранится в Патне (Индия), «Трактат об определении времени Луны под и над Землей» хранится в Готе и Каире, а «Книга об изготовлении солнечных часов» — в Алеппо и Каире. Доказательством этого является тот факт, что один из кратеров на Луне был назван в его честь в 16 веке.

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СТРУКТУРА, ХАРАКТЕРИСТИКИ И ЭЛЕМЕНТЫ АНТЕННЫ RFID МЕТКИ

Аннотация. В статье рассматриваются технические характеристики антенн для RFID меток. Внутренние показатели и реагирование при считывании информации из RFID метки. Приводится пример определения расстояния считывания метки, а также какие категории, показатели существуют у антенн в производстве при изготовлении и разработке антенн для RFID метки. Изучения и расчет расстояния прямого излучения считывателя. Какие виды антенн используются при производстве UHF меток.

Ключевые слова: RFID метка, микрочип, радиоволны, антенна, UHF и HF диапазон, считыватель, полиэтилентерефталат, Поливинилхлорид.

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STRUCTURE, CHARACTERISTICS AND ELEMENTS OF THE RFID TAG ANTENNA

Abstract. The article discusses the technical characteristics of antennas for RFID tags. Internal indicators and response when reading information from an RFID tag. An example of determining the distance of reading the tag is given, as well as what categories and indicators exist for antennas in production during the manufacture and development of antennas for RFID tags. Studying and calculating the direct radiation distance of the reader. What types of antennas are used in the production of UHF tags.

Keyword: RFID tag, microchip, radio waves, antenna, UHF and HF range, reader, polyethylene terephthalate, polyvinyl chloride.

Введение. Антенна RFID-метки — это своего рода индукционная антенна связи, соединенная с интегральной(микрочип) схемой метки, которая является важной частью транспондера RFID-метки. Антенна

принимает сигнал от опросчика, затем передает или отражает принятый сигнал в зависимости от типа метки. Для активных тегов он передает сигналы. Для полупассивных или пассивных тегов он отражает сигналы. Для пассивных меток антенна также собирает энергию радиоволн и питает интегральную схему. В пассивной RFID системе метка работает на основе энергии поля в дальней зоне излучаемого считывателем. Взаимодействие со считывателем достигается за счет вариации импеданса нагрузки путем управления расстройкой импедансов нагрузки и антенны. В итоге часть мощности сигнала от считывателя отражается от антенны, формируя таким образом обратное излучение к считывателю. Расстояние считывания метки R определяется мощностями прямого излучения считывателя и обратного излучения метки

$$R = \frac{\lambda}{4\pi} \sqrt{\frac{P_{TX} G_{reader} G_{tag}}{P_{min,tag}}} \quad (1)$$

где λ – длина волны, P_{TX} – мощность, излучаемая считывателем, G_{reader} – коэффициент усиления антенны считывателя, G_{tag} – коэффициент усиления антенны метки, $P_{min,tag}$ – минимальная мощность, переизлучаемая меткой. Геометрия антенны определяется частотой, на которой работает метка. Хотя метка может использовать одну и ту же микросхему, изменения в конструкции антенны позволяют метке иметь совершенно разные характеристики и поведение. Антенна может иметь форму спиральной катушки, одиночного диполя, двойного диполя (один перпендикулярен другому) или сложенного диполя. Существует множество вариантов формы антенны в зависимости от конкретных требований приложения и способностей разработчика. Различные частоты и материалы также могут повлиять на конструкцию антенны. Например, антенна HF и антенна UHF имеют разные конструкции антенн из-за их разных принципов работы. Также существуют различия в изготовлении антенн. Основные параметры и технические показатели двух антенн (как показано в следующей таблице).

Антенна высокой частоты (HF)		
Материалы		Частота
Алюминий	30 мкм / 10 мкм	13.56 ± 0.2 МГц
Полиэтилентерефталат	38 мкм	
Антенна сверхвысокой частоты (UHF)		
Материалы		Частота
Алюминий	10 мкм	860 ~ 960MHz
Полиэтилентерефталат	50 мкм	

Таблица-1. Классификация антенн.

Из-за разницы в материале проводов, структуре материала и производственном процессе антенну RFID-метки можно разделить на следующие категории: травленая антенна, печатная антенна, намотанная антенна, дополнительная антенна, керамическая антенна и другие. **Гравированная антенна (антенна с травлением из меди и антенна из алюминия)**

- Протравленная антенна – это основной процесс производства RFID-антенны, который занимает наибольшую долю рынка и является наиболее зрелой технологией. Есть два метода: традиционный метод травления и метод точного травления. Самая большая разница между ними заключается в том, что антенна для точного травления имеет плавные линии и небольшой допуск по ширине линии. Минимальная ширина линии травления алюминия может достигать 0.1 мм, а минимальная ширина линии антенны для травления меди может достигать 0.05 мм, но стоимость будет относительно высокой. По материалу его можно разделить на антенну из ПЭТ, антенну из полиимида (полиимид), антенну на печатную плату, в которой антенна на печатную плату в основном используется для устойчивости к высоким температурам, химической стойкости и других специальных сред, в то время как антенна на печатной плате подходит для антиметаллических бирок.

- Печатная антенна предназначена для непосредственного использования специальных проводящих чернил или серебряной пасты для печати антенной схемы на подложке. Более зрелый процесс это глубокая или трафаретная печать. Его преимущество заключается в отсутствии травления, явного загрязнения, короткого технологического процесса, быстрой доставки и низкой стоимости. Однако из-за большого сопротивления проводящих чернил или серебряной пасты и большой разницы в характеристиках проводящих материалов производительность со временем ухудшится. И до сих пор есть проблемы с согласованностью и долговечностью антенны UHF.

- **Антенна с обмоткой (антенна с медной обмоткой)** Антенна с медной обмоткой методом катушечной намотки намотала катушку на намоточный инструмент и зафиксировала ее. Он намотал определенное количество витков в соответствии с различными требованиями к частоте. Антенна в основном используется для низкочастотных (125–134 кГц) и высокочастотных (13.56 МГц) меток, но редко для UHF (за исключением антенны, соединенной с микромодулями UHF). Самым большим преимуществом является то, что он по-прежнему показывает хорошие характеристики даже при небольшой площади или объеме антенны. Но его недостатки: низкая эффективность производства, дороговизна, большая толщина изделия, непрочность на изгиб.

- **Керамическая антенна.** В керамической антенне используется керамическая подложка (оксид алюминия) в качестве подложки и

серебряная паста в качестве тела провода. Рисунок антенны печатается на подложке, а затем спекается при высокой температуре с образованием антенной схемы. Керамическая антенна отличается стабильной работой и высокой адаптируемостью к окружающей среде. Но он стоит слишком дорого и его непросто установить. Он подходит для антимагнитных меток UHF и меток для предотвращения разборки лобового стекла автомобиля.

- Хрупкая антенна. Особенностью хрупкой антенны является осознание уникальности RFID-меток. Его часто превращают в этикетку и наклеивают на ровную и чистую поверхность, такую как герметизирующая, стеклянная, пластиковая, картонная упаковка. А когда вы ее откроете, антенна будет разрушена и не сможет быть переработана. Подложка RFID-метки - это носитель, который удерживает вместе чип RFID и антенну. Антенна-метка откладывается или печатается на подложке, а затем к этой антенне прикрепляется. Подложки обычно изготавливаются из гибких материалов, таких как поливинилхлорид, полиэтилентерефталат, бумага, но также могут быть изготовлены из жестких материалов, таких как печатные платы. Подложка должна выдерживать различные условия окружающей среды, такие как высокая температура, высокая влажность, солнечный свет, химическая коррозия, износ и другие условия. И материалы подложки должны обеспечивать рассеивание электростатического накопления, гладкие печатные поверхности для разводки антенн, долговечность и стабильность в различных условиях эксплуатации, а также механическая защита антенн, микросхем и их соединений. Кроме того, материал подложки может влиять на расчетную частоту антенны; поэтому при правильной настройке антенны необходимо учитывать влияние материала подложки. Существует множество форм упаковки RFID-меток, и они не ограничены по размеру и стандартной форме, и их состав также различен. Следовательно, процессы упаковки, такие как изготовление антенны, формирование выпуклостей, соединение микросхем и меж соединений, также разнообразны.

Заключение. Каждая антенна из которых имеет свои особенности и применение. Компоненты использованные при производстве антенны RFID метки должны соответствовать требованиям использования в любых аспектах сферы деятельности. Выдерживать различные условия окружающей среды, такие как высокая температура, высокая влажность, солнечный свет, химическая коррозия, износ и физические воздействия. Все вышеуказанные условия учитываются и соответствуют всех условия при производстве антенн для RFID меток.

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ПРЕИМУЩЕСТВА МАРКИРОВКИ ГОТОВОЙ ПРОДУКЦИИ В АО “FARG'ONAAZOT”

Аннотация. В статье показано в каких отраслях использовалась и была внедрена RFID-технология. Будет обширный пример на каких предприятиях была использована эта технология. Какие преимущества и недостатки имеются при внедрении данной технологий в разных отраслях деятельности.

Ключевые слова: RFID технология, RFID метки.

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ADVANTAGES OF LABELING FINISHED PRODUCTS AT JSC “FARG'ONAAZOT”

Abstract. The article shows in which industries RFID technology was used and implemented. There will be an extensive example of which enterprises used this technology. What are the advantages and disadvantages of introducing this technology in different industries.

Keyword: RFID technology, RFID tags.

Введение. Маркировочная система является важным инструментом в различных областях человеческой деятельности, таких как транспортировка, медицина, логистика, производство, розничная торговля и многое другое. Маркировочная система представляет собой систему кодирования или пометки объектов, или продукции с использованием определенных символов, цифр или букв, которые позволяют идентифицировать и классифицировать их. Она может использоваться в различных областях, включая промышленность, логистику, торговлю и здравоохранение. Целью маркировочной системы является облегчение и упрощение процесса идентификации, отслеживания и управления объектами или продукцией.

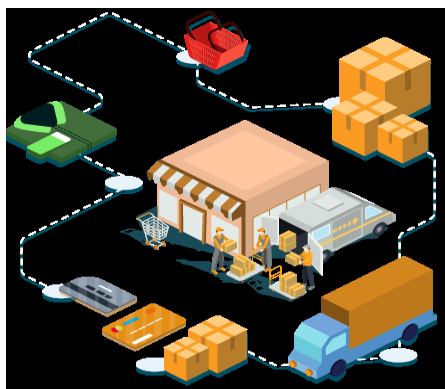


Рис – 1. Применение RFID-технологии в логистике и складском хозяйстве

RFID технология была внедрена во множестве отраслей. Некоторые из них включают:

а) Логистика и снабжение: RFID технология используется для отслеживания и управления запасами и поставками товаров в цепях поставок.

б) Транспорт и логистика: RFID метки устанавливаются на грузы и транспортные средства для отслеживания и контроля их перемещения.

в) Производство: RFID используется для контроля процессов производства, отслеживания сборки и качества изделий.

г) Библиотеки: RFID используется для автоматизации процесса учета и обслуживания книг и других материалов в библиотеках.

д) Розничная торговля: RFID метки применяются для управления запасами, контроля краж и обеспечения точности инвентаризации в магазинах.

е) Сельское хозяйство: RFID метки применяются для отслеживания скота, контроля запасов и учета сельскохозяйственной продукции.

ж) Здравоохранение: RFID технология применяется для учета и управления инвентарем медицинских препаратов и средств, отслеживания пациентов и оборудования.

з) Автомобильная промышленность: RFID используется для идентификации и отслеживания автомобилей на производственных линиях и в логистической цепи.

и) Аэропорты: RFID технология применяется для идентификации багажа и пассажиров, контроля доступа и управления инфраструктурой аэропорта.

Это только некоторые из отраслей, где была внедрена RFID технология. Ее потенциал широко применим и может быть использован во многих других областях. RFID технология была использована многими крупными фирмами в различных отраслях. Вот некоторые из них:

1. Amazon: Возможно самая известная интернет-торговая компания, Amazon, также активно использует RFID для отслеживания товаров, автоматической инвентаризации и улучшения системы доставки.

2. Walmart: Одна из первых крупных розничных сетей, Walmart, внедрила RFID технологию для улучшения управления запасами и эффективности поставок.

3. DHL: Крупная логистическая компания DHL применяет RFID для отслеживания грузов, оптимизации процессов хранения и доставки и повышения эффективности цепи поставок.

4. Ford: Автомобильная компания Ford использует RFID метки для управления запасами, отслеживания деталей и облегчения процессов производства.

5. Boeing: в авиационной промышленности Boeing использует RFID метки для управления запасами, отслеживания инструментов и материалов, контроля качества и обслуживания самолетов.

6. Nike: Компания Nike внедрила RFID технологию для улучшения учета и отслеживания товаров, оптимизации процессов поставок и предотвращения краж в розничных магазинах.

7. Coca-Cola: Известный производитель напитков Coca-Cola применяет RFID технологию для учета и управления продуктами на складах и предотвращения подделок.

8. Johnson & Johnson: Фармацевтическая компания Johnson & Johnson использует RFID для отслеживания препаратов, контроля сроков годности и следования регуляторным требованиям.

Многие другие компании в различных отраслях также используют эту технологию для оптимизации своих операций и повышения эффективности. Изучение передового, в том числе зарубежного опыта, играет ключевую роль в разработке концепции проекта "Автоматизированная информационная система маркировки готовой продукции". Одним из важных этапов анализа было исследование проектов, успешно реализованных как в зарубежных компаниях. В процессе проведения исследования был предметом глубокого анализа и обсуждения проект, реализованный в компании "SOCAR Petkin" в городе Измир, Турция. Данный проект представляет собой яркий пример успешного внедрения

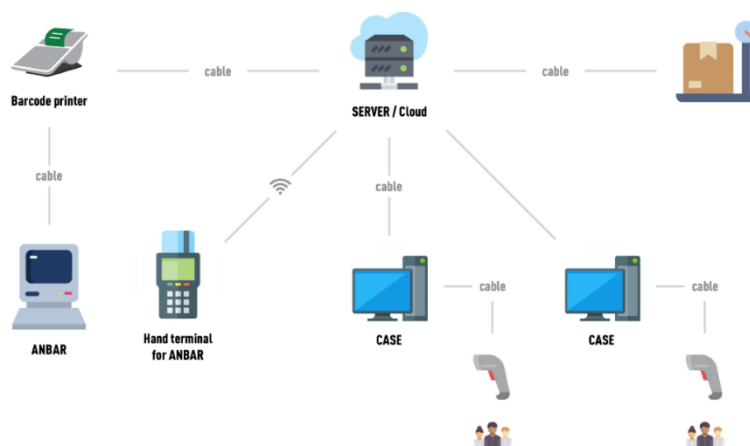


Рис-2. Структура и основные компоненты RFID системы.

технологии RFID-отслеживания. Основной задачей данной инициативы было создание эффективной системы мониторинга и управления продукцией, упакованной в формате «Биг-Бег». Внедрение RFID-отслеживания позволило компании значительно улучшить эффективность управления запасами, сократить потери и улучшить точность мониторинга продукции на всех этапах поставочной цепочки. Таким образом, проект в Измире принес ощутимую экономическую выгоду и повысил уровень удовлетворенности. Другой проект, изученный в рамках нашего исследования, был связан с городом Москва, Россия. В данном проекте основным направлением стала реализация системы отслеживания продукции в области продажи обоев с использованием RFID-технологии. Внедрение RFID-отслеживания в процессе продажи обоев позволило повысить уровень автоматизации, улучшить контроль качества, а также ускорить процессы отгрузки. Эффективная система мониторинга и управления стала фундаментом для оптимизации всей цепочки. Оба эти проекта подчеркивают важность и потенциал RFID-технологии в современном бизнесе, помогая компаниям улучшить операционную эффективность, минимизировать потери и повысить уровень обслуживания клиентов.

В заключение можно сказать, что внедрение технологии RFID (Radio Frequency Identification) оказало значительное влияние на компании в различных отраслях. Вот некоторые основные позитивные последствия внедрения RFID для компаний:

- ✓ Снижение потерь и краж (помочь компаниям защитить свои товары от краж и несанкционированного перемещения. Он позволяет отслеживать перемещение товаров и быстро обнаруживать любые несанкционированные действия).

- ✓ Улучшение эффективности инвентаризации (позволяет компаниям автоматизировать процесс учета и контроля товаров, значительно сокращая

время и затраты на инвентаризацию. Благодаря более точному отслеживанию запасов и повышенной точности данных, компании могут снизить издержки и избежать потерь товаров)

✓ Увеличение производительности (помогает ускорить процессы в снабжении, логистике и доставке товаров. Он позволяет автоматически определять и отслеживать перемещение товаров на всем протяжении цепочки поставок, что ведет к сокращению времени на обработку, увеличению скорости доставки и уменьшению вероятности ошибок).

✓ Улучшение точности и надежности информации (обеспечивает более точную и надежную информацию относительно месторасположения и статуса товаров. Это помогает предотвращать ошибки и потери, а также повышает точность прогнозирования спроса и планирования производства).

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АКТУАЛЬНЫЕ АСПЕКТЫ РАЗВИТИЯ СОЦИАЛЬНОГО ТУРИЗМА В УЗБЕКИСТАНЕ: ПРОБЛЕМЫ И ПЕРСПЕКТИВЫ РАЗВИТИЯ

Аннотация. В статье рассматривается понятие социального туризма. Обосновывается необходимость создания системы социального туризма. Анализируются наиболее острые проблемы и возможные перспективы его развитие в Республики Узбекистан. Рассматривается положительный опыт ряда регионов республики по реализации программ развития социального туризма.

Ключевые слова: социальный туризм, проблемы развития социального туризма, социальные программы, отпускные чеки, доходы населения, малообеспеченность слоев населения, благотворительная деятельность, социальная защита.

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CURRENT ASPECTS OF SOCIAL TOURISM DEVELOPMENT IN UZBEKISTAN: PROBLEMS AND DEVELOPMENT PROSPECTS

Abstract. The article discusses the concept of social tourism. The necessity of creating a social tourism system is substantiated. The most pressing problems and possible prospects for its development in the Republic of Uzbekistan are analyzed. The positive experience of a number of regions of the republic in the implementation of social tourism development programs is considered.

Key words: social tourism, problems of development of social tourism, social programs, vacation checks, income of the population, low-income segments of the population, charitable activities, social protection.

Введение (Introduction)

К настоящему времени туризм превратился в один из ведущих секторов мировой экономики. В этой связи в Узбекистане уделяется особое внимание модернизации туристической индустрии, разработке и совершенствованию нормативно-правовой базы для устойчивого развития отрасли, организации обслуживания зарубежных гостей в соответствии с международными стандартами. В годы независимости наша страна сделала

существенный прорыв в этой области вкупе с сохранением и приумножением историко-культурного наследия народа, возрождением национальных традиций и обычаев, восстановлением и обустройством достопримечательностей республики.

В целях создания современного высокоэффективного и конкурентоспособного туристического комплекса в республике сформирована прочная нормативно-правовая база, основу которой составляет Закон «О туризме», принятый 18 июля 2019 года [1]. Действуют программы адресных мероприятий по совершенствованию туристической инфраструктуры, в том числе привлечению инвестиций, диверсификации туристских продуктов, активизации мероприятий познавательно-ознакомительного характера, подготовке и повышению квалификации специалистов сферы.

В последние годы в Узбекистане активно внедряются новые виды путешествий. Одной из интереснейших категорий развития современного туризма следует назвать специализированный туризм. К данной категории относят такие виды туризма, которые как в полном объеме, так и частично имеют следующие характеристики:

- данный вид туризма не является массовым, достаточно редкий;
- при рассматривании процесса создания конечного продукта, то он будет достаточно трудоемким;
- относительно новые виды туризма, которые в первую очередь характеризуются на том, чтобы удовлетворить вторичные потребности человека;
- туры, содержащие в себе отличительные признаки, принадлежащие различным видам туризма;

В качестве примеров специализированных видов туризма можно отнести социальный туризм. Социальный туризм – это вид туризма, полностью или частично осуществляемый за счет бюджетных средств, средств государственных внебюджетных фондов (в том числе средств, выделяемых в рамках государственной социальной помощи), а также средств работодателей, при этом отдельным категориям туристов, государство в порядке, устанавливаемом Правительством Республики Узбекистан, предоставляет льготы социального характера [2].

Анализ литературы по теме (Literature review).

Сущность социального туризма и вопросы его развития изучались многими зарубежными и отечественными учеными, высказывались различные мнения. В различной литературе понятие социального туризма разнообразно трактуется различными авторами и организациями. Широкое понятие отражает массовый характер потребления туристских услуг. Одним из первых документов, определяющих социальный туризм является Манильская декларация по мировому туризму 1980 года, которая гласит: «Социальный туризм – это цель, к которой общество должно стремиться в

интересах менее обеспеченных граждан при использовании ими права на отдых» [3]. Это определение достаточно обще и поясняет, кто может относиться к «менее обеспеченным гражданам», а также каким образом и посредством чего осуществляется их право на отдых. Более точное толкование социального туризма дано в Монреальской декларации, принятой Генеральной Ассамблеей Международного бюро социального туризма в 1996 году [4]. Статья 13 Декларации гласит, что к движению социального туризма может принадлежать любая туристская организация (ассоциация, кооператив, общество взаимопомощи, фонд, федерация, неприбыльная организация, компания и т.д.), которая в своем уставе или регламенте четко ставит задачи социального характера и цель – обеспечение доступности путешествий и туризма для максимального количества людей, не ограничивая туризм единственной целью максимального получения прибыли.

Еще одно определение предложено И.О. Сердобольской. По ее мнению, туризм социальный представляет собой разновидность туризма, охватывающего все социальные слои и возрастные группы населения, поездки которых субсидируются из различных бюджетов исходя из социальной категории гражданина [5].

Профессор В.А. Квартальнов отмечает, что туризм – это рынок, и многоотраслевые рыночные связи – его экономическая составляющая. Но при этом нельзя забывать, что основная его цель – социальная. Важно туризм сделать доступным для каждого человека с детства до старости. Такая установка не противоречит его выгоды [6].

Социальный туризм – путешествия с целью отдыха, оздоровления, приобщения к природному и культурно-историческому наследию, реализуемые гражданам по цене социального тура и субсидируемые из источников внебюджетного финансирования и средств, выделяемых государством на социальные нужды [7]. Это понятие уже позволяет рассматривать туризм как некую экономическую категорию. Также данное понятие определяет цели социального туризма, чего нет в определениях, предложенных ранее. Причем автор отображает не только потребительский подход, но и нематериальные ценности, извлекаемые туристами.

Методология исследования (Research Methodology).

В статье проанализированы научные труды и учебная литература отечественных и зарубежных ученых по вопросам социального туризма. В качестве методологии исследования использовались теоретический анализ и методы наблюдения.

Анализ и результаты (Analysis and results)

Формы и методы социального туризма проявляются при установлении льготных транспортных тарифов на воздушные и иные перевозки для молодежи, льготные преysкуранты на размещение для определенных категорий туристов. Как видно из определения, для

эффективного развития данного вида туризма государство рассчитывает не только на свои собственные средства, но также и государственно-частное партнерство. Именно в этом направлении и развивается социальный туризм в зарубежных странах.

Развитие социального туризма в общем смысле будет способствовать:

- сокращению напряженности, имеющейся в обществе;
- организации обеспечения права человека на отдых;
- воспроизводству человеческого потенциала;
- формированию новых рабочих мест и т.д.

Особенностью проведения социальных туров является географическое расположение туристических мест, а также времена года, в частности:

– в большей степени коллективный, организованный туризм, проводимый внутри страны, наиболее актуален в межсезонье, а также в период «низкого сезона»;

– особенность работы с инвалидами требует наличия необходимой специфической инфраструктуры.

Важнейшую роль в развитии социального направления в туристической деятельности занимает государство, которое гарантирует грамотное составление государственного бюджета, формирует нормативно-правовую базу для развития социальной сферы.

Известно, что в обновленной Конституции закреплено важное положение: «Узбекистан – социальное государство». На этой основе в нашей стране формируется совершенно новая система социальной защиты. Эта система, прежде всего, направлена на оказание всестороннего внимания и заботы нуждающимся людям, в том числе людям с ограниченными возможностями, малообеспеченным людям, сиротам, людям, нуждающимся в уходе.

В нашей стране и в ряде других стран мира социальным туризмом называется любой вид туристического туризма, оплачиваемый за счет средств, направляемые на социальные нужды. Социально-экономический туризм направлен на создание подходящих условий для отдыха и путешествий малообеспеченного населения (молодежи и школьников, инвалидов и пенсионеров). Субсидии на этот вид туризма могут выделяться не только государством, но и различными фондами (государственными и негосударственными), а также различными благотворительными организациями. В организации отдыха скрытых слоев населения могут участвовать физические и юридические лица, участвующие в организации и реализации услуг в сфере туризма в системе социального туризма и осуществляющие деятельность, связанную с защитой прав и интересов граждан.

Социальный туризм предполагает участие социальных туристов, то есть лиц, нуждающихся в определенном продукте. К этой категории

населения в первую очередь относятся школьники, пенсионеры и инвалиды, в некоторых странах - государственные служащие, военнослужащие и даже священнослужители. К наиболее распространенным видам относятся детский и молодежный туризм. Они составляют отдельные виды путешествий в туризме.

В качестве основных видов социального туризма традиционно выступают следующие: детский, семейный туризм, туризм для инвалидов, для пенсионеров. Также можно выделить такие подвиды социального туризма, как: детско-юношеский, лечебно-оздоровительный (медицинский), самодеятельный, экологический, культурно-познавательный и ряд других видов туризма. В массовом сознании социальный туризм ассоциируется с людьми, имеющими низкие доходы, не позволяющие им приобретать туристские услуги высокого качества. К этой категории относятся многодетные семьи, учащаяся и работающая молодежь, дети-сироты, воспитанники детских домов и школ-интернатов, пенсионеры, инвалиды и малоимущие граждане. Однако, большой ошибкой будет сбрасывать эту категорию граждан со счетов и отказываться от разработки соответствующего их возможностям турпродукта. Безусловно, эта категория граждан нуждается в льготах социального характера и среди них – в доступных возможностях туризма и рекреации (таблица 1)[8].

Таблица 1

Категории лиц, имеющих предпочтительное прав на льготы в сфере социального туризма

Категория потребителей	Время пребывания	Тип учреждений размещения
Малоимущие слои населения	Межсезонье	Турбазы, дома отдыха, санатории
Дети из многодетных семей, учащаяся молодежь	Студенческие каникулы, отпуска	Лагеря труда и отдыха, турбазы, дома отдыха, санатории
Пенсионеры	Межсезонье, не сезон	Лагеря труда и отдыха, турбазы, дома отдыха, санатории
Инвалиды	Межсезонье, не сезон	Лагеря труда и отдыха, турбазы, дома отдыха, санатории

Возможно выделить важнейшие задачи социального туризма:

- организацию доступных выездов на отдых с целью улучшения здоровья для социально малозащищенных слоев населения;
- создание безбарьерной среды людей с ограниченными возможностями передвижения.

Развитие социального туризма важно прежде всего для улучшения качества жизни населения страны. Благодаря этой сфере туризма повышается не только общекультурное развитие малоимущей части

населения, но и его здоровье за счет всевозможных оздоровительных программ, снижается уровень социального напряжения в обществе. Мировой опыт бесспорно доказывает, что массовость общедоступного социального туризма покрывает его дешевизну суммарным притоком и быстрой оборачиваемостью живых денег, что увеличивает занятость, инвестиции в туризм непосредственно на местах, а заодно и налоговые поступления в местные и центральные бюджеты.

Детский туризм – обычно организуется с целью обучения школьников, получения дополнительной информации (сбор гербария, изучение своей страны и т.п.). Общение между студентами и подростками занимает главное место. Детский и юношеский туризм требует особого внимания и навыков. Организаторы должны иметь хорошую педагогическую подготовку. Такой туризм организуется на основе социального туризма и широко обеспечивается субсидиями и скидками.

Молодежный туризм считается образом жизни развитого социального общества. Среди молодежи мира бытует представление о том, что они должны путешествовать по миру, усваивать жизненные уроки, изучать образ жизни жителей других стран до 25 лет, после 25 лет они будут иметь семью, заводить детей. Это помогает им выбрать правильный жизненный путь, сформировать свое личное мнение.

Ряд международных молодежных организаций занимаются созданием льготного режима на время поездок молодежи и лиц, их сопровождающих. Например, организация поездок для молодежи входит в задачи Международной федерации «Организации молодых путешественников». Эта федерация была создана в 1951 году, ее штаб-квартира находится в Копенгагене, действует она под руководством организации ЮНЕСКО.

В 1967 году на специальном конгрессе Международное бюро социального туризма (Bureau International du Tourisme Social, BITS), проходившем в Италии в городе Фьютти, был принят Манифест о молодежном туризме. В обновленном в 1981 году Манифесте, говорится об основных элементах молодежных фестивалей, роли поддерживающих их учреждений как основной составляющей социального туризма. Учитывая специфику молодежного туризма, в его объем можно включить следующие требования: активность, способность быстро адаптироваться к потребностям молодежи, меняющимся изо дня в день (развлекательные программы, музыка и т. д.); иметь возможность снижать цены без изменения качества; обеспечение безопасности смешанных групп (женщин и мужчин); строгое внимание следует уделять санитарно-гигиеническим правилам; следует учитывать, что наличие взаимного доверия между всеми участниками группы позволяет избежать различных проблем.

В целях развития и поддержки молодежного туризма по всему миру действуют несколько организаций: Международное бюро социального туризма (BITS), Азиатско-европейское молодежное сотрудничество

(AEYC), Международная ассоциация студентов, обучающихся в экономических и коммерческих областях (AIESEC), Европейская ассоциация молодежных карточек (EYCA), Международный молодежный культурный обмен (ICYE), Международная конфедерация студенческого туризма (ISTC), Международная федерация молодежных хостелов (IYHF), Всемирная конфедерация молодежного и студенческого туризма (WYSETC) и т. д.

Уникальность молодежного туризма состоит в том, что, как и другие виды туризма, он имеет приспособленные для молодежи места размещения, то есть хостелы. Хостел (Hostel) – дешевая гостиница типа общежития для молодежи. Наличие синих ели или таблички «HI» на входе в отель используется для отличия хостелов от других отелей.

В 1909 году первое специальное общежитие в Германии было по идее немецкого учителя Рихарда Ширмана. Он предлагал путешественникам ночлег в школьных классах по невысокой цене. После урока все столы и стулья были перенесены из класса в коридор, на пол расставлены соломенные мешки, а утром путешественники помогли расставить все вещи по местам.

В 1930 году в Англии была создана первая ассоциация хостелов. В 1932 году была основана Международная федерация молодежных хостелов, созданы специальные каталоги и службы бронирования.

В его состав входит более 5500 хостелов, расположенных во всех странах мира. В настоящее время членами федерации являются 70 стран мира. В хостелях, входящих в Международную федерацию, невозможно разместиться без специальной членской карты. Если гость приехал без карты, на месте ему не откажут, а предложат купить специальную «марку» стоимостью 1-2 евро.

Чтобы охватить все категории туристов и создать для них благоприятные условия, в Узбекистане создана Ассоциация социального туризма. Она учреждена 8 мая 2020 года и является единственной организацией в стране, занимающейся проблемами развития социального туризма

Основные задачи Ассоциации:

- проведение благотворительных акций для наших соотечественников с ограниченными возможностями и детей из малообеспеченных семей;
- помощь в создании условий для путешествия людей с ограниченными возможностями;
- участие в разработке государственных программ, проектов нормативных актов и других решений в сфере социального туризма и реализации общественного контроля;
- помощь в организации туризма и экскурсий для детей, молодежи, людей с ограниченными возможностями в рамках развития инклюзивного туризма.

Ассоциация социального туризма Узбекистана будет служить развитию инклюзивного туризма в стране и налаживанию сотрудничества с зарубежными ассоциациями в этой области.

В сотрудничестве с Государственным комитетом по развитию туризма будет организовано благотворительное путешествие для наших соотечественников с ограниченными возможностями «Путешествие для всех!», а также проведена работа по оценке возможности путешествия для них по достопримечательностям нашей страны

Новая структура будет способствовать объединению физических лиц, желающих внести свой вклад в развитие туризма в нашей стране и направлять их усилия на развитие социального туризма, в том числе на организацию туризма для детей, молодежи, пожилых людей и людей с ограниченными возможностями. Ассоциация будет работать над оценкой возможностей для путешествия людей с ограниченными возможностями по достопримечательностям Узбекистана, а также налаживать сотрудничество с зарубежными ассоциациями в области инклюзивного туризма.

Социальный туризм также предназначен для инвалидов и пожилых людей, пенсионеров и тех, кто имеет социальные льготы и льготы аналогичных категорий. Официально в республике Узбекистане по состоянию на 2022 год людьми с инвалидностью были признаны 845,3 тысячи человек, или 2,3% от общей численности населения [9].

Из общего числа людей с инвалидностью значительно большее количество проживает в сельской местности: в сёлах — 532 тысячи, а в городах — 313,3 тысячи. Самый высокий процент наблюдается в Навоийской области (3,6%), Сырдарьинской области (3,1%) и в Каракалпакистане (2,9%).

В Узбекистане 142,3 тысячи детей-инвалидов до 18 лет и 396,7 тысячи лиц с инвалидностью до пенсионного возраста. Мужчин с установленной инвалидностью больше (475,8 тысячи), чем женщин (369,5 тысячи).

В республике поэтапно осуществляются широкомасштабные реформы по решению проблем, связанных с туристской инфраструктурой, повышению качества предоставляемых в сфере услуг и активному продвижению национальной туристской продукции на мировых рынках.

Вместе с тем развитие инфраструктуры безбарьерного туризма, предусматривающей обеспечение необходимых условий для свободного передвижения лиц с инвалидностью на объектах туристской инфраструктуры и культурного наследия, а также создание равных возможностей для всех граждан в туризме остаётся одной из наиболее актуальных задач в данной области.

В соответствии с Государственной программой по реализации Стратегии развития Нового Узбекистана на 2022 - 2026 годы в "Год обеспечения интересов человека и развития махалли", утвержденной Указом Президента Республики Узбекистан от 28 января

2022 года №УП-60, а также в целях дальнейшего совершенствования возможностей туристской инфраструктуры для совершения путешествий по нашей стране лицами с инвалидностью в комфортных условиях Президент Узбекистана подписал постановление «О мерах по развитию инфраструктуры безбарьерного туризма и его стимулированию» № ПП-20 от 01.12.2024, направленный на создание условий и удобств на туристических и культурных объектах для лиц с инвалидностью.

Исходя из постановления определены следующие основные направления развития инфраструктуры безбарьерного туризма в Республике Узбекистан:

-создание на объектах туристской индустрии, объектах организаций культуры и культурного наследия, в том числе в музеях, театрах и средствах размещения, необходимых условий для свободного перемещения лиц с инвалидностью;

-стимулирование субъектов сферы туризма, в частности туроператоров и турагентов, владельцев средств размещения и субъектов предпринимательства, предоставляющих транспортные услуги, а также граждан, сопровождающих лиц с инвалидностью во время путешествия;

-повышение осведомленности лиц с инвалидностью путем широкого разъяснения возможностей, созданных в республике для их беспрепятственного путешествия;

-дальнейшее повышение качества услуг, предоставляемых для лиц с инвалидностью на объектах индустрии туризма, с использованием возможностей современных информационно-коммуникационных технологий.

Пока в нашей стране социальный туризм развивается островками в рамках отдельных организаций, предприятий, регионов и не обрел характер повсеместного явления.

Здесь имеются следующие проблемы:

1. Для развития социального туризма необходим импульс со стороны государства, поскольку для запуска социальных программ нужно обеспечить выделение финансовых средств, особенно на стадии пилотных проектов.

2. Вторая проблема — это выработка форм реализации социальных программ в сфере туризма. В качестве примера можно привести практику отпускных чеков, которые выдаются работникам предприятий, организаций и учреждений именно для отдыха в сети участвующих в проекте объектов туристической индустрии и отдыха. Форма оплаты туров аналогичными чеками на протяжении десятилетий действует во Франции, Швейцарии, Италии и ряде других европейских стран. В свое время туризм в Швейцарии начал развиваться за счет таких отпускных чеков. Послевоенная Франция была в руинах, но там этими чеками простимулировали развитие внутреннего туризма. Появились новые объекты, которые стали центрами притяжения

туристов с различных регионов мира. Введение этой системы создаст серьезный стимул для того, чтобы туристические услуги были востребованы круглогодично.

3. Другая проблема — специализированные кадры. Многолетний «простой» в подготовке специалистов в сфере социального туризма, что естественным образом привело к дефициту профессионального туристского опыта, как пример — обслуживание туристов и экскурсантов с дефектами зрения или слуха.

4. Эффективность развития социального туризма для ограниченно дееспособных лиц, в том числе для инвалидов требует развитие соответствующей инфраструктуры. Надо признать, что в Узбекистане инфраструктура для организации туризма для инвалидов практически отсутствует. Имеющиеся в некоторых общественных местах пандусы не снимают проблему дискомфорта, а чаще невозможного, перемещения людей, например, с нарушениями опорно-двигательного аппарата.

Выводы/Рекомендации (Conclusion/Recommendations)

Таким образом, нашему правительству следует рассмотреть вопрос о создании системы социального туризма с учетом европейского опыта. Она должна ориентироваться на привлечение к активному отдыху наибольшего процента населения: пенсионеров, молодежи, семей с низкими доходами, инвалидов и др. Также многие предлагают не ограничивать социальный туризм внутренним рынком, должна быть предусмотрена и возможность выезда граждан за рубеж.

В нашей стране развитие социального туризма возможно пока только через государственное регулирование. Туризм на сегодняшний день имеет характер социальной ориентации целей развития современного общества. Для восстановления социального туризма необходимы инновационные подходы, модели, направления, механизмы и конкретные меры решения в стране проблем социального туризма. Необходимо искать пути применения финансовых механизмов поощрения работодателей, являющихся спонсорами социальных туристских программ или компенсирующих своим работникам часть затрат на туристские услуги на территории Республики. Всячески следует поощрять любую инициативу поддержки программ социального туризма со стороны бизнес-сообщества. Важно добиться повышения доступности туристских услуг для наименее социально защищенных групп населения и учащихся. Развитие социального туризма могло бы способствовать решению весьма актуальной в настоящее время социальной задачи -преодоление все увеличивающихся различий в уровне жизни различных слоев населения страны.

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СОЦИАЛЬНЫЕ АСПЕКТЫ ЦИФРОВОЙ ЭКОНОМИКИ В РЕСПУБЛИКЕ УЗБЕКИСТАН

Аннотация. В данной статье рассмотрены становление и развитие цифровой экономики в Республике Узбекистан, основные требования по ее реализации, а также возможные социально-экономические последствия.

Ключевые слова: цифровизация; цифровое общество; социальная экономика; четвертая промышленная революция.

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SOCIAL ASPECTS OF THE DIGITAL ECONOMY IN THE REPUBLIC OF UZBEKISTAN

Abstract. This article shows the formation and development of the digital economy in the Republic of Uzbekistan, basic requirements for its implementation, as well as possible socio-economic consequences.

Key words: digitalization; digital society; social economics; the fourth industrial revolution.

Новые технологии открывают перед миром новые перспективы, новые возможности, но при этом сулят новые испытания и новые риски [1].

В настоящее время ежедневно сотням миллионов людей по всему миру приходится подстраиваться под постоянное ускорение темпов внедрения передовых технологий абсолютно во все сферы жизни, что в свою очередь предопределяет постановку количественных и качественных социально – ориентированных целей, которые необходимо достичь повсеместно и своевременно, а именно:

- повышение осведомленности социальных слоев населения о современных тенденциях развития НИОКР;
- повышение уровня цифровой грамотности и компетентности среди населения;
- создание благоприятных условий для всех слоев населения для адаптации к быстро меняющимся темпам технологического развития;
- наличие своевременно обновляющейся инфраструктуры, необходимой для современной эпохи (телекоммуникационные центры, серверы, ИКТ, платформы по работе с данными и многое другое);
- создание условий для подготовки и переподготовки квалифицированных специалистов, отвечающих всем требованиям современного времени;
- непрерывная разработка правовой базы с целью повышения уровня цифровой безопасности субъектов цифровой экономики.

Но, как известно, в условиях постоянного ускорения как внешних, так и внутренних изменений горизонт планирования существенно сокращается. Это означает, что времени на долгие размышления нет, необходимо действовать, при чем в правильном направлении.

Сравнительно недавно, а именно в конце прошлого столетия, когда мир еще только находился на пороге четвертой промышленной революции, и стали появляться первые признаки цифровой экономики, о ней на тот момент было известно совсем немного. И только в 1995 году американский ученый, Николас Негрепonte, в своем научном труде “Being digital” впервые использовал понятие “цифровая экономика” в метафорическом описании перехода от обработки атомов к обработке битов [2]. На его взгляд основными преимуществами цифровой экономики являются отсутствие физического веса продукции, соответственно, меньшая затратность на его производство, а также более высокая мобильность товаров и услуг за счет использования сети Интернет. В том же году в свет вышла и книга канадского ученого, Дона Тапскотта “Электронно-цифровое общество: плюсы и минусы эпохи сетевого интеллекта”, в которой автор связывает цифровую экономику с использованием ИКТ [3]. Сегодня же современное общество уже не первый год живет в условиях цифровизации, являющейся одним из основных драйверов социально-экономического развития. На смену первым вычислительным машинам, черно-белому телевидению и прототипу современной сети Интернет пришли робототехника, искусственный интеллект, нанотехнологии, 3D моделирование,

виртуальная реальность и многое другое, на что направлена заинтересованность любого современного общества. Ведь, как известно, растущие инвестиции в передовые технологии цифровой экономики оказывают непосредственное положительное влияние на трансформацию экономической системы всего государства.

Для точной оценки уровня цифровой экономики и выявления наиболее важных аспектов ее дальнейшего развития в стране, существует широкий диапазон показателей, которые необходимо брать в расчет. Среди них:

- длина оптико-волоконных линий связи и уровень охвата высокоскоростным Интернетом;
- скорость интернет соединения;
- ежегодный объем оказываемых услуг связи и информатизации;
- удельный вес населения, пользующегося сетью Интернет (широполосный/беспроводной доступ) по половозрастным показателям;
- цифровые навыки населения по половозрастным группам в разрезе областей;
- удельный вес государственных и частных организаций, использующих технологии сбора и обработки больших данных, облачные сервисы, технологии искусственного интеллекта и многое другое;
- доля затрат на программное обеспечение в ВВП;
- валовая добавленная стоимость сектора ИКТ и электронной коммерции в ВВП;
- экспорт/импорт в сфере ИКТ;
- состояние электронной банковской сферы;
- количество патентов, стартапов и инновационных изобретений в области IT и передовых технологий (биотехнология, геоинженерия, нейротехнология, аддитивное производство и др.)
- состояние развития электронного правительства;
- уровень развития электронной коммерции;
- состояние информационной безопасности страны;
- публикации отечественных авторов по приоритетным научным направлениям;
- место государства в международных индексах.

В этом плане и Узбекистан старается не отставать от мировых тенденций перехода экономики на сравнительно новый уровень. В 2020 году указом Президента Республики Узбекистан была утверждена стратегия “Цифровой Узбекистан – 2030”, в рамках которой начата реализация 220 приоритетных проектов, предусматривающих цифровизацию регионов и отраслей, совершенствование системы электронного правительства, развитие отечественного рынка программных продуктов и информационных технологий, организацию во всех регионах республики IT-парков, а так же обеспечение данной сферы квалифицированными

кадрами. К 2030 году планируется довести долю цифровой экономики в ВВП до 30% [4]. Однако стоит отметить, что доля валовой добавленной стоимости, созданной в секторах ИКТ в ВВП на конец 2022 года, составила 3,3% (см. таблицу 1), что говорит о все еще имеющихся проблемах.

Таблица 1. Доля валовой добавленной стоимости, созданной в секторах информационной экономики и электронной коммерции в ВВП (в %)⁶⁰

Показатели	2018	2019	2020	2021	2022
Сектор информационной экономики и электронной коммерции	2,0	1,7	1,9	2,5	3,3
Сектор ИКТ	1,8	1,5	1,6	1,7	1,9
Производство ИКТ	0,1	0,1	0,1	0,1	0,1
Торговля ИКТ	0,1	0,1	0,0	0,1	0,1
Услуги ИКТ	1,7	1,4	1,5	1,6	1,8
Сектор контента и средства массовой информации	0,2	0,2	0,2	0,2	0,2
Электронная коммерция	0,0	0,1	0,1	0,6	1,2

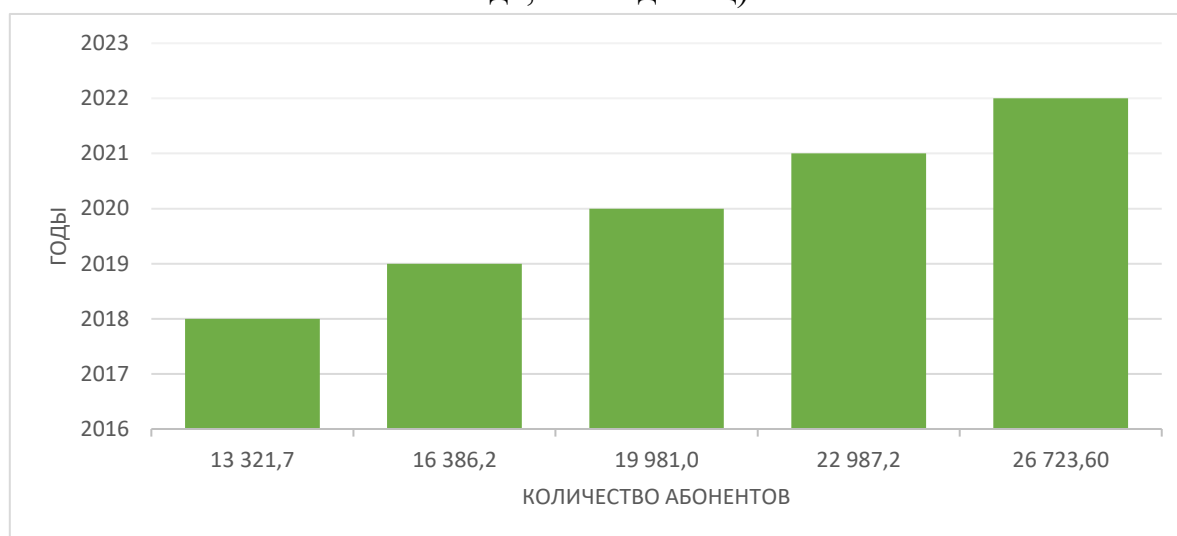
В условиях стремительного развития цифровой экономики, в первую очередь, меняются приоритеты, ценности и модели поведения человека. Это можно проследить на примере вовлеченности населения в использование ИКТ. По состоянию на конец 2022 года количество пользователей сети Интернет в Узбекистане составило 26,7 млн человек, что равняется 75 пользователям на каждые 100 человек населения⁶¹. Данный показатель увеличился на 16,5 % по сравнению с показателями предыдущего года, из которых 60% - молодежь в возрасте до 25 лет⁶². В то время как в 2018 году количество абонентов с доступом в сеть было почти в 2 раза меньше по сравнению к последнему периоду (см. диаграмму 1).

⁶⁰ Составлено по данным Агентства Статистики при Президенте РУз. <https://api.stat.uz/api/v1.0/data/axborot-iqtisodiyoti-va-elektron-tijorat-sohalarid-1?lang=ru&format=pdf>

⁶¹ Составлено по данным Агентства Статистики при Президенте РУз. <https://stat.uz/>

⁶² Составлено по данным Internet World Stats. <https://www.internetworldstats.com/asia.htm>

Диаграмма 2. Количество абонентов с доступом к сети Интернет (на конец года; тыс. единиц)



По данным индекса мобильной связи, составленным Ассоциацией операторов мобильной связи GSMA, Узбекистан в 2022 году оказался лишь на 112 строчке с индексом 54,04, в то время как в пятерку лидеров вошли такие страны как Сингапур, Швейцария, Дания, Австралия и Финляндия, у которых показатель мобильной связи варьировался от 93,09 до 90,49 соответственно (см. таблицу 2). Данный индекс рассчитывается по ключевым факторам, способствующим внедрению мобильного интернета, а именно: инфраструктуре, доступностью, потребительской готовностью, контентом и услугами.

