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## **THEORETICAL FOUNDATIONS FOR THE CREATION OF ELECTRONIC TEXTBOOKS FOR DISTANCE EDUCATION**

**Abstract:** This article discussed the theoretical foundations and tasks, opportunities, features of creating electronic textbooks for distance education, among the main factors for accelerating the educational process, as well as the principles of creating electronic textbooks.

**Key words:** Electronic textbook, educational literature, information technology, independent education, multimedia, verbal, tactile, stereo, audio, video, HTML, educational.

**Аннотация.** В данной статье обсуждались теоретические основы и задачи, возможности, особенности создания электронных учебников для дистанционного обучения, среди основных факторов ускорения учебного процесса, а также принципы создания электронных учебников.

**Ключевые слова:** Электронный учебник, учебная литература, информационные технологии, самостоятельное образование, мультимедиа, вербальные, тактильные, стерео, аудио, видео, HTML, образовательные.

**Annotatsiya:** Ushbu maqolada masofaviy ta'lim uchun elektron darsliklarni yaratishning nazariy asoslari va vazifalari, imkoniyatlari, xususiyatlari haqida fikr yuritilgan bo'lib, o'quv-tarbiya jarayonini jadallashtirishning asosiy omillari qatorida muhim ahamiyat kasb etilishi, shu bilan birga elektron darsliklarning yaratilish tamoyillari keltirib o'tilgan.

**Kalit so'zlar:** Elektron darslik, o'quv adabiyoti, axborot texnologiyalari, mustaqil ta'lim, multimedia, verbal, taktil, stereo, audio, video, HTML, o'quv-tarbiya.

Significant work is being carried out in the republic to develop information technology tools intended for the use of electronic educational literature, as well as the organization of distance learning. The scientific and methodological aspects of the creation of electronic literature are investigated by many scientists. Despite the beginning of the second experimental testing phase of the use of electronic educational literature since 2004, work on the creation of electronic textbooks for educational institutions is significantly deteriorating. And this is if the methodology for creating an electronic textbook, its structure, the components containing it are not placed in a specific system.

One of the urgent tasks of today is to accelerate the tasks in this direction to ensure the wide production and educational institutions of a new generation of educational literature with the transition to the third stage of widespread use in the educational process.

One of the tasks is to create an electronic science textbook.

We note that the textbook is a publication determined on the basis of the state educational standard, curriculum, methodology and didactic requirements, absorbed by the idea of a national perspective, fully covered by the topics of a certain educational discipline, aimed at the complete development of the relevant foundations of science and taking into account the possibilities of using various educational areas.

The electronic textbook is intended for the use of an educational method based on computer technologies, independent training and comprehensive effective development of scientific materials, scientific data:

- educational and scientific materials only in verbal (text) form;
- educational materials in verbal (text) and two-dimensional graphic form;
- multimedia (multimedia - multifunctional) applications, that is, information in three-dimensional graphic form, voice, video, animation and partially verbal (text);

- with a tactile (sensitive, sensitive) character reflecting the student (student, listener) in a form that creates an idea of entering the real world with the image of the stereotype "in the world of the screen" and moving in relation to objects in it.

The trend in the development of the education of the new century is the widespread use and spread of information technologies in the educational process. One of the main tasks of today can be considered the creation of a knowledge store that includes various subject areas. The introduction of new information technologies will ensure the transition from the traditional learning process in education to a new process that determines the course of the educational process by the student himself.

This process, taking place in great transparency, in the future could lead to a sharp revolution in the education system. Many talented students, according to their abilities and interests, get the opportunity to study on their own. In such a system of openness of education, school teachers with deep knowledge experience difficulties in achieving knowledge. Currently, in all educational institutions, computer education cannot yet be called free. While work is underway to create an electronic textbook, there are no open systems that allow textbooks to have books of ordinary libraries. Of course, with the development of the education system, these shortcomings gradually disappear.

Creating e-textbooks is a very difficult and complex job. development of the ability to independently teach students (students), in technological content - students (students) in the Center for Educational Technologies; cooperation based on training activities.

When developing an electronic textbook, three main components should be taken into account: description of the educational material, performance of practical exercises and feedback (the process of determining the degree of knowledge acquisition by students).

It is not advisable that the electronic textbook be completely in one file. It's going to be very big. This reduces the speed of downloading the textbook to a

computer and makes it difficult to master the material. Preparing each chapter as one document eliminates the above drawbacks.

It is advisable to use Microsoft FrontPage to create an electronic textbook. For textbook text, a voluntary text editor can be used, which can write prepared documents in the format or immediately in HTML.

Text is only an information part of the tutorial. The most necessary is the general method of preparing the textbook.

Frames allow you to create persistent information that, if necessary, should be displayed on the monitor. As such information, the name and name of the author of the textbook, the name of the educational institution, etc. can be obtained. But on the other side of the issue, it is convenient to place the contents of the textbook and move around the text. It should be noted that the frames themselves occupy most of the memory in which the information is placed, and little space remains in the texts.

