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КАКИМ БЫТЬ ЭЛЕКТРОННОМУ УЧЕБНИКУ?

В статье исследуются педагогические и технологические условия использования электронного учебника в учебном процессе. Автор выделяет основные направления научно-педагогических, медико-социальных и технологических исследований в области разработки и использования электронных учебников. Автор делает вывод, что при соблюдении всех условий в разработке и использовании электронных учебников происходит формирование научных знаний, создается обратная связь, осуществляется контроль за деятельностью обучающихся, задаются ориентиры и мотивация.

Ключевые слова: электронный учебник, образовательный процесс, развитие, педагогика, эффективный, взаимодействие, образовательный ресурс, ученик, цель, условия, эргономичность, качество

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WHAT SHOULD BE AN ELECTRONIC TEXTBOOK?

The article explores pedagogical and technological conditions for using an electronic textbook in the educational process. The author outlines the main directions of scientific-pedagogical, medical-social and technological research in the development and use of electronic textbooks. The author concludes that, if all the conditions are met in the development and use of electronic textbooks, scientific knowledge is formed, feedback is created, control over the activities of students is being conducted, benchmarks and motivation are given.

Keywords: electronic textbook, educational process, development, pedagogy, effective, interaction, educational resource, learners, purpose, conditions, ergonomic, quality

The collection, accumulation, processing, storage, transfer and use of information are the dominant activities in the field of education in the modern period

of computerization of society. Therefore, there is a need to introduce and use e-learning materials at a higher level.

Based on the definitions given in the state standards «GOST 7.83-2001. Electronic editions», an electronic textbook is a set of training, controlling, modeling and other programs placed on magnetic media (hard or flexible disks) PCs, which reflect the main scientific content of the academic discipline [2].

Electronic textbooks belong to the group of educational electronic publications containing systematic information of a scientific or applied nature, outlined in a form convenient for study and teaching, and designed for students of varying degrees of preparation [3, p. 1].

The modern period of modernization of the national education involves the use of pedagogical products, presented in electronic form, by students using computer equipment. At the same time, the use of products presented in electronic form in pedagogy entails possible negative consequences [1, p. 7] associated with:

- the use of unacceptable amount of educational information (the amount of information, emotional saturation);
- nonconformity of the information presented on the screen (structure, quality) to the individual capabilities of the individual;
- the lack of a positive psychological climate;
- non-compliance of the visual environment (color and sound characteristics of images) with sanitary and hygienic requirements.

Educational materials presented in electronic form are widely used in the teaching of subjects, due to their high relevance. Modern specialists in the field of pedagogy, psychology, ergonomics and engineering consider the electronic textbook as a comprehensive information system that ensures the implementation of the didactic possibilities of information and communication technologies in all parts of the educational process.

This system provides the formulation of cognitive tasks, the presentation of the content of educational material, the organization of the use of primary knowledge and

activities to perform individual tasks. As a result, scientific knowledge, feedback, control of students' activities and preparation for further educational activities are formed. It also helps setting guidelines for self-education and search for additional educational information. At the same time, electronic textbooks ensure the continuity and completeness of the learning process. They provide theoretical material, tools for organizing and managing knowledge and information retrieval activities of students.

Consider the conditions of a pedagogically expedient and effective application of an electronic textbook in the educational process, with implementation of didactic opportunities for information and communication technologies:

- organization and support of interactive dialogue between students, teaching and interactive sources of educational resources; automation of the processes of information and methodical support of the educational process;

- computer visualization of educational information about the object or process being studied; computer simulation of the objects under study;

- automation of the processes of information retrieval activity, collection, processing, transmission, display, replication of information;

- automation of control and management over the results of educational activities, the assimilation of educational material and the work of the educational institution as a whole; automation of diagnostic processes, assessment of knowledge, skills, competencies of trainees, determining the level of their preparation;

- providing replenishment of existing knowledge and information, formation of educational information;

- classification of information according to certain characteristics specified by the user;

- identification of user requests; interpretation of query results;

- the presence of situational relationships that determine the situational compatibility of certain information/ knowledge;

- ability to change the structure of educational information on the basis of the analysis of the user's actions and the educational situation.

In addition to pedagogical conditions, appropriate technologies for the development and implementation of an electronic textbook are needed. These technologies are based on the interaction of its four units:

- unit of information about the student. It determines the initial level of knowledge and skills in the subject area and determines the initial requirements for students;

- subject area unit. It contains a structured training material consisting of text, audio, video and other information, implemented on the basis of multimedia, hypertext, hypermedia, direct and backlinks;

- monitoring unit. It monitors the current level of assimilation of educational material, decides on additional volumes of educational information, to achieve the requirements, makes recommendations for advancement to the purpose of training;

- unit of evaluation of the student. It presents the results of the student's interaction with the system, and provides recommendations for further action in the study of the material.

Based on all of the above, we can outline the main directions of scientific-pedagogical, medical-social and technological research in the development and use of electronic textbooks:

1. Formation of scientific-pedagogical, medical-psychological, normative-legal and technological base for evaluation pedagogical and ergonomic quality of the electronic textbook.

2. Development of instructive, methodological and technological base of the organization. Examination of the pedagogical-ergonomic quality of the electronic textbook for compliance with technical regulations and subsequent certification.

3. Definition of the instructive and methodological design base an electronic textbook used in the information and educational environment of an educational institution.

4. Creation of educational and methodical support for the application electronic textbook, used in the information and educational environment of institutions and management of its quality.

5. Improving the quality management system of the electronic textbook based on the use of information technology.

6. Providing consulting services to developers of electronic textbooks in the form of methodological recommendations for finalizing the characteristics to the required level.

7. Training of teaching staff in the field of methodological support of the application of the electronic textbook in the teaching and educational process and the examination of the pedagogical-ergonomic quality of electronic textbooks.

8. Training of scientific and pedagogical staff in the field of expertise of the pedagogical-ergonomic quality of the electronic textbook.

9. Improvement of legislation in the field of assessing the quality of an electronic textbook and ensuring the protection of intellectual property and information security of the user.

10. Bringing legislation in the field of the use of electronic textbooks in the educational process in accordance with domestic and international standards.

СПИСОК ЛИТЕРАТУРЫ

1. Роберт И.В. *От Электронного учебника до информационной системы образовательного назначения с элементами искусственного интеллекта // Ученые записки ИИО РАО. – 2014. – № 53. – С. 5-20.*

2. *ГОСТ 7.83-2001 Электронные издания. Основные виды и выходные сведения. Система стандартов по информации, библиотечному и издательскому делу. Межгосударственный стандарт.*

3. Аревкина В.Т., Анюшенкова О.Н. *Использование электронных учебников при обучении профессионально-ориентированному иностранному языку // Строительство. Экономика и управление. – 2017. – № 2(26).*