Таблица 2. Индекс мобильной связи (GSMA Mobile Connectivity Index)⁶³

№	Страна	Год	Индекс
1	Сингапур	2022	93,09
2	Швейцария	2022	91,21
3	Дания	2022	90,89
4	Австралия	2022	90,62
5	Финляндия	2022	90,49
6	Норвегия	2022	90,45
7	ОАЭ	2022	89,48
8	Ирландия	2022	88,90
9	США	2022	88,64
10	Объединенное Королевство	2022	87,89
11	Новая Зеландия	2022	87,79
...	...	2022	...

63 Составлено по данным <https://www.mobileconnectivityindex.com/index.html#year=2022&dataSet=indicator>

GSMA.

111	Камбоджа	2022	54,63
112	Узбекистан	2022	54,04
...	...	2022	...
170	Южный Судан	2022	8,83

Для того, чтобы изучить социальные аспекты цифровизации, то какое влияние она оказывает на общество, необходимо наглядно и детально разобрать состояние всех компонентов социально-экономической сферы. На сегодняшний день цифровая экономика охватывает все больше социальных и экономических секторов, развивается синергия различных отраслей – образования, здравоохранения, финансовой отрасли, культуры, социального обеспечения, строительства, промышленности, торговли и т.д. Так, например, с целью: облегчения связи населения с государственными органами, совершенствования демократии и обеспечения оперативности и прозрачности деятельности государственных органов, принят закон Республики Узбекистан от 09.12.2015 года об “Электронном Правительстве”. Благодаря внедрению Единого портала интерактивных государственных услуг (ЕПИГУ), физическим и юридическим лицам ежедневно в режиме онлайн оказывается 591 услуга по таким сферам, как образование, социальная защита, ЖКХ, недвижимость, э-коммерция, здравоохранение, налогообложение и многое другое. В рейтинге стран мира по уровню развития электронного правительства E-Government Development Index, составляемого раз в два года Департаментом экономического и социального развития ООН, Узбекистан в 2022 году занял 69 позицию среди 193 стран (см. таблицу 3).

Таблица 3. Индекс развития электронного правительства Республики Узбекистан за 2014-2022 гг. (E-Government Development Index, EGDI)⁶⁴

Год	Место в рейтинге	Значение
2014	100	0,4695
2016	80	0,5434
2018	81	0,6207
2020	87	0,6667
2022	69	0,7265

Данный индекс рассчитывается по таким показателям, как развитие государственных онлайн сервисов, состояние инфраструктуры ИКТ и развитие человеческого капитала, а именно уровень грамотности взрослого населения, ожидаемая и фактическая продолжительность образования, что в целом иллюстрирует прямую связь между внедрением электронного правительства и оказываемым им влиянием на все общество.

⁶⁴ Составлено автором на основе данных отчета ООН “Электронное правительство 2022” <https://publicadministration.un.org/egovkb/en-us/>

Помимо всего прочего, постепенный переход к цифровой экономике не может не отразиться на рынке труда и, соответственно, на доходах населения и благосостоянии всего государства, наоборот, он его кардинально меняет. До сих пор между учеными со всего мира идут нескончаемые споры относительно того, носит ли это изменение положительный характер, либо же преобладает отрицательный эффект. Важно учитывать, что в условиях цифровой экономики меняется как характер труда, так и вся система трудовых отношений. Все эти изменения можно представить следующим образом:

- появление альтернативных форматов занятости, например, дистанционной работы, при которой сотрудникам больше не предъявляется требование личного присутствия на территории предприятия или же офиса, у сотрудников появляется возможность выбора, подходящего для себя графика работы, находясь притом абсолютно в любой точке земного шара. Это в свою очередь позволяет повысить уровень и скорость обслуживания клиентов, сокращает транзакционные издержки (аренда помещения, транспортные расходы), а также заметно уменьшает разрыв между исполнителями и заказчиками;

- ликвидация более половины рабочих мест низкоквалифицированного труда, путем замещения человеческого труда на автоматизированные системы и ИИ;

- и в то же время повышение спроса на высококвалифицированных специалистов таких профессий как аналитики, разработчики программного обеспечения, интернет маркетологи, разработчики digital проектов, киберисследователи и многие другие;

- появление у людей больших возможностей для саморазвития, повышения квалификации и цифровых навыков, а также переподготовки путем создания более гибкого и свободного рабочего графика;

- более удобный и облегченный формат взаимосвязи работодателей и потенциальных-соискателей, благодаря внедрению онлайн сервисов с огромной базой вакансий и резюме. На сегодняшний день примером могут послужить такие площадки как LinkedIn, Head Hunter, RabotaUz, действующие на территории Узбекистана;

На наш взгляд, цифровая экономика берет на себя роль перераспределения профессий на рынке труда – там, где исчезают неактуальные более профессии, освобождается место для новых, с принципиально иными квалификациями. По мнению 9-го генерального директора ИМВ Джинни Рометти, человечеству не грозит безработица, потому что роботы смогут взять на себя роль выполнения низкооплачиваемого труда, а перед людьми откроются новые виды занятости [5]. Таким образом, в эпоху цифровизации, в первую очередь, создаются рабочие места в сфере ИКТ. По состоянию на конец 2023 года в

Узбекистане только в сфере IT работает порядка 100 тыс. человек, а объем экспорта IT-услуг за аналогичный год составил 344 млн. долларов⁶⁵.

Стоит также отметить, что одним из показателей развития цифровой экономики является и качественное образование. На сегодняшний день в Узбекистане действует порядка 60 частных и государственных ВУЗов, готовящих ежегодно более 29 тыс. кадров по таким направлениям как информационная безопасность, Data Science, ИИ и другие. При этом также с целью повышения уровня образования ежегодно в высшие учебные заведения привлекаются квалифицированные преподаватели из зарубежных стран, таких как США, Южная Корея, Япония, Россия, Индия, Сингапур и многих других. Помимо этого, количество частных учреждений - резидентов IT Park, предоставляющих образовательные услуги в области IT, в 2023 году превысило отметку в 300 единиц.

Как было упомянуто ранее, в эпоху ускоренного развития цифровых технологий и масштабного реформирования социально-экономических устоев, от человека и общества, в первую очередь, требуется гибкость, умение подстраиваться под быстро меняющиеся темпы жизни. Так же не менее важным в данном случае выступает привлечение всех активных слоев населения к новому уровню взаимодействия общества, государства, бизнеса, научного сообщества с целью повышения общего благосостояния и уровня жизни всего социума.

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ИССЛЕДОВАНИЕ ПРОЧНОСТИ МАТЕРИАЛОВ ИЗ БАЗАЛЬТОВЫХ ФИБРОБЕТОНОВ ДЛЯ ДОРОЖНО - СТРОИТЕЛЬНЫХ РАБОТ

Аннотация. Научная статья посвящена методике применения геосинтетических современных материалов для дорожно-строительных работ в условиях Узбекистана. При исследовании данной проблеме используются методы и инструменты строительной технологии. В статье анализируются характерные особенности строительной технологии с учетом влияние разных местных материалов.

Ключевые слова: Автомобильные дороги, базальтовые геосинтетические материалы, категория дорог, армоконструкция, насыпи откосов, базальт.

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INVESTIGATION OF THE STRENGTH OF BASALT FIBER CONCRETE MATERIALS FOR ROAD CONSTRUCTION

Abstract. The scientific work is devoted to the methodology of application of geosynthetic modern materials for road construction works in Uzbekistan.

Methods and tools of construction technology are used in the study of this problem. The article analyzes the characteristic features of construction technology, taking into account the influence of different local resources.

Keywords: Highways, basalt geosynthetic materials, category of roads, armoured structure, embankment slopes, basalt.

В Узбекистане с Российскими специалистами создана Совместное предприятие ООО «Базальт» в Фаришском районе Джизакской области. В настоящее время в совместном предприятии ООО «Базальт» налажен полный цикл переработки базальта на основе местного сырья. Сначала здесь запустили выпуск базальтового утеплителя, в августе 2017 года на предприятии ООО «Базальт» начали производить непрерывное базальтовое волокно, базальтопластиковую арматуру и базальтовый геосинтетический материал.

Настоящая научная статья даёт возможность рассмотреть применение геосинтетических материалов, выпускаемых совместным предприятием на ООО «Базальт» в Республике Узбекистан (далее ГМ) в соответствии с проектными решениями при строительстве, реконструкции и капитальном ремонте автомобильных дорог, городских улиц, проездов, площадок под высокие нагрузки, парковок и других сооружений.

Основная цель применения ГМ - обеспечение надежного функционирования дороги или отдельных ее элементов в сложных условиях строительства и эксплуатации. Устройство дополнительных слоев из ГМ позволяет повысить эксплуатационную надежность и сроки службы конструкции или отдельных ее элементов, качество работ, упростить технологию строительства, сократить сроки строительства, уменьшить расход традиционных строительных материалов, объемы земляных работ, материалоемкость конструкции.

Отечественный и зарубежный опыт применения геосинтетических материалов показывает на их универсальность (обширное поле применения), экономичность (снижение затрат на строительство и эксплуатацию, экономию строительных материалов, сокращение сроков производства работ, увеличение межремонтных сроков), экологичность.

Геосетки из базальтоволокна выпускаемые в совместном предприятии ООО «Базальт» марки СБНП выпускаемые по СТО 5952-004-98214589-2011, рекомендуются применять в качестве армирующих прослоек при строительстве автодорог, аэродромов, площадок различного назначения и в других геотехнических сооружениях.

Данные материалы находят своё применение в следующих видах строительных работ:

- строительство насыпей на слабых основаниях (глинистых грунтах, грунтов повышенной влажности);
- строительство временных дорог;

- строительство автомобильных дорог всех категорий;
- строительство железнодорожных путей (усиление под балластным слоем);
- строительство аэродромов (взлетно-посадочных полос, рулежных дорожек и мест стоянок);
- обустройство кустовых площадок скважин;
- строительство площадок под высокие нагрузки;
- устройство уширения проезжей части;
- строительство армо-грунтовых подпорных конструкций;
- строительство подъездных путей к магистральным трубопроводам;
- строительство подъездных путей к малым искусственным сооружениям;
- строительство магистральных трубопроводов;

Геосетки из базальтоволокна выпускаемые в ООО «Базальт» марки СБНП выпускаемые по СТО 5952-004-98214589-2011 следует применять в соответствии с проектными решениями для:

- повышения несущей способности слабого основания (болота 1-2 типа, связные грунты повышенной влажности);
- обеспечения равномерной осадки насыпи и сокращения сроков консолидации основания;
- повышения устойчивости грунтовых конструкций, чем обеспечивается необходимая стабильность сооружений;
- повышения несущей способности дорожных одежд, как капитальных, так и дорожных одежд переходного типа;
- крепление оснований водопропускных труб, армирование грунта после замены;
- распределение нагрузки по всей площади взлетно-посадочных полос, рулежных дорожек и мест стоянок в аэропортах;
- дополнительно - для разделения различных типов материалов и грунтов.

В случаях строительства на слабых основаниях, при наличии переувлажненных связанных грунтов, водонасыщенных песчаных грунтов, рекомендуется в качестве армирующего элемента применять геосетки из базальтоволокна выпускаемых в ООО «Базальт» марки СБНП выпускаемые по СТО 5952-004-98214589-2011 в сочетании с разделительной прослойкой из нетканого геосинтетического материала.

Требования к грунтам и каменным материалам, материалам, используемым в дорожных конструкциях совместно с геосинтетическими материалами выпускаемой в совместном предприятии ООО «Базальт», не предъявляют специфических требований отличных от требований соответствующих государственных стандартов и строительных норм, и правил. Наименования грунтов в данном стандарте соответствуют ГОСТ 25100-95.

Характеристики слабых грунтов следует определять в соответствии с «Нормативным документам по проектированию земляного полотна на слабых грунтах».

Насыпь на слабых грунтах I типа



- Геосетка раскладывается перпендикулярно оси дороги с величиной нахлеста 0,4-0,5 м и величиной выпуска 0,5 м;

- Минимальная высота насыпи определяется из условия снегонезаносимости, возвышения верха дорожной одежды над уровнем поверхностных вод и морозоустойчивости дорожной одежды;

- Насыпь в нижней части на величину осадки плюс 0,5 м возводится из дренирующих грунтов;

- Величина осадки насыпи и скорость консолидации определяется расчетом.

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СЕМАНТИКО ФУНКЦИОНАЛЬНО МИКРОСИСТЕМЫ В ЗНАЧЕНИЕ «ОТЕЦ»

Аннотация. Внутренняя форма общетюркского термина родства «ата» и другие его фонетические варианты имеют тесную связь со значением «охранять», что экстра лингвистически соответствует значениям мужского пола в качестве отца.

Ключевые слова: термин, наука, лексика, язык, значения, словарь.

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SEMANTIC AND FUNCTIONAL MICROSYSTEMS IN THE MEANING OF "FATHER"

Annotation. The internal form of the general science term "Ata" and its other phonetic options have a close connection with the meaning of "protect", which the extra linguistically corresponds to the male values as a father.

Key words: term, science, vocabulary, language, meanings, dictionary.

Значение «отец» в современном узбекском литературном языке выражается терминами «*ота*, *дада*, *надар*». В классическом литературном языке встречаются и слова *аб*, *джазира*, *волид* которые имеют значение «отец». В отдельных диалектах узбекского языка значение «отец» выражается и через формы *ота*, *ада*. О формах «*ата*» И. Исмоилов отмечает следующее: «в современных тюркских языках форма «*ота*» сохраняется в качестве термина родства, другая же её форма -«*ота*» развивается в значении «отец».

В узбекском литературном языке фонетический вариант «*ота*» является основным по отношению к другим фонетическим, а также лексическим её вариантам. В этом отношении «*ота*» соответствует русскому эквиваленту «отец», в узбекском языке «*ота*», а в русском «отец» являются доминантами по отношению к другим членам синонимического ряда, инвариантным значением которого является «*ота*

(родной отец)». Сходство между русскими и узбекскими эквивалентами *отец-ота* заключается в том, что оба они употребляются и в значении «кровного родства» прямой линии. Кроме того, оба они используются в функции формы почтительного обращения к лицам пожилого возраста мужчин, как знак уважения.

По наличию и отсутствию признака кровного родства в семантической его структуре термин *отец -ота* делится на две группы: а) *отец -ота* «кровный отец»; б) *отец - ота* «некровный отец-отчим». Термин *отец - ота* в значении «родной отец» имеет следующие варианты: «родной отец» - «папа» - «пап-папа-папа» «дед, дедушка», «дядя» - «старший брат отца», иногда и «матери». Термин *отец* в значении "неродной отец-отчим" совпадает со значением: 1) «тесть» «свекор» - «отец жены» - «отец мужа»; 2) «названный отец»; 3) «отчим»; 4) «наставник»; 5) «основатель»; 6) «форма обращения к пожилым мужчинам». Слово-термин *отец - ота* со значением «родной отец» входит в связь с другими словами - терминами, имеющими значение кровного родства, и образуют своеобразные функционально-семантические микросистемы: в узбекском языке «ота-бобо», «ота — она», «ота — бола»; в русском «дедушка-бабушка», «отец -мать», «отец-дети» - «родители». Термин «дитя» семантически безразличен по отношению к естественному роду под давлением нейтрализации признака различия мужского и женского пола, кроме этого, «отец» имеет функционально-семантическую связь со словами *дядя-амаки* «дядя по отцовской линии», *амма-тётя* «тётя по отцовской линии». При участии термина родства *ота-отец* со значением в узбекском и русском языках образуется ряд функционально-семантических микросистем, между компонентами которых существуют родовидовые отношения, носящие гипонимический характер.

Гипоним «отец» в русском языке вместе с гипонимом *дед* образуют функционально-семантическую микросистему со значением «предки», с гипонимом «дети» - функционально-семантическую микросистему «отец-сын» со значением «совокупность». В понятии родства в русском языке между определенными терминами существует сочетание гипонимических и гетеронимических отношений. Например, в случае отношений "отец - сын" или "отец - мать" гипонимическая связь (то есть отец является родителем, а сын или мать являются детьми) переплетается с гетеронимическим отношением, когда один термин мужского рода (отец) сочетается с терминами, имеющими женский или мужской род (мать, сын).

Аналогично, в отношениях "отец - дед" или "отец - дитя" гипонимическая связь (отец является предком или родителем деда, или ребенка) также сочетается с гетеронимическим отношением, поскольку используются разные термины, что указывает на разные роли и пола в семье. Это явление функционально-семантического синкретизма в

терминологии родства, где определенные термины объединяют в себе характеристики гипонимов (обобщенных терминов, которые включают в себя различные подтипы) и гетеронимов (терминов с разными лексическими формами, обозначающих разные роли или пола).

Гипоним и гетероним представляют собой различные лингвистические явления. Гипонимы - это термины, которые являются более общими и включают в себя множество подтипов или вариаций. Они представляют собой обобщенные понятия или классы, в которые входят различные члены. Например, "отец" является гипонимом, включающим в себя подтипы "дед", "муж", "дядя" и т.д.

Гетеронимы, с другой стороны, представляют собой термины с разными лексическими формами, обозначающие разные роли или пола. В контексте родства, гетеронимы могут быть связаны с разными родственными отношениями или ролями в семье. Например, "отец" и "мать" являются гетеронимами, так как они обозначают разные родственные роли с разными полами. Гетеронимические отношения основываются на устойчивой ассоциативной связи между разными членами микросистемы родства. Они показывают различные роли, статусы и отношения внутри семьи.

Таким образом, гипонимы и гетеронимы представляют разные явления в лингвистике. Гипонимы относятся к обобщенным понятиям или классам, в то время как гетеронимы имеют разные лексические формы и обозначают разные роли или пола. Гетеронимические отношения устанавливают связь между этими разными терминами в рамках функционально-семантических микросистем родства. В отличие от гетеронимов и их отношений гипонимы и их отношения не основываются на такой связи. В гипонимических отношениях не всегда возникает устойчивое ассоциативное отношение. Гипонимические отношения функционируют между членами логико-семантических микросистем терминов родства «*ота*» и «*амаки*» («отец и дядя по отцовской линии»), «*ота*» и «*амма*» («отец и тетя по отцовской линии»), в узбекском языке, «*отец-дядя*, *отец-тётя*» в русском.

В узбекском языке в этих микросистемах члены их парадигмы не всегда устойчиво ассоциируются друг с другом. Между терминами «*ота*» и «*амаки*», «*отец и дядя по отцу*», «*ота*» и «*амма*», «*отец и тетя по отцу*» наличествуют отношения кровного родства, чем отличаются от членов парадигмы функционально-семантических микросистем терминов родства «*ота-хола*», «*отец-тётя*», которыми определяются по отношению к детям и племянникам. У детей имеются кровное родство с отцами (непосредственно), дядьями, тетями по материнской линии. Различными являются родственные отношения между функционально-семантическими микросистемами терминов «*ота – бола*», «*отец и дитя*», «*бола и амаки*», «*дитя и дядя*».

Родственные отношения между членами первой функционально-семантической микросистемы - прямые и непосредственные, а второй функционально-семантической микросистемы - опосредованные. Родственность между «бола» и «амаки» (бола-амаки), а также «бола» и «амма», «дитя-тётя») определяется по отношению детей к отцу.

В родственных отношениях одного лица вступают в действие различные роли и связи, которые основаны на их родственных связях. Каждая из этих ролей определяет отношения этого лица с другими членами семьи. Например, одно и то же лицо может быть отцом по отношению к своим родным детям, их племянниками и племянницами по отцовской и материнской линиям, а также дедушкой или бабушкой по отношению к своим родным внукам, если они имеются. Также, это же лицо может быть мужем по отношению к своей жене, братом по отношению к другим родным братьям и сестрам, зятем по отношению к родителям жены и ее родственникам. Одновременно, это же лицо остается сыном по отношению к своим родителям, внуком по отношению к своим дедушкам и бабушкам, и племянником по отношению к своим родным дядям и тетям. Кроме того, они могут быть свояком по отношению к женам родных братьев и мужьям родных сестер. Это лишь несколько примеров многочисленных родственных связей, в которых одно лицо может находиться. В каждом из этих отношений родственные термины и роли могут различаться, и каждая из них имеет свое значение и контекст в семейной структуре.

Такие множественные родственные связи показывают богатство и сложность системы родства в различных культурных и языковых контекстах. Различные родственные связи могут существовать по отношению к одному и тому же лицу. Это связано с тем, что родственные термины отражают разные роли и отношения, которые члены семьи могут играть между собой. Особенностью терминов родства в функционально-семантических микросистемах является их способность отражать отношения между людьми и указывать на связи внутри семьи. Они выражают и описывают родственные связи, которые могут быть как кровными, так и некровными.

Важно отметить, что общим для всех терминов родства является то, что они выражают отношения между людьми. Они помогают определить степень родства, роли и связи между различными членами семьи. Отношения родства устанавливаются на основе биологической связи (кровного родства) или на основе законодательно установленных отношений (некровное родство, такое как свадьба или усыновление).

Термины родства являются важными в языке и культуре, так как они помогают людям организовывать и описывать свои семейные связи и создавать смысл взаимоотношений между членами семьи. Благодаря этим терминам мы можем более точно и точно обозначать родственные связи и устанавливать коммуникацию внутри семьи и общества.

Итак, родство представляет собой разновидность относительных слов. Относительность терминов родства характеризуется тем, что они обозначают обоюдное, двустороннее (далее многостороннее) родственное отношение между людьми. Эта обоюдность и двусторонность терминов родства помогает точному определению функционально-семантических микросистем, как своеобразной функционально-семантической микросистемы: члены, вышеприведенных рядов, (у которых в качестве одного из членов выступает термин *отец-ота*), объединяются по общей категориальной семе «кровное родство». Между членами парадигматических рядов каждой из функционально-семантических микросистем существует и дифференциал семы (признак). Например, в микросистеме русского, «отец-дед» («ота-бобо») – три дифференциальных признака: степень возраста, характер родства, социальное положение.

В микросистеме «отец-мать» «ота-она» - также три: естественный род, степень родства, социальное положение, в микросистеме «отец-дитя», «ота-бола» - также три: степень возраста, естественный род (если дитя-бола является дочкой), социальное положение. Своеобразные дифференциальные признаки свойственны и членам парадигм функционально-семантических микросистем терминов родства *отец-дядя*, *ота-амаки* «отец и дядя по отцовской линии». Доминантой синонимического ряда термина родства со значением в русском языке является «отец», в узбекском языке («ота, дада, падар») — «ота». В словаре терминов родства узбекских говоров отмечается, что значение «отец» передается и посредством слова «ака», «старший брат». Русское слово «отец», узбекское «ота», как было сказано выше, вместе с другими словами родства составляют определённые парадигматические ряды функционально-семантических микросистем.

1. Гиперо-гетеронимическая микросистема *отец-мать*, *ота-она*, со значением «родители», *отец-дед*, *ота-бобо* со значением «предки», *отец-дитя*, *ота-бола* со значением совокупность.

2. Гиперонимо- гипонимическая микросистема *отец-дядя*, *ота-амаки* «отец»-«дядя по линии отца», *отец-тетя*, *ота-амма* «отец»-«тетя по линии отца».

Согласно функционально-семантическим микросистемам родства в русском языке, составные компоненты отношений родства имеют общую интегральную сему "кровного родства", что указывает на семейные связи, основанные на родственных связях через кровных родителей.

Одновременно, эти компоненты различаются друг от друга по отношению к конкретному члену семьи или родственному статусу. Каждый родственный термин в микросистеме родства указывает на определенную роль и положение в семье. Например, термин "отец" обозначает мужского родителя, который является главным по отношению к своим детям. Термин "дед" относится к мужским предкам и обозначает бабушку и дедушку, а

"мать" относится к женскому родителю, который является родителем по отношению к своим детям. Таким образом, хотя все эти термины связаны с "кровными родственными связями", каждый из них указывает на определенный статус и роль в семье.

Это различие и специфика каждого родственного термина позволяют нам строить сложные системы родства и понимать различные связи и отношения между членами семьи. Кроме того, это также отражает значимость и разнообразие ролей, которые каждый член семьи играет в контексте родственных отношений. Например: в ФСМС *отец-мать ота-она* можно обнаружить три дифференциальные семьи: некровное родство, естественный род, социальное положение (*мать-она* подчиняется *отцу-ота*); в ФСМС *отец-дед, ота-бобо* — также три дифференциальные семьи: степень возраста, разный хронологический срез, родственные отношения.

Касаясь этимологии термина родства *отец-ота*, мы присоединяемся к тем ученым, кто высказывал мнение, что тюркское слово «*ата*» с разными фонетическими вариантами тесно связано с общепарадным термином родства «*tata*» (ср. в говорах узбекского языка - *ота, ада, дада*, и др.). О происхождении и об этимологическом значении «*tata*» «отец» М. М. Гухман пишет, что и «*tata*» является наиболее древним термином родства, который предшествовал появлению известного праиндоевропейского «*pitar*» (в таджикском «*надар*»).

Высказанное предположение о связи между общетюркским термином "ата" (и его фонетическими вариантами) и значением "охранять" может иметь некоторую логическую связь, но необходимо учитывать рассмотрение этого предположения как этимологической гипотезы, которая требует дополнительных исследований и подтверждения.

В эволюции языка возможно появление связей и ассоциаций между звуками и значениями слов, в том числе в семантической сфере родства. Однако, необходимы дополнительные лингвистические и этимологические исследования, чтобы подтвердить или опровергнуть связь между звуковыми компонентами термина "ата" и значением "охранять" в общетюркском языковом контексте. Также не следует забывать, что различные языки и культуры имеют свою собственную терминологию и символику в сфере родства, и связь между звуками и значениями может быть специфичной для каждого языка или языковой семьи. В целом, рассмотрение связи между звуковыми компонентами и значениями терминов родства требует дальнейшего исследования и обоснования на основе лингвистических данных и сравнительного анализа между различными языками и культурами.

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ТРЕБОВАНИЯ К ОРГАНИЗАЦИИ ПСИХОЛОГО- ДИАГНОСТИЧЕСКОЙ РАБОТЫ В ОБРАЗОВАНИИ

Аннотация. Изучение психологии человека – один из способов повышения эффективности профессиональной деятельности. Поскольку человеческий фактор является основной движущей силой общества, изучение его потребностей и психологических аспектов и обеспечение мотивации гарантирует качество любой деятельности. В данной статье рассматриваются требования психологической диагностики личности, историческое развитие диагностического процесса в психологии. В статье анализируются научные исследования и подходы ученых в этой области. Раскрыты две задачи психодиагностики: разработка методов, вторая – их практическое применение, научно-практические направления психодиагностики, история диагностических методов. Проанализированы проблемы психодиагностики, создания методологии, недостатки культуры использования диагностики, опыта и практики диагностов, даются выводы и предложения.

Ключевые слова: Психология личности, профессиональная деятельность, эффективность, человеческий фактор, общество, потребности, психологический аспект, мотивация, показатель качества, психологическая диагностика, потребности, историческое развитие, научные исследования, научная психодиагностика, практическая психодиагностика, методы диагностики, история науки, проблемы психодиагностики, диагностика, опыт диагностов, недостатки в их практике.

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REQUIREMENTS FOR THE ORGANIZATION OF PSYCHOLOGICAL- DIAGNOSTIC WORK IN EDUCATION

Annotation. Studying human psychology is one of the ways to increase the effectiveness of professional activities. Since the human factor is the main driving force of society, studying its needs and psychological aspects and providing

motivation guarantees the quality of any activity. This article discusses the requirements of psychological diagnostics of personality, the historical development of the diagnostic process in psychology. The article analyzes scientific research and approaches of scientists in this area. Two tasks of psychodiagnostics are revealed: the development of methods, the second is their practical application, scientific and practical directions of psychodiagnostics, the history of diagnostic methods. The problems of psychodiagnostics, the creation of methodology, the shortcomings of the culture of using diagnostics, the experience and practice of diagnosticians are analyzed, conclusions and suggestions are given.

Key words: Personal psychology, professional activity, efficiency, human factor, society, needs, psychological aspect, motivation, quality indicator, psychological diagnostics, needs, historical development, scientific research, scientific psychodiagnostics, practical psychodiagnostics, diagnostic methods, history of science, problems psychodiagnostics, diagnostics, experience of diagnosticians, shortcomings in their practice.

ВВЕДЕНИЕ

Систематическое изучение психики человека является важным подходом при изучении механизмов и закономерностей взаимодействия психических явлений, а психодиагностика в ходе учебного процесса эмоциональных состояний и когнитивных процессов курсантов является важным фактором обеспечения боевой-духовной подготовки.

С теоретической точки зрения диагностика взаимосвязи психических явлений, их влияния друг на друга важна для понимания и практического изучения всей целостности психической деятельности, формирования и развития психических функций, регуляции психической деятельности. В этом смысле вопрос диагностики учебной деятельности является наиболее актуальной темой психологических исследований и всегда был актуален в развитии психологических наук. Ряд ведущих ученых мира по психологии такие, как М.К. Акимова, К.К. Платонов, В.А. Ядов, А.Г. Шмелев, Г.П. Логинова, Б.Г. Ананьев, С.Л. Рубинштейн, И.Г. Беспалко, В.М. Блейхер, Л.Ф. Бурлачук, А.А. Бодалев, В.Э. Каган, Е.А. Климов, Я. Лаак, Б.Ф. Ломов, А.Н. Леонтьев, Л. Бфиеллак, Г. Блум, Д. Кеттелл, Э. Эриксон, Дж. Гилфорд узбекские психологи М.Г. Давлетшин, Э. Гозиев, З.Т. Нишонова, С. Джалилова, М. Салаева, Н. Гаибова в своих научных исследованиях в определенной степени изучили развитие личности, познавательную деятельность и влияние на нее эмоциональных состояний и выработали предложения.

Вопросы психодиагностики в военном образовании всесторонне изучены со стороны Н.И. Росколотко, М.А. Бабухина, Р.А. Биденко, А.А. Земсковой, Д. Мещерякова, О.Ю. Демченко, Ю.Н. Видюк, А.В. Караван, Н.С. Слепухиной, Л.В. Сеницыной.

Психодиагностика военно-учебной деятельности способствует повышению эффективности учебной деятельности курсантов, открывает возможность создания разумных методов управления ситуациями и активизации познавательных процессов в учебном процессе. Интеллект и его диагностика позволяют анализировать параметры индивидуальных способностей человека к обучению, рассматривать их в контексте динамического развития индивидуальных особенностей. Стоит отметить, что, несмотря на важность этой проблемы для военного образования, ее изучению уделялось мало внимания.

На основании вышеизложенного можно сказать, что несмотря на малочисленность и разрозненность научных взглядов на эту тему, абстрактность четких теоретических представлений о связи интеллекта и индивидуальности, их диагностика показывают наличие противоречий в статусе психологических взглядов. Разрешение противоречивых мнений по данной проблеме и тот факт, что тема не исследована конкретно применительно к военным учебным заведениям, показывает актуальность изучения основных особенностей и закономерностей диагностики учебной деятельности курсантов.

ОСНОВНАЯ ЧАСТЬ

Повышение эффективности обучения в военных образовательных учреждениях Вооруженных Сил Республики Узбекистан, вопрос подготовки современных военных кадров является одним из актуальных вопросов современности. Процесс подготовки будущего военного специалиста включает в себя широкий спектр навыков военно-профессиональной подготовки, овладение способами применения военно-технических средств, проведение расчетов, разработку и оформление служебных документов, выполнение образовательных нормативов [1. – С 115].

Эффективность военного образования зависит от многих факторов. К этим факторам можно отнести такие, как научно-методический потенциал, компетентность педагога, учебно-материальная база образовательного учреждения, современность управления образованием, интеллектуальный потенциал, психологические качества курсантов, также множество других необходимых факторов. Если все вышеперечисленные факторы будут качественными, изучены психологические стороны личности курсанта, организовано обучение, то качественные результаты гарантированы. Для этого необходима психологическая диагностика параметров личности. Для изучения того, является ли психологическая диагностика важным фактором военного образования, используются методы наблюдения и сравнительный анализ.

От диагностики их склонностей и интересов во многом зависит отношение курсантов к учебе, их интерес к военно-профессиональной деятельности, их становление как настоящий специалист своего дела.

Постановка правильного диагноза зависит от того, насколько хорошо вы знаете диагностическую область психологии. Психологическая диагностика – это совокупность знаний о классификации психологических и психофизиологических особенностей людей, а также целях использования этих методов на практике, методах оценки и измерения. Психологическая диагностика имеет научную и практическую сущность. Проще говоря, «психодиагностика – это наука о психологической диагностике» [2. – С 7]. Роль Фрэнсиса Гальтона в возникновении психологического диагноза бесподобна. «Именно Гальтон стал основоположником эмпирического подхода к решению проблемы способностей, творчества, таланта, предложил основные методы и методы, которыми исследователи пользуются до сих пор, но главное – и его работы кристаллизовали основные задачи дифференциальной психологии, психодиагностики и развитие психологии, которые сегодня решаются исследователями» [3. – С 8].

Научная психодиагностика – это научно-исследовательская область психологии, которая охватывает разработку и практическое применение методов психодиагностики. Научная психодиагностика требует объективности и точности. Методы разрабатываются на основе установленных правил и проверяются по нескольким критериям. Прежде всего, это делается для оценки их качества, практической необходимости и пригодности для решения дополнительных задач. Психодиагностические методы – это специальные психологические инструменты, предназначенные для оценки и определения индивидуальных психологических особенностей людей.

Другую функцию психодиагностики, то есть прикладной психологии, выполняют прикладные психологи, использующие разработанную психодиагностическую методику. Практики-психодиагностики оценивают, измеряют, анализируют индивидуальные особенности людей или выявляют различия между группами людей, объединенными какими-то общими симптомами. Этот вид деятельности практикующих психологов называется диагностикой и осуществляется для решения конкретных дополнительных задач. Слово диагноз происходит от греческого слова («diagnosticos» – способный определить) и означает идентифицировать, распознавать, находить признаки [4. –С 604].

Задача психодиагностики двоякая: первая – разработка методов, вторая – их практическое применение. При этом практикующие психологи не только используют разработанные диагностические методы, но и сталкиваются с такими задачами, как биографическое анкетирование, разработка тестов достижений, вопросы диагностического интервью, разработка карт наблюдения. Поэтому практикующие военные психологи должны уметь пользоваться такими методами. Когда военный психолог выбирает методику, должен понимать, что необходимо выбирать,

необходимое военнотружашему и курсанту в военной сфере. Выбранная методика обязательно должна быть адаптированы к менталитету и интеллектуальному уровню курсантов.

Еще одним фактором, объединяющим создателей методик и практиков, является то, что заниматься психодиагностикой невозможно без глубоких научных знаний психодиагностики, без знания принципов и законов психологии. В этом смысле теоретические психологические знания также очень важны для практического психолога [5. –С]. Анализируя взгляды западной психологии, психолог Э. Гозиев пишет: «Известно, что поиск решения проблемы осуществляется различными психологическими средствами. Тестологи мира стремятся изучать способности, мышление, знание, умение и навыки у объектов исследования в смешанном виде, не учитывая их эмоциональное состояние и здоровье» (6. -С 52).

Теперь, чтобы заниматься психологической диагностикой в процессе военного образования, необходимо обладать не только общепсихологическими знаниями, но и знаниями и практическими навыками, касающимися требований и процессов преподавания военных наук наряду с военной психологией.

К вопросу правильной оценки результатов диагностики диагностику необходимо подойти как к очень важной и сложной задаче. Диагностический и прогностический результат, полученный с использованием методики, может быть осуществлен только в случае квалифицированного обследования и полного понимания сущности. Кроме того, как уже говорилось выше, невозможно поставить правильный диагноз, не зная основных законов психологии и требований военного образования. Например, по закону апперцепции человек воспринимает только те ситуации, которые он пережил в течение своей жизни, может сравнивать только те события, которые он пережил. Следовательно, диагностические показатели не могут быть оценены без научных психологических знаний и поддержки.

Следует признать, что развитие психологической диагностики в военном образовании не только способствует развитию других направлений психологических наук, но и играет важную роль в организации занятий по военным предметам обучения. Дело в том, что необходимо уметь оценивать психологическое разнообразие курсантов, поэтому психологический закон состоит в том, чтобы определить границы правил, приблизить их к конкретной жизни, сделать их полезными на практике. По мнению известного психолога Б.М. Теплова, если индивидуальное различие не смешалась с психологической закономерностью, то исчезает их практическое значение, она становится абстрактной [7. -С 211].

Еще одна из проблем психологической диагностики в военной сфере является повышение профессионального уровня специалистов. Конечно, нетрудно понять, к каким последствиям может привести занятие этим

людьми, не владеющие методами психодиагностики на профессиональном уровне, просто любителями, далекими от психологии и психодиагностики. При использовании методов диагностики неспециалистами, прежде всего, будет неправильно оцениваться уровень психологических способностей людей, что подорвет доверие к психодиагностике и ее методам. Именно поэтому в настоящее время стоит задача подготовки квалифицированных психодиагностов. Качество работы психологов, использующих методы диагностики, обязательно должны постоянно контролироваться.

Новшества, происходящие в мире, не обходят вниманием и нашу Республику. Количество поставщиков «психологической помощи» в различных блогах, сетях Instagram, Telegram, Facebook увеличивается с каждым днем. На сегодняшний день требуется контроль работы многих прикладных психологов, которые сейчас активны в социальных сетях. Потому что это не только вредит репутации психологии, но и может оказать негативное влияние на жизнь людей. Еще одним признаком их низкого уровня профессиональной подготовки является так называемая «диагностомания», при которой они максимально быстро ставят диагноз и делают выводы по неясным, неполным признакам. Диагностомания – низкая квалификация психодиагноста. Это проявляется в неумении правильно использовать специальные психологические термины, легко и понятно объяснять диагностические показатели, опираясь на адекватные выводы [8. - С 228].

Еще одним проявлением низкой психодиагностической профессиональной подготовки является использование психодиагностического метода и дача в заключении одинаковых неизменных рекомендаций. То есть прийти к выводу без учета других индивидуальных особенностей человека. К низкой профессиональной подготовке можно отнести и неверные представления о возможностях используемых психодиагностических инструментов. Такой диагност считает, что он может прогнозировать диагностические показатели обследуемого, прогнозировать его образовательные и профессиональные достижения, может до конца определить его дальнейшую работу, и выражает твердое мнение [9. -С 222]. Специалист-психодиагностик понимает возможности и пределы этих методов, ограничения, допускаемые при их разработке, пределы связанных с ними выводов, а также ошибки, которые можно ожидать при использовании разных методов. Специалист-диагност знает, что существуют проблемы теоретической психологической диагностики, к факторам таких проблем относятся социокультурный фактор, влияющий на диагностические показатели, возможность прогнозирования результатов диагностики, связь диагноза и данных.

Итак, психодиагностика представляет собой сложную область со многими нерешенными проблемами. Без понимания этого невозможно правильно понять методы диагностики. Настоящим врагом

психологической диагностики в Узбекистане является растущее число неквалифицированных переводов литературы, основанной на этих диагностических методах. Данная литература является плагиатом и публикуется без согласия авторов. Любой психодиагност должен настаивать на том, чтобы его методология не распространялась. Цель этого – не допустить попадания методов диагностики в руки непрофессионалов. Диагностик не может поставить правильный диагноз человеку, уже знакомому с психологической методологией. Отсутствие контроля за продажей методов, их легкая продажа делает профессиональных диагностов слабыми и безоружными перед профессиональными практическими задачами. Тех, кто публикует сборники методов диагностики, нельзя считать психодиагностами [8]. Дело в том, что они не профессионалы, как бы красиво они ни называли выпускаемые сборники, но допускают массу невнятных ошибок – «Кто вы?» (2013 «ДАВР-ПРЕСС»), «Группа крови определяет твой характер» (2014 «ДАВР-ПРЕСС»), «Мир внутри тебя» (2014 «ДАВР-ПРЕСС»). Такая непрофессиональная публичная литература негативно влияет на престиж науки.

ЗАКЛЮЧЕНИЕ

В заключение можно сказать, что психологическая диагностика как учебный предмет появилась в Узбекистане не так давно. Существует еще много проблем, связанных с развитием психодиагностических методов и их применением. В 90-е годы прошлого века этот предмет начали серьезно изучать, особенно в военной сфере, а с 2012 года его преподают в военно-учебных заведениях. В настоящее время в Вооруженных Силах существует большая потребность в военных психологах, прикладных психологах и социологах. Изучение истории психодиагностики в нашей республике, понимание условий современного положения и актуальных задач науки, перспективных тенденций и их прогноза является одной из необходимых задач развития науки. Разработка и создание психодиагностики возникает сама собой во внутренней логике общепсихологических проблем. Потребность общества вызывает появление и быстрое распространение новых отраслей психологии, и этот процесс будет продолжаться.

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ВОЗМОЖНОСТИ РАЗВИТИЯ МАРШРУТОВ ЭКОТУРИЗМА В НАВОЙСКОЙ ОБЛАСТИ РЕСПУБЛИКИ УЗБЕКИСТАН

Аннотация. В результате изучения туристического потенциала Нуратинского, Хатырчинского и Кызылтепинского районов Навоийской области Республики Узбекистан, уникальных природных условий региона, пустыни Кызылкум, скрывающей некоторые тайны, и производств в северо-западной части, Нуратинской области горных хребтов в юго-восточной части и возможности развития экотуризма в районах средней части реки Зарафшан. В данной статье описаны возможности создания экотуристских маршрутов с учетом экологических условий региона.

Ключевые слова: экотуризм, экотуристический маршрут, экотур, агроэкоэкологические ландшафты, Нурота-Кызылкумский биозаповедник, петроглиф, рекреация.

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OPPORTUNITIES FOR DEVELOPMENT OF ECOTOURISM ROUTES IN NAVOI REGION OF THE REPUBLIC OF UZBEKISTAN

Abstract. As a result of studying the tourism potential of the Nurata, Khatyrchin and Kyzyltepa regions of the Navoi region of the Republic of Uzbekistan, the unique natural conditions of the region, the Kyzylkum desert, which hides some secrets, and industries in the northwestern part, the Nurata region of mountain ranges in the southeastern part and the possibility of developing ecotourism in areas of the middle part of the Zarafshan River. This article describes the possibilities of creating ecotourism routes taking into account the environmental conditions of the region.

Key words: ecotourism, ecotourism route, ecotour, agroecotourism landscapes, Nurota-Kyzylkum bioreserve, petroglyph, recreation.

ВВЕДЕНИЕ. Осуществление глубоких структурных изменений и диверсификации в экономике нашей страны окажет положительное влияние на туристический сектор в последующие годы. Туризм – одна из относительно новых и в настоящее время развивающихся, укрепляющих свои позиции для Узбекистана, и в то же время весьма перспективных

отраслей. Сегодня в нашей стране реализуется ряд мер по созданию нескольких новых видов туризма.

Туризм представляет собой сложную социально-экономическую систему, состоящую из множества различных по своей структуре подсистем, разнообразных, взаимосвязанных и взаимотребующих. Также существует несколько видов туризма. Специфика современного туризма характеризуется также его видами. В настоящее время в научной литературе дается ряд видов классификации туризма по нескольким признакам. Сам туризм по своему назначению классифицируется следующим образом: рекреационный, оздоровительный отдых; отдых, повышающий знания; квалифицированный трудовой туризм; научный туризм; спортивный туризм, шопинг-туры; авантюрный; паломничество; район; экотуризм; экзотика.

Возможности организации практически всех этих видов туризма в Узбекистане сегодня очень высоки. В частности, очень высоким считается потенциал развития экотуризма в крупнейшей по площади Навоийской области. Экологический туризм в Навоийской области сегодня широко развит, и многих удивляет уникальность природы региона. Поэтому географические и природные условия очень благоприятны для развития экологического туризма. Здесь можно найти бескрайние пустыни, высокие горные хребты, долины и оазисы, неповторимой красоты озера.

Анализ литературы по теме. Важные исследования по экотуризму были проведены западными учеными. Особое значение в развитии экотуризма имеют исследования Макулы (McCool) Иглеса (Eagles) «Туризм в национальных парках и охраняемых территориях: планирование и управление» и «Экотуризм: Введение» Дэвида Феннелла.

Научные работы наших местных специалистов Р. Хаитбоева, Р. Амриддинова «Специальные виды туризма», Р. Хаитбоева, А. Сатторова «Технологии разработки туристических маршрутов» составляют методологическую основу развития экотуризма.

Методология исследования. В данном исследовании для изучения туристского потенциала Нуроты, Хатырчи были использованы такие методы, как наблюдение, монографическое наблюдение, абстрактно-логическое мышление, группировка и сравнение природных ресурсов, экологических возможностей регионов, системный подход к разработке маршрутов экотуризма. и Кызылтепинский районы Навоийской области.

Анализ и результаты. Экотуризм – это ответственное путешествие на природу. Цель туристов в экотуризме – во время путешествия увидеть новые места, насладиться красотой природы, чистым горным или лесным воздухом, отдохнуть на лоне «дикой» природы, а также обычаями, культурой, искусством., это увидеть исторические памятники.

Рекреационные ресурсы экотуризма включают природу, горы и равнины, реки, пустыни и оазисы, озера и различные ландшафтные зоны. Исходя из этого, экотуризм разделяется на следующие составляющие:

- морской и океанический экотуризм;
- экотуризм лесных и искусственно-парковых зон;
- экотуризм рек и озер;
- горный экотуризм;
- экотуризм исторических памятников;
- экотуризм по памятникам архитектуры;
- экотуризм экологически чувствительных зон;
- экотуризм особо охраняемых природных территорий.

В настоящее время существует четыре вида экотуризма.

1. Научный туризм. При этом туристы проводят наблюдения в полевых условиях, участвуют в исследованиях природы. Например, в одной из стран Латинской Америки – Колумбии проводятся экотуры под названием «Птицы Колумбии» с целью изучения богатого мира птиц, в них также участвуют и проводят научные исследования орнитологи из других стран. Туристы могут использовать активные способы передвижения и насладиться природными красотами. Научный туризм включает также научные экспедиции за границу и полевые практики студентов, обучающихся на естественных факультетах.

2. Виды изучения естествознания. Это поездка для изучения окружающей среды и местной культуры. Зачастую они могут быть организованы в заповедниках и национальных парках. Эти виды организованы также в местах, где наблюдаются природные явления. Сюда входят поездки школьников, в ходе которых педагог рассказывает ученикам о природе и истории посещаемых мест.

На юго-западе города Самарканда расположены горы Каратепа, на вершине которых находится пещера Хазрат Давут. Дорога к этой пещере асфальтирована и доступна каждому. Но если при посещении пещеры квалифицированный гид проведет и объяснит историю и причины появления пещеры, то не останется места для домыслов и легенды о пещере будут объяснены. Кроме того, внешний вид пещеры внутри и снаружи мог сильно измениться в ходе работ по очистке, проводимых экотуристами.

3. Приключенческий туризм. К этому виду туризма относятся поездки, включающие все виды активной деятельности, а также виды отдыха на природе. Их цель – ощутить новые эмоции, пережить впечатления, улучшить физическую форму туристов и добиться новых спортивных достижений. К этому виду туризма относятся альпинизм, скалолазание, альпинизм, пеший туризм, катание на водных лыжах и лыжный и конный туризм.

4. Особо охраняемый туризм. Индивидуальные путешествия по природным территориям (АМЕТ) являются основным видом экотуризма.

Основное отличие и уникальность задач экотуризма. Экотуризм имеет свои особенности:

участие местного населения в социально-экономическом развитии своих регионов;

большинство объектов природного туризма;

использование независимого характера;

низкое энергопотребление;

Туристы должны иметь экологическое образование.

Есть большие возможности для развития экотуризма во всех регионах и даже районах нашей республики. В последнее время организация рыболовства и животноводства на берегах озер, рек и побережий создает широкие возможности для экотуризма. Горные хребты, заповедники и пустыни позволяют организовать в нашей стране ряд экотуристических маршрутов.

Особое внимание мы будем уделять регионам нашей страны, которые имеют возможность развивать экотуризм и увеличивать количество экотуристических маршрутов.

Есть большие возможности для развития экотуризма во всех областях и даже районах Узбекистана. В последнее время организация рыболовства и животноводства на берегах озер, рек и побережий создает широкие возможности для экотуризма. Горные хребты, заповедники и пустыни позволяют организовать в нашей стране ряд экотуристических маршрутов.