Creating an electronic textbook is also possible without frames by analogy with a regular book. In this case, the loading time of the textbook will be increased, since the book itself will have a large volume. Movement, that is, display on the screen, will be lost. But at the same time, the information phase is always saved. To facilitate movement in the text, you need to create a special button permanently located on the screen.

When creating an electronic textbook, you need to use high-quality images as little as possible. They also slow down the download of the textbook to the computer.

A good electronic textbook is a demonstration tool, a repeater in independent classes organized in computer classes, a self-learning tool, a methodological assistant when performing laboratory work on a computer, a supervisor of knowledge acquisition by students, providing questions and exercises for practical classes.

However, to combine the above possibilities in an electronic textbook, the authors creating textbooks require the presence of complex methodological

developments that take into account pedagogical skills, knowledge and the nature of the subject being studied.

First of all, the electronic textbook should have separate chapters and apply the principles of exhibition, positive emotional background, frugality and broad assistance in resolving the issue.

Working in an interactive manner, providing a choice of an electronic textbook and the most convenient learning scenario, activates student learning.

An electronic textbook is designed to work with an individual rather than abstract beings. The student must choose a way of learning based on their abilities, interest in science and their level of training.

An electronic textbook does not limit a student's time training. Therefore, the time for mastering the educational material can be reduced or extended at the request of the student.

An electronic textbook can recommend to students such forms of knowledge as reading information, listening to reports, performing tasks intended for practical and laboratory studies, testing their knowledge and, if necessary, filling it, self-monitoring.

It includes simulators, practical and laboratory tasks, software that monitors testing, simultaneous training and the process of mastering them. In other words, he is the organizer of the presentation describing the main information part of the course; exercises designed to strengthen the knowledge gained, tests that allow rational assessment of the knowledge of students.

Computer textbook:

- provide feedback in one part;
- facilitate rapid detection of the necessary information;
- time saving in case of repeated access to hypermatic explanations;
- not only display text on the screen, but also analyze and model it through multimedia technology;
- the ability to evaluate students' knowledge at speed in accordance with the levels of development in a specific section;

- the possibility of updating the necessary educational information differs from traditional textbooks.

In other words, a scientific and exhibition description of electronic educational materials; diagnostic-synthetic capability; informational and cognitive description of information in a complete, system and logical sequence, transmission and activation of educational material in one system; problematic; strength of learning material development; differential and individuality of education; psychologically pedagogical, such as flexibility and emotional effectiveness; full-fledged didactic education, interactivity of education, feedback, management ability, as well as the ability to work with a textbook in the process of independent work outside the audience and audience; ease of use; easy storage of large amounts of information and the availability of special technical devices (for example, computers) required to work with educational literature.

When comparing the above didactic capabilities of published educational materials with a traditional textbook, a programmed textbook, an electronic textbook and textbooks, the presence of the most visible signs in the textbooks of the last type (multimedia) is confirmed.

When creating electronic textbooks, it is necessary to provide for the possibility of publishing the necessary parts of it on a printer, as well as the possibility of reading it during the learning period of students. Since reading text from the screen can negatively affect the eyes of readers.

By the way, electronic textbooks intended for use in the educational process of educational institutions should have the following features:

- possession of a good structure of information in the subject;
- compliance of the fundamental topics of hypermatic, indicative, audio and video studies with the elements of the educational subject;
- along with text and demonstration, issuance of video or audio recordings of educational materials by teachers on the main sections of the textbook;
- have a system of high-speed interpretation of images, models and diagrams and at the same time use hypergraphic;

- use of multi-user interface;
- the presence of a hypermate system in the text parts designed to refer to the necessary sources;
- subject titles, which are difficult to explain by text, are provided by additional video bloggers and animation clips;
- conducting audio reels with music;
- tasks and exercises that students must perform outside the classroom and classroom, as well as their answers;
- availability of basic concept and serial dictionary of modules should differ from traditional textbooks. After each section of the e-textbook, it is advisable to ask questions to strengthen the educational material.

In educational institutions, the educational process will be accelerated using electronic textbooks. The main factors of acceleration of the educational process include:

- increased focus on one goal;
- increased motivation of students;
- expansion of the information scope of the educational content;
- activation of educational and cognitive movement of students;
- acceleration of the practical level of education of students.

Based on the above, the principles of creating electronic textbooks can be considered.

They are:

- objective and multilevel description of educational information;
- focus on the student, independent and individual education;
- integration of the characteristics of the development of the spiritual activity of the student: observation, thinking and practical activity.

Creating a full-fledged electronic textbook from any subject is a very big job. Currently, the amount of electronic educational literature created and created is small. Currently, the need to implement this work with progressive scientists and the introduction of educational institutions into the educational process has become

a need. To implement the task, it is necessary to unite potential and experienced teachers, methodologists, scientists and system programmers in the republic, create special groups for the creation of electronic textbooks, as well as, based on the possibility, hat to centers. This will educate the younger generation, ensuring the future of the independent republic using new information technologies, create a basis for training competitive personnel with young people of educated, independently thinking and developed foreign countries.

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