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Didactic Possibilities Of Using Software In The Process Of Higher Education

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Abstract. Today, the use of telecommunications, information technology, and technologies developed based on the latest scientific and technological advances in higher education is becoming increasingly important. Therefore, familiarization with their didactic capabilities and training in their application in the classroom will greatly assist future teachers in their future work. In the process of higher education, the digitalization of software and the enhancement of its didactic use contribute to increasing the effectiveness of learning.
Keywords: computer, system, program, software, data, function, standard, document.

Oliy Ta’lim Jarayonida Dasturiy Ta’minotdan Foydalanishning Didaktik Imkoniyatlari

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Annotatsiya. Bugungi kunda oliy ta’lim sohasida fan va texnikaning so‘nggi yutuqlari asosida ishlab chiqilgan telekommunikatsiya, informatsion texnika va texnologiyalarning qo‘llanilishi katta ahamiyat kashf etmoqda. Shuning uchun ularning didaktik imkoniyatlari bilan tanishib chiqish va mashg‘ulotlarda ularni qo‘llashni o‘rganish, bo‘lajak o‘qituvchilar uchun, ularning kelajak faoliyatida katta yordam beradi. Oliy ta’lim jarayonida dasturiy ta’minotni raqamlashtirish

va undan foydalanishning didaktik imkoniyatlarini oshirish ta'lim samaradorligini oshirishga yordam beradi.

Kalit so'zlar. Kompyuter, tizim, dastur, ta'minot, ma'lumot, funksiya, standart, hujjat.

Аннотация. Сегодня использование телекоммуникаций, информационных технологий и технологий, разработанных на основе последних достижений науки и техники, в сфере высшего образования приобретает все большее значение. Поэтому ознакомление с их дидактическими возможностями и обучение их применению на занятиях окажут большую помощь будущим преподавателям в их дальнейшей деятельности. В процессе высшего образования цифровизация программного обеспечения и повышение дидактических возможностей его использования помогают повышению эффективности обучения.

Ключевые слова: компьютер, система, программа, программное обеспечение, данные, функция, стандарт, документ.

Introduction. Currently, the development and widespread use of information and communication technologies is a global trend of world development. In the current era, when new technologies are developing day by day and the process of informatization in the country is rapidly developing, special attention is paid to the organization of information resources in the field of education. However, despite the rapid development of information and communication technologies, the level of introduction of modern technologies into educational processes, pedagogical research on new methods, forms and means of teaching cannot yet be considered sufficient.

Today, the use of telecommunications, information technology and technologies developed on the basis of the latest achievements of science and technology in higher education is gaining great importance. Therefore, getting acquainted with their didactic capabilities and learning how to use them in training will be of great help to future teachers in their future work.

Analysis of literature on the topic. The use of new pedagogical and information technology in modern educational conditions is one of the urgent tasks. The development of didactic teaching is of great importance in the application of new pedagogical and information technologies. Didactic tools are the closest assistants of teachers in the educational process [4, p. 34; 2, p. 18].

"The adoption by society of a system of continuous education that accompanies a specialist throughout his entire career has led to a situation where education and research in any specialty are based on a continuous, lifelong process of independent information acquisition. A teacher who does not have knowledge of information technologies is deprived of one of the flexible mechanisms in a dynamically developing society" [1, p. 89]. As a result, the problem of using information that provides a holistic view of the world and foreseeing the consequences of decisions arises. Computerization of education requires the organization of a system aimed at developing a creative personality, possessing transformational intelligence and oriented towards the student as a subject.

Research methodology. Software system requirements are divided into functional and non-functional requirements.

1. Functional requirements. This is a statement of the services that the system should provide. How the system should respond to input data, how the system should behave in such situations.

2. Non-functional requirements. This is a constraint on the services and functions offered by the system. It can include time constraints, production process constraints, and constraints imposed by standards. Software requirements document. A software requirements document is a formal document that describes what the developers of the system should achieve. It includes both user requirements for the system and detailed specifications of the system requirements. Sometimes user and system requirements are described as one. In other cases, user requirements form the introductory part of the document and system requirements form the main part [5, p. 27].

Software tools are mastered in the conscious, systematic, planned implementation of certain actions. These tools include:

- computer, printer, modem, microphone and sound device, scanner, digital video camera, multimedia projector, drawing tablet, musical keyboard, etc. and their software;
- hardware - software;
- virtual text constructors, multiplications, music, physical models, geographical maps;
- information sets - reference books, encyclopedias, virtual museums;
- technical skills simulators (entering information from a set of keys without looking at the keys, initial mastering of software tools)

Analysis and results. Analysis of software for teaching based on computer technologies in leading educational institutions in our republic and developed foreign countries shows that they are qualitatively new teaching tools, which are superior to traditional teaching methods. Computer-based teaching, editing of lecture texts, analysis of the results of control tests passed by students serve to improve the method of presenting lecture texts. Students have the opportunity to see, hear and reflect on animation elements during the lesson based on multimedia tools.

The didactic possibilities of using software in the process of higher education imply that students should have the skills to perform the following tasks:

- create a working program and technological maps;
- prepare assignments related to lecture texts and practical exercises;
- compile methodological instructions, control questions;
- analyze the results of mastering;
- edit lecture texts;
- visualize animations of processes reflected in a dynamic form on each topic.

The organization of the lesson process based on software in accordance with these requirements facilitates the activities of teachers, as a result, its effectiveness in managing the educational process is further increased. Along with the III, it allows the management of the educational institution to monitor the dynamics of student learning, analyze test results, assess the quality of teachers' preparation of lecture texts and other materials for independent work,

introduce computer-modeled animated presentations for laboratory work based on multimedia tools, develop proposals for the preparation of methodological materials for mastering the course, etc.

Conclusions and suggestions. Multimedia tools are of particular importance in the educational process with the following important aspects:

- organization of the individual and differential learning process;
- assessment of the learning process, feedback;
- the availability of the opportunity for self-control and correction;
- use of computer and information technologies such as animation, graphics, multiplication, sound.

Also, the practical side of multimedia tools creates the basis for the implementation of such an important task as their use in the educational process and the creation of information and educational resources for the educational process in the future in the education system.

The use of software in the process of higher education can be carried out mainly in the following areas:

- the use of information and educational systems (databases, knowledge bases, expert-training programs);
- the use of electronic educational publications and programs;
- the use of telecommunications.

The didactic possibilities of using software in the process of higher education create the opportunity to implement an important task, based on the characteristics of the subject being taught, such as showing the internal and external properties of the object that should be demonstrated during the lesson. This, in turn, indicates the relevance of the issue of creating multimedia electronic textbooks based on pedagogical and information technologies.

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