Особое внимание мы будем уделять районам Навоийской области Республики Узбекистан, имеющим возможность развития экотуризма и увеличения экотуристических маршрутов.

В Нуратинском горном массиве, граничащем только с Джизакской и Самаркандской областями Навоийской области, высоки возможности развития экотуризма на территории «Нурота-Кызылкумского биозаповедника». В целях охраны фауны и флоры Нуратинского горного хребта создан Нуратинский государственный горно-ореховый заповедник. Нуратинский государственный горно-ореховый заповедник граничит с соседними Навоийской и Самаркандской областями, а его общая площадь составляет 17 752 га.

Горный массив Нурота расположен в переходной зоне между хребтами Памиро-Олоя и Тянь-Шаня и Туранской низменностью. Высочайшей вершиной горной системы является вершина горы, высота которой составляет 2169 метров над уровнем моря.

Территория Нуратинского заповедника привлекает всех не только красивыми горными пейзажами, уникальной фауной и флорой, но и множеством памятников истории и культуры. Эта местность имеет сложную и богатую историю благодаря тому, что она была заселена с древних времен. В качестве доказательства этого необходимо выделить разнообразие археологических находок, петроглифов, гробниц, мегалитов,

исторических памятников Средневековья, культурных ландшафтов, древних ирригационных сооружений, ореховых и плодовых деревьев. По северным склонам Нуротинского хребта через Нуроту проходил один из караванных путей от берегов Сырдарьи до Бухары. Также караванные пути пересекали перевалы Охум и Маджрум Нуратинского хребта.

Хатырчинский район Навоийской области также отличается своими горными хребтами, холмами, водопадами и источниками. Естественно, целебный источник и огромные водопады в Лангаре Хатирчитумы поразят любого туриста. О том, что прошлое Лангара очень древнее, говорят и высеченные на камнях надписи – петроглифы. Сангиджумон расположен на южном склоне Октова, ответвления горного хребта Нурата. Название села связано с Хамушбу Харсангташем. Этот камень расположен на высоте 900 метров на берегу ручья Сангиджумон, имеет окружность 20 метров и высоту 6 метров. Его вес превышает 280 тонн. Если Сангиджумон поднять на запад, он на некоторое время сдвинется. Гигантский камень настолько легкий, что даже ребенок 12-14 лет сможет переместить его одной рукой. Второй загадочный харсанг-камень называется «Дырчатый камень». По поверьям, пройти через его дыру могут только невинные люди.

Горные районы региона имеют особое значение не только своей очаровательной природой, целебными водами, но и историческими памятниками. Среди важнейших исторических памятников – петроглифы в Тикчасой, Асрафсой, Андегенсой, Маджрумсой, Хаятсой, Синтобсой, остатки крепостей в селах Сентоб, Маджрум, Охум, руины древней мечети в селе Маджрум, окружность тела 8 метров, окружность центральной ветви 12 метров, а ветвей 4-5. Стоит отметить тысячелетний восточный кипарис, на котором может поместиться человек, и гробницы Хазрата. Али в Маджрумсое и Эшонбаба в Каррисое.

На севере и западе региона расположены подвижные песчаные и глинистые барханы. Эти просторы украшаются натуральными травами, разнотравьем и яркими растениями, особенно в весенние месяцы. Астрагал, полынь, шора, ладан, тростник, зарпечак, саксовул, юлгун и десятки других пустынных кустарников придают ни с чем не сравнимую красоту кажущейся безжизненной необъятной земле. На этих землях выращивают скот двенадцать месяцев в году. Кандим, черкес, сингрэн, тысячелистник, селен, эфемер и другие травы являются питательным кормом для скота. Пустыни Навои, степные поля, горные скалы являются родиной тысячи различных животных и насекомых. В этом регионе сохранились дикие животные, грызуны, млекопитающие и рептилии, которые редко встречаются в других частях нашей республики или вообще не встречаются.

Территория Навоийской области состоит из 100 миллионов километров пустынь, конца которым не видно. Одним из важных объектов развития экотуризма в пустынях является «Сафари-парк», расположенный в пустыне между Нуратинским и Конимехским районами.

Одной из уникальных туристических особенностей Навоийской области является наличие водных территорий. То есть, воспользовавшись наличием трёх: Тудакул, части Айдаркул и небольшого Шуркул, уже начато развитие прибрежного туризма. На данный момент инвесторам предлагается реализовать туристические проекты на этих территориях.

Экотуристы становятся участниками различных традиций и обычаев, свадеб и праздников, воплощающих древнюю культуру и историю жителей вместе с уникальной природой этих регионов. Также они наслаждаются экологически чистыми лечебными блюдами, такими как тандыр-кебаб, кимиз, бешбармок, сузма, курут, принесенные на стол местными жителями, или участвуют в процессе приготовления этих блюд по своему желанию. Они могут увидеть и купить произведения народного искусства, такие как созана, доппи, кнут, хранящиеся в музеях Отова.

Одним из основных условий организации экотуризма в перечисленных районах Навоийской области является развитие экотуристских маршрутов и их популяризация. Экотуристические маршруты или экотуры составляют основу практически всего экотуризма.

Экотуристический маршрут – это направление экологического движения туристов в определенном направлении, направленное на такие цели, как природоохранный отдых, спортивная, оздоровительная, познавательная и духовная (общеобразовательная) деятельность. Для того чтобы маршруты экотуризма были понятными и популярными, необходимо полностью раскрыть концепцию тура, показать положительные стороны поездки, определить оптимальные особенности услуг и удобств. Как уже говорилось выше, оно должно реализовываться для разных целей, в зависимости от способностей людей разного возраста или социального статуса. Во многих случаях маршруты экотуризма комбинируются с другими видами туристических маршрутов, чтобы сделать их интересными, обширными и прибыльными.

Выводы и предложения. Исходя из экологических возможностей Навоийской области, при разработке экотуристских маршрутов целесообразно обратить внимание на следующее:

1. Осуществление экотуризма совместно с другими видами туризма эффективно, то есть с точки зрения экономической эффективности в большинстве случаев осуществлять экотуризм совместно с историческим, паломническим, духовным и познавательным туризмом, иметь комплекс нескольких видов туризма по маршруту экотуризма.

2. Рекреационный экотуризм, повышающий знания в Нуратинском заповеднике, то есть основными направлениями научной работы являются ведение летописи природы, инвентаризация флоры и фауны, изучение экологии, биологии и популяции редких животных, сверцовских овец, хищных птиц, разработать методы кормления и разведения сверцовских овец в вольных условиях, развитие эковидов, включающее в себя

возникновение, экологию и биологию воробья, классификацию растительности, картографирование, мониторинг, фенологические наблюдения, изучение состояния ореховых деревьев.

3. Включение агроэкотуристических ландшафтов (например, виноградников в Хатырчинском районе, саксов в пустынях, водохранилищ, заповедников, плантаций) в экотуристические маршруты с учетом высокого потенциала агроэкотуризма в окультуренных ландшафтах.

4. Учет антропогенной, природной и природно-техногенной изменчивости геосистем при разработке маршрутов экотуризма.

5. Знакомить туристов с основными правилами, предупредительными знаками, мерами по предотвращению размножения и кормления на экотуристических маршрутах редких видов редкой фауны и флоры, включенных в «Красную книгу» Узбекистана, и осуществлять контроль за ними.

6. На экотуристских маршрутах целесообразно организовывать мероприятия, направленные на повышение экологического сознания и культуры местного населения, организовывать круглые столы, уделять внимание сохранению уникальных экологических систем.

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ОЦЕНКА СПРОСА ПРОДУКТОВ ПИТАНИЯ ПО ТЕНДЕНЦИИ ВРЕМЕННЫХ РЯДОВ

Аннотация. В статье с целью оценки спроса потребителей показана серия колонок, реализующая программу экстраполяции, которая требуется при реализации производства продукта в определенном диапазоне направлений. Программа изучения покупательского спроса может включать различные задачи. Однако всегда требуется, чтобы были даны оценки текущего состояния спроса, а также оценки объёма и структуры спроса в будущем. Выявлена квадратичная модель для прогнозирования объёма товарооборота.

Ключевые слова: экстраполяция, прогнозирование, уравнение гиперболы, динамический ряд, метод аналитического выравнивания.

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ESTIMATION OF FOOD PRODUCTS DEMAND BY TIME SERIES TRENDS

Abstract. Application of extrapolation of a tendency of a dynamic row for prediction of consumer demand on the example of data on commodity turnover of shop for some time term is given in article. The program of studying of consumer demand can include various tasks. However it is always required that estimates of current state of demand and also assessment of volume and structure of demand in the future were given. The square model for prediction of volume of commodity turnover is revealed.

Key words: extrapolation, prediction, hyperbole equation, method of analytical alignment, dynamic row.

Прогнозирование покупательского спроса основано на экстраполяции тенденции динамического ряда товарооборота. Под динамическим рядом товарооборота понимается изменение товарооборота во времени. Если не происходит каких-либо существенных изменений в условиях, формирующих покупательский спрос, то метод экстраполяции позволяет получить достаточно надежные результаты. В противном случае данный метод необходимо дополнить другими методами определения покупательского спроса – расчетно-конструктивным или анкетным.

Статистические [3] методы прогнозирования тенденции динамического ряда подразделяются на две основные группы: методы аналитического выравнивания и экспоненциального сглаживания.

Сущность метода аналитического выравнивания заключается в нахождении теоретических уровней ряда y_t , которые в минимальной степени отклонялись бы от фактических уровней y . После этого тенденцию ряда можно продолжить, рассчитав уровни ряда на будущий период (год, квартал, декаду), в зависимости от поставленной задачи (Қаршибоев, Х. Қ. Сафарова, Д. Ф., 2023).

Выравнивание [1] уровней ряда динамики и их экстраполяция производятся по уравнению прямой (тренду), если уровни ряда равномерно растут или уменьшаются. Если изменение тенденции носит характер усиливающегося или затухающего роста, то для экстраполяции применяется соответственно уравнение параболы либо полупологарифмическая кривая. Для экстраполяции криволинейных плавных тенденции можно воспользоваться уравнением гиперболы.

Выбор уравнение связи производится на основе графического анализа. Вид уравнений будет несколько отличаться от приведенных ранее тем, что вместо признака – фактора x в уравнение в качестве переменной вводится время t .

Рассмотрим прогнозирование уровней динамического ряда на следующем примере.

Розничный товарооборот по магазину за 2020-2028 гг. (в млн. сум.)

2020г. – 80,1	2025г. – 100,8
2021г. – 82,5	2026г. – 106,5
2022г. – 85,8	2027г. – 114,9
2023г. – 89,7	2028г. – 125,7
2024г. – 94,8	

Анализируя изменение уровней ряда, [2] приходим к выводу, что оно носит характер усиливающегося роста. Графический анализ свидетельствует о наличии криволинейной зависимости, напоминающей график параболы. Следовательно, для выравнивания ряда выбираем уравнение параболы

$$\bar{y}_t = a_0 + a_1 t + a_2 t^2$$

Составим систему нормальных уравнений:

$$n a_0 + a_1 \sum t + a_2 \sum t^2 = \sum y;$$

$$a_0 \sum t + a_1 \sum t^2 + a_2 \sum t^3 = \sum yt;$$

$$a_0 \sum t^2 + a_1 \sum t^3 + a_2 \sum t^4 = \sum t^2 y$$

Построим рабочую расчетную таблицу (табл.1).

Для упрощения расчетов [2] годы условно нумеруются таким образом, чтобы $\sum t = 0$, тогда и $\sum t^3 = 0$, а система нормальных уравнений будет иметь вид

Таблица 1

Человеческий потребительский спрос с течением времени

Годы	Розничный товарооборот. млн. сум.	t	t^2	t^3	t^4	$y \cdot t$	$y \cdot t^2$	\bar{y}_t
2020	80,1	-4	16	-64	256	-320,4	1281,6	80,13
2021	82,5	-3	9	-27	81	-247,5	742,5	82,37
2022	85,8	-2	4	-8	16	-171,6	331,2	85,65
2023	89,7	-1	1	-1	1	-89,7	89,7	89,67
2024	94,8	0	0	0	0	0	0	94,73
2025	100,8	+1	1	1	1	100,8	100,8	100,79
2026	106,5	+2	4	8	16	213	426	107,67
2027	114,9	+3	9	27	81	344,7	1034,1	115,55
2028	125,7	+4	16	64	256	502,8	2011,2	124,37
Итого	880,8	0	60	0	708	332,18	6017	880,8

$$na_0 + a_2 \sum t^2 = \sum y;$$

$$a_1 \sum t^2 = \sum yt;$$

$$a_0 \sum t^2 + a_2 \sum t^4 = \sum t^2 y.$$

Поставляя в эту систему соответствующие значения из расчетной таблицы, получаем:

$$9a_0 + 60a_2 = 880,8$$

$$60a_1 = 332,18$$

$$60a_0 + 708a_2 = 6017$$

Решая уравнение относительно a_1 , получаем

$$a_1 = \frac{332,18}{60} = 5,53.$$

Далее решаем систему из двух уравнений:

$$9a_0 + 60a_2 = 880,8 \quad : 9$$

$$60a_0 + 708a_2 = 6017 \quad : 60$$

Разделив каждое уравнение на коэффициенты при a_0 и вычитая из второго уравнения первое, получим:

$$a_0 + 66,6a_2 = 97,85$$

$$a_0 + 11,80a_2 = 100,28$$

$$5,24a_2 = 2,43$$

$$a_2 = 0,47.$$

Теперь найдем a_0 :

$$9a_0 + 60 \times 0,47 = 880,8$$
$$a_0 = 94,73$$

Подставим вычисленные параметры в параметры в уравнение параболы:

$$\bar{y}_t = 94,73 + 5,53t + 0,47t^2$$

Подставляя в данное уравнение значение t , вычислим теоретические уровни ряда \bar{y}_t :*

$$\bar{y}_t = 94,73 + 5,53(-4) + 0,47(-4)^2 = 102,25 - 22,12 = 80,13 \text{ и т. д.}$$

Выполнив расчеты, последовательно найдем теоретические уровни ряда, которые выражают общую тенденцию развития.

Для оценки [3] степени приближения теоретических уровней к фактическим необходимо исчислить корреляционное отношение

$$\eta = \sqrt{1 - \frac{2,263}{1921}} = 0,99.$$

Высокое значение корреляционного отношения указывает на то, что кривая подобрана правильно, а теоретические и фактические значения Y тесно связаны. В [4] расчете t -критерия Стьюдента в данном случае необходимости нет, поскольку связь очень высокая, и ошибка коэффициента регрессии будет незначительной. Это дает право для прогнозирования объема товарооборота применить уравнение параболы.

Продолжив нумерацию лет, получим следующие значения t :

$$t_{2026} = +5; t_{2027} = +6.$$

Тогда прогнозируемый объем товарооборота для этих лет будет равен:

$$\bar{y}_{t_{2026}} = 94,73 + 5,53 \cdot 5 + 0,47 \cdot 5^2 = 134,0 \text{ млн. руб.}$$

$$\bar{y}_{t_{2027}} = 94,73 + 5,53 \cdot 6 + 0,47 \cdot 6^2 = 144,7 \text{ млн. руб.}$$

Следует иметь в виду, что прогноз тем точнее, чем короче период экстраполяции.

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КОМПЕТЕНТНОСТНЫЙ ПОДХОД В ОБРАЗОВАНИИ ПО РОДНОМУ ЯЗЫКУ И ГРАМОТНОСТИ ЧТЕНИЯ

Abstract. This article presents scientific, pragmatic information on the formation of competencies for working with information in the education of the native language and reading literacy, a competence-based approach in the classroom.

Keywords: teacher, competence, problem, education, function, law, modernization, knowledge, integration, skills.

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COMPETENCE-BASED APPROACH IN NATIVE LANGUAGE AND READING LITERACY EDUCATION

Аннотация. В данной статье представлена научная, прагматическая информация о формировании компетенций по работе с информацией в образовании родного языка и грамотности чтения, компетентностном подходе на уроках.

Ключевые слова: педагог, компетенция, проблема, образование, функция, право, модернизация, знания, интеграция, навыки.

Известно, что внимание к проблеме развития социальных компетенций у будущих педагогов как педагогической проблеме совершенствует компетентностный подход в образовательном процессе в высших учебных заведениях. Это требует уточнения сущности социальной компетентности через понятия “компетентность” и “компетентность”. В словарях понятие “компетентный” имеет несколько значений. В частности, к проблемам, ситуациям, возникающим в деятельности организации, человека, обладающего определенной компетенцией, т. е.: компетенция (лат.) способный выполнять соответствующие функции в соответствии с законом; относится к квалифицированному должностному лицу, способному ответить на определенный набор вопросов. Е.А.Сейтхалилов, Б.Х.Рахимов, И.У.В словаре “педагогический словарь-справочник”, изданном маджидовыми, термин “компетентный” трактуется как “обладание знаниями, осведомленность, относящиеся к определенной области”, а слово “компетентность” - как “человек, хорошо знающий ответы

на определенные вопросы”, или “круг людей, имеющих право что-либо делать” [1].

На сегодняшний день понятие "компетентность" стало центральным понятием модернизации содержания образования, объединяющим в себе результат интеллектуального и квалификационного содержания образования. Компетентностный подход в образовании не отрицает наличие необходимой базы знаний, а предполагает комплексную результативность компетенции.

Здесь большой интерес представляют научные взгляды ученых-педагогов Узбекистана на вопросы компетентностного образования. Доктор педагогических наук М.Вахабов считает, что “под” компетенцией”, на наш взгляд, понимается способность учащихся самостоятельно применять полученные знания и навыки в личной, профессиональной и социальной деятельности [6].

Говоря о соотношении” компетентности “и” эрудиции”, ученые, исследовавшие основы педагогической компетентности и креативности, Н.А.Муслимов, М.Н.Усманбаева, Д.М.Сайфуров и А.В.Тураевы выдвинули гармоничное представление о том, что компетентность возникает в результате обучения (практики), а компетентность проявляется в использовании теоретических знаний в деятельности, в проявлении высокого уровня профессиональной компетентности, умений и талантов [7]. В нашей стране проводятся научно-методические исследования, направленные на совершенствование профессиональной деятельности, компетенций педагогов-педагогов. В частности, ученый-педагог Республики Узбекистан М.В.Бекмуродов указал, что компетентность определяется как способность специалиста мобилизовать обобщенные способы своих знаний, умений и действий. Базовые компетенции обеспечивают универсальность педагога-специалиста и поэтому не могут быть глубоко специализированными. Свои компетенции специалист проявляет только в своей деятельности, в конкретной ситуации. С другой стороны, компетенции, которые не были продемонстрированы, будут существовать как потенциальные возможности [3].

В речи учащихся желательно давать обратную связь, опираясь на Науку логики. Вот почему они перемещают словарный запас в своей памяти через свою речь. Основной задачей преподавания предмета Родной язык является “формирование речевой компетенции, направленной на мышление личности учащегося, осмысление чужого мнения, умение грамотно излагать свое мнение в устной и письменной форме, овладение учащимся знаниями по грамматике (фонетике, лексикологии, письму, составу слова, словообразованию, морфологии, синтаксису, письму и орфографии, пунктуации, развитие понятий о стилях речи, стилистике), состоит в формировании языковых компетенций, направленных на развитие способности правильно и красноречиво выражать свои мысли, эффективно

используя широкий спектр возможностей родного языка”. Образование, направленное на формирование компетенций, - это возможность обучающихся практически применять полученные знания, умения и навыки в своей личной, профессиональной и общественной деятельности. Образование, основанное на компетентностном подходе, сформировало у учащихся самостоятельность, активную гражданскую позицию, инициативу, умение рационально использовать в своей деятельности медиаресурсы и информационно-коммуникационные технологии, осознанный выбор профессии, здоровую конкуренцию, общекультурные навыки. Определено формирование у младших школьников базовых и предметных (речевых и языковых) компетенций.

Компетенция-это способность применять на практике теоретические знания, практические навыки и умения, полученные в науке, используя их для решения практических и теоретических задач, с которыми мы сталкиваемся в повседневной жизни.

Начиная с 2020 года, в рамках проекта национальной учебной программы, с учетом международного опыта и требований рынка труда, планируется разработать современные образовательные стандарты, учебные программы, а также передовые методики и систему оценки по 22 предметам для общеобразовательных школ, в частности по предмету “Родной язык и читательская грамотность”.

На основе национальной учебной программы с 2020-2021 года в общеобразовательных школах введена дисциплина “родной язык и грамотность чтения”, результат объединения предметов родного языка и чтения. Основной причиной слияния двух дисциплин стало изменение подхода к обучению родному языку. Теперь он перешел от обучения на основе грамматики и запоминания к форме обучения, направленной на развитие 4 навыков обучения языку, которые включают понимание на слух, понимание прочитанного, устное и письменное выражение мысли. Одним из навыков, формируемых у учащегося на основе предмета родного языка, является понимание прочитанного. В результате ученик будет работать с большим количеством текстов в учебнике, а не с правилами, и у него разовьется навык понимания прочитанного. Нет необходимости в самостоятельной науке чтения за счет того, что у школьника развивается навык понимания прочитанного носителем языка. Начиная с 2020 года, в рамках проекта национальной учебной программы, с учетом международного опыта и требований рынка труда, планируется разработать современные образовательные стандарты, учебные программы, а также передовые методики и систему оценки по 22 предметам для общеобразовательных школ, в частности по предмету “Родной язык и читательская грамотность”. На основе национальной учебной программы с 2020-2021 года в общеобразовательных школах введена дисциплина “родной язык и грамотность чтения”, результат объединения предметов

родного языка и чтения. Основной причиной слияния двух дисциплин стало изменение подхода к обучению родному языку.

Теперь он перешел от обучения на основе грамматики и запоминания к форме обучения, направленной на развитие 4 навыков обучения языку, которые включают понимание на слух, понимание прочитанного, устное и письменное выражение мысли. При обучении родному языку и чтению основное внимание уделяется формированию у учащегося четырех языковых навыков: понимания прочитанного, понимания на слух, разговорной и письменной речи, а также грамматической грамотности. В процессе обучения важно развивать творческое и критическое мышление, круг мышления учащихся, обучая их наблюдать, понимать, сравнивать, анализировать и синтезировать события. Наука о родном языке и грамотности чтения служит реализации этих целей.

В тетради упражнений выполняются задания, обозначенные в учебнике специальным знаком. Учащиеся могут писать в тетради, рисовать, заполнять пробелы, выполнять задания, связанные с пониманием прочитанного и прослушивания, составлением текста, а также раскрашивать картинки. На основе применяемых в начальных классах учебников по родному языку предусматривается развитие у учащихся следующих компетенций: Речевая компетентность (понимание на слух, говорение, чтение, письмо): -умеет понимать речь учителя, слушая видео-и аудио-тексты и задания (мультимедийные приложения); может вступить в беседу на основе картинок и по прочитанному тексту, применять в устной речи новые слова, усвоенные в процессе речи; умеет читать, складывая слова в текст упражнения, умеет читать, говорить, читать, Читать, Читать, Читать, Читать, Читать, Читать, Читать, Читать, Читать, Читать, умеет бегло и выразительно читать, следуя тону, может читать слова, в которых задействована комбинация букв; наличие в слове столько звуков, сколько слогов означает, что один гласный звук может образовывать слог, то есть он может делиться на слоги, такие как о-На, U-ка, а-ка, комбинации букв могут делить вовлеченные слова на слоги, он может правильно писать слова со звуками Х и Н, он может писать ответы на вопросы в рамках темы, факел, умеет слогом записывать такие слова с тугими знаками, как "хорошо", "образование", "юр", "та'зим", писать словарь, аннотацию, слух, заучивать наизусть, диктант с картинками, а также копировать предложения в порядке картинок. Неоднократно подчеркивалось, что основной целью обучения родному языку в общеобразовательных учреждениях является совершенствование личности, которая правильно и свободно выражает свое мнение в устной и письменной форме в различных ситуациях, обладает навыками устной и письменной грамотности, формируется культура чтения, умеет мыслить самостоятельно и творчески, осознает чужое мнение – развита культура общения и речи.

Предоставление лексических знаний учащимся младших классов не ограничивается уроками родного языка, их также учат во время уроков чтения. Особенно большое значение при обучении словарному составу языка, устаревшим и вновь появляющимся в нем словам, диалектными словам, профессиональным словам, русско – интернациональным словам имеет анализ текстов, представленных в учебнике, словарная работа, проводимая на каждом уроке. При этом теоретические знания генерируются посредством практической работы.

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РОЛЬ ТИКТОК В СОЦИАЛИЗАЦИИ ДЕТЕЙ, А ТАКЖЕ ФОРМИРОВАНИИ ЦЕННОСТЕЙ ЧЕЛОВЕКА)

Аннотация. Данная статья исследует роль популярной социальной сети TikTok в социализации детей и подростков, а также её влияние на формирование их ценностей. Анализируются факторы, способствующие популярности TikTok среди молодежи, а также негативные последствия, связанные с отсутствием контроля контента и возможным формированием антисоциального поведения. В статье поднимается вопрос о важности обеспечения безопасного и здорового онлайн-пространства для молодежи и необходимости развития цифровой грамотности и критического мышления.

Ключевые слова. TikTok, социализация, дети, подростки, ценности, контент, безопасность, цифровая грамотность.

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THE ROLE OF TIKTOK IN THE SOCIALIZATION OF CHILDREN, AS WELL AS FORMATION OF HUMAN VALUES)

Abstract. This article explores the role of the popular social network TikTok in the socialization of children and adolescents, as well as its influence on shaping their values. It analyzes the factors contributing to TikTok's popularity among youth, as well as the negative consequences associated with the lack of content control and the possible formation of antisocial behavior. The article raises the question of the importance of providing a safe and healthy online space for young people and the need to develop digital literacy and critical thinking.

Keywords. TikTok, socialization, children, adolescents, values, content, safety, digital literacy.

В современном мире социальные медиа играют все более значимую роль в формировании социальной жизни, особенно среди молодежи. Среди многочисленных платформ TikTok выделяется своей особой популярностью среди детей и подростков, данный сервис, предлагающий короткие видеоролики, стал не только местом для творчества, но и значимым фактором в социализации молодежи и формировании их ценностей.

Для начала следует отметить, что сегодня почти половина подростков проводит более 4 часов в интернете, и среди приложений, которые они

используют, TikTok занимает особое место, это приложение предлагает огромное количество видеоконтента, который привлекает внимание пользователей и заставляет их проводить в нем значительное количество времени ежедневно. Но людям, для понимания роли TikTok в формировании ценностей детей, необходимо рассмотреть общие тенденции в развитии интернета и социальных сетей. Последние десятилетия были отмечены стремительным развитием интернета и мобильных технологий [1]. Если около 40 лет назад интернет был преимущественно механизмом для хранения данных американских спецслужб, то сегодня он стал неотъемлемой частью повседневной жизни.

С развитием интернета появились новые технологии, такие как смартфоны с сенсорными дисплеями, а в 2007 году был представлен первый iPhone и данные изменения не только изменили способы коммуникации и доступа к информации, но и существенно повлияли на культурные ориентиры общества. Современное поколение детей стало зависимым от интернета по ряду причин. Легкая доступность интернета и смартфонов делает его доступным практически для всех. Дети, рожденные в эпоху цифровых технологий, уже с самого раннего возраста сталкиваются с интернетом и цифровыми устройствами.

Блогеры и создатели контента на платформах, таких как TikTok, становятся для них образцом поведения и ценностей, критически важной особенностью TikTok является его удобный и привлекательный дизайн, который позволяет пользователям легко и комфортно проводить время в приложении и это в сочетании с возможностью постоянного доступа к видеоконтенту делает его особенно привлекательным для подростков. Тем не менее, стоит заметить, что проблема зависимости от гаджетов стала актуальной еще около 10 лет назад. Интернет предоставляет возможность смотреть мультфильмы и общаться с друзьями в любое время и в любом месте, что может привести к негативным последствиям.

С появлением TikTok и подобных социальных сетей, которые активно используют мобильные устройства, происходит дальнейшая цифровая трансформация общества, платформы становятся основным местом социализации и формирования ценностей для молодого поколения, обществу, необходимо осознавать потенциальные негативные последствия такого глубокого взаимодействия с цифровыми технологиями, в том числе таких ужасных вещей как утрату личных связей, снижение внимания и концентрации, а также негативное влияние на психическое здоровье.

К концу первого квартала 2019 года, это приложение стало самым популярным, согласно многомиллионным скачиваниям из App Store и Google Play. Статистика, представленная Институтом исследования интернета, указывает на то, что более 40% пользователей TikTok в России составляют подростки до 18 лет, данные подтверждают исследование Globalwebindex, согласно которому 41% скачиваний приложения были

совершены молодыми людьми в возрасте от 16 до 24 лет. TikTok, социальная сеть, основная идея которой заключается в возможности делиться короткими видео с удобным интерфейсом, стала феноменом с момента своего запуска в 2017 году [2].

Ее основатель, молодой предприниматель из Китая Чжан Иминг, создал платформу, ориентированную на музыку и танцы. Благодаря возможности быстрого продвижения треков и поддержке малоизвестных исполнителей, TikTok стал лидером в создании трендового контента. Важной деталью TikTok является его алгоритм, основанный на больших данных, он анализирует взаимодействие пользователя с видео, такие как время просмотра, лайки, комментарии и шаринг, чтобы предложить контент, соответствующий его интересам и это дает шанс даже новичкам стать популярными, если их контент соответствует вкусам аудитории.

Благодаря такому подходу, TikTok обладает огромным потенциалом для вирусного распространения контента. Привлекательность TikTok заключается также в его разнообразии контента и форматах. Пользователи могут создавать различные видео, челленджи, дуэты, реакции, или использовать популярные хэштеги для привлечения внимания широкой аудитории.

Простота использования приложения также способствует его популярности: просматривать видео можно даже без регистрации, а для тех, кто решит зарегистрироваться, достаточно указать номер телефона. Согласно данным Sensotower, в среднем каждый пользователь TikTok тратит 58 минут в день, открывая приложение около 8 раз в день, что подтверждает огромную привлекательность и востребованность платформы среди молодежи.

Роль TikTok в социализации детей и формировании их ценностей пронизывает современную культурную сцену, оказывая значительное влияние на восприятие мира и поведение молодежи. Приложение, которое впервые описал Э. Тоффлер в книге «Третья волна», отражает явление клиповой культуры, где основными факторами являются быстрая смена образов, увеличение информации и потребность в актуальности. Именно в этой культуре молодежь находит себя, а TikTok становится идеальным пространством для выражения ее "клипового мышления". Согласно теории "клипового мышления", молодежь воспринимает информацию фрагментарно и кратковременно. Именно в такой среде процветает TikTok, предлагая бесконечную ленту коротких видео с ярким музыкальным сопровождением, что создает особый тип восприятия реальности, где все воспринимается через несвязанные между собой фрагменты, несущие скорее развлекательный, чем информационный характер. Суть TikTok заключается не только в просмотре видео, но и в активном участии в создании контента. Возникновение челленджей, таких как танцы или песни, подтверждает тенденцию к подражанию и стремлению к утверждению себя

в глазах других. Этот жанр интернет-роликов становится двигателем конкуренции, где каждый стремится выделиться, повторяя уже существующие видео и добавляя к ним что-то новое, но, к сожалению, с ростом популярности TikTok возникают и опасности. Продолжительное время, проводимое в приложении, может привести к зависимости, вызывающей депрессию и одиночество. Исследования показывают, что склонность к онлайн-социальным связям может усугубиться при недостаточных навыках общения в реальном мире [3].

Рассмотрим роль ТикТока в социализации детей и формировании их ценностей на основании представленной информации. Сначала стоит обратить внимание на основные факторы, сделавшие ТикТок таким популярным. На платформе активно представлены известные личности различных сфер, что привлекает внимание пользователей. Система рекомендаций делает возможным быстрый рост популярности и нахождение единомышленников. Для создания контента требуется минимум времени благодаря ограниченной продолжительности видео, за этой маской развлечения скрываются опасности. ТикТок, несмотря на свой кажущийся безобидный характер, может стать источником деструктивного поведения.

Молодые блогеры, стремясь к популярности, снимают видео, разрушающие моральные и социальные границы. Опасные тенденции, популяризируемые на платформе, могут оказать негативное влияние на формирование моды и трендов среди подростков. Проведенные исследования подтверждают влияние социальных сетей, таких как ТикТок, на подростков, данные приложения становятся основным местом общения и самовыражения для молодежи. Рост популярности ТикТока вызывает беспокойство среди общественности и властей. Запреты исследовались в различных странах, включая Индию и США, но платформа остается устойчивой к критике. Миллионы пользователей продолжают активно использовать ТикТок, несмотря на поднятые вопросы о безопасности и морали.

Короткие видеоролики на платформе привлекают миллионы пользователей и создают условия для формирования новой элиты, которую можно назвать "мем-машины", эти влиятельные личности зарабатывают деньги на просмотрах, лайках и акциях, что делает ТикТок не только местом для творчества, но и для предпринимательства, но вот, как и в случае с другими социальными платформами, отсутствие строгого регулирования и контроля может создать риск негативных последствий. Запрет ТикТок в Индии из-за распространения порнографического контента и возможного нежелательного влияния на детей и подростков - лишь один из примеров того, как проблемы безопасности могут возникнуть на подобных платформах. Невзирая на шаги по регулированию и наказанию

нарушителей, остаются зоны неопределенности, особенно в контексте влияния на молодое поколение.

Негативное влияние TikTok уже сейчас проявляется порой в различных формах, через антисоциальное поведение и неадекватное использование платформы. Беспокойство некоторых исследователей заключается в том, что рост популярности социальных медиа делает молодежь все более изолированной и склонной к выражению низких моральных качеств через онлайн-профили и видеоролики и этот аспект может вносить дополнительные сложности в социальную адаптацию и общение в реальном мире, помимо прочего отсутствие эффективной системы обратной связи и жалоб может привести к тому, что негативные ситуации останутся неразрешенными, оставляя пользователей без защиты от вредного контента или недопустимого поведения других пользователей, что особенно актуально для детей и подростков, которые могут быть в более уязвимом положении при использовании подобных платформ [4].

TikTok оказывает значительное влияние на социализацию детей и формирование их ценностей, предоставляя им площадку для самовыражения, общения с единомышленниками и участия в различных культурных движениях, но помимо положительных аспектов, существуют и риски, связанные с недостаточным контролем контента и возможным негативным воздействием на молодое поколение. Для обеспечения безопасности и здорового развития пользователей TikTok необходимо продолжать работу над совершенствованием механизмов контроля и обратной связи, а также осуществлять образовательные мероприятия, направленные на развитие цифровой грамотности и критического мышления среди молодежи.

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ИССЛЕДОВАНИЕ ПРОБЛЕМ И МЕР РАСПРОСТРАНЕНИЮ КОРОТКИХ ВИДЕОРОЛИКОВ НА ПЛАТФОРМЕ (НА ПРИМЕРЕ ТИКТОК)

Аннотация. Данная статья посвящена исследованию проблем и мер распространения коротких видеороликов на платформе ТикТок. В работе рассматриваются основные проблемы, с которыми сталкиваются пользователи и создатели контента на данной платформе, такие как безопасность данных, контроль над контентом и психологическое воздействие. В заключении предлагаются рекомендации по решению данных проблем и созданию более безопасной и здоровой онлайн-среды.

Ключевые слова. ТикТок, социальные медиа, короткие видеоролики, безопасность данных, контроль контента, психологическое воздействие.

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RESEARCH OF PROBLEMS AND MEASURES IN THE DISTRIBUTION OF SHORT VIDEOS ON THE PLATFORM (BASED ON THE EXAMPLE OF TIKTOK)

Abstract. This article explores the issues and measures related to the dissemination of short videos on the TikTok platform. The paper examines the main challenges faced by users and content creators on this platform, such as data security, content control, and psychological impact. In the conclusion, recommendations are proposed for addressing these issues and creating a safer and healthier online environment.

Keywords. TikTok, social media, short videos, data security, content control, psychological impact.

В эпоху цифровой революции социальные медиа стали неотъемлемой частью повседневной жизни миллионов людей по всему миру. Выделяющейся среди молодежи популярных платформ, завоевавшей огромную аудиторию в кратчайшие сроки, стал ТикТок, ведь данный сервис коротких видеороликов стал не просто развлечением, но и мощным инструментом для создания контента, массовой коммуникации и даже коммерческих целей, но за этим кажущимся вихрем кроется ряд проблем и вызовов, требующих внимания и исследования.

Исследование проблем и мер по распространению коротких видеороликов на платформе ТикТок отражает важность осведомленности и

безопасности для подростков, которые активно участвуют в цифровой культуре. Платформа TikTok служит источником радости и вдохновения для миллионов пользователей по всему миру, особенно для подростков, что подчеркивает необходимость обеспечения их безопасности в онлайн-пространстве, важной задачей TikTok является обеспечение безопасной среды для пользователей, особенно для несовершеннолетних.

Для этого платформа активно отслеживает и реагирует на потенциально опасные вызовы и мистификации, которые могут затронуть подростков. Глобальное исследование, проведенное TikTok, с участием 10 000 человек из различных стран, а также экспертов по безопасности молодежи, выявило важные тенденции и проблемы в этой области. Большинство челленджей, представленных на платформе, оцениваются как веселые и безопасные. Тем не менее, существует небольшой процент вызовов, которые могут представлять опасность для участников. Подростки, как часть процесса взросления, склонны к риску, но большинство из них предпринимают шаги для оценки потенциального риска перед участием в вызове. Исследование показало, что информирование подростков о потенциальных рисках и предоставление рекомендаций по безопасности является важной мерой для обеспечения их защиты. Подростки выражают потребность в более подробной информации о рисках и способах предотвращения негативных последствий. Родители также играют важную роль в обеспечении безопасности подростков в онлайн-пространстве. Недостоверная информация, такая как фейки о самоповреждении, может негативно влиять на ментальное здоровье подростков. Однако многие взрослые испытывают затруднения в общении с подростками на эту тему, опасаясь, что это привлечет их внимание к опасным вызовам [2].

Усиление мер по обеспечению безопасности на платформе TikTok является результатом анализа и использования выводов из проведенного исследования проблем и мер по распространению коротких видеороликов. TikTok предпринял шаги для улучшения существующих мер безопасности, опираясь на результаты исследования [1]. Исследование подчеркнуло, как недостоверный контент, особенно тот, который связан с самоповреждением, может оказать негативное влияние на подростков. В ответ на это TikTok принял решение не только ограничить и удалять недостоверную информацию о опасных вызовах, но и начать удалять сообщения пользователей, содержащие ложную информацию об опасных действиях, что дает возможность предотвратить распространение вредной информации и защитить пользователей от потенциальных опасностей. Строгие Правила сообщества, сопровождаемые эффективными методами распознавания контента, являются важным инструментом для обеспечения безопасности на платформе. TikTok разработал технологию, позволяющую отслеживать внезапный рост нарушающего правила контента, а также идентифицировать

материалы с проявлениями потенциально опасного поведения, такой подход позволяет оперативно реагировать на угрозы безопасности и защищать сообщество от потенциальных опасностей [3].

В рамках усиления мер безопасности TikTok разработал новые руководства для поддержки сообщества платформы и данные руководства имплементируют советы для родителей и опекунов о том, как общаться с подростками на тему вызовов и мистификаций, а кроме прочего текст предупреждений, который видят пользователи при поиске контента, связанного с вызовами или мистификациями, был изменен с призывом посетить Центр безопасности TikTok для получения более подробной информации. Взаимодействие с мировыми экспертами по безопасности позволило TikTok эффективно реагировать на вызовы в области безопасности пользователей [4].

Платформа планирует продолжить совершенствование своих мер безопасности и сотрудничество с экспертами для обеспечения безопасной и здоровой онлайн-среды для всех пользователей.

Все понимают, что молодежь подвергается риску манипуляции и формирования негативных убеждений под воздействием контента, который может быть далек от правды или здравого смысла. В свете этих проблем необходимо принимать меры для предотвращения злонамеренного распространения контента на платформе TikTok. Первым шагом может быть ужесточение механизмов модерации и контроля контента, что подразумевает разработку более эффективных алгоритмов фильтрации, способных выявлять и блокировать вредоносный контент, фейковые новости и другие формы дезинформации.

В качестве рекомендации должно быть сказано, что важно обучать модераторов распознавать и реагировать на подобный контент, а кроме прочего важно повышать осведомленность пользователей о проблеме их собственной защиты от вредоносного контента, что можно осуществить путем проведения образовательных кампаний и распространения информации о признаках недостоверной информации и методах ее проверки. Для повышения ответственности создателей контента и влиятельных личностей на платформе необходимо разработать строгие политики использования и наказания за распространение вредоносной информации, рекомендуется использовать штрафы, блокировку аккаунтов или другие меры дисциплинарного характера, а также важно сотрудничать с правительственными и неправительственными организациями для разработки законодательства и международных стандартов, направленных на регулирование деятельности платформы TikTok и других аналогичных сервисов, только так можно создать более безопасное и надежное онлайн-пространство для пользователей всех возрастов [5].

Для поднятия мотивации, важно поощрять позитивные примеры использования платформы TikTok и других социальных сетей для

образования, вдохновения и поддержки сообщества, что должно быть достигнуто путем выделения и поддержки контента, который способствует развитию навыков, продвижению здорового образа жизни и формированию позитивной социальной динамики. Только путем комплексного подхода, включающего в себя усиление модерации контента, повышение осведомленности пользователей, ужесточение политики использования и сотрудничество с заинтересованными сторонами, можно эффективно бороться с проблемой злонамеренного распространения контента на платформе TikTok и обеспечить безопасную и здоровую онлайн-среду для всех пользователей.

Простое запрещение TikTok может быть неэффективным решением. Несмотря на негативные последствия, вызванные этой платформой, она является лишь одним из множества приложений, предлагающих короткие видеоролики. Запрет TikTok может привести к тому, что пользователи просто перейдут на другие аналогичные сервисы, что не решит проблему, а лишь перенесет ее на другие платформы, также запрет TikTok может вызвать негативные реакции и быть воспринятым как дискриминация со стороны владельцев платформы.

Вместо этого необходимо продолжать работать над разработкой эффективных мер регулирования и контроля содержания на платформе, фактическое ужесточение политики использования, обучение модераторов для более эффективной фильтрации контента, также необходимо обратить внимание на образование пользователей и повышение их осведомленности о проблеме.

В нашей статье мы проанализировали ключевые проблемы и вызовы, связанные с распространением коротких видеороликов на платформе TikTok. Мы увидели, что помимо явных преимуществ этого сервиса существуют и серьезные проблемы, такие как проблемы безопасности данных, контроль над контентом и психологическое воздействие на пользователей, но благодаря активным действиям как со стороны платформы, так и со стороны общества, эти проблемы могут быть решены. Внедрение строгих политик безопасности данных, повышение осведомленности пользователей и разработка инструментов для контроля контента могут способствовать созданию более безопасной и здоровой онлайн-среды. При этом важно сохранить и поддержать творческую атмосферу и возможности для самовыражения, которые делают платформу TikTok уникальной.

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ВЛИЯНИЕ ФИЗИЧЕСКОЙ АКТИВНОСТИ НА КОГНИТИВНЫЕ ФУНКЦИИ ШАХМАТИСТОВ

Аннотация. Цель данной статьи заключается в исследовании влияния физической активности на когнитивные функции шахматистов. В статье рассматриваются результаты современных исследований, связанных с этой проблематикой, а также анализируются методы и подходы к интеграции физических упражнений в тренировочный процесс шахматистов с целью повышения их когнитивных способностей. Приводятся примеры практической реализации такого подхода и его влияние на результативность в шахматных соревнованиях.

Ключевые слова: физическая активность, когнитивные функции, шахматы, тренировочный процесс, интеграция, результативность.

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THE IMPACT OF PHYSICAL ACTIVITY ON THE COGNITIVE FUNCTIONS OF CHESS PLAYERS

Annotation. The aim of this article is to investigate the influence of physical activity on the cognitive functions of chess players. The article examines the results of contemporary research related to this issue, as well as analyzes methods and approaches to integrating physical exercises into the training process of chess players with the aim of enhancing their cognitive abilities. Examples of practical implementation of such an approach and its impact on performance in chess competitions are provided.

Keywords: physical activity, cognitive functions, chess, training process, integration, performance.

Введение:

В современном исследовании в области спортивной психологии, акцент смещается к пониманию влияния физической активности на когнитивные процессы у шахматистов. Подобно тому, как в спорте уверенное управление мышлением и эмоциями становится критическим

элементом достижения выдающихся результатов, так и в шахматах стратегическое мышление и психологическая устойчивость могут играть ключевую роль. Это исследование направлено на рассмотрение влияния физической активности на когнитивные функции шахматистов, с углубленным изучением психологических аспектов и их взаимосвязи с производительностью в шахматной игре.

В последние десятилетия в психологии спорта наблюдается увеличение внимания к роли ментальных процессов в достижении спортивных целей. Успех в шахматах, как и в других видах спорта, обусловлен не только техническим мастерством, но и умением контролировать свои мысли, эмоции и адаптироваться к стрессовым ситуациям. Исследование направлено на изучение современных методов психологической подготовки, используемых для улучшения производительности шахматистов, а также выявление индивидуальных подходов, способствующих достижению психологической устойчивости в этой умственно-напряженной дисциплине.

Методы и исследования:

Для данного исследования была подобрана группа шахматистов с различным уровнем игрового опыта и физической подготовки. Участники были отобраны из различных шахматных клубов и турниров с учетом их игрового рейтинга и физической активности.

Для оценки когнитивных функций участников были использованы стандартизированные психологические тесты, адаптированные для оценки уровня внимания, концентрации, памяти и принятия решений. Эти тесты были проведены как до, так и после периода физической активности.

Участники проходили специально разработанную программу физических упражнений, которая включала в себя аэробные и силовые тренировки, а также элементы координации и гибкости. Продолжительность программы составляла 8 недель, с частотой тренировок 3 раза в неделю.

Результаты тестирования когнитивных функций были записаны и проанализированы до и после завершения программы физической активности. Статистический анализ был проведен для выявления любых значимых изменений в когнитивных функциях участников.

Исследование было проведено в соответствии с принципами этики и с учетом конфиденциальности данных участников. Все участники были ознакомлены с целями исследования и дали свое согласие на участие в нем.

Этот раздел описывает методологию и процедуры, использованные в исследовании для изучения влияния физической активности на когнитивные функции шахматистов.

Результаты оригинального авторского исследования:

Результаты исследования показали статистически значимое улучшение когнитивных функций у шахматистов после завершения

программы физической активности. В частности, наблюдалось увеличение уровня внимания и концентрации, повышение памяти и улучшение способности к принятию решений.

Дополнительный анализ показал, что уровень улучшения когнитивных функций был связан с интенсивностью и регулярностью физических тренировок. Чем выше был уровень участия в программе физической активности, тем более заметным было улучшение когнитивных процессов.

Наблюдалось также, что уровень улучшения когнитивных функций в ответ на физическую активность различался в зависимости от начального уровня когнитивных способностей участников. Некоторые участники проявили более значительное улучшение, чем другие, что может указывать на индивидуальные различия в ответе на тренировочные стимулы.

После завершения программы физической активности, улучшение когнитивных функций оставалось стабильным в течение определенного периода времени. Это указывает на то, что регулярная физическая активность может иметь долгосрочный положительный эффект на когнитивные процессы у шахматистов.

Полученные результаты не только демонстрируют существенное улучшение когнитивных процессов в ответ на физическую активность, но и подчеркивают важность адаптации тренировочных методик под индивидуальные особенности шахматистов. Эти выводы предоставляют практические рекомендации для тренеров, психологов и шахматистов, помогая им оптимизировать тренировочные программы и достичь высоких результатов в соревнованиях за счет улучшения когнитивных функций через физическую активность.

Заключение

Исследование влияния физической активности на когнитивные функции шахматистов подчеркивает важность комплексного подхода к тренировке ума в спорте. Полученные результаты свидетельствуют о том, что регулярная физическая активность способствует улучшению когнитивных процессов у шахматистов, включая внимание, концентрацию, память и способность к принятию решений.

Эти выводы предоставляют ценные практические рекомендации для тренеров, психологов и шахматистов, подчеркивая важность включения физической активности в тренировочные программы для достижения максимальных результатов в соревнованиях.

Дальнейшие исследования в этой области могут помочь более глубоко понять механизмы взаимодействия между физической активностью и когнитивными функциями, что приведет к разработке более эффективных стратегий тренировки ума для шахматистов и других спортсменов.

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ВОЗОБНОВЛЯЕМЫЕ ИСТОЧНИКИ ЭНЕРГИИ – ТРЕБОВАНИЕ ВРЕМЕНИ

Аннотация. В этой статье рассматриваются анализированные результаты изучения возобновляемых источников энергии и возможности их использования. В связи с тем, что население Узбекистана из года в год растет и спрос на энергию и энергоэффективность становится все более актуальной темой.

Ключевые слова: возобновляемые источники энергии, энергия ветра, солнечная энергия, гидроэнергетика, энергия волн.

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RENEWABLE ENERGY SOURCES – THE NEED OF TIME

Abstract. This article discusses the analyzed results of the study of renewable energy sources and the possibility of their use. Due to the fact that the

population of Uzbekistan is growing from year to year and the demand for energy and energy efficiency is becoming an increasingly relevant topic.

Key words: renewable energy sources, wind energy, solar energy, hydropower, wave energy.

Использование возобновляемых источников энергии в Узбекистане имеет давнюю историю. В начале 20 века в общем балансе (объеме) их топливной энергии занятая доля составила 90%, из них 40% - дрова, и около 20% - ветер и торф достиг.

Эпоха индустриализации привела к полной централизации экономической жизни, в том числе энергетической снабжение оттеснило все автономные энергетические установки, к таким установкам включаются и возобновляемые источники энергии, в настоящее время их доля составляет около 1% представляет собой.

Программы солнечной энергетики разработаны более чем в 70 странах мира и сделанный. В Германии стартовал проект «Тысяча крыш», в котором 2250 домов оснащен фотоэлектрическим оборудованием. Рассчитан на период до 2010 года в США принята программа «Миллион солнечных крыш». Сегодня существуют миллионы солнечных водонагревателей используется. «Солнечные дома» получили широкое распространение. Методы речевого управления системами произведено.

Экономический анализ использования возобновляемых источников энергии в мире в настоящее время делается. Мир в использовании солнечной и ветровой энергии как общего источника энергии страны-лидеры по: США-17%, Франция-15%, Дания-50%, Китай-14%, Индия-22%, Латинская Америка - до 35%, Австрия - 25% Германия, Израиль, Россия 10% к 2010 г является.

Возобновляемая энергия – возобновляемая или неисчерпаемая в человеческом масштабе являются источниками энергии. Основной принцип использования возобновляемых источников энергии заключается в извлечение из процессов в окружающей среде или возобновляемых органических ресурсов и его технические заключается в предоставлении в пользование. Возможность использования таких источников энергии различны, наиболее распространенными видами альтернативной энергетики являются солнечная и ветровая энергия, для отдельных регионов характерны другие виды и источники энергии.

Чтобы получить возобновляемую энергию от солнечного света, ветра, рек и из речного стока, подземной энергии, воды и воздуха, энергии биомассы, геотермальной энергии. энергия, течения, волны, разница солености морской и речной воды, море можно использовать разницу температуры поверхности и глубины (температуры).

Возобновляемые источники энергии (ВИЭ)- Постоянное обновление биосферы Земли виды энергии: солнечная, ветровая, энергия океана,

гидроэнергетика рек источники. Возобновляемые источники энергии экологически безопасны; они с планеты нет стимула для дополнительного отопления.

Солнечная энергия-считается основной энергией жизни на земле. Резиденции наибольший интерес для энергоснабжения вызывает солнечная энергетика. Расчеты показывают, что этой энергии хватит на экодому во многих регионах земли может быть основным источником энергии. Экологичность от возобновляемых источников энергии безопасны, ущерб от них намного больше, чем ущерб от традиционной энергетике встречается редко. Этот вид энергии представляет собой электромагнитное солнечное излучение, электричество или тепло основан на преобразовании энергии Солнечные электростанции непосредственно от солнечной энергии правильно (фотоэлектрическая солнечная электростанция, работающая на явлении внутреннего фотоэлектрического эффекта станции) и косвенно – использует кинетическую энергию пара.

В области использования солнечной энергии во многих странах мира, особенно регионы, где солнечные лучи быстро распространяются – страны Средиземноморья, юг Европы Часть исследований ведется в странах Ближнего Востока, Африки и Центральной Азии. Гелио обычно обеспечивает дополнительную энергию к традиционным источникам энергии для строительства установок рассматривается как устройство. Единственным недостатком всех гелиоустановок является их зависит от атмосферных условий и сезонных и суточных колебаний солнечной радиации объясняется это тем, как они работают, этот недостаток у них накопительный в их составе требуются устройства ввода.

Использование возобновляемых источников энергии при строительстве и эксплуатации зданий может быть использован. Он уже давно производит солнечную энергию в южном направлении можно выдать. А открытое пространство позволяет получать энергию ветра. Много солнца и благодаря ветровым ресурсам, международной поддержке и технологическим достижениям, Узбекистан имеет собственную к уникальным возможностям изменить энергетический ландшафт и продолжить путь к устойчивому будущему иметью.

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ИННОВАЦИОННЫЕ ПОДХОДЫ К УЛУЧШЕНИЮ СОЦИАЛЬНОЙ ГИГИЕНЫ ЧЕРЕЗ ТЕХНОЛОГИИ И ЦИФРОВИЗАЦИЮ

Аннотация. Развитие технологий и цифровизация в сфере здравоохранения открывают новые возможности для улучшения социальной гигиены и обеспечения здоровья населения. Инновационные подходы, такие как использование мобильных приложений для мониторинга здоровья и доступа к медицинским услугам, а также развитие систем телемедицины и электронных медицинских карт, способствуют повышению доступности и эффективности медицинского обслуживания. Внедрение современных технологий также позволяет улучшить системы управления здравоохранением, оптимизировать процессы и ресурсы, а также повысить уровень информированности населения о вопросах здоровья и профилактике заболеваний. Эти инновационные подходы играют ключевую роль в современной стратегии совершенствования социальной гигиены и обеспечения качественного здравоохранения для всех слоев населения.

Ключевые слова: технологии здравоохранения, цифровизация медицины, телемедицина, электронные медицинские карты.

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INNOVATIVE APPROACHES TO IMPROVING SOCIAL HYGIENE THROUGH TECHNOLOGY AND DIGITALIZATION

Abstract. The development of technology and digitalization in the healthcare sector opens up new opportunities for improving social hygiene and ensuring public health. Innovative approaches, such as the use of mobile applications to monitor health and access to health services, as well as the development of telemedicine systems and electronic health records, are helping to improve access and efficiency of health care. The introduction of modern technologies also makes it possible to improve healthcare management systems, optimize processes and resources, and increase the level of public awareness about health issues and disease prevention. These innovative approaches play a key role in modern strategies to improve social hygiene and ensure quality healthcare for all segments of the population.

Keywords: healthcare technologies, digitalization of medicine, telemedicine, electronic medical records.

Введение. В современном мире технологии становятся все более интегральной частью нашей жизни, оказывая значительное влияние на различные аспекты общества, включая здравоохранение. Цифровизация медицинской сферы и развитие технологий здравоохранения приносят революционные изменения в способы обслуживания пациентов и управления здравоохранением. В этой статье мы рассмотрим роль инновационных подходов в улучшении социальной гигиены и обеспечении здоровья населения [1]. Мы обсудим преимущества использования мобильных приложений, телемедицины и электронных медицинских карт в повседневной практике. Кроме того, мы рассмотрим вызовы и перспективы, связанные с внедрением этих технологий, а также их влияние на системы управления здравоохранением. Исследование этих аспектов не только поможет нам понять текущее состояние здравоохранения, но и определить будущее направление его развития.

Материалы и методы: Для проведения исследования по данной теме был осуществлен обширный обзор академической литературы, включающий научные статьи, книги, отчеты и онлайн-ресурсы. В процессе обзора были использованы базы данных такие как PubMed, Google Scholar, а также официальные веб-сайты медицинских и здравоохранительных организаций. Основными ключевыми словами для поиска были "технологии здравоохранения", "цифровизация медицины", "мобильные приложения в здравоохранении", "телемедицина" и "электронные

медицинские карты". Анализ полученных материалов позволил выявить основные тенденции, достижения и вызовы в области применения технологий для улучшения социальной гигиены и управления здравоохранением.

В современной медицинской практике наблюдается ряд инновационных подходов, которые существенно влияют на улучшение социальной гигиены через применение технологий и цифровизацию [2]. Одним из таких подходов является использование мобильных приложений для мониторинга здоровья и поддержки пациентов в режиме реального времени. Эти приложения позволяют пользователям отслеживать свои медицинские показатели, принимать лекарства вовремя, записывать симптомы и консультироваться с врачами удаленно. Кроме того, развитие телемедицины играет важную роль в обеспечении доступа к медицинским услугам, особенно для тех, кто проживает в удаленных или малообслуживаемых районах. Пациенты могут проводить консультации с врачами через видеосвязь, получать второе мнение и даже проводить удаленные медицинские обследования. Кроме того, внедрение электронных медицинских карт позволяет централизованно хранить медицинскую информацию о пациентах и обеспечивать ее доступность для врачей и других медицинских работников в любой точке мира. Эти подходы не только повышают эффективность медицинского обслуживания, но и способствуют улучшению социальной гигиены, обеспечивая более широкий доступ к качественным медицинским услугам [3].

Дополнительно, цифровизация медицинской сферы также включает в себя автоматизацию административных процессов и улучшение системы управления медицинскими данными. Использование цифровых систем управления позволяет сократить временные затраты на обработку информации, уменьшить вероятность ошибок и повысить эффективность взаимодействия между медицинскими учреждениями. Кроме того, развитие и внедрение систем искусственного интеллекта (ИИ) в медицину открывает новые возможности для диагностики, прогнозирования и лечения различных заболеваний. Алгоритмы машинного обучения могут анализировать медицинские данные, выявлять скрытые закономерности и предлагать индивидуализированные подходы к лечению. Наконец, важно отметить, что успешная реализация этих инновационных подходов требует не только технических ресурсов, но и обеспечения конфиденциальности и безопасности медицинских данных, а также обучения медицинского персонала в использовании новых технологий [4].

Вывод: Выводя исследование по применению инновационных технологий в здравоохранении для улучшения социальной гигиены, можно подчеркнуть их значительный потенциал в повышении доступности и качества медицинского обслуживания. Мобильные приложения, телемедицина, электронные медицинские карты и другие цифровые

решения уже показали свою эффективность в оптимизации процессов и повышении уровня здравоохранения. Однако, внедрение этих технологий также сталкивается с рядом вызовов, включая проблемы конфиденциальности данных, неравный доступ к технологиям и необходимость постоянного обучения персонала. Тем не менее, при правильном подходе и совместных усилиях общества и медицинского сообщества, применение инновационных технологий в здравоохранении может привести к значительным улучшениям в сфере социальной гигиены и обеспечения здоровья населения.

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ОБЩИЕ ВОПРОСЫ ФИЛОСОФИИ ЭТИКИ АМИРА ТЕМУРА

Аннотация. В статье описано воспитательное значение качеств Амира Темура, научный анализ исторических основ идей патриотизма, верности, ответственности и просвещения в его нравственной философии.

Ключевые слова: моральный идеал, наследие, добродетель, этика, удобрения, судьба страны, справедливость, патриотизм.

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GENERAL ISSUES OF AMIR TEMUR'S PHILOSOPHY OF ETHICS

Abstract. The article describes the educational significance of the qualities of Amir Temur, the scientific analysis of the historical foundations of the ideas of patriotism, loyalty, responsibility and enlightenment in his moral philosophy.

Keywords: moral ideal, heritage, virtue, ethics, fertilizers, destiny of the country, justice, patriotism.

Амир Темура, правитель, основавший могущественное государство. Если бы не мощь государства, не было бы ни духовного наследия, ни памятников, ни исторических памятников. Этот фактор очень важен в укреплении независимости Узбекистана, и Амир Темура должен быть ценен для нас как основатель великого государства. Потому что справедливо будет сказать, что Амир Темура управлял своей страной, опираясь на интеллект и законную основу. Ведь его слова: «Девять частей государственных дел я осуществил посредством советов, мероприятий и совещаний, а остальную часть - мечом» - яркое тому подтверждение.

Амир Темура глубоко и хорошо понимал, что 600 лет назад ни одна страна не имела бы будущего без взаимодействия и сотрудничества со своими соседями. Благодаря этому он совершил великие дела, которые помогли соединить Европу и Азию. Амир Темура создал единое торгово-экономическое пространство, сложилась ситуация, поучительная как для

сегодняшнего дня, так и для современности. Доказательством тому являются слова Амира Темура: «...Я установил такую дисциплину что от одного конца моего царства до другого конца, если ребенок будет носить на голове тарелку золота, то даже крупица ее не повредится»." [5].

Развитие любого общества невозможно представить без знаний. А.Темур, глубоко понимавший это, связал первые указы, изданные им придя к власти, с учреждением медресе и выделением пособий, ищущим знаний. Какой бы город он ни посетил, Амир Темур в первую очередь встречался с учеными и добродетелями этой страны, беседовал с ними, обсуждал различные темы. Качество мастера Амира Темура как «Покровителя науки и просвещения» сегодня состояние управляющего – необходимое качество для благополучия народа, развития страны и развития общества.

Амир Темур – историческая и незабываемая личность, задумавшаяся о судьбе своей страны, проявившая самоотверженность за ее перспективу и независимость. Есть много примеров его человеческих качеств. Можно сказать, что важнейшим аспектом отношения Амира Темура к исламу является мобилизация мусульманских верований на служение миру, процветанию, социальной справедливости, целостности веры и духовной чистоте. Потому что, по его убеждению, государство должно быть государством, а религия должна быть религией. Эта идея не потеряла своего значения и в современную эпоху. Необходимость научного изучения теоретических вопросов, касающихся личности, духовности и нравственности Амира Темура, связана с его анализом моральных принципов, определяющих развитие нации, государства и общества. Справедливость играет важную роль в личности и деятельности Амира Темура. В частности, национальное и общечеловеческое значение «Уложение Темура» определяется отношением А.Темура к правосудию. Кроме того, преувеличивается справедливость как моральный критерий деятельности Амира Темура. Для нынешнего поколения в личности А.Темура есть много моральных качеств, таких как честность, смелость, дальновидность, сила духа, решительность, которые полезно и мудро изучать, и практиковать. В частности, в любую эпоху важным считалось изучение патриотизма в характере исторических деятелей и проверенных реалиях жизни великих людей. Например, анализ патриотических идей, взглядов и призывов Амира Темура позволяет сделать важные научные выводы, связанные с развитием моральной философии. Идеино-идеологические основы принципа патриотизма в творчестве Амира Темура сегодня служат учебно-дидактической основой воспитания молодого поколения. В этом смысле моральная сущность идеи патриотизма А.Темура:

а) моральное мужество характера Амира Темура в воспитании его как решительного, энергичного, ответственного.

б) что образцовая жизнь и деятельность Амира Темура в «Уложение Темура» является прагматической основой укрепления независимости Родины;

в) изучение источников, трактующих Амира Темура как «великого спасителя Родины» в нашей стране и за рубежом;

г) его можно определить по таким моральным качествам, как то, что Великий А.Темура обладает широким кругозором, хорошо разбирается в искусстве и литературе, является патриотом и любит свой народ.

Из вышеизложенных соображений нетрудно понять, что справедливость, любовь к Родине и патриотизм являются главными критериями нравственной философии Амира Темура. Ведь первый президент Узбекистана Ислам Каримов в Париже в 1996 году на международной конференции, посвященной 660-летию со дня рождения Амира Темура: сказал, «Пока в нашей истории есть такая великая личность, как Амир Темур, его наследие и учения гармонируют с нашей нынешней жизнью и помогают в решении проблем, с которыми мы сталкиваемся. Мы не имеем права не изучать, описывать и пропагандировать наследие». [6]

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ЗНАЧЕНИЕ ЦЕННОСТЕЙ ПРИ СОВЕРШЕНСТВОВАНИИ НАЦИОНАЛЬНОГО СОЗНАНИЯ И НАЦИОНАЛЬНОЙ ГОРДОСТИ МОЛОДЁЖИ

Аннотация. В данной статье дан научно-теоретический анализ совершенствованию национального сознания и национальной гордости молодёжи, а также, национальной психологии в составе общественного сознания.

Ключевые слова: Независимость, сознание, национальное самосознание, национальное сознание, общественное сознание, социальная психология, гордость, ценности, традиции, национально-чувство.

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MEANING OF VALUES IN IMPROVING NATIONAL CONSCIOUSNESS AND NATIONAL PRIDE OF YOUTH

Annotation. This article provides a scientific and theoretical analysis of the improvement of the national consciousness and national pride of youth, as well as national psychology as a part of public consciousness.

Key words: Independence, consciousness, national self-consciousness, national consciousness, social consciousness, social psychology, pride, values, traditions, national feeling.

Повышение морального духа молодежи, воспитание у нее чувства патриотизма и сопричастности к окружающим событиям приобретают сегодня все большее актуальное значение.

Ш.М.Мирзиёев

Благодаря независимости в нашей духовной жизни происходят коренные изменения. Растет национальное самосознание и национальная гордость нашего народа, а духовный мир становится богаче день ото дня. Это создает основу для дальнейшего укрепления нравственной основы

нашего независимого государства.

Образ каждой нации, независимо от ее численности отражается прежде всего в ее национальном сознании и психологии. Национальное сознание – основная форма этнического сознания, являющаяся составной частью общественного сознания. Известно, что общественное сознание-это совокупность чувств, идей и взглядов, отражающих производственные отношения общества и выражающих уровень его духовной жизни. Оно проявляется в форме социальных, политических, правовых, моральных, философских, религиозных, эстетических взглядов и переживаний.

Разным социально-экономическим системам соответствуют разные образы мышления и образы мышления. Например, простой способ производства общественной системы, основанной на общественной собственности, создает способ мышления, основанный на слаборазвитом общественном сознании и коллективном воображении. «Мышление первобытных людей,-говорит Л. Леви-Брюля,-по существу мистический, "божественный", причина этого-его коллективное воображение, мистическое своим вниманием к сущности, которая является необходимым элементом первобытного человеческого восприятия.[3].

Наряду с этническим сознанием большое место в структуре общественного сознания занимают социальная ментальность и социальная идеология.

Социальная психика как отражение социального существования возникает и развивается под влиянием практической деятельности людей. Социальный менталитет также отражает культуру, сформировавшуюся в социальной системе. Невозможно узнать образ жизни людей, живущих в том или ином обществе, не изучив и не поняв его внимательно.

К национальным чертам характера узбеков относятся трудолюбие, щедрость, патриотизм, гуманизм, настойчивость, терпение, отношение к другим народам и представителям этой нации. Каждый исторический период, совокупность общественных отношений в этот период создает свой идеал национального характера, соответствующий национальным интересам.

Национальное чувство проявляется в форме отношения людей ко всем вещам и событиям действительности, национальным процессам, а также к древнему историческому и культурному наследию нации и имеет большое значение в духовном облике нации. Влияние национального чувства особенно проявляется в отношении к родному языку. Ведь национальные особенности каждого народа выражаются через язык. Национальное чувство также не является врожденным элементом. Это историческое понятие, которое создается в результате постоянного воздействия внутренних и внешних объективных факторов на представителей данного народа и нации. В наших национальных чувствах национальные интересы и потребности, особенно их позитивность и негативность, являются

удовлетворительными или неудовлетворительными для национального представителя социальной действительности.

Социальная идеология – это совокупность нравственных, религиозных, сравнительных, правовых, эстетических взглядов на определенную нацию, народ, нацию и социальные группы, классы. Идеология является частью структуры общества, формируется в обычных условиях жизни и отражает социально-экономические отношения. Это несколько отличается от социальной психологии. Это отличие состоит в том, что идеология не возникает стихийно, как социальная психика, а возникает в процессе исторической практики как продукт сознательной человеческой деятельности. Идеология отражает действительность шире и глубже, чем социальный менталитет, и разрабатывается наиболее зрелыми интеллектуалами, учеными, политологами общества.

«Идеология национальной независимости, построенная на основе многовековых традиций, обычаев, языка и духа нашего народа, - сказал И.А.Каримов, - в гармонии с общечеловеческими ценностями, вселяет в сердца людей чувство уверенности в завтрашнем дне и умы, внушает им любовь к Родине, должен воспитывать в духе человеколюбия, служить на пути воспитания честности, храбрости и терпения, чувства справедливости, стремления к знаниям и просвещению. Оно должно помочь гражданам государства приблизиться к великой цели».[2].

Сознание и духовный образ каждого народа в том или ином обществе изменяются в зависимости от природных, социальных и исторических условий этого общества. Мысленный и духовный образ нации выражается в существующих формах общественного сознания. В силу своей относительной самостоятельности национальное сознание, как и формы общественного сознания, может оказывать активное влияние на коренное изменение сущности базиса и надстройки общества.

Президент Республики Узбекистан Ш.М.Мирзиёев-«Главной своей целью мы определили формирование в Узбекистане фундамента **новой эпохи Возрождения – Третьего Ренессанса** путем масштабных демократических реформ, в том числе в системе образования. Когда речь идет об этом, каждый из нас, все наше общество должно прежде всего глубоко осознать суть и значение этого вопроса» [1].

Естественно, что национальное самосознание и его формирование, прежде всего, начинаются в основе национального пробуждения. Третий ренессанс становится объективной социальной реальностью развития согласно требованиям времени. Потому что оно формируется и развивается благодаря мировоззрению людей, жизненным выводам, взаимоотношениям, воле и желаниям, национальному образу жизни, национальной живописи, обычаям и традициям. Поэтому национальный образ жизни и культура являются естественным выражением социальной реальности. Признание национальности означает признание социально-этнической устойчивости

людей, принадлежащих к нации. В народности человеческие и общечеловеческие ценности приобрели определенную форму и форму. В национальности есть дух национальной принадлежности. Совокупность наших национальных чувств в нашем национальном духе выражается как простое сознание в наших национальных представлениях и настроениях. Если национальная принадлежность и все ее аспекты научно обоснованы в воображении людей, мы понимаем ее как национальное самосознание.

Национальная гордость – это естественное стремление защитить особенности каждой нации и улучшить ее будущую жизнь.

«Национальное чувство естественно для человека, потому что оно передается по наследству от родителей.

Известно, что национальное чувство является одним из естественных чувств. В то же время они являются весьма чувствительными элементами национальной духовной жизни. Национальные чувства являются одним из признаков национальной гордости, национального характера, следовательно, национальная психология, неотъемлемая его часть.

Это связано с интересами национального чувства, национальной гордости и патриотизма. Это духовное понимание, эмоциональное восприятие истории, современной ситуации, национальной психологии и характера своего народа. Однако чувства и эмоции не выражают напрямую коренные интересы наций. Вот почему национальное чувство отличается от национального сознания.

Национальные чувства и настроения играют важную роль в сплочении и проявлении воли нации. В объединении нации их общие национальные интересы проявляются как исторические события, любовь к прошлой культуре, чувство национальной гордости.

Чувство законной гордости за многовековую богатую историю и прекрасное духовное наследие своего народа призвано не скрывать прошлое, а изучать и раскрывать древнюю историю, созданные народом материальные и духовные богатства, обеспечивать их усваиваются новыми поколениями как наследие предков. Чем двойственнее становятся национальные чувства, тем опаснее пренебрежение национальным достоинством.

Осознание национального самосознания и идентичности не ограничивается чувством принадлежности к той или иной нации, глубоким знанием ее истории, культуры, обычаев и традиций.

Национальное самосознание требует знания современного состояния нации, проблем, ожидающих своего решения, и активных усилий по их решению. Для этого необходимо уметь использовать возможности высокой культуры, дальновидности и мудрости, идейно-духовной зрелости и чистоты, нового образа мышления, чтобы ускорить развитие общества и создать основу для благополучной жизни общества.

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ПСИХОЛОГИЧЕСКИЕ ОСОБЕННОСТИ ЛИЧНОСТИ СЕТЕВЫХ ТРОЛЛЕЙ

Аннотация. в статье рассмотрены психологические особенности личности субъектов, занимающихся сетевым троллингом.

Анализируется деструктивное влияние сетевого интернет-троллинга на психологическое здоровье и психическую уравновешенность.

Ключевые слова: троллинг, агрессия, деструктивное влияние, провокация, подстрекательство.

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PSYCHOLOGICAL FEATURES OF THE PERSONALITY OF NETWORK TROLLS

Abstract. the article examines the psychological peculiarities of the personality of subjects engaged in network trolling. The destructive influence of online trolling on psychological health and mental balance is analyzed.

Keywords: trolling, aggression, destructive influence, provocation, incitement.

Характер межличностного общения как в бытовой, так и в рабочей и в учебной среде в последние годы резко меняется из-за внедрения компьютеров и информационных технологий во все сферы жизни людей. Во многом его специфика зависит от вида получения, хранения, предоставления данных – публичного, открытого, ограниченного либо полностью анонимного.

Для многих пользователей Интернета очень привлекательной его чертой выступает возможность скрыть реальные эмоции и стремления тех, кто участвует в коммуникации. А это в свою очередь является

благоприятной почвой для провокационных, подстрекательских действий в целях разжигания конфликта, травли, агрессивного преследования одного человека другим, психического насилия над одним человеком со стороны группы людей.

Все эти типы поведения имеют деструктивный характер. Изучать их следует с двух позиций:

- 1) того, кого преследуют;
- 2) того, кто нападает.

Провокационные, подстрекательские действия, осуществляемые в целях разжигания конфликта, представляют собой способ общения посредством телекоммуникационной связи. Выражаются они в агрессивных, издевательских, оскорбительных поступках.

За рубежом хорошо известны работы по исследованию провокационных, подстрекательских действий, осуществляемых в целях разжигания конфликта психологов А. М. Хорна, Б. Глейзера, Т. В. Сейджера⁶⁶.

Российские специалисты долго вообще не считали открытые унижение, оскорбление, критику человека специфическим аспектом межличностной коммуникации. Хотя некоторое внимание проблемам поступков, ориентированных на причинение вреда окружающим или самому себе, либо ведущих к превращению субъекта в жертву преступного посягательства, а также вопросам агрессивности и виктимизации личности все же уделялось.

Е. Н. Волкова и Е. В. Гребенкин⁶⁷ выделили два фактора, провоцирующих агрессивное преследование и издевательство одного члена коллектива на другим в Интернете. Это врожденные поведенческие черты личности, стандартные реакции человека на окружающих и ситуации, а также отражение субъективного отношения к предметам и явлениям непосредственно того, кто осуществляет агрессию. А психолог Д. А. Кутузова добавляет и еще одну причину травли другого человека помимо чисто личностных особенностей агрессора – стремление показать свою ценность значимость и таким образом добиться соответствующего положения в определенной социальной группе⁶⁸.

Интересное объяснение увеличению числа провокационных, подстрекательских действий, осуществляемых в Интернете в целях разжигания конфликта, дает Д. Шулер, видящий причину в «эффекте

66 Славская А.Н. Основы психологии С.Л. Рубинштейна: философское обоснование развития / А.Н. Славская ; отв. ред. В.А. Кольцова. – М. : Институт психологии РАН, 2022. – 344 с.

67 Волкова Е.Н. Критерии и признаки психологического ущерба и психологического насилия / Е.Н. Волкова // Вестник Нижегородского университета им. Н.И. Лобачевского. Серия: Социальные науки. – Нижний Новгород. – 2022. – № 1. – С. 84–95., Гребенкин Е.В. Профилактика агрессии и насилия в школе / Е.В. Гребенкин. – Р-н/Д: Феникс, 2020. – 157с.

68 Кутузова Д.А. Травля в школе: что это такое и что можно с этим делать / Д.А. Кутузова // Журнал практического психолога. – Москва. – 2021. – С. 72–90.

растормаживания в Сети». По мнению автора, отражением такого эффекта выступает ослабевание социальных ограничений, вызываемое тем, что собеседник из всемирной паутины невидим и анонимен.

Свое определение провокационных, подстрекательских действий, осуществляемых в целях разжигания конфликта, дал И. Кон⁶⁹.

Этот известный российский психолог называет таковыми принуждение, шантаж, агрессивное преследование, целью которых является страх другого человека, позволяющий тому, кто нападает, подчинить его себе

Ученые считают, что людям, провоцирующим конфликты путем издевательств над собеседниками, свойственна такая личностная черта, как макиавеллизм. Они, как правило, хитрые, стремятся манипулировать другими и идти к власти, используя любые средства и методы. Помимо этих, они обладают еще рядом психопатических признаков – демонстрируют отсутствие социальной ответственности, нарушают права других людей.

Интересно, что, по мнению исследователей, злорадные люди, не заботящиеся о том, какое впечатление производят их слова на других участников веб-комьюнити, считают провокационные, подстрекательские действия, осуществляемые в целях разжигания конфликта, одним из способов общения.

Нами представлена выше комплексная психологическая характеристика личности, провоцирующей конфликты в виртуальном пространстве путем совершения действий подстрекательского характера. Но следует признать, что данная конструкция не может применяться в отношении любого субъекта, подстрекающего других к ссорам. Ведь у каждого существует свой набор личностных особенностей, собственный опыт и специфические мотивы.

Но в целом практически каждый Интернет-подстрекатель

– действует анонимно, используя вымышленные имена и фейковые аккаунты, чтобы избежать наказания, порицания или мести за свои издеательства;

– использует негативные формулировки, обидные слова в адрес собеседников, намеренно вызывая у них агрессию, чтобы придать спору негативный характер;

– обладает слабо развитыми навыками коммуникации, ведения конструктивных диалогов;

– не может осознанно сопереживать другому человеку;

– получает удовольствие от оскорбления и унижения других людей.

Примечательно, что от возраста желание досадить окружающим, спровоцировав конфликт и за счет этого самоутвердиться, не зависит. Такие

⁶⁹ Кон И.С. Что такое буллинг и как с ним бороться / В.С. Кон // Семья и школа. – Москва. – 2019. – № 11. – С. 15–18.

люди есть и среди подростков, и среди представителей более старших поколений.

Все эти особенности говорят о том, что психологическое поведение Интернет-подстрекателей далеко от нормы. Люди с адекватной психикой не оскорбляют и не унижают других, не позволяют себе грубости в комментариях, стараясь вызвать у собеседников негативную реакцию. Соблюдают правила и нормы, принятые в цифровом пространстве.

Тактичны, не пользуются ненормативной лексикой. Не инициируют разногласия между собеседниками, начиная дискуссию с провокационных вопросов или утверждений. Никогда не действуют агрессивно, в том числе в рамках общения с несколькими собеседниками.

Ничего этого нельзя сказать о тех, кто удовлетворяет свои низменные инстинкты, разжигая конфликты между пользователями Интернета.

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НАУЧНО-ИНЖЕНЕРНЫЕ МЕТОДЫ РАСЧЕТА И АЛГОРИТМ СИСТЕМНОГО ПОДХОДА БЕЗОПАСНОСТЬ ТРУДА

Аннотация. Мероприятия по охране труда должны планироваться на базе теории управления, в которой используется системный подход для разработки целей, критериев, методов и средств управления. Методология системного подхода позволяет вскрыть внутренние связи изучаемого процесса, определить основные функции управления.

Ключевые слова: научная инженерия, методы расчета, системный подход, алгоритм, безопасность труда.

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SCIENTIFIC AND ENGINEERING CALCULATION METHODS AND ALGORITHM OF SYSTEM APPROACH OCCUPATIONAL SAFETY

Abstract. Occupational safety measures should be planned on the basis of management theory, which uses a systematic approach to develop goals, criteria, methods and management tools. The methodology of the system approach allows us to reveal the internal connections of the process under study, to determine the main management functions.

Keywords: scientific engineering, calculation methods, system approach, algorithm, labor safety.

Для оптимального планирования мероприятий по охране труда в целях эффективного использования имеющихся ресурсов необходимо создание системы управления, обеспечивающей на базе математических методов и анализ информации, принятие и реализацию управляющих решений.

Если брать во внимание статистику нашей Республики при планировании мероприятий охраны труда, то она показывает, что в начале 2023 года из общей численности населения мужчин насчитывалось 18,13 миллиона, женщин- 17,89 миллиона. Городское население составило 18,33 миллиона человек, сельское население- 17,69 миллиона. Люди моложе трудоспособного возраста составляют 31,7%, трудоспособного- 56,8% и старше трудоспособного возраста- 11,5%. Число живорождений в 2022 году составило 932,2 тысячи человек, из них мальчиков- 482,4 тысячи, девочек- 449,8 тысячи. В городах родилось 473,4 тысячи человек, в сельской местности- 458,8 тысячи.

Доля рождений одного ребёнка составила 97,8%, двух детей- 2,1%, трёх и более детей- 0,1%.

Среди рожениц женщин младше 25 лет было 38,9%, 25–39 лет- 60,1%, 40 лет и старше- 1%.

Отцов в возрасте младше 25 лет было 10,7%, 25–39 лет- 83,4%, 40 лет и старше- 5,9%. Из выше указанной статистике можно анализировать что число занятого населения состоит из:(Диаграмма-1)

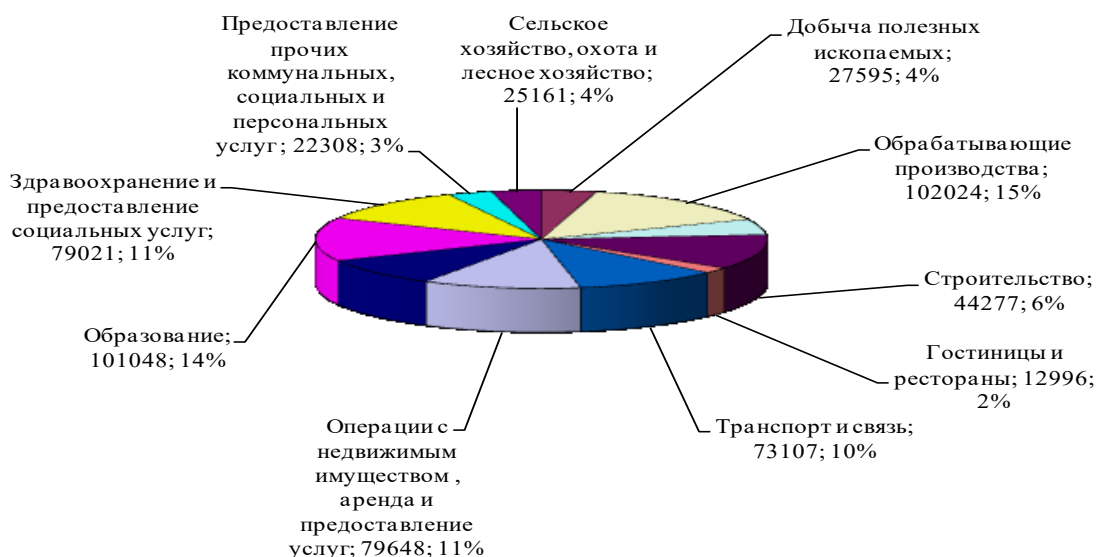


Диаграмма 1 Структура занятого населения

Системы управления охраной труда на уровне предприятия, объединения, отрасли позволяют повысить эффективность борьбы с производственным травматизмом, общими и профессиональными заболеваниями, обеспечат достижение наиболее благоприятных условий труда.

В общем виде система управления состоит из объекта управления, органа управления, средств обработки информации и средств реализации управляющих решений.

Цель функционирования системы управления – изменение выходных параметров объекта в соответствии с заданными критериями или программой управления. При этом регистрируются входные и выходные параметры, которые используются для идентификации объекта, то есть построения достаточно адекватной математической модели, позволяющей прогнозировать значения выходных переменных и вырабатывать необходимые управляющие воздействия.

Объект управления рассматривается как преобразователь вектора входных случайных функций времени $x(t)$ вектор выходных случайных функций $y(t)$:

$$y(t) = A_t x(t), (1)$$

где A_t – оператор описания объекта.

Каждая выходная переменная $y_i(t)$ ($i=1, m$) определяется набором входных переменных $x_1(t), \dots, x_n(t)$, однако полный их учет практически невозможен. Поэтому приходится ограничиваться частью определяющих переменных, а остальные отнести к неконтролируемым шумам.

Дадим определение некоторым элементам системы управления мероприятиями по охране труда, направленными на снижение заболеваемости.

Объект управления в данной системе - состояние здоровья исследуемого контингента работающих.

Этот контингент характеризуется определенной стажа, возрастного пола и профессиональной структурой, а объединяется по принципу качественной однородности воздействующих на него факторов условий труда.

Цель функционирования системы – достижение безвредных и безопасных условий труда, позволяющих для данных климатических и социально-экономических условий, с учетом особенностей контингента работающих, обеспечить минимально возможные уровни заболеваемости.

Входные переменные- параметры окружающей и производственной среды и профессионально-демографические характеристики работающих. Выходные переменные-показатели заболеваемости, характеризующих состояние здоровья работающих.

Критерием эффективности в рассматриваемой системе должно быть обеспечение фонового уровня заболеваемости, который не связан с

влиянием производства, а определяется климатическими, социально-бытовыми и другими неконтролируемыми в данной системе факторами.

Управляющими воздействиями являются мероприятия охраны труда, направленные на достижение минимально возможных уровней заболеваемости работающих. Эти мероприятия могут улучшать условия труда, компенсировать ущерб, вызванный неблагоприятными воздействиями, способствовать защите работающих, регламентировать режим их труда и отдыха.

Органами управления в настоящей системе являются службы охраны труда (техники безопасности и промышленной санитарии), работающие совместно с администрацией предприятия. Они анализируют поступающую информацию об условиях труда и о состоянии здоровья работающих, рассматривают возможные варианты управляющих решений, составляют планы мероприятий и контролируют их выполнение.

Информация о состоянии объекта управления содержит данные о соблюдении правил и норм охраны труда, о выполнении плановых мероприятий, текущие значения факторов условий труда, показатели состояния здоровья работающих и экономические данные.

Средства обработки информации представляют собой организованное, техническое и программное обеспечение, позволяющее формировать и накапливать показатели, выполнять их комплексный анализ и разрабатывать оптимальные рекомендации для органов управления.

Средствами реализации управляющих воздействий являются научно-исследовательские, проектные и технические решения, меры морального и материального стимулирования, средства индивидуальной и коллективной защиты, медицинские препараты и оборудование и пр., необходимые для показателей состояния здоровья работающих.

Для осуществления основных функций управления мероприятиями охраны труда следует создать автоматизированную систему обработки данных, где должны решаться следующие задачи:

- ✓ регистрация, контроль и накопление информации;
- ✓ расчет статистических показателей и печать информационных таблиц;
- ✓ идентификация объекта управления в целях определения взаимосвязи между параметрами условий труда и показателями заболеваемости;
- ✓ определение минимально возможных уровней заболеваемости и соответствующих им оптимальных, но лежащих в реально достижимых границах значений производственных факторов;
- ✓ составление различных, вариантов профилактических воздействий и выбор оптимального варианта;
- ✓ оценка прогнозных уровней заболеваемости;

✓ определение социально-экономического эффекта системы оптимального планирования профилактических мероприятий.

С помощью функционального расчета и схемы рассмотрим последовательность этапов оптимизации заболеваемости. Такая оптимизация предусматривает использование автоматизированной системы обработки данных.

Объект управления, характеризуется входными переменными-параметрами условий труда, и выходными переменными-показателями заболеваемости работающих. Эта информация накапливается в соответствующих архивах данных. Такие архивы формируются и используются при работе автоматизированной системы в информационном режиме управления.

В первом случае архивы данных об условиях труда и данных о заболеваемости с заданной периодичностью пополняются и корректируются. При необходимости составления отчетов или получения оперативных сводок для заданной выборки оцениваются значения производственных факторов и рассчитываются показатели заболеваемости. При этом возникает возможность не только оперативно получать необходимую информацию, но и с помощью общих признаков сопоставлять условия труда и заболеваемость отдельных групп работающих, выявлять наиболее неблагоприятные участки производства и тем самым облегчать планирование целенаправленных профилактических мероприятий.

При работе системы в режиме управления она дополняется блоками идентификации оптимизации прогнозирования [9-11]. Параметры условий труда и показатели заболеваемости после их статистической обработки и группировки, позволяющей проводить сопоставительный анализ, служат исходной базой для модели идентификации. Здесь с помощью методов факторного и регрессионного анализа определяются количественные зависимости:

где интенсивный показатель формы заболевания;
- вектор параметров условий труда;
- число форм заболеваний, зарегистрированных у исследуемого контингента работающих.

Каждый из показателей заболеваемости [5] характеризует частные свойства объекта управления, поэтому для полного описания объекта следует построить моделей по показателям.

Показатели заболеваемости [4] являлось функциями параметров условий труда [2] при соответствующем оптимум независимых переменных могут принимать минимальные значения. Эти значения [6] могут быть определены в качестве минимально возможных уровней заболеваемости при условии, что в этих точках непрерывны, дифференцируемы и имеют глобальные положительные минимумы, а соответствующие оптимальные

значения аргументов [4] находятся в реально достижимой области, определяемой технико-экономическими ограничениями.

В случаях, когда минимумы функции не удовлетворяют указанным условиям или значения соответствующих им аргументов лежат вне реально достижимой области, минимально возможные уровни заболеваемости определяются граничными значениями реальной области в направлении к оптимуму.

Таким образом, для определения минимального уровня показателя заболеваемости по форме необходимо решить следующую задачу.

Где-нижняя грань (точное наименьшее значение) функции показателя заболеваемости – вектор параметров условий труда;

X -множество реально достижимых значений, на котором решается задача минимизации. Вектор минимизирует функцию:

Каждый из полученных при решении задачи минимизации частных оптимальных векторов параметров условий труда минимизирует показатели формы заболевания[7]. Для минимизации суммарного показателя заболеваемости равного сумме интенсивных показателей по отдельным нозологическим формам, необходимо определить общий оптимальный вектор параметров условий труда все составляющие которого принадлежит частным векторам:

Таким образом, общий оптимальный вектор условий труда для исследуемого контингента работающих может быть как объединение частных оптимальных векторов минимизирующих отдельные формы заболеваний.

Параметры, составляющие общий оптимальный вектор должны быть использованы при планировании профилактических мероприятий. Для автоматизированного составления отдельных вариантов плана не обходимы классификаторы, разработанные для конкретных объектов производства (цехов, участков, профессий и т.д.). В этих классификаторах каждому профилактическому мероприятию должны быть поставлены в соответствие не только вредные факторы условий труда, которым они противодействуют, но и доля удельного ослабления этих факторов, а также стоимость мероприятий[2]. Для достижения расчетных оптимальных значений параметров условий труда с помощью классификаторов составляется вариантов планов профилактики, различающихся по составу мероприятий, общей стоимости и получаемому оздоровительному эффекту[3]:

В целях определения наиболее рационального варианта плана мероприятий решается задача оптимизации при заданном критерии эффективности с учетом технико-экономических ограничений. В настоящей задаче этими условиями являются критерий минимально возможного уровня суммарного показателя заболеваемости при ограниченных затратах на профилактику:

Допуская, что после проведения комплекса оптимальных мероприятий минимально возможные уровни заболеваемости будут достигнуты через некоторое время принимаем это время за период прогнозирования. Оценив экспертным путем значения которые будут иметь параметры условий труда через время (без проведения оптимальных мероприятий), с помощью модели идентификации[1] определим реальный прогноз показателей заболеваемости:

–прогностическое значение показателя заболеваемости по нозлогической форме через время безпроведения мероприятий; - прогностические значения факторов условий труда через без проведения мероприятий.(Диаграмма-2)

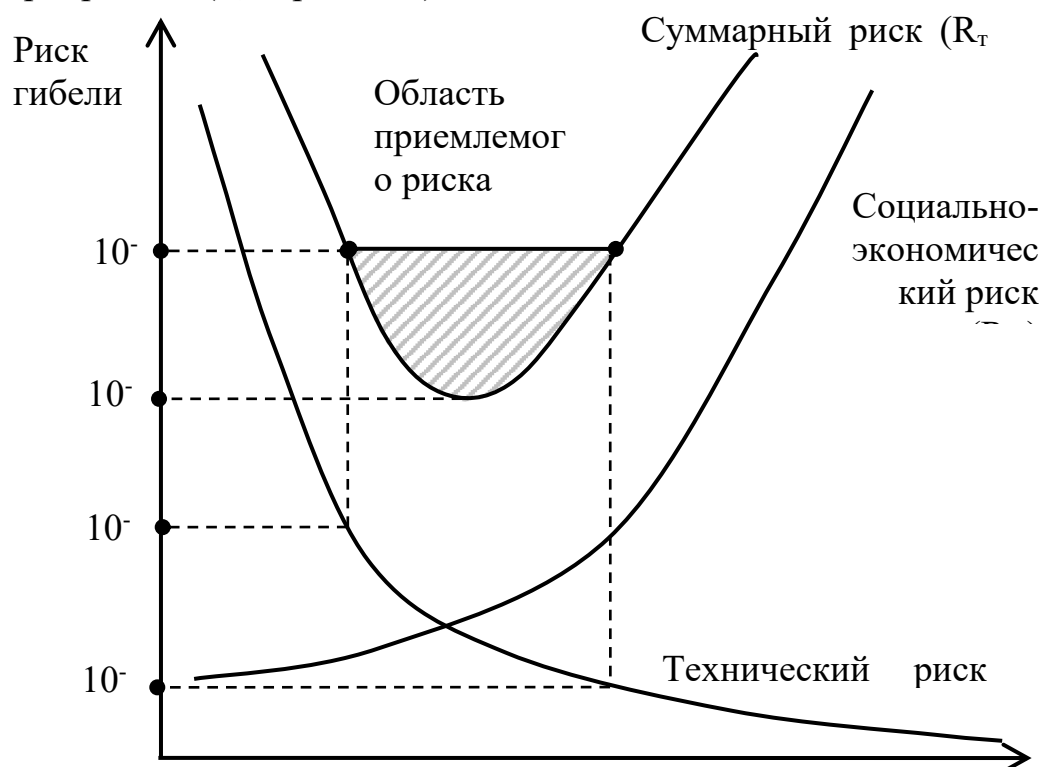


Диаграмма-2 Приемлемый риск.

Расчет прогностических значений показателей заболеваемости позволяет определить социально-экономический эффект, который может быть достигнут в результате оптимизации профилактических мероприятий. Предполагая, что в результате проведения оптимальных мероприятий показатели заболеваемости снизятся до минимально возможных значений, определим величину этого снижения по отдельным нозлогическим формам:

Суммируя это снижение по всем идентифицированным для исследуемого объекта формам заболеваний, получим общее снижение заболеваемости в результате оптимизации профилактических мероприятий:

Социальный эффект от проведения оздоровительных мероприятий должен определяться числом работающих, выведенных из-под воздействия вредных и тяжелых условий труда, что непосредственно сказывается на

снижении показателей заболеваемости. Таким образом, рассчитанное снижение показателей по числу болевших лиц, числу случаев заболеваний можно считать эквивалентом одного из видов социального эффекта, полученного путем оптимизации. Сокращение числа рабочих дней, потерянных в результате заболеваний, будем считать показателем социально-экономического эффекта, так как, свидетельствуя о сокращении тяжести заболеваний, оно отражает уменьшение потерь рабочего времени, а значит, и снижение невыработки продукции. Зная стоимость одного рабочего дня, по этому показателю можно рассчитать экономическую эффективность оптимального планирования мероприятий, направленных на снижение заболеваемости работающих.

Первая очередь автоматизированной системы учета и анализа информации об условиях труда и заболеваемости работающих внедрена в промышленную эксплуатацию в основных цехах производственного объединения. Эта система реализует следующие этапы описанного выше подхода к оптимизации мероприятий по охране труда: статистическую обработку данных об условиях труда работающих и о заболеваемости с временной утратой трудоспособности; печать информационных табуляграмм; моделирование количественных зависимостей между факторами условий труда и показателями заболеваемости. Апробация последующих этапов изложенного подхода к оптимизации мероприятий по охране труда предполагается при внедрении

Выводы:

1. Оптимальное планирование профилактических мероприятий, направленных на снижение заболеваемости работающих, должно быть основано на функционировании автоматизированной системы управления.
2. Система управления мероприятиями по охране труда, направленными на снижение заболеваемости, должна содержать блоки статистической обработки информации, моделирования количественных уровней заболеваемости, связанной с производством, классификации и оптимизации профилактических мероприятий.
3. Оптимизация мероприятий, направленных на снижение заболеваемости работающих, должна быть основана на критерии максимального оздоровительного эффекта и выполняться с учетом технико-экономических ограничений.
4. Автоматизированной системы управления, включающая этапы статистической обработки и моделирования.

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АНАЛИЗ ЭФФЕКТИВНОСТИ АГРОУСЛУГ В САМАРКАНДСКОЙ ОБЛАСТИ

Аннотация. В данной статье указаны показатели для расчёта эффективности агросервиса предприятий Самаркандской области; проведён корреляционно-регрессионный анализ, характеризующий влияние основных факторов на эффективность производства сельскохозяйственной продукции. Выявлены факторы повышения объёмов и эффективности производства продукции сельского хозяйства.

Ключевые слова: анализ эффективности, агросервисные предприятия, МТП, технический потенциал, организационно-экономический фактор. аграрный сектор, агроуслуги, инновационная деятельность, сельское хозяйство, стратегия развития, приоритетные направления, эффективность.

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ANALYSIS OF THE EFFECTIVENESS OF AGRICULTURAL SERVICES IN SAMARKAND REGION

Abstract. This article provides indicators for calculating the efficiency of agricultural services of enterprises in the Samarkand region; A correlation and regression analysis was carried out, characterizing the influence of the main factors on the efficiency of agricultural production. Factors for increasing the volume and efficiency of agricultural production have been identified.

Keywords: efficiency analysis, agroservice enterprises, agricultural enterprises, technical potential, organizational and economic factor. agricultural sector, agricultural services, innovation, agriculture, development strategy, priority areas, efficiency.

В условиях цифровой экономики увеличение эффективности средств механизации сельскохозяйственного производства зависит от наличия эффективной системы агросервиса, состояния технического сервиса в Республике Узбекистан. Для выполнения производственно-технологических процессов в данной сфере является эффективная

реализация их технического потенциала. Это в свою очередь определяется грамотным и профессиональным техническим сервисом в дехканских и фермерских хозяйствах региона.

Повышение эффективности функционирования агросервиса нашло отражение в работах П.И.Чужинова, И.Я.Петренко, Л.И.Абалкина, И.Н.Буздalова, В.Е.Черепановой, Н.Е.Зимиha, Пардаева М.К., Муртазаева О.М., Мирзаева К.Д., Ибрагимова Г.И. Авторы в своих научных трудах выявили показатели, характеризующие эффективность агросервисных предприятий. Однако изменения, происходящие в аграрной сфере области, привели к дальнейшему поиску выхода путей из сложившейся ситуации.

В аграрном секторе существует более 20 видов агросервисных услуг. Многие агросервисные услуги связаны с техническим оснащением. Мы в своей диссертационной работе изучили один из действующих агросервисных предприятий – деятельность МТП. МТП выполняет сервисные услуги для поддержания средств механизации фермерских хозяйств в области, и, в свою очередь, формы образования сервисных служб могут быть различны. Размещение МТП также быть может различными: чем они ближе будут к агропроизводителям, тем меньше будут затраты на транспортировку оборудования, запасных частей и средств механизации.

Важнейшим организационно-экономическим фактором повышения эффективности агросервисных предприятий и успешной работы служб технического сервиса является профессиональное и качественное проведение сервисного обслуживания, а это зависит от профессионализма работников.

Машинно-технологический комплекс аграрного сектора является важнейшей производственной системой, обеспечивающей внедрение эффективных технологий в области.

Оснащение сельского хозяйства Самаркандской области характеризуется отрицательной динамикой (табл.1):

Таблица 1

Оснащённость техническими средствами МТП в Самаркандской области⁷⁰ (2021-2023 г.г.)

№	Агросервисные предприятия	Агротехника,шт		Годность агротехники,%	
		всего	годные	(+; -)	%
1	Агросервис МТП Гузалкентского района	104	56	-48	53,8
2	Агросервис МТП Кушрабадского района	31	18	-13	58
3	Агросервис МТП Джамбайского района	62	29	-33	46,8
4	Агросервис МТП Нарпайского района	57	21	-36	36,8

⁷⁰ Составлено автором по данным Sam.stat.uz

5	Агросервис района	МТП Пахтачийского	48	22	-26	45,8
	Всего:		302	146	156	48,3

За период с 2021 по 2023 г. наблюдается сокращение количества технических средств в результате её физического износа. Парк комбайнов и тракторов сократился на 8,1% в год, увеличилась нагрузка на зерноуборочные и хлопкоуборочные комбайны, снижается энергообеспеченность сельскохозяйственного производства, растёт нагрузка на один трактор. Все эти факторы отрицательно влияют на технические возможности сельхозпроизводителей, снижает производительность труда.

Следует отметить, основными проблемами технической и технологической модернизации сельского хозяйства в Самаркандской области являются физический и моральный износ МТП, неукомплектованность техники и высокая нагрузка на единицу используемой техники.

Проведённые исследования свидетельствуют, что недостаточная реализация имеющихся технических средств связана в основном с неэффективной эксплуатацией имеющегося энергоёмкого оборудования и значительным отклонением в структуре МТП. Наблюдается тенденция сокращения количества техники и оборудования, что показывает замещение малоэффективных машин на технику нового поколения, которая выполняет несколько технологических операций. Непрерывное совершенствование создаваемой сельскохозяйственной техники, использование новых интенсивных и ресурсосберегающих технологий, новые способы организации труда и производства влияют на степень использования земельных, материальных и трудовых ресурсов, т.е. на уровень технологической эффективности.

Для изучения характера влияния факторов, характеризующих результативность агросервисной деятельности в Самаркандской области, нами была построена корреляционно-регрессионная модель, характеризующая влияние основных факторов на эффективность производства сельскохозяйственной продукции. Для изучения факторов, мы отобрали следующие показатели:

- уровень фондовооружённости и фондооснащённости;
- уровень энерговооружённости и энергооснащённости;
- структура основных производственных фондов предприятия;
- средний возраст оборудования;
- среднегодовая выработка на 1 работника;
- уровень оплаты труда.

По основным рекомендациям для отбора факторов при включении их в модель, были исключены те показатели, которые не отвечали

определённым условиям. В результате проведения процесса отбора в модель вошли следующие показатели:

- уровень энерговооружённости труда, л.с./чел – X_1 ;
- структура основных производственных фондов предприятия % - X_2 ;
- коэффициент обновления основных производственных фондов – X_3 ;
- затраты труда на 1 работника, чел. – X_4 ;
- уровень оплаты труда на 1 чел./час, тыс.сум. – X_5 ;
- доля оплат стимулирования в общем фонде оплаты труда, % - X_6 .

В качестве результативного признака Y выбран относительный показатель эффективности производства – валовой продукции в расчёте на 100 га сельскохозяйственных угодий (млн.сум).

Для анализа показателей мы построили модель методом случайной бесповторной выборки 20 агросервисных предприятий Самаркандской области. Результаты анализа представлены в табл. 2:

Таблица 2

Корреляционный анализ агросервисных предприятий

	Y	X_1	X_2	X_3	X_4	X_5	X_6
Y	1						
X_1	0,123752	1					
X_2	0,328649	0,079914	1				
X_3	0,453839	0,021355	0,309432	1			
X_4	-0,14526	0,216558	0,095694	-0,09591	1		
X_5	0,345198	0,103663	-0,04089	0,142378	-0,13543	1	
X_6	0,311522	0,306767	0,344971	0,349867	-0,12348	0,123609	1

По результатам корреляционного анализа, мы видим что полученные значения коэффициентов парной корреляции указывают на тесную связь результативного признака с величиной коэффициента обновления основных производственных фондов ($r_{yx3} = 0,45$) и умеренную связь со следующими факторами:

- доля активной части основных производственных фондов в их общей стоимости ($r_{yx2} = 0,33$);
- уровень оплаты труда 1чел/час ($r_{yx5} = 0,35$);
- доля стимулирующих выплат в общем фонде оплаты труда ($r_{yx6} = 0,31$).

Здесь связь результативного признака с каждым из перечисленных факторов – прямая. Связь результата с фактором X_1 - энерговооружённости труда достаточно слабая, прямая. Трудоёмкость производства продукции же напротив, имеет обратную, слабую связь с результативным показателем. Межфакторные связи достаточно слабые, вследствие этого все факторные признаки можно включить в модель эффективности агросервисной деятельности области.

По результатам корреляционно-регрессионного анализа мы имеем следующий вид уравнения:

$$Y=55,2+0,69x_1+1,95x_2+873x_3-0,54x_4+6,32x_5-0,002x_6$$

Степень обновления основных производственных фондов повлияло на изменение выхода валовой продукции в расчёте на 100 га сельскохозяйственных угодий, при этом в результате корреляционно-регрессионного анализа выявлено, что в агросервисных предприятиях Самаркандской области выполняется стимулирующая функция заработной платы: рост уровня оплаты труда 1 чел/час в среднем на 1 сум может повлечь за собой увеличение годового выпуска продукции в среднем на 90,2 тыс. сум.

Затраты труда на 1 чел. и показатель доли стимулирующих выплат в общем фонде оплаты труда, имеют обратную связь с результативным показателем, например: при росте затрат труда в среднем на 1 чел/час в расчёте на 1 чел. объём производства валовой продукции сокращается на 0,99 тыс. сум, и при увеличении удельного веса стимулирующих выплат в общем фонде оплаты труда на 2%, выход валовой продукции уменьшается в среднем на 1000 сум. Это объясняется тем, что в агросервисных предприятиях ещё недостаточно эффективная организация труда, не на всех предприятиях разработана система стимулирующих выплат.

По результатам статистической модели значимыми оказались два факторных признака: X_3 – коэффициент обновления основных производственных фондов и X_5 – уровень оплаты труда 1 чел./час, а остальные четыре фактора – остаются малоэффективными, т.е. оказали несущественное влияние на результативный показатель.

Основными факторами повышения объёмов и эффективности производства продукции сельского хозяйства в области в соответствии с полученной моделью являются техническая модернизация, осуществляемая за счёт рациональной организации системы оплаты труда работников, а также инновационной активности в агросервисных предприятиях.

В условиях цифровой экономики эффективное и целенаправленное использование организаций агросервиса, в том числе использование машинно-тракторного парка, увеличение поставок новой техники является одной из главных задач агропромышленного комплекса. Организационно-экономический механизм материально-технического обеспечения аграрного сектора является составной частью экономического механизма хозяйствования и, в свою очередь, представляет собой совокупность методов и инструментов, соответствующих организационно-экономических форм комплексного их использования в регулировании и стимулировании развития воспроизводственного процесса. Эффективность сельскохозяйственного производства обеспечивается системой его обслуживания, которое обуславливает создание и функционирование агросервиса технического обслуживания и ремонта машин. Но отсутствие

научно-методического обоснования развития и функционирования услуг агросервисных предприятий, слабая проработка вопросов основ создания рыночных структур и использования потенциальных возможностей сервисных предприятий, несовершенство экономических взаимоотношений партнеров отрицательно отражается не только на организации сервисных услуг, но и на эффективности и надежности сельскохозяйственного производства в стране.

В структуре затрат на производство сельскохозяйственной продукции основную долю занимают расходы, связанные с использованием сельскохозяйственной техники. Затраты на ремонт и техническое обслуживание техники в 2023 году превысили 5% валовой продукции сельского хозяйства и оценивается в 500 млн сум. По сравнению с 2018 годом они увеличились в 2 раза. Затраты средств и запасных частей на восстановление машин из года в год растут и значительно превышают установленные нормативы. Значительная часть сельскохозяйственной техники МТП находится в фермерских хозяйствах или у индивидуальных владельцев, заинтересованных в работоспособности машин, но не имеющих опыта проведения ремонта и технической базы для его проведения. Финансовые ресурсы в агросервисе весьма ограничены, поэтому поддержание энергонасыщенных машин в работоспособном состоянии собственными ремонтными средствами стало серьезной проблемой. Возникли трудности качественного восстановления агрегатов, многих деталей сложных машин.

При определении организационно-экономических механизмов повышения эффективности технических средств в агросервисе, к организационному механизму материально-технического обеспечения относятся создание технических центров сервиса, обменных пунктов, лизинговых компаний, машинно-технологических станций, формирование системы оптовых рынков и др. Если рассмотреть экономический механизм материально-технического обеспечения, то он включает в себя повышение платёжеспособности сельскохозяйственных товаропроизводителей, льготное налогообложение, финансово-кредитные рычаги, маркетинг, создание условий для нормальной конкуренции на внешнем и внутреннем рынках, развитие инфраструктуры рынка, обеспечение стимулирования повышения эффективности производства и т.д. Также можно охарактеризовать социально-экономические проблемы, к которым относятся уровень обеспеченности стабильной заработной платой работников предприятий агросервиса, а также социальными услугами. Одной из путей сохранности техники МТП является увеличение объёмов ремонта техники и повышения качества ремонта. Также здесь требуются совершенствование элементов хозяйственного механизма, стимулирующие эффективность и надёжность использования наличного потенциала ремонтно-обслуживающей базы и мастерских хозяйств.

В условиях рыночной экономики товаропроизводитель определяет экономическую целесообразность ремонта машины на том или ином ремонтном предприятии с учётом качества ремонта; и соответственно, для экономической оценки должны быть учтены:

- себестоимость ремонта машины на первом ремонтном предприятии;
- себестоимость ремонта машины на втором ремонтном предприятии;
- экономический показатель качества связи между ремонтными предприятиями;
- средняя межремонтная наработка машин;
- транспортные затраты.

Агросервис и ремонт машин при становлении множества товаропроизводителей, усложняет работу и требует особых форм организации ремонта машинно-тракторного парка. Для определения размера каждого типа ремонтных предприятий для отдельно взятых районов, необходимо пользоваться методом группировок по насыщенности ремонтными работами на 100 га сельскохозяйственных угодий. Важно отметить, что государственное регулирование рынка средств производства в аграрном секторе Самаркандской области осуществляется по следующим важным направлениям:

- бюджетное финансирование государственных программ;
- формирование сезонных запасов материально-технических ресурсов;
- обеспечение поставщиков средств производства для аграрного сектора;
- осуществление льготного кредитования фермерских и дехканских хозяйств;
- техническое переоснащение предприятий агросервиса на основе лизинга;
- льготное налогообложение.

Главным направлением государственного регулирования рынка средств производства во всех сферах АПК состоит в том, чтобы свести к минимуму последствия обмена между промышленностью, сельским хозяйством и другими отраслями агропромышленного комплекса, осуществить защиту отечественных сельских и промышленных товаропроизводителей, предусматривать безопасность страны.

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ИССЛЕДОВАНИЕ ПРИМЕНЕНИЯ АВТОМАТИЗИРОВАННЫХ ПРОЦЕССОВ ДЛЯ ПОВЫШЕНИЯ ЭФФЕКТИВНОСТИ СТРОИТЕЛЬСТВА ЗДАНИЙ

Аннотация. В данной работе анализируется применение автоматизированных процессов в строительстве зданий с целью повышения эффективности и качества проектов. Рассматриваются основные аспекты внедрения современных технологий, включая Building Information Modeling (BIM), роботизированные системы строительства, системы управления проектами и использование дронов.

Ключевые слова: автоматизация, строительство, эффективность, качество, технологии, BIM, роботизация, управление, инновации, конкурентоспособность

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RESEARCH ON THE APPLICATION OF AUTOMATED PROCESSES TO INCREASE THE EFFICIENCY OF BUILDING CONSTRUCTION

Abstract. This paper analyzes the use of automated processes in building construction in order to improve the efficiency and quality of projects. The main aspects of the implementation of modern technologies are considered, including Building Information Modeling (BIM), robotic construction systems, project management systems and the use of drones.

Keywords: automation, construction, efficiency, quality, technology, BIM, robotization, management, innovation, competitiveness.

ВВЕДЕНИЕ. Современное строительство зданий сталкивается с рядом вызовов, включая повышенные требования к эффективности, сокращение сроков проектов, улучшение качества и снижение затрат. В этом контексте использование автоматизированных процессов становится все более важным для достижения эффективности и конкурентоспособности. Одной из основных проблем, с которой сталкиваются строительные компании, является неэффективное использование ресурсов, длительные сроки выполнения работ и высокие затраты. Традиционные методы строительства, основанные на ручном труде и устаревших технологиях, часто не способны обеспечить необходимый

уровень производительности и качества. Для решения этой проблемы следует внедрить автоматизированные процессы во все этапы строительства зданий. Это включает в себя использование современных технологий, таких как Building Information Modeling (BIM), автоматизированные системы управления строительными процессами, роботизированные системы строительства и дроны для мониторинга и инспекции стройплощадок.

МЕТОДОЛОГИЯ Методика применения автоматизированных процессов в строительстве зданий:

Систематическое внедрение автоматизированных процессов в строительство зданий требует комплексного подхода и стратегического планирования. Вот основные шаги, которые следует учесть при разработке методики:

1. Оценка текущего состояния: Первый этап включает в себя анализ текущих процессов и технологий, используемых в строительстве зданий. Это позволяет выявить узкие места, определить области, где автоматизация может принести наибольшую пользу, и разработать стратегию внедрения.

2. Установление целей и ожиданий: На этом этапе определяются конкретные цели, которые должны быть достигнуты с помощью автоматизированных процессов. Это могут быть цели по сокращению сроков проектов, повышению производительности, улучшению качества или снижению затрат.

3. Выбор подходящих технологий: После определения целей выбираются соответствующие технологии и инструменты для автоматизации различных аспектов строительного процесса. Это может включать в себя BIM-платформы, системы управления проектами, роботизированные системы и дроны.

4. Планирование внедрения: Разрабатывается план внедрения, который включает в себя определение этапов, ресурсов и временных рамок. Важно учитывать возможные препятствия и риски, а также разработать стратегию обучения персонала.

5. Пилотное внедрение и оценка результатов: На этом этапе выбирается небольшой проект для пилотного внедрения автоматизированных процессов. После завершения проекта проводится оценка достигнутых результатов с целью их дальнейшей оптимизации.

6. Масштабирование и оптимизация: После успешного пилотного внедрения происходит масштабирование автоматизированных процессов на другие проекты. В этот момент важно непрерывно оценивать и оптимизировать процессы в соответствии с постоянно меняющимися требованиями и технологическими возможностями.

РЕЗУЛЬТАТ. Результаты проведенного исследования по методике внедрения автоматизированных процессов в строительстве зданий показали значительное улучшение эффективности и качества проектов.

После внедрения автоматизированных технологий и процессов произошло сокращение сроков выполнения проектов на 20%. Это достигнуто благодаря оптимизации планирования работ, автоматизации производственных процессов и улучшению координации между участниками проекта.

Кроме того, наблюдалось повышение производительности труда на 15% благодаря использованию роботизированных систем и автоматизированных инструментов, что привело к сокращению затрат на рабочую силу.

Качество выполненных работ также значительно улучшилось. Внедрение BIM-технологий позволило улучшить координацию проекта и предотвратить конфликты в конструктивном проектировании, что снизило количество ошибок на этапе строительства на 25%.

В итоге, внедрение автоматизированных процессов в строительстве зданий привело к улучшению конкурентоспособности компании, повышению уровня сервиса для клиентов и снижению общих затрат на проекты.

Таблица 1

Уровень использования различного оборудования в процессе внедрения автоматизированных процессов в строительстве зданий

Оборудование	Процент использования
Building Information Modeling (BIM)	90%
Роботизированные системы строительства	80%
Системы управления проектами	85%
Дроны	70%
Автоматизированные системы управления строительными процессами	75%

ВЫВОДЫ. Внедрение автоматизированных процессов в строительстве зданий демонстрирует значительный потенциал для повышения эффективности, сокращения сроков проектов и улучшения качества работ. Результаты исследования подтверждают, что использование современных технологий, таких как BIM и роботизированные системы, способствует оптимизации производственных процессов и снижению затрат, делая строительную отрасль более конкурентоспособной и инновационной.

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СПЕЦИФИЧЕСКИЕ ТРЕБОВАНИЯ К ПРОФЕССИОНАЛЬНОЙ АДАПТАЦИИ КУРСАНТОВ ВЫСШИХ ОБРАЗОВАТЕЛЬНЫХ УЧРЕЖДЕНИЙ

В данной статье раскрыты место и роль педагогов при адаптации курсантов в учебный процесс в высшем военном образовательном учреждении. При исследовании данной проблемы изучены и проанализированы работы и взгляды различных ученых в данной области.

Ключевые слова: военное образование, военное образовательное учреждение, профессиональная деятельность.

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SPECIFIC REQUIREMENTS FOR PROFESSIONAL ADAPTATION OF CADETS OF HIGHER EDUCATIONAL INSTITUTIONS

This article considers the issues of place and role of instructors in the adaption of cadets to education process in higher military educational institution. In the study of this problem, works and views of various scientists in this field have been studied and analyzed.

Key words: military education, military educational institution, professional activity.

В своем праздничном поздравлении к дню учителя и наставника Президент Республики Узбекистан Ш. Мирзиёев сказал, что: «... Наш просвещенный народ испокон веков возвеличивает учителей, всегда оказывает им особое уважение, почитая наравне с родителями. Каждый из нас всю жизнь с благодарностью помнит о том, что во всех его достижениях есть бесценный вклад дорогих учителей и наставников. ...» [1; 230 б.].

Сегодня реализуемые в нашей республике коренные реформы направлены на доведение системы образования и подготовки кадров до уровня современных требований, повышение обороноспособности нашей страны, построение современных Вооруженных Сил, способных надежно

защищать границы нашей страны и мирную и благополучную жизнь нашего народа от внешней агрессии.

В различные периоды развития человечества важное значение приобрел процесс адаптации человека к жизни и профессиональной деятельности.

Изучая труды наших великих мыслителей Абу Райхана Беруни, Абу Насра Фараби, Али Ибн Сины, Имама аль-Бухари, Имама ат-Термизи, Юсуфа Хоса Хаджиба, Ахмеда Яссави, Алишера Наваи, Джалалуддина Давани, учёных разных стран, мы можем увидеть уникальные решения этой проблемы с научной точки зрения.

Курсант высшего военного образовательного учреждения как будущий офицер – является важнейшей социально и духовно значимой личностью в Вооруженных Силах. Как защитник Родины и субъект военной деятельности он является важным членом воинского коллектива.

В своей научной статье Д. Холикова указывает, что воспитание военнослужащих, в частности будущих офицеров, стать умственно и духовно зрелыми, укрепить их стойкость и патриотизм в любой ситуации считается одной из важных задач военного педагога [2; 25 с.].

Мысли, чувства и действия, рассуждения и надежда курсанта часто зависят от взаимоотношений его с сослуживцами. Молодежь, поступающие для них в новую военную структуру, должны в короткие сроки адаптироваться к социально-военной среде, профессиональной деятельности (боевой подготовке, боевой готовности, военной службе) [3; 14 с.].

Для того чтобы курсанты могли адаптироваться к вышеперечисленным ситуациям, очень важна правильная организация их адаптации к этому процессу.

Проблемы адаптации курсантов в процессе военно-образовательной деятельности в социально-психологическом, военно-педагогическом направлениях раскрываются в исследованиях таких авторов, как М.В. Чемодуров, С.Ю. Добряк, А. Кравец, Д. Грушевский, В.Ф. Лазуки, Д. Завалишина, А. Козачок, П. Образцов, Э. Кананыкина, А. Дашкова, Н. Чурляева, А. Межуев, И. Чечел, О.С. Васильева, Н.Н. Азизхужаева, Х.И. Ибрагимов, Н.М. Эгамбердиева, М. Курбонбоев, А.В. Сычев, В.П. Тарантей, А.Н. Шепилова, Ш.А.Содикова, З.Т. Салиева, Н.Г. Исмадова, Г.К. Мардиева и др. ученых.

В работах данных ученых проблемы исследовались использованием общих и традиционных методов. Исследователи проблем адаптации в военной педагогике часто используют понятие «профессиональная адаптация». По мнению Образцова П.И. и Козачка А.И. профессиональная адаптация отражает процесс последовательного формирования важных профессиональных качеств будущего военного специалиста, позволяющих курсантам найти свое место в профессии и проявить себя в военной сфере,

в условиях активного взаимодействия курсантов и преподавателей [4; 26 стр.].

В учебно-воспитательном процессе высшем образовательном учреждении имеются ряд особенностей препятствующих адаптации студентов, это особенно отчетливо наблюдается у студентов первого курса, - отметила Д. Мукимова в своем исследовании [5; С. 58-60].

Изучая процесс адаптации курсантов к новым условиям обучения в высших военных образовательных учреждениях А.В. Межуев ввел понятие «готовность курсантов к работе в условиях военно-учебных заведений» и в ней указывает на трудности с социально-психологическими и педагогическими характеристиками в процессе адаптации курсантов первого курса обучения к условиям и требованиям военного образовательного учреждения. Адаптивное обучение он определяет, как способность курсанта эффективно организовывать отношения с обществом и личностью, успешно общаться с образовательной средой образовательного учреждения на основе общепринятых норм и правил, положительно влияющих на эффективность социальной и другой деятельности обучающихся в образовательной деятельности [3; 22 стр.].

Рассматривая профессиональную деятельность, важно отметить, что каждая профессия имеет свою уникальную особенность и требования. В том числе по мнению А.А. Сатиба-Алдиева, военно-педагогическая деятельность – это целенаправленная деятельность преподавателей (командиров, начальников), связанная с оснащением курсантов необходимыми знаниями, навыками и умениями для успешного выполнения боевых задач, связанных с вооруженной обороной страны, а также формирование военно-профессиональных навыков [5; 11 стр.].

Процесс подготовки будущего военного специалиста включает в себя широкий спектр навыков военно-профессиональной подготовки, овладение способами применения военно-технических средств, проведение расчетов, разработку и оформление служебных документов, выполнение образовательных нормативов.

В ходе продолжающегося реформирования системы военного образования большое значение приобретают проблемы подготовки специалистов, обладающих творческим мышлением и неординарной способностью к действию. Данная проблема весьма актуальна для профессорско-преподавательского состава высших военных образовательных учреждений, которые в должны готовить офицерские кадры, отвечающие современным вызовам и угрозам. Поэтому роль профессорско-преподавательского состава в правильном направлении идет адаптация курсантов учебному процессу очень важна.

На начальном этапе обучения (1-2 этапы) курсанты, как и студенты гражданских вузов, адаптируются к условиям военного образовательного учреждения, однако сложность адаптации курсантов к процессу обучения в

условиях военных образовательных учреждений характеризуется тем, что в этот период курсанты наряду с учебой должны выполнять служебные обязанности. Именно в этот период профессорско-преподавательский состав должен оказать поддержку курсантам в адаптации к новым условиям, повысить их уверенность в себе и интерес к учебе. Иногда могут возникнуть проблемы у некоторых курсантов по освоению материалов по предметам обучения, в этих случаях преподавателям во взаимодействии с командирами курсантских подразделений нужно организовать в коллективе обсуждение по решению проблем отстающих и если есть необходимость, то нужно «закрепить» за отличниками отстающих курсантов.

Важно не допустить, чтобы преподаватель проявил негативное отношение к курсантам, что может отрицательно сказаться не только на его предмете, но и на отношении к военной службе.

В заключение можно сказать, что профессорско-преподавательскому составу следует подбирать индивидуальные задачи и задания для курсантов с учетом их способностей, моральных и боевых качеств, формировать конкретные характеры, личностные способности, такие как дисциплинированность, ответственность и организованность. У курсантов желательно путем индивидуального подхода развивать уверенность в себе и целеустремленность, поощрять их проявлять решительность и смелость при выполнении задач и заданий.

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ПРИНЦИПЫ ПОСТРОЕНИЯ ОДНОФАЗНЫХ ИНВЕРТОРОВ ДЛЯ АЛЬТЕРНАТИВНОЙ ЭНЕРГЕТИКИ

Аннотация. Данная статья обсуждает принципы построения однофазных инверторов для альтернативной энергетики. Она представляет обзор основных технических аспектов, связанных с разработкой и проектированием таких устройств. В частности, рассматривается выбор компонентов, принципы модуляции сигнала, методы управления и обратной связи, а также основные характеристики проектируемых инверторов.

Ключевые слова: Однофазные инверторы, альтернативная энергетика, технические аспекты, проектирование, модуляция сигнала, управление и обратная связь.

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PRINCIPLES OF CONSTRUCTION OF SINGLE-PHASE INVERTERS FOR ALTERNATIVE POWER ENGINEERING

Abstract. This paper discusses the principles of construction of single-phase inverters for alternative energy. It provides an overview of the main technical aspects related to the development and design of such devices. In particular, the selection of components, signal modulation principles, control and feedback techniques, and the main characteristics of the designed inverters are discussed.

Keywords: Single-phase inverters, alternative energy, technical aspects, design, signal modulation, control and feedback.

Республика Узбекистан обладает большими перспективами в сфере использования ВИЭ. Технический потенциал солнечной энергетики Узбекистана составляет 176,8 млн. тонн нефтяного эквивалента (т.н.э.), ветроэнергетики – 0,4 млн. т.н.э., гидроэнергетики – 1,8 млн. т.н.э. В соответствии с Концепцией обеспечения Республики Узбекистан электрической энергией на 2020-2030 годы [1-3] предусматривается строительство 3 ГВт ветрогенераторных и 5 ГВт фотоэлектрических энергоустановок. Также предполагается строительство фотоэлектрических установок мощностью 100-500 МВт в Центральном и Южном регионах и электростанций мощностью 50-200 МВт в остальных районах страны.

Также представляет интерес Указ Президента Республики Узбекистан «О дополнительных мерах по внедрению энергосберегающих технологий и развитию возобновляемых источников энергии малой мощности» от 09 сентября 2022 года [4-5]. Упомянутый указ экономически стимулирует физических и юридических лиц приобретать произведенные в Узбекистане установки, предназначенные для преобразования энергии от возобновляемых источников.

Растущий рынок систем генерации электроэнергии на основе ВИЭ требует развития преобразовательной техники – зарядных устройств, инверторов, контроллеров отбора максимальной мощности от солнечных панелей, преобразователей постоянного напряжения в постоянное и др. Стоимость производства электроэнергии на основе возобновляемых источников постепенно снижается благодаря следующим факторам:

1) развитие силовой электроники (улучшение характеристик полупроводниковых ключей, магнитных материалов индуктивных накопителей энергии, усовершенствование силовых контуров и т.д.);

2) оптимизация технологий производства аккумуляторов (повышение плотности энергии, токоотдачи и долговечности) [6-7];

3) улучшение алгоритмов работы энергосистемы за счет повышения вычислительных мощностей систем управления, внедрения информационных и телекоммуникационных технологий.

На рис. 1.1 показана структурная схема фотоэлектрической энергоустановки. Выход солнечных панелей подключен к МРРТ-контроллеру, обеспечивающему работу фотоэлектрической системы в точке максимальной мощности. Необходимость применения МРРТ-контроллера обусловлена нелинейным характером зависимостей $I(V)$ и $P(V)$ фотоэлектрической панели, где I , V , P – ток, напряжение и мощность на выходе солнечной панели соответственно. Отслеживание точки максимальной мощности (МРРТ – maximum power point tracking) на выходе солнечных панелей позволяет добиться максимально возможной электрогенерации от фотоэлектрической установки [8-9]. Контроль точки максимальной мощности представляет собой нетривиальную и интересную техническую задачу.



Рисунок 1.1 – Структурная схема фотоэлектрической энергоустановки

Выходное напряжение MPPT-контроллера подается на контроллер заряда аккумуляторной батареи (АКБ). Контроллер заряда АКБ формирует требуемые уровни тока и напряжения для заряда батареи, а также отслеживает температуру и уровень заряда АКБ. На контроллер заряда могут быть дополнительно возложены функции контроля каждой из ячеек батареи, системы с такими функциями получили название BMS (Battery Management System). Также системы BMS могут быть выполнены в общем корпусе с ячейками АКБ. MPPT-контроллер и контроллер заряда АКБ часто реализуются в общем корпусе, на вход которого подключаются солнечные панели, а на выход – АКБ.

Питание преобразователя постоянного напряжения в постоянное (DC-DC) осуществляется от АКБ [10-11]. Наличие DC-DC преобразователя в фотоэлектрической установке продиктовано сильным разбросом напряжения на АКБ в зависимости от степени заряда и необходимостью стабилизации входного напряжения инвертора. Часто DC-DC преобразователь целесообразно выполнить по повышающей топологии, т.к. с ростом номинального напряжения АКБ увеличивается количество последовательно соединенных аккумуляторных ячеек, следовательно, усложняются контроль, балансировка и возможность оперативной замены каждой из ячеек. Для повышения удобства монтажа на месте эксплуатации оборудования имеет смысл реализовать DC-DC преобразователь и инвертор в одном устройстве, на вход которого подается напряжение с АКБ, а к выходу подключаются потребители переменного тока.

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СЕГМЕНТИРОВАНИЕ РЫНКА – ТЕХНОЛОГИЯ МАРКЕТИНГОВОЙ СТРАТЕГИИ

Аннотация. В современных рыночных условиях для эффективного управления бизнесом, предприятиям необходимо внедрять маркетинговые стратегии, понимать и предвидеть требования рынка, анализировать поведение потребителей.

Ключевые слова: конкурентоспособность, маркетинговая стратегия, сегментирование рынка, эффективное управление бизнесом

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MARKET SEGMENTATION IS A MARKETING STRATEGY TECHNOLOGY

Annotation. In modern market conditions, for effective business management, enterprises need to implement marketing strategies, understand and anticipate market demands, and analyze consumer behavior.

Keywords: competitiveness, marketing strategy, market segmentation, effective business management.

Конкурентоспособность – категория, характеризующая способность соперничающего субъекта конкурировать на рынке и показывать

результаты, позволяющие быть заметным игроком. В целях обеспечения конкурентоспособности, соперничающие субъекты разрабатывают некий план действий или стратегию, в том числе маркетинговую, которая и должна привести к желаемому результату.

Основная задача маркетинговой стратегии в условиях конкурентной борьбы, заключается в том, чтобы выявить потребности потребителей и максимально эффективно использовать эту информацию в своих дальнейших действиях. При формировании маркетинговой стратегии следует учитывать сочетание факторов, наличие и сдвиг, которых провоцирует цепную реакцию для эффективного управления предприятием. Цепная реакция возникает в результате взаимодействия трех факторов: ситуации в отрасли; условий конкуренции; поведения покупателей. Формирование маркетинговой стратегии предприятия основывается на умении видеть перспективу; замечать изменения; формулировать план действий предприятия на рынке.

Следует отметить, что современный маркетинг меняется с изменением среды, потребностей, возможностей покупателей, их запросов. Рынок сегодня в достаточной степени сегментирован, при этом требования покупателей различны в разных сегментах, что обуславливает необходимость четкого бизнес-процесса, в рамках выбранной предприятием стратегии. Сегментирование рынка одна из технологий маркетинговой стратегии. Использование данной технологии позволяет предприятию увеличить объемы продаж с эффективностью воздействия на потребителей и улучшить финансовые результаты предприятия.

Процесс сегментирования состоит из следующих этапов:

- Анализ рыночных и маркетинговых возможностей предприятия
- Анализ рыночной среды и выбор целевого рынка
- Выбор и планирование стратегии поведения предприятия на рынке
- Оценка привлекательности и выбор сегментов целевого рынка
- Позиционирование товаров на рынке
- Планирование комплекса маркетинга
- Разработка комплекса маркетинга
- Организация деятельности предприятия на новом сегменте рынка.

Сегментирование рынка по группам потребителей проводится на основе следующих основных признаков:

- Географический
- Демографический
- Психографический
- Поведенческий.

Сегментационный анализ и выделение групп потребителей для каждой группы позволяет разработать комплекс маркетинга, включающий в себя товар, цену, каналы сбыта и методы продвижения. Для разных сегментов могут использоваться товары с разными ценами,

характеристиками, разные каналы сбыта и маркетинговые коммуникации. На сегментационный анализ влияет и наличие взаимосвязи между характеристиками потребителей и особенностями их поведения. Поведение используется для формирования маркетинговой стратегии и политики предприятия, по характеристикам удобнее и проще выделять рыночные сегменты потребителей.

Таким образом, можно сделать вывод, что ключевым атрибутом сегментирования рынка является то, что предприятие оказывает на выделенные сегменты активное воздействие.

Анализ литературы показал, что некоторые ученые расширяют понятие термина «сегментирование» и на другие объекты, рассматривая не только сегментирование потребителей, но и сегментирование конкурентов, продуктов, конкурентов и т. п. Предлагается рассматривать «в качестве объектов сегментации рынка не только группы потребителей, но и группы продуктов (товаров, услуг), либо предприятий (конкуренты). Виды сегментации рынка по потребителям, продуктам и конкурентам взаимно дополняют друг друга, и все полученные результаты рассматриваются в комплексе, что позволяет правильно выбрать наиболее эффективный сегмент рынка». 71

По мнению автора, это противоречит понятию сегментирования, правильнее будет в отношении товаров и конкурентов говорить о классификации, а не о сегментировании.

Одной из основных причин расширения понятия «сегментирование рынка» является неправильное понимание термина «рынок». В маркетинге, под рынком понимают непосредственно потребителей товара. Рынок «(market) – это совокупность объектов, как индивидуумов (людей), так и организаций, имеющих потребности в продуктах, желание и способность приобретать продукты при существовании необходимых условий товарного обмена».72

«сегментирование рынка».

Таким образом, «сегментирование рынка – это формирование групп потребителей, однородных по своим характеристикам и по поведению на рынке»73, объектом сегментирования рынка могут выступать потребители: покупатели - физические лица на рынках B2C «business-to-consumer», предприятия на рынках B2B «business-to-business». Такой подход позволит эффективно использовать данную маркетинговую технологию и

71 Романенкова О.Н. Маркетинговые исследования. Теория и практика : учебник для бакалавров / под общ. ред. О.Н. Романенковой [Азарова С.П., Захаренко И.К., Земляк С.В., Поляков В.А., Карпова С.В., Козлова Н.П., Рожков И.В., Соловьева Л.П., Фирсов Ю.И., Фирсова И.А.] - М.: Издательство Юрайт, 2014. – С. 314-315.

72 Котлер Ф. Маркетинг менеджмент. Анализ, планирование, внедрение, контроль. [Электронный ресурс] : учебник / Ф. Котлер. – Электрон. текст. дан. – СПб: Питер. – 2021. – С. 896 – Доступ из ЭБС «Литресс».

73 Коротков А. В. Маркетинговые исследования : учебник для бакалавров / А. В. Коротков. — 3-е изд., перераб. и доп. — Москва : Издательство Юрайт, 2022. — С. 595.

разрабатывать для разных сегментов соответствующие комплексы маркетинга, реализуя тем самым маркетинговую стратегию предприятия.

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ДЕМОГРАФИК ЖАРАЁНЛАРНИНГ ИЛМИЙ НАЗАРИЙ АСОСЛАРИ ВА АМАЛИЙ АҲАМИЯТИ

Аннотация. Мазкур мақолада демографик жараёнларнинг илмий назарий асослари, демографик жараёнларга илк ёндошувлар ва демографик жараёнларни бошқаришга уринишнинг амалий натижалари ва аҳамияти ҳақида фикр юритилган.

Калит сўзлар. Демографик жараёнлар, аҳолини ўрганиш, “Малтус назарияси”, “Ўтиш назарияси”, “Демографик мувозанат назарияси”, туғилиш, ўлим, турмуш даражаси.

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SCIENTIFIC AND THEORETICAL FOUNDATIONS AND PRACTICAL SIGNIFICANCE OF DEMOGRAPHIC PROCESSES

Annotation. This article discusses the scientific and theoretical foundations of demographic processes, the first approaches to demographic processes, as well as the practical results and importance of attempts to manage demographic processes.

Keywords. Demographic processes, demographic research, “Malthus’s Theory”, “Theory of Transition”, “Theory of Demographic Balance”, birth, death, standard of living.

Кириш. Маълумки демографик жараёнлар тарихи инсоният тарихи қадар қадимий бўлиб XIX-XX асрлар давомида анча фаол тус олди. “19-асрда 50 млн. Европаликлар бошқа қитъаларга кўчишди. Кўчишларининг асосий сабаби, яшаётган жойларида ерларнинг етишмовчилиги ва кўчиб борган жойларида эса, ерларнинг арзон баҳоларга сотилишидир. Кўчиб борган мухожирларнинг кўпчилиги қишлоқ жойларида ўрнашдилар. 19-асрнинг охири 20-асрнинг бошларида эса миграция оқими йирик саноатлашган шаҳарларга қаратилди.”[2]

Миграция жараёнларини ўрганиш эса, узоқ ўттиз йиллик танаффусдан сўнг 50 йилларда бошланган бўлиб, бу даврда Европадаги Польша, Германия, Чехия, Словакия мамлакатлари ва Россиянинг асосан шарқий қисми аҳолиси миграцияси чуқурироқ тадқиқ этилган.

Методлар: Мақола умум қабул қилинган тарихий методлар-тарихийлик, қиёсий-мантиқий таҳлил, кетма-кетлик, ҳолислик тамойиллари асосида ёритилган.

Тадқиқот натижалари ва муҳокама: Бугунги глобаллашув жараёни фаол кечаётган шароитда демографик жараёнлар хусусиятлари ўтган асрга нисбатан тубдан фарқ қилади. Яъни ишлаб чиқариш тезлиги ва аҳоли даромадлари юқори, коммуникациялар ривожланган, қулай шарт-шароитларга эга бўлган минтақаларга меҳнат ресурсларининг интилиши билан характерланади. Айниқса, бозор иқтисодиёти шароитида режалаштирилган иқтисодиётдан фарқли ўлароқ, демографик жараёнларга янгича ёндошишни тақозо этмокда[2].

Демографик жараёнлар, аҳолини ўрганиш, демография ижтимоий фанининг муҳим соҳасидир. Ушбу жараёнларни тушуниш ва тушунтиришга ёрдам берган бир нечта дастлабки назариялар мавжуд. Масалан, “Малтус назарияси” 18-аср охирида Томас Малтус томонидан ишлаб чиқилган бу назария аҳолининг ўсиши озиқ-овқат ва бошқа ресурсларнинг мавжудлиги билан чекланиши, озиқ-овқат ишлаб чиқариш эса арифметик прогрессия бўйича ортиб боришини таъкидлайди. Малтус башорат қилганидек, агар аҳоли ўсиши назорат қилинмаса, туғилишнинг юқори даражаси аҳолининг ҳаддан ташқари кўпайиши ва очарчиликка олиб келишини эътироф этади.

Кейингиси, “Ўтиш назарияси” 1929 йилда Уоррен Томпсон томонидан ишлаб чиқилган бўлиб, ушбу назария ривожланаётган мамлакатларда туғилиш ва ўлимнинг юқори даражадан паст даражага ўтишини тушунтиришни таклиф қилади. Ушбу ўтиш иқтисодий ва ижтимоий ривожланиш, масалан, таълим, соғлиқни сақлаш ва қашшоқликни камайтириш каби имкониятларни яхшилаш билан боғлиқ.

Шулар қаторида, “Демографик мувозанат назарияси” бу назария туғилиш ва ўлимнинг мувозанатда эканлигини таъкидлайди. Бу назария Жон Грем томонидан ишлаб чиқилган бўлиб, жамият ривожланишининг маълум даражасига эришгандан сўнг, туғилиш ва ўлим даражаси барқарор қадриятларга яқинлашишини англатади.

Шунингдек, “Миграция назарияси” ҳам мавжуд бўлиб, бу назария доирасида миграциянинг аҳоли ўзгаришига таъсири ўрганилади. Унда таъкидлашча, миграцияга иқтисодий имкониятлар, сиёсий ва ижтимоий шароитлар каби турли омиллар сабаб бўлиши мумкин, бу маълум минтақаларда аҳоли сонига таъсир қилади. “Миграция назарияси” — одамларнинг бир географик ҳудуддан иккинчисига кўчишининг сабаблари, хусусиятлари ва оқибатларини ўрганувчи фан соҳаси. Бу назария миграция

механизмларини, уларнинг умумий қонуниятларини ва жамиятга таъсирини тушунишга ёрдам беради.

Миграция назариясидаги муҳим тушунчалардан бири “бирлаштирувчи омиллар” ва “суриш омиллари”дир. “Бирлаштирувчи омиллар” - бу одамларни ўз мамлакати ёки минтақасини тарк этишга мажбур қиладиган омиллар, масалан, низолар, паст турмуш даражаси, иш этишмаслиги. "Сўриш омиллари" - бу одамларни бошқа мамлакатларга жалб қилувчи омиллар, масалан, иш имкониятлари, яхши яшаш шароитлари, таълим.

Миграция назарияси, шунингдек, ички миграция (бир мамлакат ичида), халқаро миграция (бир мамлакатдан бошқасига) ва вақтинчалик миграция (маълум бир давр учун) каби миграциянинг турларини ҳам ўрганади.

Бугунги кунда миграция жаҳон сиёсати, иқтисодиёти ва ижтимоий-маданий соҳаларида муҳим ўрин тутди. Миграция назариясини тушуниш янада самарали иммиграция ва муҳожиралик интеграцияси сиёсатини ишлаб чиқишга ёрдам беради ва янада инсонпарвар ва барқарор жамиятларга ҳисса қўшади.

Бу демографик жараёнлар ва аҳоли сони билан боғлиқ дастлабки назарияларнинг бир қисмидир. Вақт ўтиши ва ижтимоий фанларнинг ривожланиши билан ушбу дастлабки ғояларни тўлдирадиган янги ёндашувлар ва назариялар пайдо бўлди.

Демографик жараёнлар ва аҳолини ўрганган кўплаб маҳаллий олимлар мавжуд. Жумладан, П.П. Семенов-Тянь-Шанский - Ўрта Осиё аҳолисини ўрганган рус географи ва демографи; В.В. Починский - рус демографи, Россияда демографик ривожланиш муаммолари устида ишлаган; А.М. Денисенко - демограф, демографик хавфсизлик ва аҳоли барқарорлиги доктринасининг асосчиси; Н.Н. Харьков собиқ СССРдаги демографик жараёнларни ўрганган машҳур географ; Л.А. Нварцев - совет ва рус демографи, Россия қишлоқларидаги демографик вазиятни ўрганган. Бу олимлар демография ва аҳолини ўрганишга катта ҳисса қўшган ва уларнинг ишлари ҳозирги замон фанлари учун долзарб ва қимматли бўлиб қолмоқда.

Демографик жараёнлар ва аҳолини бошқариш жамият тараққиётининг асосий жиҳати ҳисобланади. Бу жараёнларни самарали бошқариш мамлакатларга аҳоли сонидаги ўзгаришларни башорат қилиш ва тегишли стратегия ва дастурларни ишлаб чиқиш имконини беради. Самарали демографик бошқарув учун муҳим бўлган бир неча асосий йўналишлари мавжуд. Улардан:

Биринчиси: демографик маълумотларни мониторинг қилиш ва таҳлил қилиш - Демографик жараёнларни самарали бошқариш учун туғилиш, ўлим, миграция ва бошқа кўрсаткичлар каби аҳоли маълумотларини доимий равишда кузатиб бориш ва таҳлил қилиш имконини беради. Бу

тенденциялар ва муаммоларни аниқлашга ҳамда онгли қарорлар қабул қилишга ёрдам беради.

Иккинчиси, демографик сиёсатни ишлаб чиқиш орқали мамлакатлар демографик сиёсатни ишлаб чиқмоқда, улар туғилиш даражасини тартибга солиш, оилаларни қўллаб-қувватлаш, миграцияни назорат қилиш ва бошқа жиҳатларни ўз ичига олади. Муваффақиятли аҳоли сиёсати аҳоли сони ва жамият ресурслари ўртасидаги мувозанатни таъминлайди.

Учинчиси, таълим ва соғлиқни сақлаш демографик жараёнларни самарали бошқаришнинг муҳим элементи аҳолининг таълим ва соғлиқни сақлаш хизматларидан фойдаланишини таъминлашдир. Билимли ва соғлом фуқаролар жамиятнинг барқарор ривожланиши ва иқтисодий ўсишга ҳисса қўшади.

Тўртинчиси, миграция ҳисоби орқали миграция жараёнлари мамлакат демографиясига ҳам сезиларли таъсир кўрсатади. Миграция сабаблари, унинг оқибатлари ва мигрантларнинг жамиятга интеграциялашуви имкониятларини тушуниш бу жараёнларни бошқаришга ёрдам беради.

Бешинчиси, жамоатчилик иштироки ёрдамида демографик жараёнларни муваффақиятли бошқариш фуқаролар, маҳаллий ҳамжамият, ННТ ва бошқа манфаатдор томонларнинг фаол иштирокини талаб қилади. Қарорлар қабул қилиш жараёнига жамоатчиликни жалб қилиш янада самаралироқ сиёсат яратишга ёрдам беради.

Самарали демографик ва аҳолини бошқариш маълумотларни таҳлил қилиш, сиёсатни ишлаб чиқиш ва таълимга киришни ўз ичига олган комплекс ёндашувни талаб қилади.

Дунёнинг кўпгина мамлакатлари демографик жараёнлар ва аҳоли сонини бошқаришда фаол иштирок этиб, ижобий натижаларга эришишга интилоқда. Ушбу мамлакатларнинг баъзилари бу соҳада намуна бўлиб, муваффақиятли амалиётлари билан халқаро эътиборни тортмоқда. Бу эрда демографик жараёнларни бошқаришда ижобий натижаларни кўрсатадиган баъзи мамлакатлар масалан, Швеция туғилишни рағбатлантириш, гендер тенглигини тарғиб қилиш ва оилаларни қўллаб-қувватлашни ўз ичига олган муваффақиятли аҳоли сиёсати билан машҳур. Бундай чора-тадбирлар туфайли Швецияда барқарор туғилиш ва ўлим даражаси паст бўлиб, бу аҳоли ўсишига ёрдам беради. Сингапур эса, кичик давлат бўлишига қарамай ўзининг муваффақиятли аҳоли стратегиялари билан ҳам машҳур. Бугунги кунда Сингапур юқори малакали муҳожирларни фаол жалб қилмоқда, бу эса унинг ишчи кучини ошириш ва иқтисодиётини яхшилашга ёрдам бермоқда.

Шунингдек, Жанубий Корея оилани қўллаб-қувватлашнинг кенг қўламли дастурлари, узайтирилган ота-она таътиллари сиёсати ва оила фаровонлигини таъминловчи бошқа чора-тадбирларни жорий этиш орқали туғилиш даражасининг пасайиши ва аҳолининг қариши билан боғлиқ муаммоларни енгиб чиқмоқда.

Норвегия демографик жараёнлар муваффақиятли бошқариладиган давлатга ҳам мисол бўла олади. Бу ерда гендер, оила ва болалар ўртасидаги тенгликни қўллаб-қувватлаш чора-тадбирларидан кенг фойдаланилаётгани жамиятнинг барқарор ривожланишига хизмат қилмоқда. Бу каби мамлакатлар демографик ва аҳолини бошқариш қанчалик самарали иқтисодий, ижтимоий ва жамият ривожланишининг ижобий натижаларига олиб келиши мумкинлигини кўрсатмоқда.

Марказий Осиёда, жумладан, Ўзбекистонда демографик жараёнлар ва аҳолини бошқариш минтақанинг барқарор ривожланишини таъминлашда муҳим рол ўйнайди. Марказий Осиё кўп миллатли ва кўп динли минтақа бўлиб, бу эрда демографик жараёнлар алоҳида аҳамиятга эга. Демографик бошқарувнинг муҳим жиҳатлари туғилишни назорат қилиш, ўлимни назорат қилиш, миграция назорати, таълим ва соғлиқни сақлашдир.

Марказий Осиёда демографик жараёнларни бошқариш қуйидагиларни ўз ичига олади:

Биринчи, “оила сиёсати ва туғилиш даражаси” оилани режалаштириш, ёш оилаларни қўллаб-қувватлаш бўйича хабардорликни ошириш.

Иккинчи, “соғлиқни сақлаш” сифатли тиббий хизматлардан фойдаланиш имкониятларини яхшилаш, болалар ва оналар ўлимини камайтириш.

Учинчи, “Таълим тизими”ни ривожлантириш, жумладан, саводсизлик даражасини пасайтириш, аҳолининг билим даражасини ошириш.

Тўртинчи, “Миграция оқимлари”ни, шу жумладан ички ва халқаро ҳаракатларни бошқариш, мигрантларнинг интеграцияси.

Ўзбекистон Марказий Осиё давлатларидан бири сифатида демографик жараёнларни бошқаришда ҳам қийинчиликларга дуч келмоқда. Ўзбекистоннинг ижтимоий-демографик сиёсати аҳоли сонининг барқарор ўсишига эришиш, фуқароларнинг ҳаёт сифатини ошириш ва мамлакатни барқарор ривожлантиришга қаратилган. Ўзбекистон ва Марказий Осиёнинг бошқа мамлакатларида демографик жараёнлар ва аҳолини бошқариш комплекс ёндашувни талаб қилади.

Ўзбекистон, бошқа айрим давлатлар сингари, туғилишнинг юқорилиги, ўртача умр кўриш давомийлиги, миграция жараёнлари, ёшларнинг ишлаш учун хорижга чиқиб кетиши натижасидапайдо бўлаётган социал муаммолар яъни ажрашишлар сонининг ортиб бориши, болалар тарбияси билан боғлиқ муаммоларга дуч келмоқда. Демографик жараёнлар ва аҳолини самарали бошқариш учун Ўзбекистонга қуйидаги чора-тадбирларни ўзида мужассам этган комплекс ёндашувни қўллаш тавсия этилади:

✓ Туғилиш даражасини ижтимоий рағбатлантириш: туғилиш даражасини оширишни рағбатлантириш учун турли имтиёзлар ва болали оилаларни қўллаб-қувватлаш дастурларини жорий этиш.

✓ Тиббий ёрдамнинг қулайлиги ва сифатини ошириш: аҳоли саломатлиги ва умр кўриш давомийлигини яхшилашга ёрдам берадиган барча фуқаролар учун сифатли тиббий ёрдам мавжудлигини таъминлаш.

✓ Таълим ва касбий тайёргарлик: таълим тизимини ривожлантириш ва аҳолининг билим даражасини ошириш, бу меҳнат ресурсларининг малака даражасини оширишга ва мамлакатнинг иқтисодий ривожланишига ёрдам беради.

✓ Меҳнат бозорини ривожлантириш ва ишсизликни қисқартириш: иқтисодий барқарорлик ва аҳолининг ижтимоий хавфсизлигини таъминлаш мақсадида янги иш ўринларини яратишга кўмаклашиш ва бандликни қўллаб-қувватлаш дастурларини ишлаб чиқиш.

✓ Миграция жараёнларини бошқариш: чет эллик мутахассисларни жалб қилиш дастурларини ишлаб чиқиш, шунингдек, меҳнат муҳожирларини уларнинг тажриба ва билимларидан фойдаланиш учун мамлакатга қайтариш чора-тадбирларини ишлаб чиқиш.

✓ Кекса фуқароларни қўллаб-қувватлаш бўйича дастурларни яратиш: пенсия тизимини ривожлантириш, кексаларга муносиб турмуш шароитларини таъминлаш учун тиббий-ижтимоий ёрдам кўрсатиш.

✓ Демографик маълумотларни мониторинг қилиш ва таҳлил қилиш, Самарали сиёсат ва дастурларни ишлаб чиқиш учун мамлакатдаги демографик вазият тўғрисидаги маълумотларни тизимли равишда йиғиш ва таҳлил қилиш муҳим аҳамиятга эга.

Хулоса. Ўзбекистонда демографик жараёнларни комплекс бошқариш мамлакатнинг барқарор ривожланишини таъминлаш учун турли соҳалар – соғлиқни сақлаш ва таълимдан тортиб, ижтимоий ҳимоя ва иқтисодиётгача бўлган мувофиқлаштирилган ўзаро ҳамкорликни тақозо этади.

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СОВРЕМЕННЫЕ ТЕХНОЛОГИИ УПРАВЛЕНИЯ ОРГАНИЗАЦИЕЙ

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ПРОБЛЕМА УПРАВЛЕНИЯ КОНФЛИКТАМИ В ОРГАНАХ ВЛАСТИ В ОТЕЧЕСТВЕННЫХ И ЗАРУБЕЖНЫХ НАУЧНЫХ ИССЛЕДОВАНИЯХ

Аннотация. Статья освещает аспекты управления конфликтами в органах власти, анализируя различные стратегии, используемые в этом процессе. Осуществлен анализ природы и причин конфликтов в государственном управлении.

Ключевые слова: конфликт, органы власти, управление конфликтами.

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THE PROBLEM OF CONFLICT MANAGEMENT IN GOVERNMENT IN DOMESTIC AND FOREIGN SCIENTIFIC RESEARCH

Annotation. The article highlights the theoretical aspects of conflict management between the government and civil society, analyzing the various strategies used in this process. The analysis of the nature and causes of conflicts in public administration has been carried out.

Keywords: conflict, authorities.

Работа органов исполнительной власти нередко сопровождается конфликтами. Их многообразие обусловлено различными факторами, включая борьбу за власть, различия во взглядах и целях, а также борьбу за ресурсы. В результате формируется обширное конфликтное пространство, в которое вовлекаются как отдельные сотрудники, так и целые группы, движимые разными интересами и потребностями.

Одной из особенностей конфликтов в органах исполнительной власти является их динамичность. Одни из них носят скрытый характер,

проявляясь в различных формах пассивного сопротивления или саботажа. Другие конфликты имеют явный характер и могут проявляться в открытом противостоянии. При этом конфликты в органах исполнительной власти часто сменяют друг друга, принимая различные формы 74.

Причин возникновения конфликтов в органах исполнительной власти также множество. К ним относятся:

1. Разделение полномочий и ответственности, что приводит к нечеткому распределению обязанностей и полномочий.

2. Противоречивые цели и задачи, ставящие сотрудников перед необходимостью выбирать между разными вариантами действий.

3. Борьба за ресурсы, такие как финансирование, персонал или политическое влияние.

4. Личностные особенности сотрудников, такие как различные стили принятия решений, амбиции или склонность к конфликтам.

5. Неэффективная коммуникация, приводящая к недопониманию, неопределенности и недоверию.

6. Отсутствие механизмов решения конфликтов, что препятствует конструктивному обсуждению и нахождению компромиссов 75.

Управление конфликтами в органах исполнительной власти является сложной задачей. Однако оно имеет важное значение для сохранения работоспособности и эффективности организации. К основным принципам управления конфликтами относятся:

1. Профилактика конфликтов: внедрение четких процедур, регламентирующих распределение полномочий и ответственности, а также формирование открытой и конструктивной рабочей среды.

2. Раннее выявление и решение конфликтов: регулярный мониторинг конфликтного пространства и оперативное вмешательство при первых признаках возникновения проблем.

3. Использование конструктивных методов разрешения конфликтов: проведение переговоров, медиации или фасилитации для поиска компромиссов и взаимовыгодных решений.

4. Формирование механизмов решения конфликтов: создание независимых комитетов или комиссий по разрешению конфликтов, которые могут выступать в качестве арбитров и помогать сторонам найти выход из конфликтной ситуации.

5. Развитие навыков управления конфликтами у сотрудников: проведение тренингов и программ обучения для повышения уровня

74 Юдина Ю.В. Государственное и муниципальное управление: учебник для вузов / Ю.В. Юдина; Под общей ред. Н.А. Омельченко. М.: Издательство Юрайт, 2023. С. 122.

75 Путиловский А.А. Технологии управления политическими конфликтами // Конфликтология. 2014. № 4. С. 192-197.

управленческой компетенции и способностей к урегулированию конфликтов⁷⁶.

Таким образом, конфликты в органах исполнительной власти являются неизбежной частью их функционирования. Однако при грамотном управлении они могут не только не мешать работе, но и способствовать повышению эффективности организации за счет раскрытия различных точек зрения, выявления проблем и поиска новых решений.

Конфликты неизбежны в любых рабочих коллективах, и государственно-административные структуры не являются исключением. Традиционное разделение конфликтов на конструктивные и деструктивные справедливо и для этой сферы. Конструктивные конфликты могут способствовать улучшению организационного климата и повышению эффективности работы, в то время как деструктивные могут нанести серьезный ущерб и препятствовать достижению целей организации.

Эффективное управление конфликтами имеет решающее значение для государственно-административных структур. Для этого необходимо прежде всего выявить причины возникновения конфликтов. Одной из основных причин может быть несогласованность целей, когда разные подразделения или сотрудники преследуют разные интересы. Другие причины включают недостаточное общение, разницу в ценностях и стилях руководства.

Конструктивное и деструктивное управление конфликтами осуществляется разными методами. Для конструктивного управления конфликтами можно использовать следующие подходы:

1. Сотрудничество: Цель сотрудничества - найти взаимовыгодное решение, удовлетворяющее все стороны конфликта. Этот метод наиболее эффективен, когда стороны имеют сходные цели и готовы идти на компромисс.

2. Компромисс: Компромисс предполагает поиск решения, которое частично удовлетворяет все стороны конфликта. Это полезный метод, когда стороны имеют разные цели и не могут достигнуть взаимовыгодного решения.

3. Избегание: Избегание конфликта - это стратегия, при которой одна или обе стороны стараются избежать его полностью. Этот метод может быть полезен, когда конфликт незначителен или, когда есть риск, что он обострится.

4. Принуждение: Принуждение - это метод, при котором одна сторона использует свою власть или ресурсы, чтобы навязать решение другой

⁷⁶ Зайнуллин С.Б. Методические проблемы разрешения корпоративных конфликтов // Интернет-журнал Науковедение. - 2016. - № 2 (33).

стороне. Этот метод следует использовать только в крайних случаях, когда другие методы неэффективны⁷⁷.

В отличие от конструктивных, деструктивные конфликты управляются неэффективно. Используются следующие методы:

1. Конкуренция: Конкуренция – это метод, при котором одна сторона добивается победы за счет другой. Этот метод может привести к обострению конфликта и нанесению ущерба отношениям между сторонами.

2. Уступка: Уступка - это метод, при котором одна сторона полностью отказывается от своих требований, чтобы избежать конфликта. Этот метод может привести к тому, что сторона, которая уступила, будет чувствовать себя неудовлетворенной и обиженной.

3. Уклонение: Уклонение – это метод, при котором одна или обе стороны избегают обсуждения или решения конфликта. Этот метод может привести к тому, что конфликт будет тлеть и в конечном итоге обострится⁷⁸.

Последствия управления конфликтами могут быть как положительными, так и отрицательными. Конструктивное управление конфликтами может привести к улучшению коммуникации, укреплению отношений и повышению эффективности работы. Деструктивное управление конфликтами может привести к снижению производительности, ухудшению морального климата и появлению новых конфликтов.

Таким образом, выбор действенного метода разрешения конфликта в государственно-административных структурах имеет решающее значение. Для того чтобы эффективно управлять конфликтами, необходимо выявить причины их возникновения, вид и возможные последствия. Конструктивные методы управления конфликтами, такие как сотрудничество и компромисс, следует использовать как можно чаще, в то время как деструктивные методы, такие как конкуренция и уклонение, должны использоваться только в крайних случаях.

Конфликты, будь то в государственно-административной сфере или в любой другой области, часто возникают из-за накопившихся противоречий. Поэтому важно уметь выявлять конфликтные ситуации и их истинные причины. Когда мы понимаем, что противостояние основано на взаимоисключающих интересах и позициях, мы можем предупредить развитие конфликта.

Однако, разрешение конфликтной ситуации является более приоритетной задачей, чем просто устранение инцидента. Разрешение конфликта требует применения структурных методов, которые помогут

77 Beller, S., Klein, G., & Fisher, R. (2010). US government innovation in peace building and conflict resolution: Implication for IPCR program.

78 Beller, S., Klein, G., & Fisher, R. (2010). US government innovation in peace building and conflict resolution: Implication for IPCR program.

преодолеть разногласия и достичь взаимоприемлемого решения для всех сторон.

Один из таких методов - медиация, которая позволяет сторонам конфликта общаться и искать компромиссное решение при наличии нейтрального посредника. Медиатор помогает установить диалог, выслушать обе стороны и найти общие интересы, на основе которых можно разработать взаимовыгодное соглашение⁷⁹.

Также важно учитывать, что конфликты могут быть как открытыми, так и скрытыми. Открытые конфликты легче выявить, так как они проявляются в явной форме, например, через открытые противоречия и конфронтации. Однако скрытые конфликты могут быть более опасными, так как они могут накапливаться внутри организации или сообщества, незаметно разрушая взаимоотношения и приводя к негативным последствиям.

Поэтому важно иметь систему мониторинга и раннего выявления конфликтных ситуаций. Это поможет предотвратить их эскалацию и своевременно принять меры для их разрешения. Также необходимо создать атмосферу открытого общения и доверия, чтобы люди могли свободно высказывать свои мнения и беспокойства, а также искать конструктивные пути решения проблем.

Один из способов обеспечения равноправного участия в управлении - это управление ограниченным правительством. Этот подход позволяет всем заинтересованным группам высказывать свое мнение по важным политическим вопросам, что в конечном итоге минимизирует конфликты. Например, в США конституция ограничивает исполнительную власть через делегирование полномочий, что приводит к четкому разделению и передаче властных функций. Разделение властей на исполнительную, законодательную и судебную, как отмечает Дорн, также содействует снижению конфликтов, поскольку их функции редко пересекаются⁸⁰.

В итоге, понимание конфликтных ситуаций и применение структурных методов преодоления конфликта играют важную роль в государственно-административной сфере. Разрешение конфликтов способствует развитию эффективных взаимоотношений и повышению эффективности работы организации в целом.

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ПОНЯТИЕ И ПРИНЦИПЫ ИНСТИТУТА НАСЛЕДОВАНИЯ

Аннотация. В данной научной статье рассматриваются понятие и основные принципы наследственного права. В статье подробно описываются принципы наследственного права.

Ключевые слова: гражданское право, наследственное право, принципы наследования, наследник, наследодатель.

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CONCEPT AND PRINCIPLES OF THE INSTITUTE OF INHERITANCE

Abstract. This scientific article discusses the concept and basic principles of inheritance law. The article describes in detail the principles of inheritance law.

Key words: civil law, inheritance law, principles of inheritance, heir, testator.

Институт наследования является отраслью гражданского права, в Российской Федерации наследование регулируется 3 частью Гражданского кодекса и призвано урегулировать отношения в области наследования, в том числе и наследование, осложнённое иностранным элементом.

Под наследственным правом в объективном смысле принято понимать – совокупность правовых норм, регулирующих переход прав и обязанностей от умершего к другим лицам (наследственные отношения и отношения, связанные с наследованием).

Наследственное право в субъективном смысле, с одной стороны, – это право гражданина передать свои имущественные права и обязанности к наследникам, с другой стороны – право получить от наследодателя в наследство имущественные права и обязанности (право наследования) [2, с. 93].

Наследственное право относят к древнему институту прав, который зародился в период римского права, и в процессе своего формирования были положены обычаи, традиции, классические устои, религия, моральные и нравственные свойства каждого народа. Наследственное право связано с семейным правом, так как после смерти наследодателя наследует его семья.

Проблемным в наследственном праве является, то что право в каждой определенной стране проходит свой процесс формирования, но основе чего создаются нормативные правовые акты, именные обычаи и традиции каждого народа ложатся в основу этих актов, а в последствии и регулируют данную сферу. Это показывает демонстративную конкретную сложную задачу в выработке единых правил при принятии наследия за рубежом другого государства и поэтому возникает разнообразность в юридическом регулировании наследных взаимоотношений, а именно в отношении наследования имущества умершего лица.

В науке правовые системы современности делят на две группы. «Первая это англосаксонская (или англо-американская), ко второй системе относятся романо-германская (или континентальная, европейская) семья права. Англосаксонская правовая система, в частности к ней относятся страны США, Англия, Новая Зеландия, Канада, Австралия, Индия и бывшие колонии Британской империи, не регулирует институт правопреемства, и поэтому имущество наследодателя по праву доверительной принадлежности переходит сначала к представителю умершего. Представитель в первую очередь погашает долги, платежи, сборы за счет наследственной массы, а потом уже оставшееся имущество делится между наследников, в порядке очереди. В Романно-германской системе наследники принимают наследство на праве универсального правопреемства» [1, с.69].

В наследственное право входят такие институты как, институт основания наследства. Различают два вида основания: по завещанию и по закону. Институт открытия наследства, который определяет, время, место, территорию открытия наследства, определяет следующие основные для наследников моменты, такие как срок ожидания выдачи готового свидетельства о переходе прав на наследственную собственность, состав наследственной массы, собственную долю наследника, количество претендентов на наследство и другие моменты. «Институт приобретения наследства. Принятие наследства по своей природе является односторонней сделкой, для совершения которой необходимо конкретное выражение собственной воли одной стороны – наследника» [3, с.98].

Приобретение наследства включает в себя принятие наследства наследником, переход в порядке наследования по закону выморочного имущества в собственность государства, а также охватывает иные отношения такие как: по отказу от наследства, оформление наследственных прав (свидетельства о праве на наследство), меры наследства и некоторые

другие. Институт недостойных наследников, то есть - это лица которые не могут получить наследство, по причинам, прописанным в законе и в разных странах эти причины разные.

В институт наследования входят много микроинститутов и процедур таких как: процедура открытия, оформления, принятия, вступления в наследство. Получение наследства подразумевает переход имущественных и неимущественных прав к достойным наследникам на праве собственности.

В науке трактуют и различают право наследования в двух смыслах. Первое это «объективное понятие наследования, оно представляет собой комплекс нормативно правовых актов, регулирующих перехода прав обязательств погибшего господина к иным лицам, то есть - это его наследники, которые имеют право получать наследство. Второй смысл это субъективный, под ним понимается право лица быть призванным к наследованию, стать полноправным собственником имущества и нести бремя содержания, принадлежащего ему имущества, а также выполнять все права и обязанности. Через принятие наследства возникает право собственности, а если лицо является собственником, значит может распоряжаться, пользоваться и владеть своим имуществом по своему усмотрению. Так, же данный институт права играет очень весомую роль при переходе в порядке правопреемства не только собственности на вещи, но и исключительных, патентных и авторских прав умершего лица» [3, с. 119].

В российском законодательстве под наследованием принято понимать наследование имущества умершего и переход к другим лицам в порядке универсального правопреемства.

К лицам, которые могут принимать наследство в Российской Федерации, относятся:

– граждане, оказавшиеся в живых в день открытия наследия, а также еще зачатые при жизни наследодателя и родившиеся живыми после его гибели;

– к наследованию по завещанию имеют все шансы призываться еще обозначенные в нем юридические лица, имеющие место быть юридически оформленным на день открытия наследия;

– к наследованию по завещанию могут призываться: международные организации, иностранные государства Российская Федерация, субъекты Российской Федерации, муниципальные образования. К наследованию по закону в РФ призываются- Российская Федерация, субъекты Российской Федерации, и муниципальные образования.

При отсутствии завещания лица будут наследовать по закону в соответствии с внутренним правом страны и в порядке очереди. В Российской Федерации существуют 7 очередей наследования.

Наследники, которые находятся за границей или которые в силу различных обстоятельств являются гражданами других государств или

имеют двойное гражданство связываются при наследовании с международным наследственным правом.

Авторы определяют международное наследственное право, как «совокупность норм, регулирующие наследственные отношения, связанные с правопорядком двух и более государств входящих в сферу действий международного частного права» [1].

Существует еще одно определение наследственного международного права: «наследственное правоотношение с иностранным элементом, подлежащее урегулированию компетентным российским нотариусом и (или) судом», в этом определении делается упор на специальные органы, которые уполномочены заниматься делами наследования за рубежом и иностранных граждан в Российской Федерации.

Важно понимать сущность наследования, которое вытекает из юридических фактов, а точнее события. Событием является - смерть лица, с которой он теряет свои права и обязанности по отношению к своему имуществу, и они переходят к новому лицу, а точнее наследникам. Исключение составляет только те права и обязанности, которые были неразрывно связаны с личностью умершего лица, например, его авторство на книгу, написанную лицом при жизни. За умершим лицом сохраняется авторство на его произведения посмертно, а вот право на получения денежных средств (дохода) от авторского произведения переходит к наследникам.

Наследники заменяют умершего в юридических отношениях. Наследование переходит в порядке преемства. Лицо принимает наследство целиком и едино, либо отказывается от всего наследства. В случае принятия наследства к лицу переходят права и обязанности принадлежащие умершему. Если наследник не один, а двое и более, то каждый из них вступает в свою долю и несет свои определенные права и обязанности.

Принявшие наследство вступают каждый в свои правоотношения касаясь наследства. После принятия наследник как правомочный собственник осуществляет три составляющие в отношении наследства - владеет, пользуется, распоряжается на праве частной собственности, как единолично, так и совместно с другими лицами. В этом и заключается сущность наследования.

Одним из самых важных принципов наследования считается принцип универсального правопреемства. В любом государстве, которое относится к романо-германской семье права - этот принцип считается самым важным и главным. Россия относится к романо-германской семье права и поэтому в силу особенностей в российском законодательстве этот принцип вытекает из понятия наследования закрепленного в гражданском кодексе.

«Универсальное правопреемство означает что к наследникам переходят все принадлежавшие умершему собственнику имущество, права, обязанности, исключая только те из них, переход которых по наследству не

разрешается по прямому указанию закона или переход которых неосуществим в силу их юридической сути. Так же в порядке наследственного правопреемства передаются права и обязанности совместно со способами их обеспечения и наложенными обременениями. Явным примером может служить частный сервитут на земельном участке, который наследник наследует после умершего и при этом изменить он его не может.

Получить наследство можно не только после обращения к нотариусу, но и в момент совершения наследником действий, обращённых на принятие наследства, подобный преемник является принявшим все потомственные активы, где бы они ни пребывали» [4, с. 125].

К числу главных принципов в наследственном праве относится принцип свободы завещания. Завещание принято называть сделкой. Оно должно соответствовать определенной письменной форме. Принцип свободы завещания подразумевает под собой волеизъявление лица относительно судьбы принадлежащего ему имущества на случай смерти, оно надлежит быть всецело осмысленным и свободным от стороннего воздействия. В соответствии с принципом свободы завещание, лицо которое составляет завещание вправе выбирать круг наследников, и это не обязательно могут быть его родственники или близкие люди, завещатель вправе указывать любых лиц по своему усмотрению, а также указывать их доли без каких-либо ограничений.

Принцип приоритета завещания над наследованием по закону. Во многих странах наследование осуществляется по двум основаниям. Первое это завещание. Лицо излагает переход имущественных прав определенным лицам, указанным в завещании. Приоритет отдается завещанию, так как в нем указана последняя воля лица передать имущество, права и обязанности, после его смерти другим лицам. Второе это наследование по закону, если нет завещание или оно недействительно полностью или частично, и (или) когда завещано не все имущество лица, то наследство распределяется между его родственниками определенной очереди. Предполагается при произошедшем событии если наследодатель не оставивший завещания, то к наследованию призываются максимально близкие, родные и кровно связанные лица, будь у него желание то вероятней всего он отдал бы предпочтение перед другими лицами при распределении имущественных прав и собственного имущества.

Принцип обязательной доли в наследовании. В большинстве зарубежных стран присутствует обязательная доля. В России обязательная доля представляет собой гарантированный гражданским законодательством минимум в наследственном имуществе, получаемый необходимыми наследниками. Эти лица представляют собой не защищенную категорию граждан, независимо от того, что прописано в завещание. Их доля

составляет не менее 1/2 доли, причитающейся бы каждому из них при наследовании по закону.

«Наследники, которые не вписанные в завещание, наследуют свою обязательную долю одновременно с наследниками той очереди, которые призываются к наследованию. Таким образом, институт обязательной доли в наследственном праве призван материально поддержать незащищенную категорию граждан, например, несовершеннолетних, как указано в российском законодательстве, нуждающихся в особой защите в силу возраста, состояния здоровья и имущественного положения. Обязательная доля в праве России имеет исключительно социальные начала» [5, с. 56].

В некоторых странах существует другой подход к обязательной доле, например, во Франции. Наследство в этой стране разделяется на две категории: это свободная доля и резервная доля. Свободной долей при составлении завещания, завещатель может распорядиться своими имущественными правами по своему усмотрению и указать тех лиц, которые получают это наследство после его смерти. И вторая часть наследства - резервная доля, такая часть зарезервирована государством, подлежит наследованию исключительно членами семьи наследодателя. Именно в последнем случае наследник, который является наиболее близким членом семьи наследодателя, и получает свою долю из незавещанного имущества. При этом размер резерва напрямую зависит от двух обстоятельств: от числа обязательных наследников и от того, к какой категории они относятся.

Таким образом, под наследственным правом принято понимать совокупность правовых норм, регулирующих переход прав и обязанностей от умершего к другим лицам. К числу главных принципов в наследственном праве относятся принцип свободы завещания, принцип приоритета завещания над наследованием по закону, принцип обязательной доли в наследовании.

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ENHANCING MEDICAL EDUCATION: THE VITAL ROLE OF BIOPHYSICS

Abstract. This abstract explores the pivotal role of biophysics in enhancing medical education and shaping the future of healthcare. Biophysics serves as a bridge between biology and physics, providing students with a deeper understanding of biological phenomena at the molecular and cellular levels. By integrating biophysical principles into medical curricula, students gain insights into physiological processes, diagnostic techniques, and therapeutic interventions. Moreover, biophysics education fosters critical thinking, problem-solving skills, and interdisciplinary collaboration essential for navigating the complexities of modern healthcare.

Keywords: Biophysics, medical education, interdisciplinary collaboration, students, biological phenomena, integration.

Introduction. Medical education is an ever-evolving field that constantly adapts to incorporate new scientific advancements and interdisciplinary approaches. Among these, biophysics plays a crucial role in understanding the fundamental principles governing biological systems at the molecular and cellular levels. Integrating biophysics into medical curricula offers students a deeper comprehension of physiological processes, aiding in diagnosis, treatment, and innovation in healthcare practices. In this article, we explore the significance of biophysics education in medical institutes and its impact on shaping the next generation of healthcare professionals.

Understanding Biological Phenomena: Biophysics bridges the gap between biology and physics, applying the principles of physics to elucidate biological phenomena. In medical education, this interdisciplinary approach provides students with a comprehensive understanding of complex biological systems. Through biophysics, students delve into topics such as molecular interactions, membrane dynamics, and signal transduction, gaining insights into the mechanisms underlying diseases like cancer, neurodegenerative disorders, and cardiovascular diseases.

Diagnostic and Therapeutic Applications: Knowledge of biophysics enhances medical students' ability to interpret diagnostic tests and imaging

techniques. For instance, understanding the principles of nuclear magnetic resonance (NMR) spectroscopy aids in the interpretation of magnetic resonance imaging (MRI) scans, crucial for diagnosing conditions ranging from brain tumors to musculoskeletal injuries. Moreover, insights from biophysics inform the development of novel therapeutic strategies, including targeted drug delivery systems and gene editing technologies, revolutionizing patient care and treatment outcomes.

Advancements in Medical Technology: The integration of biophysics into medical education cultivates a cohort of professionals equipped to drive innovation in medical technology. Students proficient in biophysical principles are better positioned to engage with cutting-edge technologies such as microfluidics, biosensors, and computational modeling. These tools not only facilitate research endeavors but also translate into tangible clinical applications, fostering a culture of continuous improvement and advancement within the healthcare industry.

Promoting Critical Thinking and Problem-Solving Skills: Biophysics education fosters critical thinking and problem-solving skills essential for navigating the complexities of modern healthcare. By challenging students to apply physical principles to biological systems, educators cultivate analytical reasoning and creative problem-solving abilities. Whether analyzing the biomechanics of musculoskeletal injuries or designing experiments to study cellular signaling pathways, students develop a multidisciplinary approach to problem-solving that extends beyond the confines of traditional medical education.

Interdisciplinary Collaboration: Collaboration between biophysicists and medical professionals is integral to advancing both fields. Medical institutes that prioritize biophysics education foster interdisciplinary collaborations that yield groundbreaking discoveries and translational research opportunities. By fostering a culture of collaboration, medical institutes create synergies between diverse disciplines, propelling innovation and driving progress towards improved patient care and medical outcomes.

Methods. To assess the integration of biophysics into medical education, a comprehensive review of literature was conducted using academic databases such as PubMed, Google Scholar, and ERIC. Keywords including "biophysics education," "medical curriculum," "interdisciplinary collaboration," and "biophysical principles" were used to identify relevant articles published within the past decade. Additionally, information was gathered from reputable medical education websites, institutional reports, and conference proceedings.

Results. The review revealed a growing trend towards integrating biophysics into medical curricula across various institutions globally. Medical schools are increasingly recognizing the importance of biophysical principles in understanding complex physiological processes and fostering innovation in healthcare. Several key findings emerged from the literature review:

Curriculum Integration: Many medical institutes have introduced dedicated courses or modules focusing on biophysics to provide students with foundational knowledge in physical principles applied to biological systems. These courses cover topics such as molecular interactions, cellular signaling, and medical imaging techniques.

Interdisciplinary Collaboration: Collaboration between biophysicists and medical professionals is becoming more prevalent, leading to the development of joint research projects, interdisciplinary seminars, and collaborative teaching initiatives. Such collaborations enrich students' learning experiences by exposing them to diverse perspectives and fostering a culture of innovation.

Overall, the results highlight the growing recognition of biophysics as a foundational discipline in medical education and its potential to shape the future of healthcare through innovation, interdisciplinary collaboration, and improved patient outcomes.

Discussion. The integration of biophysics into medical education represents a significant step towards preparing future healthcare professionals to tackle the complex challenges of modern medicine. This discussion will delve into the implications of the findings presented in the results section and explore the broader implications of biophysics education in medical institutes.

Enhanced Understanding of Physiological Mechanisms: By incorporating biophysical principles into medical curricula, students gain a deeper understanding of the underlying mechanisms governing biological processes. This knowledge not only aids in the interpretation of diagnostic tests and imaging techniques but also facilitates the development of innovative therapeutic strategies. Understanding the physical principles governing biological systems enables students to approach clinical problems from a more holistic perspective, leading to more accurate diagnoses and tailored treatment plans.

Fostering Innovation and Technological Advancements: The integration of biophysics into medical education fosters a culture of innovation and drives advancements in medical technology. Students proficient in biophysical principles are better equipped to engage with cutting-edge technologies such as microfluidics, biosensors, and computational modeling. These tools have transformative potential in improving diagnostics, drug delivery systems, and personalized medicine approaches, ultimately enhancing patient care and treatment outcomes.

Promoting Interdisciplinary Collaboration: Biophysics education encourages collaboration between biophysicists, medical professionals, and engineers, leading to interdisciplinary research endeavors and translational opportunities. Collaborative initiatives enrich students' learning experiences by exposing them to diverse perspectives and approaches. Furthermore, interdisciplinary collaboration facilitates the translation of basic science discoveries into clinical applications, bridging the gap between benchside research and bedside practice.

In conclusion, the integration of biophysics into medical education offers significant benefits in terms of enhancing students' understanding of physiological mechanisms, fostering innovation, promoting interdisciplinary collaboration, and developing critical thinking skills. Addressing the associated challenges requires a concerted effort from medical institutes, faculty members, and stakeholders. Moving forward, continued investment in biophysics education is essential to prepare the next generation of healthcare professionals to meet the evolving needs of patients and society. Biophysics education holds immense potential to enrich medical curricula, empowering students with a holistic understanding of biological processes and the tools to innovate in healthcare. By incorporating biophysical principles into medical education, institutes prepare students to tackle the complexities of modern medicine, driving progress towards improved diagnostics, therapeutics, and patient care. As we look towards the future, the integration of biophysics into medical institutes will remain indispensable in shaping the next generation of healthcare professionals poised to make significant contributions to the field.

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SOFTWARE TO CREATE MULTIMEDIA APPLICATIONS

Annotation. Multimedia tools are a set of hardware and software tools that can communicate using animation. Multimedia tools are a set of hardware and software, which allows a person to communicate with a computer using a variety of natural environment: sound, video, graphics, texts, animations, and others.

Keywords: multimedia, multimedia technologies, visual effects, audio, video, interactive, multi-master, virtual being.

Introduction: Multimedia means is a set of hardware and software, which allows a person to communicate with a computer using various environmental for themselves: sound, video, graphics, texts, animations, and others. We can get qualifications and clear results using multimedia tools. Nowadays, innovation is developing and we also need to add our own contribution. To do this, we need to create new ideas.



Picture 1. Multimedia hardware

Multimedia tools are a set of hardware and software tools that can communicate using animation.

Multimedia devices are a multimedia data processing, hardware for text, sound, images and video information, include:

- Data recording devices;
- Information from the data to be released;
- Manipulators;
- "Virtual Body" devices;
- Information carriers;
- Image processing devices.



Picture 2. Multimedia's hardware tools.

Multimedia elements are combined using software tools. These software tools are made to separate multimedia elements.

Image creator and means of working with them

Digital camera Scanner



Figure 3. arm scanner (a), a drum scanner (B), roll scanner (G), projection scanner (D), laser scanner (e), 3D scanners (j)
Digitizers



Adobe Photoshop for programming tools for viewing and working with them, Corel Photo-Paint, Paint Shop Pro, Microsoft Picture It includes Visualizer Picture.

The card is required to write voice files into the COM, COMCARD CD, calling multimedia presentations, video conferences, or audio-playing data (audio

- "voice, and the information on the computer. Microphone, voice CD PROGRYS, Voice CD PROGRYS, sound speakers, etc. Connects to devices. Audio player can also be connected to the sound as platform, as well magnification, electric musical instruments.



Figure 4. Audio Adapter and its main plait

Write and video editing facilities

To perform a full-time operation with the video, the device is required to form a device to the corresponding form and a reluctant installation according to the position. It can be connected to it to a camcorder, Video Adapters and TVs.

In the case of most cases, it will be enough to be able to express video elements on the monitor. It is sufficient in any modern computer, which is available on any modern computer.



Figure 5. Video Adapter and its Outline Plaster

Virtual Being Shlemi (Head Mounted Display) is a device designed to fully feel thoughtful virtual. In order to display the image size, there are two small screen in the shkey, and the image is divided into two and creates a separate image for both eyes. This shelm is 360 degrees all images in the field of industry. An image location is also changed, accordingly at the time of the head time, even when the head is turned.



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СОДЕРЖАНИЕ И МЕТОДЫ РАЗВИТИЯ ПРОФЕССИОНАЛЬНОЙ КУЛЬТУРЫ УЧИТЕЛЯ

Аннотация. Целью статьи является разработка содержания, способов и педагогических средств формирования профессиональной культуры будущего учителя. Наше исследование этого процесса основано на культурологическом подходе, который является одним из современных методологических подходов в педагогике.

Ключевые слова: высшая школа, субъект профессиональной культуры, культурологический подход, образование.

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CONTENT AND METHODS OF DEVELOPING TEACHER'S PROFESSIONAL CULTURE

Abstract. The purpose of the article is to develop the content, methods and pedagogical means of forming the professional culture of the future teacher. Our study of this process is based on the cultural approach, which is one of the modern methodological approaches in pedagogy.

Key words: higher school, subject of professional culture, cultural approach, education.

Введение

Сегодня в современной педагогике преодолевается отношение к профессиональным знаниям и компетентности как цели профессионального образования [1]. Применительно к образованию профессиональная компетентность педагога не является единственной целью-результатом высшего профессионального образования. В педагогической профессии все в конечном итоге зависит от личности учителя и его профессиональной

культуры [2] Мы рассматриваем образовательную технологию как специально организованную и последовательно реализуемую деятельность по достижению запланированных дидактических целей. Исследователи выделили следующие основные характеристики образовательных технологий: системность, концептуальность, диагностичность, эффективность и воспроизводимость. Образовательная технология — это единство содержания, форм и методов обучения, обеспечивающее достижение запланированных результатов. Оперативная сторона педагогической деятельности не может быть отделена от ее личностного и субъективного вариантов. Реальные субъекты образовательного процесса являются основными элементами любой образовательной технологии [3]. Именно поэтому эффективность любой технологии определяется тем, насколько она дает реализацию человека и его качеств.

В связи с этим исследование содержания и методов формирования профессионализма учителя в образовательном процессе представляет научный интерес. Профессиональная компетентность педагога является важнейшим показателем его профессионализма. Но педагогическая деятельность имеет свои отличительные особенности, являясь профессией типа «человек-человек» со своими гуманистическими ценностями. С этих позиций проблема формирования профессиональной культуры является актуальной в высшем образовании. Применительно к профессиональному образованию компетентность является необходимым, но не единственным условием эффективного решения профессиональных задач.

Учитель как носитель высокой общепрофессиональной культуры и педагогических ценностей становится главной фигурой такого образовательного процесса. Он осознает культурную миссию образования и своей профессии. Он понимает ребенка и способен поддержать культуру детства. Будучи субъектом профессиональной культуры, он является посредником между ребенком и культурой.

Материалы и Методы

Наше исследование содержания профессиональной культуры учителя основано на принципах культурологического подхода. Это: рассмотрение объекта как культурного явления; системная реконструкция культуры; учет субъективности культурного развития; учет деятельности по реализации субъектности студента в культуре; единство нормативной и творческой культуры.

Профессиональная культура рассматривается как результат образовательного процесса в высшей школе. Это должно быть оценено не только по компетенциям, но и по личностным характеристикам.

В основу нашего исследования легла гипотеза о том, что формирование профессиональной культуры учителя определяется следующими факторами: образовательные условия: разработка из студента субъективных характеристик; стимуляция из саморазвития;

осознание значимости культурного самосовершенствования студента; переход университетского образования на поли предметную форму; ориентация образовательного процесса на модель предмета; высокий уровень профессиональной культуры преподавателей вуза; максимальное использование гуманитарного потенциала учебных дисциплин; использование активных методов обучения и другие.

В течение наш исследовать тот следующий диагностический методы были использовал: анализ, обобщение, сравнение, моделирование, включающее наблюдение, интервью, тестирование, экспертную оценку, изучение документации, педагогический эксперимент.

Студенты разных факультетов педагогического университета, участвующие в эксперименте, -100 человек (экспериментальная группа - 50 студентов, контрольная группа -50 студентов).

Полученные результаты

Для определения уровня сформированности педагогической культуры будущего учителя в сфере образования мы использовали диагностическую систему на констатирующем и оценочно-продуктивном этапах эксперимента (табл. 1).

Уровни	Группы	2	3	Этапы образования	4	5
Адаптивный	Контроль	42	18	8	4	
	Эксперимент	38	14	6	-	
Репродуктивный	Контроль	48	60	50	44	
	Эксперимент	38	38	20	18	
Репродуктивно-творческий	Контроль	10	18	32	40	
	Эксперимент	24	38	54	56	
Творческий	Контроль	-	4	10	12	
	Эксперимент	-	10	20	26	

Таблица 1. Динамика из того предмета из профессиональный культура формирование, в процент условия

По результатам опроса можно сделать вывод, что уровень оценочного, деятельностного и творческого компонентов педагогической культуры значительно вырос со студентами ВОЗ прошел пилот программа. Другие студенты также заметили положительные изменения, что можно объяснить профессиональной компетентностью преподавателей вуза.

В основу пилотной программы легла теоретическая модель формирования профессиональной культуры учителя. Модель включает в себя следующие компоненты: цель, задачи, принципы, содержание,

технологии, уровни и результаты. Данная модель позволяет представить процесс формирования субъекта профессиональной культуры как систему.

В блок «Цель» включено представление о конечном результате профессиональной подготовки – эффективном функционировании педагога как субъекта профессиональной культуры.

В блоке «Задачи» указана цель:

- вывести ценности педагогической культуры на уровень личностного смысла;
- к владельцу, а функциональную часть из тот педагогический культура;
- к реализовать тот процесс из творческая самореализация в учебном процессе.

Блок «Принципы» отражает требования к деятельности преподавателя вуза: культурная направленность образовательного процесса; «возвращение» и саморазвитие студента в области педагогической культуры; гуманитаризация образовательного процесса; герменевтический принцип процесса исследования; индивидуальное творческое развитие; рефлексивный характер учета образования.

Блок «Содержание» включает в себя комплекс знаний, умений, компетенций, профессиональных и культурных ценностей, культурологического смысла педагогической деятельности; базовые культурологические, психолого-педагогические знания; знания и навыки для само рефлексии; мульти культурные знания; культурные компетенции; субъективный опыт в учебе и профессиональной деятельности; переживание эмоционального стресса; навыки поиска смысла; методы педагогической деятельности и творческой самореализации.

В компонент «Технологии» включены личностно-ориентированные и студенческо-деятельностные технологии обучения, способствующие реализации культурного содержания образования: технология диалога; технология из индивидуальный творческий разработка; значение поиск технологии; активный обучение методы; кейс-метод.

Там являются 4 возможный уровни из освоение тот культура в тот единица «Уровни»: адаптивный, репродуктивный, репродуктивно-творческий; творческий.

Блок «Результаты» содержит итоговые показатели профессиональной культуры студентов: усиление варианта субъективности; переход на следую.

Однако технологии образования и средства формирования профессиональной культуры будущего учителя до сих пор глубоко не изучены в педагогике. Реализация культурологического подхода в высшей школе представлена фрагментарно. В то же время это требует концептуального системного исследования.

Заключение

Статья посвящена формированию будущего учителя как субъекта профессиональной культуры. Предмет профессиональная культура - это неотъемлемая характеристика педагога, который активно и осознанно не только осваивает артефакты педагогической культуры, но и реализует свою культурно-творческую сущность, создает культурное пространство для детей.

Мы определили критерии, позволяющие определить степень активности студентов в освоении профессиональной культуры: 1) уровень усвоения ценностей педагогической культуры; 2) уровень профессиональной компетентности; 3) реализация творческого потенциала.

Доказано, что формирование будущего учителя как субъекта профессиональной культуры является результатом культурно-творческий образовательный процесс. Он имеет следующие особенности: учитель и ученик осознают себя субъектами культуры; применяются личностно-ориентированные технологии; критерии культурной оценки используется для определения уровня готовности выпускников к педагогической деятельности.

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ДЕКАРБОНИЗИРОВАННАЯ ТЕХНОЛОГИЯ ДЕМИНЕРАЛИЗАЦИИ ВОД

Аннотация. Обоснована декарбонизированная газогидратная технология получения дополнительных водных ресурсов путем их деминерализации. Приводится обзор истории и методик исследований газовых гидратов. На основании ретроспективного анализа существующих технологий деминерализации вод, разработан наиболее эколого-экономичный способ, основанный на физико-химических процессах. Доказана эффективность наиболее усовершенствованной конструкции способа деминерализации вод. Катализатором образования газового гидрата явилась барбатажно-цилиндрическая колонна, перемешивающее устройство и система азотного охлаждения. Подтверждено технико-экономическое преимущество над известными методами.

Ключевые слова: деминерализация, газогидратная технология, подземные, коллекторно-дренажные, озерные и морские воды.

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DECARBONIZED WATER DEMINERALIZATION TECHNOLOGY

Abstract. The decarbonized gas hydrate technology for obtaining additional water resources through their demineralization is substantiated. A review of the history and methods of gas hydrate research is provided. Based on a retrospective analysis of existing water demineralization technologies, the most environmentally-economical method based on physical and chemical processes has been developed. The effectiveness of the most advanced design of the water demineralization method has been proven. The catalyst for the formation of gas

hydrate was cylindrical bubble columns, a mixing device and a nitrogen cooling system. The technical and economic advantage

Keywords: demineralization, gas hydrate technology, underground, collector-drainage, lake and sea waters.

Введение

Дефицит пресной воды ощущается в мире на территории 40 стран, расположенных главным образом в аридных, а также засушливых областях и составляющих около 60% всей поверхности земной суши (по расчетам, к началу 21 в. достигнет $120-150 \times 10^9 \text{ м}^3$). Интенсивный рост промышленности должен быть в максимальной степени обеспечен не вследствие увеличения водозаборов свежей воды, а в результате интенсивного развития систем оборотного и повторно-последовательного водоснабжения [1]. В настоящее время более 2,5 миллиарда человек живут в населенных пунктах, которые испытывают острую нехватку воды [2]. Проблема нарастающего дефицита пресной воды благоприятного состава признана проблемой международного значения [3]. Этот дефицит может быть покрыт утилизацией соленых вод после деминерализации, объективно востребованное как обществом, так и природой. Искусственное опреснение соленых вод перспективно. Наибольших успехов в этой области достигло Государственное управление по использованию соленых вод США [4].

Недостаток пресной воды может быть ликвидирован и подачей её по трубопроводам или каналам из районов, в которых она имеется в избытке. Однако при значительном удалении пресноводных источников опреснение солёной воды на месте стоит дешевле пресной воды, поступающей по водоводам. По оценкам специалистов, при водопотреблении до $1000 \text{ м}^3/\text{сут}$ опреснение солёной воды на месте выгоднее, чем подача пресной воды на расстояние больше 40-50 км, при водопотреблении $100000 \text{ м}^3/\text{сут}$ — выгоднее, чем подача пресной воды на расстояние, больше 150-200 км. В высокоразвитых странах – США, Япония, Голландии – уже применяются подобные технологии.

1 Методики и объект исследования

Все существующие технологии очистки и деминерализации подземных, сточных, включая коллекторно-дренажные и озерные воды могут быть подразделены на две большие группы. Первая группа технологий основана на удалении из воды загрязняющих компонентов, вторая группа технологий базируется на противоположном принципе: из сточной воды выделяются не загрязняющие компоненты, а молекулы чистой воды.

К первой группе технологий относятся способы технологической, биологической, химической, а также многие способы физико-химической очистки сточных вод (флотация, экстракция, адсорбция, коагуляция, диализ, обратный осмос и др.). Ко второй группе относятся способы,

основанные на выпаривании сточных вод, кристаллизации сухого остатка и конденсации дистиллята.

Использование первой группы технологий предпочтительно в тех случаях, когда доля загрязняющих компонентов в массе сточных вод незначительна. Если же концентрация загрязняющих компонентов достигает десятков и более грамм на литр, целесообразно использование второй группы технологий.

Именно вторая группа технологий наиболее перспективна при деминерализации подземных, коллекторно-дренажных, озёрных и сбросных вод, содержащих повышенные концентрации хлоридных, сульфатных, карбонатных и других неорганических солей. Однако существующим технологиям второй группы присущ весьма существенный недостаток: эти технологии характеризуются весьма высокой энергоёмкостью.

Современный уровень техники характеризуется гидратной технологией деминерализации сточных вод, которая лишена указанного выше недостатка – высокой энергоёмкости процессов. Человеческая практика непрестанно ставит перед наукой все новые и новые вопросы, нарастающие числом и сложностью. Успешное их решение является мощным стимулом прогресса человечества. Однако, бывает и так, что некоторые явления и закономерности первоначально недооцениваются. Так было с группой веществ, получивших название газовых гидратов, что и явилось объектом исследования

1.1 Ретроспективный анализ газовых гидратов

Как отмечают Ф.А. Кузнецов и другие [5], первым исследователем, что наблюдал образование газовых гидратов, по всей вероятности, был английский химик Джозеф Пристли (1777-1778). Он получил необычный лед-гидрат сернистого газа, существующий при положительных температурах, который, в отличие от обычного гексагонального льда тонул в водных растворах SO_2 . Далее французские физики Атаназ Пельтье и Карстен получили гидрат хлора (1785-1786). Однако они полагали, что имеют дело с твердым хлором. И все-таки, началом более «осознанной» химии газовых гидратов сейчас принято датировать 1811 годом, когда английский химик и физик Гемфри Дэви сообщил о получении - гидрата хлора (хлор пропускался через охлажденную до 0°C воду). Великий английский физик Майкл Фарадей ещё 1823 году приблизительно выполнил анализы состава гидрата хлора и приписал ему стехиометрическую формулу $\text{Cl}_2 \cdot 10\text{H}_2\text{O}$. В 1829 г. Левич открыл гидрат брома, а в 1840 г. немецкий химик Фридрих Вёлер получил гидрат сероводорода, причем с высокой точностью установил его состав ($\text{H}_2\text{S} \cdot 6\text{H}_2\text{O}$). Позднее польский физик Зыгмунт Вроблевски (1882 г.) синтезировал гидрат диоксида углерода. В 1884 году Нидерландский физико-химик Хендрик Розебом предложил формулу состава гидрата-хлора $8\text{H}_2\text{O} \cdot \text{Cl}_2$. Гидраты метана, этана, пропана, этилена,

аргона, криптона, ксенона и ряда других газов исследовал П. Виллар с 1888 г. В эти же годы разрабатываются методы определения состава газовых гидратов (французские физико-химики Анри Луи Ле Шателье и др.). Последующие исследования были проведены многими учеными [6-25].

В последние годы в Китае Гуо с соотрд.; в Японии Хонда, Учида, Эбинума, Нарита, Танака и др.; в Дании Расмуссен с соотрд.; в США Слоан с соотрд., Холдер с соотрд., Ю.Ф.Макогон и др.; в Канаде группа Рипмистера, группа Бишну, Энглезос и др.; в Великобритании группа Тохиди с соотрудниками [5] и в других странах [7; 11; 13-17; 25] были продолжены работы в этом направлении.

Дальнейшие исследования газовых гидратов (вплоть до начала тридцатых годов XX века) носили чисто академический характер. И основная причина этого, по-видимому, заключалась в том, что газовые гидраты не находили применения в промышленных технологиях. Только после начала развития газовой промышленности изучение газовых гидратов получило практический толчок, так как возникла необходимость разработки методов предупреждения их образования и скопления в трубопроводах и аппаратах при добыче и транспорте газа.

Начиная с 1940-х годов публикуются и патентуются многочисленные и весьма перспективные предложения по использованию газогидратов в различных технологических процессах и в частности, как опреснение воды, обессоливание морской воды, концентрирование и разделение водных растворов и др.

Отдельных успехов в практическом отношении достигли в Великобритании, где создана опытно-промышленная установка по получению гидратов производительностью 1 т/сут. В Японии построены полупромышленные установки по получению лед – газогидратных «таблеток» которые можно хранить и перевозить при низких температурах [5].

Резюмируя можно отметить, что это лишь перечень исследований газовых гидратов, однако практическая их ценность – огромна, они составляют научно-техническую базу для гидроэкологических, гидрохимических, гидрологических, геологических и экологических исследований.

Впоследствии было обращено внимание на то, что газовые гидраты могут быть использованы в различных промышленных технологиях (деминерализация воды, разделение газов, рассеяние туманов, облаков и др.).

1.2 Анализ технологий деминерализации вод

Как отмечают Л.В. Кирейчева и др, минерализованные дренажные воды – это отходы гидромелиоративной системы. Их утилизация – серьезнейшая проблема современной науки [26]. Подземные воды

глубокого залегания засолены и могут быть задействованы только при условии их опреснения [27].

Современный уровень науки и техники требует разработку эколого-экономичных технологий деминерализации вод. В настоящее время в целях деминерализации вод применяют различные способы очистки: химические-ионный обмен, опреснение клатратами; физические: вымораживание, дистилляция, активация; физико-химические: сорбция, электродиализ, обратный осмос, газовые гидраты; биологические и биохимические-аэробные и анаэробные микроорганизмы, микрофиты, гидромакрофиты, сорбенты.

Метод ионного обмена используется для деминерализации вод с содержанием солей 1,5 -10 г/л. Однако при опреснении сильно минерализованных вод расход химических реагентов увеличивается и составляет 3...5% количества опресняемой воды [28]. Как отмечают Л.А. Коренева и М.К.Адылова, ... опреснительные технологии требуют использования дорогостоящих оборудования и материалов, следовательно, проблема разработки дешёвых технологий весьма актуальна [29]. При сравнении технико-экономических параметров различных способов, самой эколого-экономичной технологией явилась газогидратная [табл].

Таблица

№	Наименование способов	Минерализация опресняемой воды, г/л	Производительность, м ³ /час	Удельные энергозатраты на 1 м ³ воды, кВт ч/м ³	Стоимость 1 м ³ деминерализованной воды, сум (01.04.2024 г.)	Стоимость 1 м ³ пресной питьевой воды, сум (01.04.2024 г.)
11	Газогидратная технология	2-3÷500	50-500	2-6	1800-5400	Для бюджетных организаций 6000 для оптовых организаций 10000
22	Обратный осмос	2÷36	0,005-50	2-2,5	1800-2250	
33	Электродиализ	2÷36	0,05	3-6,5	2700-5850	
44	Термическое обессоливание	Не зависит от минерализации воды	1-12	5,5-25	4950-22500	
55	Вымораживание	Не зависит от минерализации воды	20	9,2-10	8280-9000	
66	Дистилляция	Не зависит от минерализации воды	0,06	До 18	До 16200	

Суть этой технологии состоит в том, что при контакте газа-гидратообразователя со сточной водой при соответствующих температурах и давлениях образуется газовый гидрат, в который входят только газ и пресная вода, а соли остаются в растворе, так как молекулы их слишком велики и не помещаются в полостях молекул воды. После выделения кристаллов гидрата из рассола их промывают и разлагают с образованием пресной воды и газа, который вновь направляют в цикл. В промышленных установках фирмы «Coppers» в качестве газа-гидратообразователя используют пропан [29].

Низкая энергоёмкость гидратной технологии деминерализации природных и сточных вод базируется на том, что основной процесс протекает в температурном интервале 0-10⁰С.

Существенные недостатки этого способа в основном связаны с выбором газа-гидратообразователя, так как именно этот газ определяет конечный результат, а также параметры и эффективность всех звеньев в технологической цепочке. В данном способе, как уже указывалось выше, в качестве газа-гидратообразователя используют пропан. Однако этот газ, во-первых, огне-и взрывоопасен. Во-вторых, он дефицитен, особенно в странах и регионах, не имеющих собственных нефтяных и газовых месторождений.

Пропану присущи также следующие недостатки технологического плана. Как газообразный, так и сжиженный пропан плохо растворимы в воде, что отрицательно сказывается на кинетике гидратообразования. Газовый гидрат этого углеводорода существует в весьма узком интервале положительных температур, что также накладывает ограничения на технологический процесс его использования.

2. Результаты и обсуждения исследований

Основной задачей, решаемой нашим предложением, является устранение отмеченных выше недостатков. Предложенное техническое решение [30] включает получение газового гидрата при контактировании газа-гидратообразователя с водой, выделение кристаллов гидрата, их промывку и разложение с образованием пресной воды и газа, причём в качестве газа-гидратообразователя используют растворимый в воде газ. По своим параметрам наиболее пригодным для этих целей является двуокись углерода (CO₂). При этом образование гидрата двуокиси углерода осуществляют в интервале температур 275- 179⁰К при давлениях 1400 2500 кПа.

В настоящее время известно довольно большое количество газов, образующих гидраты. Однако далеко не все они пригодны для осуществления гидратного процесса деминерализации вод. В качестве критериев выбора оптимального газа-гидратообразователя могут быть использованы следующие: во-первых, гидрат должен образоваться при положительных температурах, т.е. контактируя с жидкой водой, при давлениях выше атмосферного (для исключения попадания в систему

воздуха), но не более 20-25 МПа (для уменьшения металлоёмкости конструкций, исходя из условий прочности); во-вторых, предпочтителен газ, хорошо растворимый в воде, и, в-третьих, газ-гидратообразователь должен соответствовать условиям гигиеничности и экологичности.

Очень многие газы-гидратообразователи, полностью соответствуя одним критериям, совершенно не отвечают другим. Так, гидраты ряда галоидированных углеводородов (фреонов) существуют при температурах до 21⁰С (например, хлористый метил CH_3Cl) и давлениях не выше 1,6 кПа (бромистый метил CH_3Br). Однако фреоны опасны с экологической точки зрения (разрушают озоновый слой земли), к тому же весьма дорогостоящи.

Весьма привлекательно применение хлора. Этот газ хорошо растворим в воде (461 мл в 100 г. воды при 0⁰С). Кроме того, он имеет очень высокую критическую температуру гидратообразования (28,7⁰С). Однако хлор высокотоксичен и является сильным корродирующим агентом.

Перечисленным выше критериям в наибольшей степени соответствует двуокись углерода. Именно этот газ обладает существенными преимуществами по сравнению с газом, используемым в способе- США (пропаном).

Во-первых, двуокись углерода хорошо растворима в воде (при 0⁰С в 100 г воды растворяется 171,3 мл CO_2). Во-вторых, ΔH_1 для двуокиси углерода равно 59,9 кДж/моль, что в 2 раза ниже, чем для пропана. В-третьих, гидрат двуокиси углерода образуется в наиболее широком интервале положительных температур. Для CO_2 максимальная температура существования гидрата равна 283,1⁰ К, т.е. интервал положительных температур гидратообразования почти в два раза шире, чем для гидрата пропана.

Двуокись углерода неопасна в обращении (в противоположность горючему и взрывоопасному пропану), водные растворы CO_2 нетоксичны для человека, поэтому не требуется полное ее удаление из конечного продукта (пресной воды). Двуокись углерода более широко распространенный в природе и более дешёвый газ по сравнению с пропаном. Если пропан может быть получен из горючих подземных и попутных нефтяных газов, то источником CO_2 являются газы топочные, металлургические, хлебопекарного производства, спиртового брожения и др.

Формула гидрата двуокиси углерода изменяется от $\text{CO}_2 \cdot 6\text{H}_2\text{O}$ до $\text{CO}_2 \cdot 17\text{H}_2\text{O}$ (при давлениях до 70 МПа). Нижняя квадрупольная точка системы $\text{CO}_2 + \text{H}_2\text{O}$ (газ-гидрат-лёд) характеризуется следующими параметрами: $T=273,1^0$ К; $P=1250$ кПа, а верхняя квадрупольная точка (газ-гидрат-вода-жидкий гидратообразователь) – параметрами: $T=283,1^0$ К, $P=4490$ кПа. При нормальном атмосферном давлении ($P=101,3$ кПа) равновесная температура существования гидрата $T=218,1^0$ К (-55⁰С).

Для реализации разработанного способа важное значение имеют Р-Т-условия гидратообразования, так как они определяют режимные характеристики технологического процесса деминерализации вод, а также выбор насосов, компрессоров и материалов конструктивных элементов используемых устройств и установок. На основании обобщения разрозненных литературных (зачастую противоречивых) данных и проведения специальных экспериментальных прецизионных исследований, а также проведения расчётов, получены следующие условия образования гидрата CO_2 в системе $\text{CO}_2+\text{H}_2\text{O}$ (рис. 1).

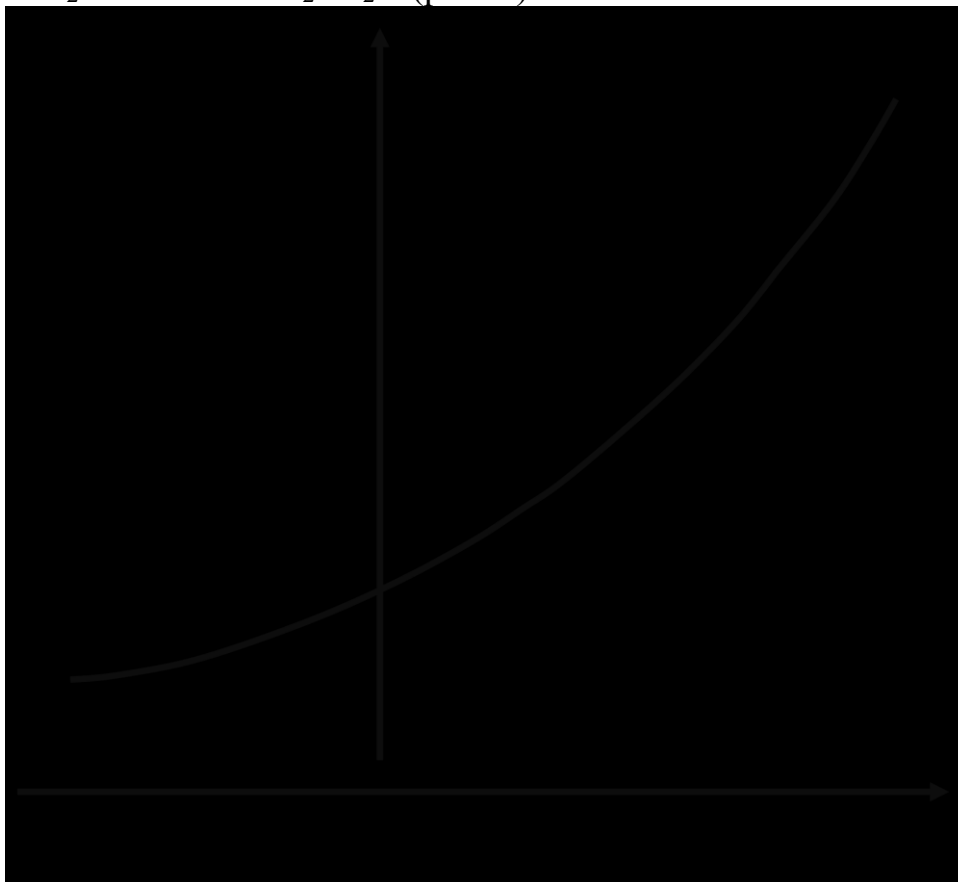


Рисунок 1. Условия образования гидрата двуокиси углерода в системе $\text{CO}_2+\text{H}_2\text{O}$.

Поле выше кривой-область существования гидратов.

Исходя из экспериментальных данных, в качестве оптимального температурного интервала принят интервал от 275 до 279⁰ К, которому соответствуют равновесные давления гидратообразования от 1400 до 2500 кПа. Температурные интервалы 273,1–274,9⁰ К и 279,1–283,1⁰ К составляют некий режимный “запас прочности” (они примыкают к верхним и нижним квадрупольным точкам, вблизи которых процесс гидратообразования резко ослабевает; кроме того, они необходимы для регулирования процессов теплообмена).

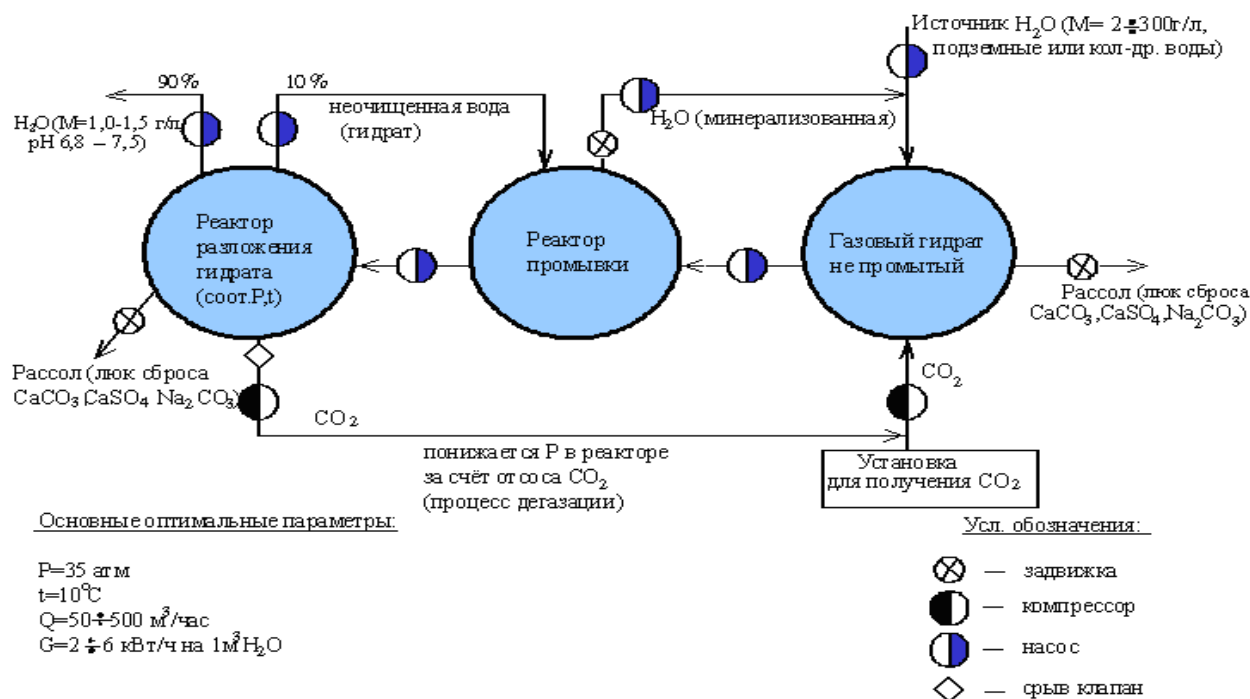


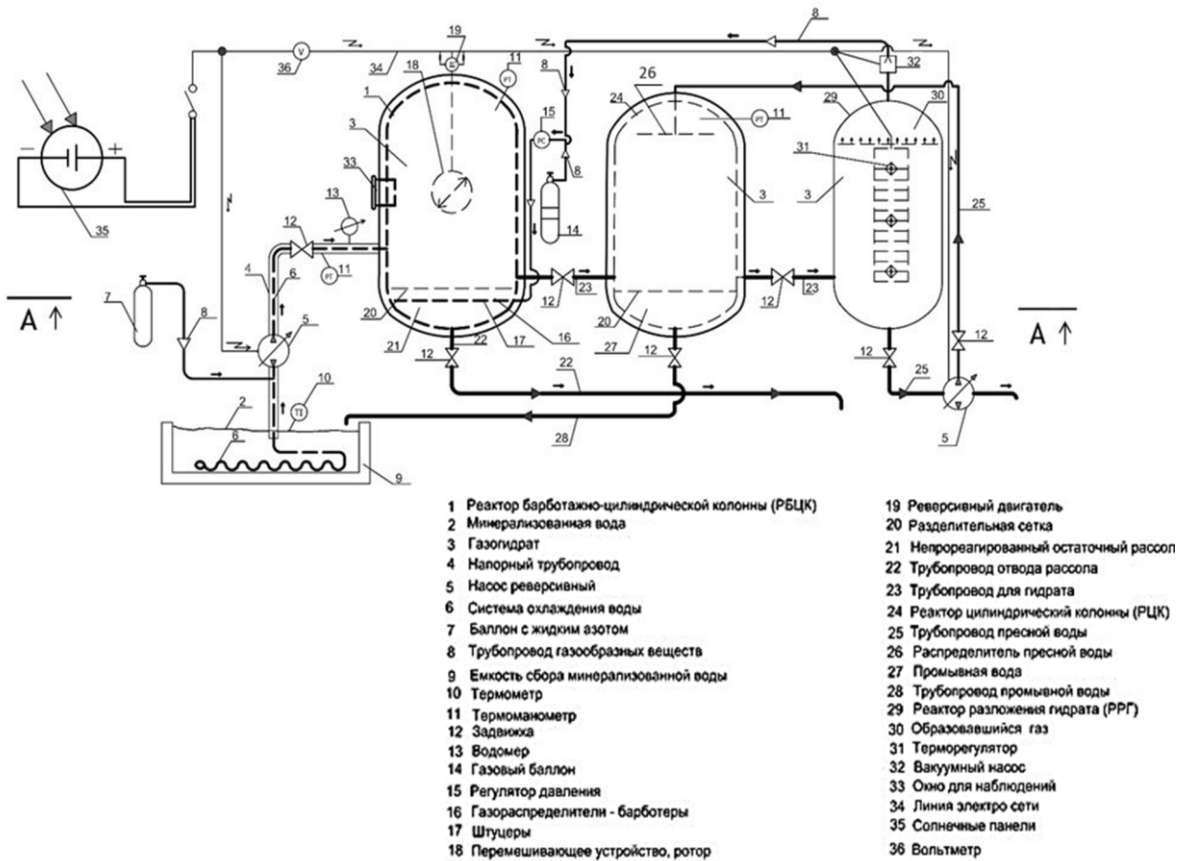
Рисунок 2. Технологическая схема способа деминерализации вод

Предлагаемый способ деминерализации вод включает получение газового гидрата при контактировании газа-гидратообразователя с минерализованной водой, выделение кристаллов гидрата, их промывку и разложение с образованием пресной воды и газа, причём в качестве газа-гидратообразователя используют растворимый в воде газ-двуокись углерода, а сам процесс гидратообразования осуществляют в интервале температур 275- 279⁰ К и при давлениях 1400-2500 кПа.

Технологическая схема деминерализации приведена на рис.2 Здесь отражены всевозможные процессы. Дальнейшие исследования позволили разработать модернизированную технологию и новую установку [33] (рис. 3).

Способ деминерализации воды [рис.3], включающий получение в цилиндрической колонне (1) газового гидрата (3) при контактировании минерализованной воды (2) с сжатой под давлением или сжиженную двуокисью углерода, используемой в качестве газа-гидратообразователя, промывку газового гидрата (24) и его разложение с образованием деминерализованной воды и газа (29), отличающийся тем, что подачу минерализованной воды (4) в цилиндрическую колонну (1) охлаждают азотной системой (6), для ускорения перемешивания газа-гидратообразователя с минерализованной водой производят барботирование и вращение устройством в виде ротора (18), а в реакторе для разложения газового гидрата (29) нагревают терморегулирующий теплообменник (31), причем система электроснабжения (34) получает электроэнергию от солнечной системы (35).

Рисунок 3. Модернизированная технологическая схема установки



Еще одна особенность предложенного модернизированного решения – его универсальность. Поэтому деминерализации могут быть приняты подземные, коллекторно-дренажные, озерные и иные сточные воды весьма широкого спектра показателей: рН 3÷12; минерализации – от 2-3 до 200-300 г/л (кстати в апреле 2009г. засоление вод Восточного Арала достигло 253г/л [32]); она обладает селективностью, т.е. тип загрязнений – как неорганический, так и органический. Это означает, что для деминерализации вод, даже резко отличающихся по составу, могут быть использованы одни и те же типовые гидратные установки, а подземные и сбросные воды многих гидромелиоративных и коммунально-бытовых систем могут неограниченно объединяться в общий сток для их централизованной очистки.

Конечным продуктом деминерализации является пресная вода. Гидратная технология предусматривает следующие требования к ней: рН 6,8+7,5; сухой остаток — не выше 1,0-1,5 г/л; по химическому, бактериальному составу, содержанию взвесей и физическим свойствам вода соответствует действующим нормативам. Как известно воды минерализацией от 0,7 до 2,0 г/л считаются хорошими по качеству для орошения [33]. Проектная мощность промышленных установок от 50 до 500 м³/ч.

Надо отметить, что одним из ярких объектов Мира, где востребовано применение данной технологии, является Центрально-Азиатский регион, где около 40% воды забранной из источников, участвует в формировании соленых дренажно-сбросных вод [32]. Описание перспективных ресурсоэкономичных технологий и технических средств для очистки дренажных и сбросных вод гидромелиоративных систем в СНГ приведены в каталоге [36].

Репрезентативным государством необходимости деминерализации соленых вод является Узбекистан, которое диктуется тем, что как отмечают В.А.Борисов и др., количество пресных питьевых подземных вод в Узбекистане за 30 лет (1965-1995) уменьшилось с 471 до 294 м³/с и стало составлять 34% вместо 56% от общей величины ресурсов подземных вод с минерализацией 5 и более г/л. Количество же последних даже несколько возросло с 844 до 853 м³/с [35]. Необходимость деминерализации соленых вод в одной из самых засушливых районов, которым является юг Узбекистана, объясняется тем, что наличие пресных (до 1,0 г/л) подземных вод в регионе незначительно (Сурхандарьинском -29,14, а в Кашкадарьинском -15,6 м³/с) по сравнению с Ферганским (111,4 м³/с), Приташкентским (90,8 м³/с) и Зарафшанским (46,4 м³/с) гидрогеологическими районами [36].

Заключение

1. Деминерализация вод рекомендуется как наиболее кардинальный вариант решения их утилизации.

2. Деминерализованные воды являются дополнительным ресурсом в повышении водообеспеченности отраслей экономики.

3. Разработанный усовершенствованный способ газогидратной технологии деминерализации вод соответствует современному уровню науки и техники, повышает безопасность работ, снижает дефицитность газо-гидратообразования, а также энергоемкость и повышает технологичность процессов: ускоряет образование гидратов и расширяет интервал положительных температур гидратообразования.

4. Экологичность данной технологии заключается в использовании одного из безопасного газа (СО₂) усиливающим метаболизм в организме человека, в декарбонизации за счет сокращения выброса, разрушающего озоновый слой и повышающий парниковый эффект, который влечет за собой глобальное потепление.

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EKSPERIMENTAL JIGAR SIRROZI SHAROITIDA PASTKI PORTO-KAVAL VENOZ TIZIMI MORFOLOGIYASINING O'RGANILGANLIK DARAJASI

Annotatsiya. Ushbu maqolada ohirgi yillarda xar hil davlatlarda jigar sirrozi bilan kasalanish darajasi va eksperimental jigar sirrozi sharoitida pastki porto-kaval vena tizimi qon tomirlarining morfologik o'zgarishlarining o'rganilganlik xolati yoritilgan.

Kalit so'zlar: jigar sirrozi, pastki porto-kaval anastamoz, morfologiya, gistologik tuzilish, eksperimental.

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THE LEVEL OF STUDY OF THE MORPHOLOGY OF THE LOWER PORTO-CAVAL VENOUS SYSTEM IN THE CONDITIONS OF EXPERIMENTAL LIVER CIRRHOSIS

Resume. The article in recent years describes the level of liver cirrhosis in various countries and the state of studying morphological changes in the vessels

of the lower porto-caval venous system in conditions of experimental liver cirrhosis.

Key words: liver cirrhosis, lower porta-caval anastomosis, morphology, histological structure, experiment.

Kirish. 2020 yilda Lancet Gastroenterology & Hepatology 1990 yildan 2017 yilgacha 195 ta davlatlarda jigar sirrozi [JS] bilan aholi kasalanish darajasining epidemiologik ko'rsatkichlarini o'rganishga bag'ishlangan fundamental ilmiy ishini nashr etdi. Osiyo, Tinch okeani mintaqasi, Markaziy Lotin Amerikasi, Markaziy va Sharqiy Yevropa aholisi orasida kompensatsiyalangan JS bilan kasallanish Shimoliy Amerika, Janubi-Sharqiy Osiyo va Avstraliyaga qaraganda 5-6 barobar yuqori. MDH davlatlarida JS bilan kasallanish darajasi umumiy aholining 1% da uchraydi. O'zbekistonda jigarning surunkali kasalliklar va JS tufayli o'lim ko'rsatkichi 2000 yilda har yuz ming aholiga 45.3 kishini tashkil etgan bo'lsa, 2005 yilda bu ko'rsatkich 42.5 taga yetadi. Hozirgi kunda tibbiyotda JS kasalligida yuqorigi porto-kaval (YuPK) va pastki porto-kaval (PPK) venoz anastomozlari qon tomirlaridan qon ketish asoratlardan o'lim holati dolzarb muammolardan biri bo'lib qolmoqda (Yeramishantsev A. K., Musin R. A., Lyubiviy Ye. D. 2005., F.G. F.G. Nazirov, A.V. Devyatov, A.X. Babadjanov 2010., S.B. Jigalova, A.B. Melkumov, V.G. Manukyan, A.G. Shertsinger 2015.,)

Tadqiqot maqsadi: Ohirgi yillardagi ilmiy ma'lumotlarni Rossiyaning internetdagi eng yirik ilmiy ishlar katalogi disser Cat sayti, AQShning sog'liqni saqlash va inson xizmatlari departamentining PubMed logotipi milliy biotexnologiya axborot markazi biotibbiyot va genomik ma'lumotlarga kirish sayti va O'zbekiston ilmiy jurnallaridan foydalangan holda ilmiy ma'lumot to'plab maqsadni amalga oshirish.

Tadqiqot materiallari va usullari: So'nngi yillardagi ilmiy materallarini Rossiyaning internetdagi eng yirik ilmiy ishlar katalogi disser Cat sayti, AQShning sog'liqni saqlash va inson xizmatlari departamentining PubMed logotipi milliy biotexnologiya axborot markazi biotibbiyot va genomik ma'lumotlarga kirish sayti va O'zbekiston ilmiy jurnallaridan foydalangan holda, tahlil qilish va taqqoslash orqali amalga oshiriladi.

Олинган натижалар. Bir qancha olimlar (N.V. Abramovskaya 2007. Volkov A. V. 2009) surunkali JS holatida YuPK anastomoz venalari bo'lgan qizilo'ngach-oshqozonga o'tish sohasida varikoz venalaridan, PPK anastomozga qo'shiluvchi yo'g'on ichakning varikoz kengaygan venalarida qon ketish sabablarini aniqlash maqsadida tajribada JS chaqirib, qon tomirlar anatomomorfologik tuzilishini va vegetativ nerv tolalarining neyrogistologik tuzilmalarining morfologiyasini o'rganishgan. Nadjimudinov T.K, Yuldasheva M.T, Nadjimudinov M.T. larning yozishicha, tajriba hayvonlarida pestitsidlar ta'sirida surunkali zaharlanish holatida elektron mikroskop tekshiruv usulida jigar nerv tizimidagi buzilishlar natijasida qon tomirlarida gemodinamik buzilishlar

kuzatilishi, gepatotsitlardagi ultratuzilmalarning distrofik o'zgarishlari yuzaga kelishini o'rganib, bu jarayonga mikroto'lqin ta'sirida jigar faoliyati qayta tiklanishini kuzatgan. Boshqa bir (B.R. Aliev, A.S. Xikmatullaeva, A.N. Tillaev 2015) ilmiy izlanishda bemorlarda JS va surunkali virusli gepatit S, D [SVGSD] kasalik holatlarida jigar sinusoid kapilyarining tuzilishini jigardan bioptat olinib gemotoksilin Eozin va Mallori bo'yash usullari hamda elektron mikroskop tekshirish usuli yordamida tekshirgan. Ilmiy tadqiqot natijasida aniqlanishicha, JSda, SVGS va SVGD kasalliklarida sinusoid kapilyarlar devorida aniqlangan tarkibiy o'zgarishlar gepototsitlar va qon zardobi o'rtasidagi metabolik jarayonlarning yomonlashishiga olib keladi. Natijada ayrim jigar hujayralarining trofik va funksional faolligi buziladi. JS ning kelib chiqish sabablarini o'rganish hozirgi vaqtda dolzarb muammolardan biri hisoblanadi. Ishtimoiy-tibbiy jihatdan JS kasalligining ortishi odamlarning mehnat qilish qobiliyatini yo'qotishiga olib keladi. Ayrim ilmiy izlanuvchilarning ta'kidlashicha JS da gastroduodenopatiya kasalliklarida simptomlarning bo'lmasligi yoki sust namoyon bo'lishi kuzatilgan [4,7,20,22.]. Yana bir qancha mualliflarning ma'lumotiga ko'ra JS kasalligida YuPK yani qizilungach qorin qismi bilan me'da a'zolari o'rtasidagi venoz anastomozlarning varikoz kengaygan vena qon tomirlarining yorilishidan qon ketish asorati 10-70 % gacha kuzatiladi. [5,14]. Ko'p hollarda varikoz kengaygan qon tomirlardan qon ketgan. Klinik tadqiqotchilar tomonidan bir qator zamonaviy davolash usullari ishlab chiqilgan. Unga ko'ra JS kasalligida qopqa venasidan qonni jigar meyorida qabul qilmasligi hisobiga me'da va qizilungach qorin qismi, yo'g'on ichak va ingichka ichak qismlaridan surunkali venoz qon dimlanishi kuzatiladi. Shundan ma'lumki bu a'zolar o'rtasidagi yaqin anatomik- fiziologik munosabatlar va funksional o'zaro bog'liqligini bildiradi [21,13]. Muallif o'zining ilmiy izlanishida nospetsifik yarali kolit kasalligida fibrokolonoskop apparati yordamida to'g'ri ichak va sigmasimon ichaklarning shilliq qavatidan to'qima olib, ichak shilliq qavatidagi endokrin apparatining hujayralarini immunomorfologik o'zgarish bosqichlarini kasallikning har xil darajalarida o'rganadi. Uning fikricha yo'g'on ichak shilliq qavatidagi endokrin hujayralari faoliyatining ortishi yallig'lanishning dastlabki bosqichida va shillik qavat funksional qobiliyatining ortishida kuzatilsa, aksincha hujayralar faolligi pasayishi shillik qavat to'qimalarida yallig'lanishning kuchayishi bilan namoyon buladi. Korrelyatsion tahlil usuliga asoslanib aytish mumkinki, serotonin tutuvchi hujayralar va intraepitelial limfotsitlarning ortishi kasallikning qaytalashidan darak beradi. (2,3,21) Muallifning ishiga ko'ra, sirroz rivojlanishining barcha bosqichlarida yosh bolalarda (7 yoshgacha) shish-assit sindromi ustunlik qiladi. Sirroz bilan og'rikan katta yoshdagi bolalar (8-15 yosh) erta qizilo'ngach-oshqozon qon ketishining yuqori xavfi bilan tavsiflanadi. (1,23) Birinchi marta mualif tomonidan to'g'ri ichakning klinik, morfologik, mikrobiologik xususiyatlarini sirrozning etiologiyasi va sinfi bilan solishtirganda har tomonlama tahlil qilish o'tkazilgan. Sirrozda birinchi marta serotonin va xromogranin-A ga immunopozitiv kolonotsitlar, hujayra yangilanish belgilarini ifodalash sohasining

immunogistokimyoviy va morfometrik ko'rsatkichlari o'rganildi. Enterik nerv tizimi hazim traktining nerv tizimi bo'lib, uzoq yillar o'rganib kelinishiga qaramay u periferik nerv tizimining kam o'rganilgan tuzilmalaridan bo'lib qolmoqda. [Furness J., 2006, 2012]. Enterik nerv tizimi oshqozon ichak qavatlari orasi bo'ylab mushaklararo va shilliq osti tutamlar bilan ifodalanadi. Ushbu tutamlarni hosil qiluvchi neyronlar va glial hujayralar nerv tugunlarini bog'laydigan mushaklararo, shilliqosti va xususiy plastinkadagi nerv tolalarini o'z ichiga olgan intramural nervlardir.

Ilmiy izlanish natijasida quyonlarda adashgan nerv tolalari bo'ylab aksoplazmatik oqimning ovqat hazim qilish a'zolarining postnatal struktural va funksional rivojlanishiga ta'siri haqida yangi ma'lumot olgan. Aksoplazmatik oqimning adashgan nervga ta'siri to'xtatilganda asetilxolin tarkibidagi asetilxolinesteraza va xolinergik ko'rsatkichning faolligi oshib jigar, me'da va me'da osti bezining lipolitik va amilolitik fermeptlari faollashishi kuzatiladi. (6) Muallif birinchi bo'lib mushuk va itlarda oshqozon, o'n ikki barmoq ichak, och ichak va yonbosh ichaklar devorlarini ultrasonagrafik tekshirish usuli orqali o'rganib aks-sado bir xil gomogenligini aniqladi. Har bir a'zolarining shillik, shillik osti qavati va mushak qavatlaridan kelayotgan aks sado tovushlarning qaysi qavatga tegishli ulushlarini o'rganib ishlab chiqdi [9]. So'ngi yillardagi ilmiy adabiyotlarni tahlil qilganimizda, quyonlarda eksperimental jigar sirrozi sharoitida pastki porto-kaval tizimi vena qon tomorlarining morfologiyasini o'rgangan ilmiy ma'lumot topilmadi. Shundan kelib chiqqan holda ushbu mavzuni o'rganish dolzarb mavzulardan biri hisoblanadi.

Xulosa: Birinchi marta eksperimental jigar sirrozi sharoitida quyonlarda pastki porto-kaval tizimi vena qon tomirlarining morfologik o'zgarishlarini umumgistologik usullarni qo'lagan holda qiyosiy o'rganish. Amaliyotda jigar sirrozida kasalligida yo'g'on ichak qisimlaridan qon ketishning oldini olish yangi xirurgik davolash usullarini ishlab chiqishga tadbiiq etish.

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BIOFIZIKA FANINING TIBBIYOTDAGI AHAMIYATI

Annotasiya Ushbu maqolada tibbiyot sohasi uchun fizika, biologiya hamda kimyo fanlarining ahamiyati to'g'risida bayon etildi.

Kalit so'zlar: Astrofizika, gidrodinamika, mexanika, farmakologiya, gigiyena.

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IMPORTANCE OF BIOPHISICS IN MEDICINE

Abstract. This article describes the importance of physics, biology and chemistry for the field of medicine.

Key words: Astrophysics, hydrodynamics, mechanics, pharmacology, hygiene.

Materiya harakatining turli shakllari bir- biri bilan aloqadorlikda va bir biriga bog'liq bo'ladi, bu esa avvalgi fanlar qo'shilishidan yangi fanlarning – biofizika, astrofizika, kimyoviy fizika va boshqalarning kelib chiqishiga, shuningdek, bir fan yutug'idan boshqa fanning rivoji uchun foydalanishga sabab bo'ladi.

Inson organizmida sodir bo'ladigan turli jarayonlarning murakkabligiga va o'zaro bog'liqlikda bo'lishiga qaramay, ular orasidan ko'pincha fizik jarayonga yaqin bo'lganlarini ajratib ko'rsatish mumkin bo'ladi. Masalan, qon aylanish kabi murakkab fiziologik jarayonlar aslida fizik jarayondir, chunki bu jarayon suyuqlikni oqishi – gidrodinamika, tomir bo'ylab elastik tebranishlarning tarqalishi – tebranishlar va to'lqinlar, yurakning mexanik ishi – mexanika, biopotensiallarning generatsiyasi – elektr va hokazolar bilan bog'liq. Nafas olish gaz harakati – aerodinamika, issiqlik o'tkazish – termodinamika, bug'lanish (fazoviy o'tishlar) va hokazolar bilan bog'liq.

Organizmida fizik makrojarayonlardan tashqari, huddi jonsiz tabiatdagi kabi molekulyar jarayonlar ham sodir bo‘ladi va ular biologik sistemalarning holatini belgilaydi. Bunday mikrojarayonlarning fizikasini tushunish otganizm holatini, ba’zi bir kasalliklarning tabiatini tushunish, dorilarni ta’sirini va shu kabilarni Tripoli baholash uchun ham zarurdir.

Bu masalalarning hammasida fizika biologiya bilan shu darajada bog‘langanki, u mustaqil fan – biofizikani vujudga keltirdi. Bu fan tirik organizmdagi fizik va fizikaviy – kimyoviy jarayonlarni, shuningdek, biologik sistemalarni ultrastrukturasi tashkil qilishning hamma jabhalarida – submolekulyar va molekulalardan to to‘qima va to‘liq orhanizmgacha o‘rganadi.

Diagnostika va tadqiqotlarning ko‘pgina prinsiplari va g‘oyalardan foydalanishga asoslangan. Ko‘pgina zamonaviy tibbiy asbob - uskunalar tuzilishiga ko‘ra fizik asboblardir. Mexanik kattalik – qon bosimi bir qator kasalliklarni baholash uchun foydalaniladigan ko‘rsatkichdir. Manbai orhanizmning ichkarisida bo‘lgan tovushlarni eshitish azolarning kasalligi yoki sog‘ligi haqida axborot olishga imkon beradi. Ishlashi simobning issiqlikdan kengayishiga asoslangan meditsina termometri – keng tarqalgan meditsina diagnostik asbobdir. Keyingi yillarda elektron qurilmalarning rivojlanishi natijasida tirik organizmda sodir bo‘ladigan biopotensiallarning yozib olishga asoslangan diagnostik usullar keng tarqalmoqda. Ko‘pchilikka ma’lum bo‘lgan usul – elektrokardiografiya – yurak faoliyatini aks ettiruvchi biopotensiallarni yozishdir. Mikroskopning tibbiy va biologik tadqiqotlardagi ahamiyati barchamizga ma’lum. Tolali optikaga asoslangan zamonaviy tibbiy asboblari organizmning ichki bo‘shliqlarini ko‘rishga imkon bermoqda. Spektral analiz usulidan adliyaviy tibbiyotda, gigiyenada, farmokologiyada va biologiyada foydalaniladi. Atom va yadro fizikasining yutuqlari diagnostikadagi ancha mashhur metodlar: rentgenologik diagnostika va nishonlangan atomlar usullari ham barchamizga ma’lum.

Tibbiyotda qo‘llaniladigan turli davolash usullari ichida davolashning fizik omillari ham o‘rin topmoqda. Ularning ba’zilar haqida qisqacha tanishib chiqamiz. Suyak singanida foydalaniladigan gipsli bog‘lanishlar yordamida shikastlangan organni harakatsiz, qo‘zg‘almas holatga keltiriladi. Davolash maqsadida sovutish va isitish issiqlik ta’siriga asoslangandir. Elektr va elektromagnit ta’ sirlar fizioterapiyada keng qo‘llaniladi. Davolash maqsadida ko‘rinadigan va ko‘rinmaydigan, rentgen va gamma nurlanishlaridan keng foydalanilmoqda.

Tibbiyotda ishlatilayotgan bog‘lamchalar, asboblari, elektrodlar, protezlar va hokazolar tashqi muhit tasirida va shu jumladan biologik muhit tasirida ishlaydi. Bunday asboblarni real sharoitda ishlatish mumkinligini baholash uchun ular tayyorlangan materiallarning fizik xossalari haqidagi malumotlarni, masalan, protezlar tayyorlash uchun mexanik mustahkamlikni, ko‘p karrali yuklanishlarga chidamlilikni, elastiklikni, issiqlik o‘tkazish qobiliyatini, elektr o‘tkazuvchanlik kabi hossalarni bilish muhimdir.

Qator hollarda biologik sistemalarning yashovchanlik hususiyatlarini yoki ma'lum tashqi muhit tasirlariga chidamliligini baholash uchun ularning fizik xossalari o'zgarishiga qarab kasalliklarni aniqlash mumkin.

Tirik organizm atrof muhit bilan o'zaro tasirlashgan holdagina yashashi mumkin. U muhitning harorat, namlik, havo bosimi va shu kabi fizik karakteristikalarining o'zgarishlaridan keskin tasirlanadi. Tashqi muhitning organizmga ta'siri faqatgina tashqi faktor sifatida hisobga olinmasdan, undan davolash usuli sifatida ham foydalanish mumkin. Bu misollar shifokor atrof muhitning fizik xossalari va karakteristikalarini baholay bilishi kerakligi haqida dalolat beradi.

Yuqorida aytib o'tilgan fizikaning tibbiyotda qo'llanish usullari tibbiyot fizikasining asosini – amaliy fizika va biofizikaning kompleks bo'limlarini tashkil qiladi. Ularda fizik hodisalar, jarayonlar va karakteristikalari tibbiyot masalalarini hal qilishda qo'llanilgan holda qarab chiqiladi.

Zamonaviy tibbiyot turli tuman asboblarni keng qo'llashga asoslanadiki, bu asboblarning ko'pchiligi fizik asboblardir. Shuning uchun ham tibbiyot va biologik fizika kursida asosiy tibbiyot asboblarining tuzilishi va ishlash prinsiplari ko'rib chiqiladi.

Hisoblash mashinalari kun sayin tibbiyotdagi tadqiqot natijalariga ishlov berishda, kasalliklarga diagnos qo'yishda keng qo'llanilmoqda. Bundan tashqari matematikadan tirik sistemalarda sodir bo'layotgan jarayonlarni tavsiflashda, shuningdek, tegishli modellarni yaratish va tahlil qilishda keng ko'lamda foydalanilmoqda. Kasalliklarni turini hisobga olishda, epidemiyalarning qanchalik tarqalganligini aniqlashda va boshqa maqsadlarda matematik statistikada foydalaniladi.

Xulosa qilib aytganda, tibbiyot bu - barcha fanlarning uyg'unligida mavjud bo'lgan sohadir. Har bir tibbiyot hodimi faoliyati davomida foydalanayotgan mahsulotlar haqida yetarlicha ma'lumotga ega bo'lgan holda ish yuritsa albatta maqsadga muvofiqdir. Bemorda davolash profilaktikasi o'tkazish davomida unga fizik, biologik hamda kimyoviy omillar bilan yetarlicha malakaga ega bo'lgan holda yondashsa samarali natijaga erishish nisbatan osonroq hamda yengilroq kechishi mumkin.

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РЕЗУЛЬТАТЫ ПОСЛЕДСТВИЙ COVID-19 НА СОСТОЯНИЕ ТКАНЕЙ РОТОВОЙ ПОЛОСТИ

Аннотация. В данной работе на основании клинико-лабораторных методов были проведены диагностика и лечение заболеваний слизистой полости рта у 82 пациентов, ранее перенесших COVID-19. Результаты обследования полости рта у больных, перенесших COVID-19, демонстрируют разнообразные стоматологические проявления. Полученные данные обследования пациентов с COVID-19 обосновывают необходимость и целесообразность включения стоматологического осмотра у данной категории больных после их клинического выздоровления.

Ключевые слова: коронавирус, проявления коронавирусной инфекции в полости рта, кандидоз, галитоз, ксеростомия.

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RESULTS OF THE CONSEQUENCES OF COVID-19 ON THE CONDITION OF ORAL TISSUE

Annotation. In this work, based on clinical and laboratory methods, the diagnosis and treatment of diseases of the oral mucosa were carried out in 82 patients who had previously suffered from COVID-19. Oral examination results in post-COVID-19 patients demonstrate a variety of dental manifestations. The obtained data from the examination of patients with COVID-19 substantiate the need and advisability of including a dental examination in this category of patients after their clinical recovery.

Key words: coronavirus, manifestations of coronavirus infection in the oral cavity, candidiasis, halitosis, xerostomia.

Актуальность.

Коронавирусная инфекция (COVID-19) представляет собой серьезную и неотложную угрозу для здоровья всего человечества. Согласно некоторым данным о коронавирусной инфекции, проявления в полости рта включали язву, эрозию, везикулы, папулы и петехии [3]. Дисгезия является

первым определяемым симптомом в полости рта при COVID-19. Вирус SARS-CoV-2, изначально идентифицированный как вызывающий проблемы с дыхательной системой, оказал значительное влияние и на состояние зубов, ткани пародонта и слизистых оболочек ротовой полости [1,6]. Это связано с тем, что некоторые пациенты, испытывающие длительный стресс или тревогу, могли изменить свои режимы ухода за полостью рта и питания, что в конечном счете приводило к нарушению гигиены ротовой полости. Отсутствие своевременного удаления зубного налета может вызвать развитие заболеваний тканей пародонта и кариеса зубов [2,8].

Выявлено увеличение числа случаев ощущений сухости во рту, известной как ксеростомия, у пациентов после перенесенного COVID-19[9]. Несвоевременное лечение этого состояния может повлечь за собой нарушение здоровья полости рта, так как снижение защитных свойств слюны вызывает развитие кариеса и заболеваний слизистых оболочек [2].

Целью нашего исследования явилось оценить отдаленные результаты трехлетнего периода последствий COVID-19 на состояние тканей ротовой полости по клиническим стоматологическим индексам.

Материалы и методы. В ходе исследования приняли участие 82 пациента, включая 31 мужчину и 51 женщину, средний возраст которых составил $61,4 \pm 1,51$ лет. Эти пациенты переболели COVID-19 в период с 2020 по 2021 годы и обратились в стоматологическую областную поликлинику города Андижан для планового стоматологического лечения. Все пациенты прошли наблюдение в течение 1-3 лет после выздоровления от COVID-19. В рамках клинического стоматологического обследования проводился осмотр полости рта.

Изучались жалобы пациентов, связанные с проблемами в полости рта, включая первые проявления этих проблем, возможные причины их возникновения, ранее проведенное лечение, его тип и эффективность, а также частота рецидивов.

Последующие осмотры пациентов, начиная с первичного приема и в процессе динамического наблюдения, включали оценку состояния мягких тканей, целостности зубо и зубного ряда, цвета и состояния кожи, таких как границы губ, углы рта, преддверие рта, щеки и десны. Был определен индекс КПУ в процентах, который отражает общее количество зубных единиц с кариесом и пломбами, а также количество удаленных зубов.

При осмотре десневого края снаружи и внутри обращали внимание на цвет, отек, форму и кровоточивость десневых сосочков по индексу SBI ($SBI = (\text{сумма баллов/число зубов}) \times 100\%$) в модификации I. Cowell (1975) согласно методу H.R. Muhlemann (1971). Также оценивался гигиенический статус с использованием упрощенного индекса гигиены (ИГР-У=ИЗН+ИЗК) по J.C. Green, J.R. Vermillion (1964) в баллах и индекса Approximal Plaque- Index (API) по D.E. Lange, H. Chr. Plagmann и др. (1977).

Для установления диагноза пациентам была присвоена соответствующая Международной статистической классификации болезней и проблем, связанных со здоровьем (МКБ-10). Обработка полученных цифровых данных проводилась с применением метода вариационной статистики и использованием t-критерия Стьюдента. Для анализа значимости различий по временным интервалам исследования использовался критерий Вилкоксона. Уровень значимости составлял $p < 0,05$.

Результаты исследования и их обсуждение. В соответствии с результатами

проведенного исследования, индекс КПУ на первый год обследования составил 70%, что отражает умеренное состояние. Однако спустя три года этот показатель возрос до 90,2%, демонстрируя высокую степень кариозного поражения. При более тщательном анализе данных обнаружено, что основными факторами, приведшими к росту индекса КПУ, являются повышение количества пломбированных зубов на 8,5% и удаление зубов на 4,5%. Увеличение числа пломбированных зубов может свидетельствовать о развитии кариозного процесса, который требует лечения и восстановления зубных тканей. С другой стороны, удаление зубов может быть необходимой процедурой в случае серьезных осложнений, вызванных COVID-19.

В течение первого года исследования, у половины (до 55%) опрошенных пациентов выявлялось накопление зубного налета и кровоточивость десен, и имелись жалобы на наличие неприятного запаха изо рта и ощущения сухости в полости рта. Однако, через три года эти показатели улучшились до 20-27% соответственно. Это изменение также совпадало со снижением зубного налета и степенью кровоточивости зубов на 10-15%. Исследование состояния гигиены полости рта у пациентов, переболевших COVID-19, через 3 года, показало значительное снижение индекса ИГР-У, индекса SBI и индекса API.

Интересно отметить, что третий год после инфицирования SARS-CoV-2 сопровождается значительным улучшением состояния пародонтальных тканей, но, как показали данные, эффект вируса полностью не исчезает.

Заключение.

На основании рассмотренных новейших публикаций и собственных данных исследования можно говорить о взаимосвязи вируса и проявлений COVID-19 в полости рта. Полученные результаты собственного исследования симптомов пациентов с COVID-19 подтверждают взаимосвязь между инфицированием вирусом SARS-CoV-2 и наличием таких проявлений в полости рта, как дисгезии и петехиальная сыпь. К сожалению, не предоставляется возможным провести осмотр пациентов в период разгара заболевания, из-за высокой контагиозности коронавируса. Безусловно, необходимы дополнительные исследования на больших группах пациентов для окончательного выявления корреляции между

симптоматикой в полости рта и коронавирусной инфекцией, а также для понимания механизма возникновения проявления в полости рта для последующего предупреждения развития осложнений.

В целом, данная информация подчеркивает важность хорошей гигиены полости рта и регулярного обращения к стоматологу, чтобы минимизировать возможные последствия для тканей ротовой полости. Восстановление зубных тканей и предотвращение кариозных поражений являются ключевыми мерами для здоровья зубов и десен.

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ПРИЧИНЫ ВОЗНИКНОВЕНИЯ И МЕТАСТАЗИРОВАНИЯ РАКА ШЕЙКИ МАТКИ

Аннотация. В статье обсуждается изучение причин возникновения и метастазирования РШМ. Вопросы метастазирования остаются одной из актуальных проблем онкологии. На базе отделения онкогинекологии Андижанского областного онкологического диспансера проведен анализ 90 клинических случаев. Из них у 54 (60,0%) пациенток выявлено метастазирование в лимфатические узлы, в 21 (23,3%) случае — метастазы в легких и плевре, у 15 (16,7%) пациенток — метастазы в печени, метастазы чаще всего поражают лимфатические узлы (60,0%), легкие и плевру (23,3%), а также печень (16,7%).

Ключевые слова. Лимфатические узлы, рак шейки матки, метастазы, злокачественная опухоль.

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CAUSES OF CERVICAL CANCER APPEARANCE AND METASTASIS

Annotation. The article discusses the study of the causes of the occurrence and metastasis of cervical cancer. Metastasis remains one of the pressing problems in oncology. An analysis of 90 clinical cases was carried out on the basis of the gynecological oncology department of the Andija regional oncology clinic. Of these, 54 (60.0%) patients had metastasis to the lymph nodes, 21 (23.3%) cases had metastases in the lungs and pleura, and 15 (16.7%) patients had metastases in the liver, metastases most often affect the lymph nodes (60.0%), lungs and pleura (23.3%), and the liver (16.7%).

Keywords. lymph nodes, cervical cancer, metastases, malignant tumor.

Введение. Рак шейки матки (РШМ) — злокачественная опухоль, которая, по данным медицинской статистики, среди онкологических заболеваний, возникающих у представительниц прекрасного пола, занимает

второе место. РШМ — заболевание, обусловленное вирусной инфекцией, передающейся половым путем. В 95% удаленных у женщин образцов опухоли содержатся вирусы папилломы человека (human papillomaviruses — HPV). В настоящее время известно 80 типов вирусов, 30 из них инфицируют аногенитальную область и только 5 (HPV 16, 18, 31, 33, 45) — так называемые вирусы высокого риска — могут вызывать РШМ. Источником раковой опухоли шейки матки служат нормальные клетки, покрывающие шейку матки. Ежегодно эту опухоль выявляют у более чем 600 тыс. пациенток. Обычно РШМ возникает в возрасте 40–60 лет. Факторы, провоцирующие заболевание: рано начатая (до 16 лет) половая жизнь; ранняя беременность и ранние первые роды (до 16 лет); беспорядочная половая жизнь; аборты; воспалительные заболевания половых органов; курение; длительный прием гормональных контрацептивов; нарушение иммунитета.

Вопросы метастазирования остаются одной из актуальных проблем онкологии. Особенности метастазирования злокачественных опухолей в значительной мере определяют клиническое течение, выбор методов лечения и прогноз заболевания. Поэтому изучение факторов, влияющих на частоту возникновения метастазов, локализацию, время, прошедшее после лечения первичной опухоли, имеет исключительно важное значение для клинической онкологии. В связи со стертостью клинических проявлений и отсутствием специфической клинической симптоматики наиболее эффективным методом диагностики являются регулярные гинекологические осмотры, призванные выявить злокачественные новообразования на ранних стадиях. Скрининговым методом, позволяющим диагностировать РШМ на разных стадиях развития, является цитологическое исследование. Основной метод диагностики — кольпоскопия. Так, в случае скрининга проводится цитологическое исследование мазков отпечатков. Также шейка матки может обрабатываться уксусной кислотой для выявления плоских кондилом, которые будут проявляться как пятна другого цвета на поверхности нормальной шейки. В случае подозрения на наличие атипичных клеток проводится кольпоскопия с биопсией. Признаком предраковых состояний является обнаруживаемый при цитологическом обследовании пойкилоцитоз. Следует отметить, что предраковые состояния не всегда приводят к развитию злокачественных новообразований, но их наличие является плохим прогностическим признаком в отношении риска возникновения РШМ.

Целью этого исследования стало изучение причин возникновения и метастазирования РШМ.

Объект и методы. На базе отделения онкогинекологии Андижаснского областного онкологического диспансера проведен анализ 90 клинических случаев. Из них у 54 (60,0%) пациенток выявлено

метастазирование в лимфатические узлы, в 21 (23,3%) случае — метастазы в легких и плевре, у 15 (16,7%) пациенток — метастазы в печени.

Результаты. Частота метастазирования зависит не только от стадии заболевания, но и от глубины инвазии опухоли, метода лечения. Выживаемость больных РШМ с метастазами находится в зависимости от стадии, глубины инвазии опухоли и проведенного лечения. В когорте 120 пациентов 5-летняя выживаемость при I стадии составила 84,0%, II стадии — 43,0%, III стадии — 20,0%, а при IV стадии зафиксирована только 2-летняя выживаемость — 11,0% ($p < 0,05$). При глубине инвазии опухоли < 1 см при II стадии РШМ 5-летняя выживаемость равна 65,5%, а при инвазии ≥ 1 см — 41,2%, III стадии — соответственно 26,2 и 22,4%. Введение химиотерапии в комплекс лечения больных РШМ II стадии повышает 5-летнюю выживаемость в 1,8 раза по сравнению с комбинированной терапией. При III стадии 3-летняя выживаемость при проведении химиотерапии увеличивается почти в 2 раза.

Профилактика: 1. Наблюдаться у гинеколога. Один раз в год необходимо проходить осмотр у гинеколога с обязательным осмотром шейки матки — кольпоскопией. 2. Простого осмотра шейки матки недостаточно — необходимо сделать определенные анализы. То есть получить ответ на два вопроса: есть ли у вас вирус папилломы человека? есть ли в клетках шейки матки изменения, которые могут потенциально привести к развитию РШМ? Чаще всего в обычных клиниках и лабораториях берут простой цитологический мазок и мазок методом полимеразной цепной реакции на определение вируса (то есть анализ, с помощью которого можно просто определить, есть этот вирус или нет). У этих анализов есть несколько существенных недостатков, которые могут значительно влиять на их точность. 3. В возрасте старше 65 лет также необходимо регулярно проходить скрининг на РШМ. К нему в большинстве случаев приводит заражение вирусом папилломы человека. Возбудитель мог попасть в организм даже во время сексуальных контактов 15-летней давности, «дремать» в течение длительного времени, а затем привести к развитию злокачественной опухоли. В том случае, если женщина в пожилом возрасте продолжает ежегодно проходить проверку на предрасположенность к РШМ, возможность вовремя «поймать» болезнь и вылечиться от нее повышается в несколько десятков раз.

Выводы. Таким образом, метастазы чаще всего поражают лимфатические узлы (60,0%), легкие и плевру (23,3%), а также печень (16,7%). Анализ клинических проявлений метастазов и рецидивов показал, что далеко не всегда метастазы и рецидивы имеют манифестированную клинику. Возможно и скрытое течение данных процессов, что подчеркивает необходимость полного обследования при динамическом наблюдении больных.

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КОМПЛЕКСНАЯ ЛУЧЕВАЯ ДИАГНОСТИКА В СКРИНИНГЕ РАКА МОЛОЧНОЙ ЖЕЛЕЗЫ

Аннотация. При рассмотрении медицинских изображений большое внимание уделяют раку молочной железы, который является серьезной угрозой для здоровья женщин и зачастую приводит к множеству смертельных исходов. Ранняя диагностика рака молочной железы с помощью цифрового маммографического оборудования может повысить точность выявления заболевания.

Ключевые слова. Рак молочной железы, лучевая диагностика, маммография, ультразвуковое исследование, диагностика.

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COMPLEX RADIATION DIAGNOSTICS IN BREAST CANCER SCREENING

Annotation. When reviewing medical images, much attention is paid to breast cancer, which is a serious threat to women's health and often leads to many deaths. Early diagnosis of breast cancer using digital mammography equipment can improve the accuracy of detection of the disease.

Keywords. Breast cancer, radiation diagnostics, mammography, ultrasound examination, diagnostics.

Актуальность. Рак молочной железы (РМЖ) занимает 1-е место в структуре онкологических заболеваний у женщин, актуальным вопросом

остаётся выявление РМЖ на ранних стадиях, когда комплексное лечение позволяет полностью избавить пациентку от этого заболевания.

Распространение рака молочной железы стало одной из проблем здравоохранения в человеческом обществе. Рак молочной железы является наиболее распространённым типом злокачественных новообразований у женщин и входит в тройку самых распространённых видов рака во всем мире, наряду с раком лёгких и толстой кишки [1, 2]. В 2012 г. в мире было зарегистрировано ~1,7 млн новых случаев рака, и около 31% из них закончились летальным исходом [3].

Чёткой причины возникновения рака молочной железы нет, но некоторые факторы увеличивают риск развития рака, такие как курение, ожирение, недостаток физической активности, алкоголь, инфекции, а также молекулярные и генетические механизмы. Клинические исследования показывают, что методы раннего выявления повышают выживаемость примерно до 5 лет [4].

Раннее выявление рака молочной железы играет важную роль в лечении и контроле заболевания. Если рак молочной железы диагностирован на ранней стадии, он имеет очень высокий показатель выживаемости. С этой целью страны разработали некоторые профилактические программы. В настоящее время существует 3 клинических метода визуализации молочной железы, хотя в качестве основного диагностического инструмента используется ручное обследование. В настоящее время стандартным методом скрининга и диагностики является маммография, при которой используются низкоэнергетические рентгеновские лучи с энергией 20–30 кэВ. Согласно исследованиям, чувствительность (истинно положительная) этого метода составляет около 75%, но у людей среднего возраста, чьи ткани молочной железы часто имеют более высокую плотность массы, чувствительность снижается примерно до 50% [8]. Так, в некоторых случаях дифференциация злокачественных и доброкачественных опухолей усложняется [9]. Вторым методом – магнитно-резонансная томография (МРТ). Этот метод очень чувствителен к обнаружению рака, но потенциально может обнаруживать ложноположительные результаты. Иными словами, его специфичность (истинно отрицательная) низкая. Третий метод – ультразвуковая визуализация. Диагностическая сила в этой процедуре сильно зависит от профессионализма сканера и правильного подбора параметров УЗИ. С другой стороны, при обычных ультразвуковых процедурах отличить кисты от солидных опухолей сложно. Таким образом, для диагностики рака молочной железы используется доплеровский и энергетический доплеровский метод. В настоящее время МРТ и УЗИ являются лишь вспомогательными средствами к маммографии. Исследование показало, что при одновременном использовании маммографии и УЗИ чувствительность теста для диагностики составила 97%, тогда как для маммографии с ручным

исследованием чувствительность составила 74% [1]. Существуют и другие методы диагностики молочной железы, которым уделяется меньше внимания из-за их проблем и сложностей, включая томосинтез, эластографию, фотоакустику и оптическую визуализацию. В данном исследовании мы попытались оценить эффективность традиционных методов визуализации молочной железы для раннего выявления рака молочной железы у женщин и их влияние на снижение смертности.

Цель исследования. Изучение эффективности комплексной лучевой диагностики, включающей маммографию, ультразвуковое исследование с прицельной биопсией в диагностике ранних стадий РМЖ, особенно при наличии непальпируемых изменений в молочной железе.

Материалы и методы исследования. Были обследованы 500 пациенток в возрасте 35–74 лет. Всем выполнялась маммография в стандартных проекциях, в случае выявления изменений дополнялись первично увеличенными маммограммами и снимками в атипичных проекциях. При наличии патологических изменений 308 (61%) пациенткам проводили ультразвуковое исследование на аппаратах «Siemens Sonoline G-50», «Mindray DP-3300» с использованием высокочастотных датчиков. Под контролем УЗИ проведена пункционная биопсия у 46 (15%) пациенток, в том числе у 18 (6%) с непальпируемыми образованиями. У 23 (7,4%) пациенток с сецернирующей железой проводилось 5-кратное цитологическое исследование патологического отделяемого с последующей дуктографией, с использованием неионных контрастных средств.

Результаты. Среди общего количества выявленной при маммографии патологии в 34 (2,8%) случаях отмечали признаки РМЖ, в том числе в 4 случаях (1,2%) диагностирована внутрипротоковая карцинома. Локальный аденоматоз выявлен у 61 (20%), диффузный аденоматоз у 74 (24%), жировая инволюция у 56 (18%), доброкачественные объемные образования (фиброаденома, аденома, липома) у 83 пациенток (27%).

Опухоли молочной железы характеризовались наличием отграниченного образования или зоны с нарушением нормальной эхоструктуры молочной железы. Природу объемного образования определяли исходя из следующих признаков: структура и характер контуров, форма, эхоструктура, эхогенность, акустические эффекты, наблюдаемые за опухолью, эхоструктура ткани железы вокруг патологического процесса, васкуляризация. Эхографическая картина рака молочной железы была разнообразной, в большинстве случаев, была характерна следующая эхографическая картина: нечеткие — 68,7%, неровные — 89,3%) контуры; неправильная — 56,9%, округлая — 35,6% форма; неоднородная структура — 87,5%), гипоэхогенность — 89,3, дорсальная акустическая тень — 11,9%, несоответствие пальпаторных и эхографических размеров — 65,0%. Эхоструктура ткани железы вокруг

очага деформирована, изменена в виде выростов не-правильной формы за счет деструкции тканей.

Выводы. Комплексное применение маммографии и ультразвукового исследования при скрининге РМЖ, позволяют существенно повысить выявляемость заболевания, в том числе у пациенток с непальпируемыми объемными образованиями и внутрипротоковыми опухолями в молочной железе.

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РАННЕЕ ВЫЯВЛЕНИЕ РАКА МОЛОЧНОЙ ЖЕЛЕЗЫ В СИСТЕМЕ КОМПЛЕКСНЫХ МЕДИЦИНСКИХ ОСМОТРОВ

Аннотация. Статья посвящена раннему выявлению рака молочной железы в системе комплексных медицинских осмотров. Предупреждение и лечение злокачественных новообразований — одна из важнейших медицинских и социальных проблем. В условиях РИОРИАТМАф налажена комплексная работа по активному выявлению патологии молочных желез. Всем женщинам 30-40 лет производится УЗИ молочных желез, старше 40 лет - маммография 1 раз в 2 года. Анализ работы онкологического кабинета показал, что патология молочной железы распределилась следующим образом: рак молочной железы - 5%; диффузная мастопатия - 60%; узловая фиброзно-кистозная мастопатия - 20%; фиброаденомы - 10%; другая доброкачественная патология - 5%.

Ключевые слова. Рак молочной железы, фиброаденома, диффузная мастопатия, ранняя диагностика.

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EARLY DETECTION OF BREAST CANCER IN THE SYSTEM OF COMPREHENSIVE MEDICAL EXAMINATIONS

Annotation. The article is devoted to the early detection of breast cancer in the system of comprehensive medical examinations. Prevention and treatment of malignant neoplasms is one of the most important medical and social problems. In the conditions of RSSPMCORAf, comprehensive work has been established to

actively detect pathology of the mammary glands. All women 30-40 years old undergo an ultrasound of the mammary glands, and those over 40 years old undergo mammography once every 2 years. An analysis of the work of the oncology office showed that breast pathology was distributed as follows: breast cancer - 5%; diffuse mastopathy - 60%; nodular fibrocystic mastopathy - 20%; fibroadenomas - 10%; other benign pathology - 5%.

Keywords. Breast cancer, fibroadenoma, diffuse mastopathy, early diagnosis.

Актуальность. Предупреждение и лечение злокачественных новообразований — одна из важнейших медицинских и социальных проблем. Ее актуальность определяется постоянным ростом заболеваемости раком среди населения многих стран, трудностью своевременной (ранней) диагностики, сложностью и дорогостоящей лечением, высоким уровнем инвалидизации и летальности больных [1,5]. В значительной мере данные обстоятельства относятся к раку молочной железы, который нередко развивается на фоне длительно существующих форм мастопатий, своевременно невыявленных и нелеченных [6]. Следовательно, у клиницистов имеется своеобразный временной резерв для профилактики злокачественных новообразований молочных желез на этапе дисгормональных гиперплазий. Профилактика рака молочной железы представляет собой важную социальную и медико-биологическую проблему и заключается в выявлении и лечении различных форм доброкачественной патологии молочной железы, а также причин, их вызывающих [9]. Проблема диагностики заболеваний молочной железы остается чрезвычайно актуальной, так как заболеваемость раком молочной железы вышла на первое место среди злокачественных новообразований у женщин и имеет тенденцию к неуклонному росту. В структуре заболеваемости и причин смертности женского населения Андиганской области рак молочной железы занимает первое место. Процент ранней диагностики рака молочной железы (1-2 стадии заболевания) составляет 35-38%, то есть процент запущенных форм остается достаточно высоким [7]. В связи с этим, первостепенной проблемой ранней диагностики рака молочной железы является организация профилактических обследований. Эффективный скрининг молочных желез у женщин позволяет выявить заболевание на ранних стадиях развития, что в последующем позволяет применить к пациенткам органосохраняющие методики хирургического лечения, а также способствует увеличению продолжительности жизни больных [2].

Цель. Раннее выявление рака молочной железы в системе комплексных медицинских осмотров.

Материалы и методы. В условиях РИОРИАТМАф налажена комплексная работа по активному выявлению патологии молочных желез.

Первичным звеном является отделение профосмотров. Прохождение медосмотра является ежегодным мероприятием. Первый этап - клинический осмотр молочных желез гинекологом. Всем женщинам 30-40 лет производится УЗИ молочных желез, старше 40 лет - маммография 1 раз в 2 года. Женщины с выявленной патологией молочных желез направляются на специализированный прием врача-онколога, который производит клинический осмотр молочных желез, а также медицинские манипуляции - пункционные биопсии образований молочных желез (под контролем УЗИ), мазки-отпечатки. При необходимости проводится консервативная терапия диффузных дисгормональных гиперплазий. Для диагностики внутрипротоковой патологии используется дуктография, внутрикистозного рака - тонкоигольная аспирация с пневмоцистографией. По результатам обследования формируются группы повышенного онкологического риска, которые подлежат сдаче крови на онкомаркеры (СА-125, СА-15.3, СА-19.9, РЭА).

Анализ работы онкологического кабинета показал, что патология молочной железы в процентном выражении распределилась следующим образом: • диффузная мастопатия - 60%; • узловая фиброзно-кистозная мастопатия (в т.ч. солитарные кисты) — 20%; • фиброаденомы — 10%; • рак молочной железы — 5%; • другая доброкачественная патология (цистаденопапилломы, фибромы, • липомы, фибролипомы, гамартомы) — 5%. Высокий процент диагностики рака молочной железы на ранних стадиях развития позволил в большинстве случаев применить к пациенткам органосохраняющие методы хирургического лечения, что существенно улучшило качество жизни больных, прогноз заболевания и позволило практически всем пациенткам после реабилитации вернуться к труду. Проведенный ретроспективный анализ показывает, что радикальные резекции молочной железы являются наиболее часто выполняемой методикой органосохраняющих операций, выполненных нашим пациенткам. Все операции проводились при локализации опухолевого очага в латеральных квадрантах (верхне-наружный и нижне-наружный). В послеоперационном периоде все больные получали курс дистанционной лучевой терапии. Химиогормонотерапия проводилась по показаниям, в зависимости от рецепторного статуса опухоли и экспрессии Her2 neu. В 2005 г. случай ранней диагностики рака молочной железы (размер первичного опухолевого очага 4 мм), позволил выполнить методику лампэктоми. Все виды хирургического, комбинированного и комплексного лечения рака молочной железы, а также хирургическое лечение доброкачественной патологии, производились на базе специализированного маммологического отделения РИОРИАТМАф.

Результаты. Анализ работы онкологического кабинета показал, что патология молочной железы распределилась следующим образом: рак молочной железы - 5%; диффузная мастопатия - 60%; узловая фиброзно-

кистозная мастопатия -20%; фиброаденомы - 10%; другая доброкачественная патология - 5%. За 10-летний период (2013-2023) выявление рака молочной железы на стадии составило 88 - 100% (РУз - 20-30%). Высокий процент диагностики рака молочной железы на ранних стадиях позволил в большинстве случаев применить органосохраняющие методы хирургического лечения, что существенно улучшило прогноз заболевания, качество жизни больных и позволило всем пациенткам вернуться к прежней трудовой деятельности.

Заключение. По результатам проведенного обследования формируются группы диспансерного наблюдения, группы повышенного онкологического риска (лица, с отягощенным наследственным онкологическим анамнезом — рак молочной железы, опухоли женской половой системы у кровных родственников, лица с пролиферативными формами мастопатии, лица, длительно получающие лечение по поводу фиброзно-кистозной мастопатии). Такие пациентки подлежат обязательной сдаче крови на онкомаркеры (СА-125, СА-15.3, СА-19.9, РЭА).

Комплексная работа РИОРИАТМАф, а также своевременное лечение доброкачественной патологии молочных желез является реальным путем ранней диагностики, профилактики и лечения рака молочной железы.

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ОЦЕНКА ПОТРЕБЛЕНИЯ КОНДИТЕРСКИХ ИЗДЕЛИЙ В СРЕДНЕСУТОЧНЫХ РАЦИОНАХ ПИТАНИЯ НАСЕЛЕНИЯ В ЛЕТНЕ-ОСЕННИЙ СЕЗОН

Аннотация. Конечной целью работы стало оценка факторов риска загрязнений кондитерских изделий и их снижение путем разработки и внедрения современной системы контроля критических точек.

Оценено фактическое потребление различных видов кондитерской продукции в различных регионах Республики среди городского и сельского населения по сезонам года. Оценка состояния фактического питания проводилась по общепринятым методам [6,8,11] у 140 домохозяйств и 220 студентов-добровольцев медицинского колледжа.

Ключевые слова: фактическое питание, оценка адекватности питания, продукты, летне-осенний сезон, кондитерские изделия.

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ASSESSMENT OF CONSUMPTION OF CONFECTIONERY PRODUCTS IN THE AVERAGE DAILY DIETS OF THE POPULATION IN THE SUMMER-AUTUMN SEASON

Annotation. The final goal of the work was to assess the risk factors for contamination of confectionery products and reduce them through the development and implementation of a modern critical point monitoring system.

The actual consumption of various types of confectionery products in various regions of the Republic among the urban and rural population by season of the year was assessed. Assessment of actual nutritional status was carried out using generally accepted methods [6,8,11] in 140 households and 220 medical college student volunteers.

Key words: actual nutrition, assessment of nutritional adequacy, products, summer-autumn season, confectionery products.

Введение. Проблема безопасности пищевых продуктов носит многогранный характер, охватывая политические, социальные, экономические и медицинские аспекты. Государство должно разрабатывать и реализовывать эффективные законы и нормативы, чтобы гарантировать безопасность продуктов питания. Общество должно быть осведомлено о рисках, связанных с небезопасной пищей, и знать, как сделать правильный выбор. Производители продуктов питания должны нести ответственность за качество своей продукции. А медицинские работники должны быть готовы диагностировать и лечить заболевания, вызванные некачественной пищей. Для Узбекистана она имеет особую актуальность и важность в связи с происходящими в последние 10-15 лет изменениями во всех сферах жизни человека и перехода страны на новые политические и экономические (рыночные) отношения. В этих условиях формируются новые типы предприятий, связанных с производством продовольственного сырья и пищевых продуктов, их хранением, реализацией, транспортированием, новые взаимоотношения всех участников этого сложного процесса.

Поиск способов повышения качества и обеспечения сохранности пищевой и биологической ценности кондитерской продукции усиливает практическую значимость предпринимаемой работы для практического здравоохранения.

Цель и задачи исследований работы. Конечной целью работы явилось оценка факторов риска загрязнений кондитерских изделий и их снижения, путем разработки и внедрения современной системы контроля критических точек.

Материалы и методы исследования. Характеристика объектов исследований. Объектами исследований явилось домохозяйства, предприятия кондитерской промышленности в г.Ташкенте и Самаркандской области и продукция производимая данными предприятиями в целях определения роли в суточных рационах населения и установлении критериев контрольных точек в системе НАССР.

В связи со спецификой исследуемого населения метод анкетного опроса 24 часового статуса с использованием общепринятой методики. Оценка состояния фактического питания проводилась по общепринятым методам [7,10,11,12] у 140 домохозяйств и 220 студентов –добровольцах медицинского колледжа.

В целях более детальной оценки алиментарных факторов в сохранении здоровья и оценки пищевой ценности рационов нами изучено 2100 меню-раскладок суточных рационов по 26 показателям: белки общие и животные, жиры общие и растительные, углеводы, ди-моносахариды, полисахариды, пектин, холестерин, энергетическая ценность, соли кальция, фосфора, железа, магния, золота, содержание витаминов А, бетта-каротина, тиамин, рибофлавин, пиридоксин, цианкобаламин, витамин

С,Д,Е,РР, фолиевой кислоты и клетчатки по сезонам года по А.А.Покровского (1976г.), М.Ф.Нестерина, И.М.Скурихина (1979г.) [1,4,8].

Полученные данные сравнивались с нормами физиологических потребностей в пищевых веществах и энергии для населения республики Узбекистан (2017.) [2,3,5].

Результаты. Фактическое питание изучалось методом частотного и 24-часового воспроизведения, рекомендованного ВОЗ для эпидемиологических исследований с адаптацией для Узбекистана анкеты, разработанные нами и утвержденные минздравом у 140 домохозяйств г.Ташкента, Самаркандской области, 210 студентов –добровольцах медицинского колледжа г. Ташкента. При оценке адекватности питания за референтные величины были взяты нормы физиологических потребностей в энергии и пищевых веществах для различной половозрастной группы Республики Узбекистан, а также нормативы потребления нутриентов по шкале ФАО/ВОЗ [6,9].

Как показывает анализ среднесуточного потребления продуктов питания в исследуемых объектах по всем видам продукции имеются отклонения от рациональных норм питания, принятых в Узбекистане как в летне-осеннем сезоне (таблица 1.), кроме кофе, томатной пасты и специй.

Таблица 1

Оценка потребления продуктов питания в среднесуточных рационах взрослого населения по исследуемым регионам, в летне-осеннем сезоне, в сравнении с рациональными нормами, гр/день, $M \pm m$

Наименование продуктов	Самаркандская обл.		г Ташкент	Студенты колледжа г Ташкент	Рациональные нормы	P
	город	село				
Бобовые	10,0±0,2	12, 0±0,2	15, 0±0,3	5,0±0,2	15,0	<0,01
Мука пшеничная	55,5±1,5	63,0±1,8	60,0±1,4	40,0±1,6	20,0	<0,01
Рис	45,0±1,8	43,0±1,9	42,8±1,6	34,0±1,6	50,0	<0,01
Крупы (без риса)	4,5±1,1	3,5±1,0	12,4±1,4	10,0±1,1	20,0	<0,01
Хлеб пшеничный	352,5±15,5	433,0±18,8	324,2±14,6	225,0±13,6	250,0	<0,01
Хлеб ржаной	15,2±1,2	10,2±1,1	45,2±1,5	33,2±1,2	80,0	<0,01
Хлеб из других видов зерна	50,4±15,2	20,0±1,1	35,0±1,5	23,2±1,2	отсутв	
Макароны	36,6±1,1	32,0±1,0	44,4±1,2	43,0±1,0	30,0	<0,01

Картофель	152,4±11,5	163,0±11,8	240,0±7,2	270,0±1,6	200,0	<0,01
Капуста	25,5±1,2	44,0±1,7	54,2±1,6	23,2±1,1	50,0	<0,01
Огурцы	11,0±0,5	13,6±0,8	12,2±1,1	5,0±0,6	50,0	<0,01
Помидоры	13,0±0,8	26,0±1,5	14,2±1,3	3,5±0,6	50,0	<0,01
Свекла	6,0±0,3	8,0±0,8	6,5±0,7	2,5±0,2	30,0	<0,01
Морковь	22,5±1,8	25,0±1,5	24,2±1,4	63,0±1,6	50,0	<0,01
Лук	14,4±1,1	16,0±1,2	18,5±1,1	12,0±1,0	40,0	<0,01
Прочие овощи	11,0±0,5	16,0±0,8	12,2±1,1	4,0±0,6	60,0	<0,01
Всего овощей	103,4±3,3	148,8±3,8	142,0±3,6	113,2	200,0	<0,01
Бахчевые	16,5±1,3	43,0±1,5	34,2±1,5	23,0±1,2	50,0	<0,01
Тыква	15,2±1,2	23,0±1,3	14,2±1,0	6,0±1,0	30,0	<0,01
Фрукты и ягоды свежие	25,0±1,1	42,0±178	54,2±1,4	33,0±1,2	200,0	<0,01
Сушёные	5,0±0,5	8,0±0,8	4,2±0,4	6,0±0,6	20,0	<0,01
Виноград свежий	15,5±1,0	45,0±1,8	20,0±1,3	12,0±1,0	30,0	<0,01
Цитрусовые	2,5±0,5	3,0±0,8	5,2±0,4	5,0±0,6	15,0	<0,01
Говядина	30,0±1,5	32,0±1,0	34,2±1,3	23,0±1,6	60,0	<0,01
Баранина	52,0±1,4	33,0±1,0	24,2±1,4	21,0±1,2	30,0	<0,01
Мясо кролика	1,5±0,5	6,0±0,8	2,2±0,4	000	25,0	<0,01
Субпродукты	11,5±0,5	8,0±0,8	12,2±0,4	6,1±0,4	отсутв	
Птица дом.	45,1±1,2	53,0±1,3	44,4±1,5	33,0±1,2	70,0	<0,01
Рыба свежая	15,5±0,5	12,0±0,7	20,0±1,4	5,0±0,6	35,0	<0,01
Рыбные продукты	16,0±0,5	6,0±0,6	22,0±1,5	4,0±0,4	30,0	<0,01
Молоко цельное	90,0±1,6	73,0±2,5	131,±1,5	60,0±1,3	400,0	<0,01

Сметана, сливки	5,0±0,5	10,0±1,1	14,2±1,2	10,0±0,6	15,0	<0,01
Масло животное	5,5±0,5	8,0±0,8	8,2±0,6	6,0±0,6	30,0	<0,01
Творог	14,5±1,1	15,0±1,0	20,1±1,1	13,0±1,0	30,0	<0,01
Сыр, брынза	4,5±0,5	6,0±0,8	14,5±1,3	8,0±0,6	20,0	<0,01
Яйца (штук)	0,5±0,1	0,6±0,08	0,5±0,04	0,5±0,06	1,0	<0,01
Сахар	24,0±0,5	20,0±0,8	28,0±0,6	20,0±1,0	30,0	<0,01
Шоколад	2,0±0,05	1,0±0,07	4,0±0,4	5,0±0,5	отсутв	
Карамель леденцовые	1,5±0,4	2,0±0,06	5,0±0,4	2,0±0,06	отсутв	
ирис	1,0±0,05	2,0±0,08	2,0±0,4	2,0±0,6	отсутв	
Драже	1,5±0,05	1,2±0,07	2,0±0,4	2,0±0,06	отсутв	
Восточные сладости (в категории учтены: халва, лукумы)	2,5±0,05	2,0±0,07	2,5±0,4	2,0±0,06	отсутв	
мармелад	2,0±0,04	1,5±0,07	2,8±0,4	2,0±0,06	отсутв	
Навват	10,5±0,4	16,0±0,6	20,0±1,0	5,0±0,4	отсутв	
Мучные кондитерские изделия (торты, пироженные)	10,0±0,5	15,0±0,5	10,0±0,6	20,0±0,6	отсутв	
Сахар с пересчетом кондитерских	47,5±0,5	54,0±0,7	66,0±1,5	48,5±0,9	30,0	<0,01
Мёд	6,0±0,3	4,4±0,2	5,0±0,4	2,0±0,2	20,0	<0,01
Маргарин	10,0±0,5	9,0±0,7	12,0±1,2	4,0±0,6	5,0	<0,01
Масло растительное	34,5±2,5	40,0±3,0	33,0±2,4	25,0±1,6	25,0	<0,01
Соль йодиров.	8,5±1,5	10,0±1,7	8,8±1,4	8,0±1,6	5,0	<0,01

Чай	4,4±0,5	5,0±0,5	6,0±0,6	4,0±0,5	2,0	<0,01
Кофе	1,5±0,05	1,0±0,07	1,5±0,04	2,0±0,06	2,0	≥0,01
Паста томатная	1,0±0,5	1,2±0,6	2,0±0,4	2,0±0,3	3,0	≥0,01
Специи	1,5±0,05	2,0±0,07	2,0±0,04	2,0±0,06	2,0	≥0,01
Калорийн ккал.	2651,6±15	2840,7±16,8	2797,7±14	2070,0±16,0	3104,4	<0,01
Белки	98,8±8,5	98,0±6,6	107,1±7,4	70,1±5,0	118	<0,01
Жиры	85,5±5,5	91,7±6,7	95,6±7,5	72,0±5,6	119,5	<0,01
Углеводы	388,9±8,8	488,9±8,8	488,9±14,2	373,37±11,6	561,2	<0,01
Соотношения Б:Ж:У	1:0,9:4,2	1:0,9:4,8	1:0,9:4,3	1:1,1:5	1:1:4	

По результатам исследований, впервые в Узбекистане получены данные характеризующие потребление кондитерских изделий по видам продукции. Потребление сахара, без учета кондитерских изделий составило в г.Самарканде в летне-осеннем сезоне составило 24,0±0,5 гр в сутки, или 9,2 кг в год. С пересчетом кондитерских изделий на сахар или 17,3 кг в год. В г.Ташкенте в летне-осеннем сезоне потребление сахара составило 28,0±0,6 гр/сутки, или 10,2 кг в год. С пересчетом кондитерских изделий 66,0±1,5 гр/сутки или 24 кг в год.

Обсуждения полученных результатов. На низком уровне соблюдения принципов рационального питания энергоёмкость углеводов в среднесуточных рационах питания в исследуемых объектах высокая, при низкой энергоёмкости белков. При этом энергоёмкость углеводов в рационах питания в летне-осеннем сезоне составило в г.Самарканде 58,6±1,1%, в г.Ташкенте 68,8±1,5%; в зимне-весеннем сезоне 61,4±1,3% и 74,6±1,8% соответственно при рекомендуемых ВОЗ до 55%.

Вывод:

1. Впервые в Узбекистане получены данные характеризующие потребление кондитерских изделий по видам продукции, в т.ч. по национальным видам.

2. Потребление сахара, без учета кондитерских изделий составило в г.Самарканде в летне-осеннем сезоне составило 24,0±0,5 гр в сутки, или 9,2 кг в год. С пересчетом кондитерских изделий на сахар или 17,3 кг в год. В г.Ташкенте в летне-осеннем сезоне потребление сахара составило 28,0±0,6 гр в сутки, или 10,2 кг в год. С пересчетом кондитерских изделий 66,0±1,5 гр/сутки или 24 кг в год.

3. На низком уровне соблюдения принципов рационального питания энергоёмкость углеводов в среднесуточных рационах питания в исследуемых объектах высокая, при низкой энергоёмкости белков.

4. Данное положение указывает на необходимость разработки мероприятий по обеспечению безопасности кондитерских изделий по современной системе от «фермы до дастархана».

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ГОРМОНОТЕРАПИЯ ВЫСОКОДИФФЕРЕНЦИРОВАННОЙ АДЕНОКАРЦИНОМЫ ЭНДОМЕТРИЯ

Аннотация. Комбинированное применение агонистов гонадолиберина с введением внутриматочных левоноргестрел релизинг систем, является эффективным методом лечения сложной атипической гиперплазии и высокодифференцированного рака эндометрия IA стадии без инвазии эндометрия у молодых женщин с нереализованной репродуктивной функцией и может рассматриваться как альтернатива радикальному оперативному лечению.

Ключевые слова: рак эндометрия, самостоятельная гормонотерапия, высокодифференцированный рака эндометрия.

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HORMONE THERAPY FOR HIGHLY DIFFERENTIATED ENDOMETRIAL ADENOCARCINOMA

Annotation. The combined use of GnRH agonists with the introduction of intrauterine levonorgestrel releasing systems is an effective method for the treatment of complex atypical hyperplasia and well-differentiated stage IA endometrial cancer without endometrial invasion in young women with unrealized reproductive function and can be considered as an alternative to radical surgical treatment.

Key words: endometrial cancer, independent hormone therapy, well-differentiated endometrial cancer.

Актуальность. На современном этапе развития онкологии, важнейшей задачей является развитие органосохраняющих методов лечения. Принимая во внимание постоянный рост заболеваемости раком эндометрия в России, тенденцию к омоложению контингента больных, в некоторых клинических случаях возникает необходимость сохранить фертильность у женщин репродуктивного возраста. За последние годы наметилась тенденция к увеличению числа больных с начальной формой рака эндометрия (РЭ) репродуктивного возраста, что требует поиска современных консервативных методов терапии, позволяющих сохранить детородную функцию, таким образом решить вопросы социального здоровья. В последние годы активно развивается направление органосохраняющей терапии гиперпластических процессов эндометрия (ГПЭ), даже начальных форм рака эндометрия (РЭ) [3, 6]. Это особенно важно, если речь идет о больных молодого возраста с нереализованной репродуктивной функцией, когда врачу трудно решиться на оргауноносящую радикальную операцию [3]. Точные механизмы развития ГПЭ и их перерождение в рак эндометрия неизвестны. Влияние генетической предрасположенности, целого ряда гормональных и негормональных факторов имеют огромное значение в развитии ГПЭ и РЭ. Отсутствие четких представлений о формировании ГПЭ и РЭ делают фактически невозможной проведение патогенетической терапии. До сегодняшнего дня нет единых рекомендаций по выбору лекарственного средства, дозы и оптимальной длительности лечения ГПЭ и начальных форм РЭ. К сожалению, зачастую о неадекватности терапии мы судим уже *post factum*, когда в очередной раз возникает рецидив [2, 3, 7].

Высокая распространенность и рецидивирующее течение пролиферативных процессов эндометрия (ППЭ), сопряженность с маточными кровотечениями и возникновением рака эндометрия (РЭ) отражают актуальность проблемы профилактики и повышения эффективности лечения данного патологического состояния. Решение этих вопросов возможно либо за счет расширения показаний к оперативному лечению, либо за счет совершенствования консервативных методов лечения, что имеет приоритетное значение, поскольку ППЭ характерны для социально активной группы женщин репродуктивного возраста, у которых часто стоит вопрос о деторождении [3, 6]. Не менее актуальным аспектом данной проблемы и современной онкогинекологии является то, что повсеместно отмечается неуклонный рост частоты и «омолаживание» рака органов репродуктивной системы, в том числе и РЭ [1, 2, 3, 6, 7]. Несмотря на достигнутые успехи в лечении ППЭ, некоторые вопросы, касающиеся патогенетической терапии этих заболеваний, не решены окончательно. В частности, одной из проблем являются их рецидивирование и резистентность к гормонотерапии [4, 5]. Широкое внедрение в клиническую практику гормональных рилизинг систем, их доказанные лечебные эффекты

при дисфункциональных маточных кровотечениях, гиперплазии эндометрия, аденомиозе и протективное воздействие на эндометрий при проведении заместительной гормональной терапии явилось основанием для проведения научных исследований по их применению при ГПЭ и даже при аденокарциноме эндометрия [6,7].

Цель исследования. Оценить эффективность гормонотерапии, как самостоятельного метода лечения минимального рака эндометрия.
Материалы и методы. В отделении опухолей женской репродуктивной системы ГУЗ КОД№1 ДЗ КК с 2005 по 2009г. самостоятельная гормонотерапия минимального рака эндометрия проведена 7 пациенткам с диагнозом высокодифференцированная аденокарцинома эндометрия. Возраст больных колебался от 21 до 34 лет (средний 28,7 года). Репродуктивная функция была реализована у 2 (28,6%) пациенток. Преобладали пациентки с нормальным ИМТ, только 1(14,3%) больная страдала ожирением 1 ст. Сопутствующая патология гениталий выявлена в 3-х случаях (42,9%): аденоматоз -1(14,3%), хр. эндометрит, аднексит – 2 (28,6%). Во всех случаях диагноз установлен после гистероскопии с РДВМ и консультации гистопрепаратов в онкогинекологии. Принимая во внимание молодой возраст больных, категорический отказ от оперативного лечения, нереализованную репродуктивную функцию проводилась двухэтапная гормонотерапия.

Результаты. На первом этапе у 4-х пациентов (57,1%) использовались агонисты ГнРг (золадекс 3,6мг/28 дней), у 3-х (42,8%) – антигонадотропины (даназол 800мг/сутки) в течение 4-х месяцев с ежемесячным УЗИ гениталий и контрольной гистероскопией с биопсией эндометрия после 1-го и 4-го месяцев лечения. Положительный результат (отсутствие клеток аденокарциномы эндометрия в гистопрепаратах, гипоплазия эндометрия по данным УЗИ и гистероскопии) после первого этапа был получен у всех 7 пациенток. На втором этапе проводилась гормонотерапия комбинированными эстроген-гестагенными препаратами по контрацептивной схеме в течение 8 месяцев с ежемесячным УЗИ контролем. У одной пациентки в возрасте 33 лет, (14,3%) с сопутствующим ожирением 1 ст. и аденомиозом, через 9 месяцев от начала гормонотерапии отмечены УЗ признаки гиперплазии эндометрия, произведена гистероскопия с РДВМ, выявлена железистая гиперплазия эндометрия. В связи с отсутствием убедительного положительного эффекта от лечения, больной была произведена гистерэктомия, в гистопрепарате клетки аденокарциномы не обнаружены. Остальные пациентки наблюдаются с безрецидивным периодом от 2 до 3,5 лет. В 2-х случаях (28,6%) после 2-х летнего динамического наблюдения, реализована репродуктивная функция: двое пациенток родили здоровых детей.

Выводы. Таким образом, проведение самостоятельной гормонотерапии минимального рака эндометрия пациенткам, раннего

репродуктивного периода, с целью сохранения органа и реализации фертильной функции, возможно только при тщательном отборе группы больных, постоянном динамическом наблюдении в КОД и реализации репродуктивной функции в ближайшие 2-3 года от начала лечения.

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