

The Usage of Automated Information Systems In the Organization of the Educational Process

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Annotation. The article provides information about the role, importance and possibilities of automated information systems in the organization of the educational process. The automated learning environment and its use, the organizers, types, purpose and tasks of the automated learning environment are described. The results of research on the organization and management of an automated learning environment, as well as internal and external factors of system development are presented.

Key sentences: information and communication technologies, information systems, automation, educational process, teleconference, computerization.

Introduction. In the experience of developed countries, the issue of creating a theoretical basis for the introduction of information and communication technologies into the educational process and its practical implementation is recognized as an urgent issue. Fundamental changes taking place in the field of education in our republic require the development and continuous improvement of educational process information and methodical support in every educational institution.

One of the main factors of reforming the field of education in our republic is related to the current use of modern information and communication technologies in the educational process. In this regard, on August 22, 2022, the President of the Republic of Uzbekistan, Sh.M. Mirziyoyev, adopted PQ-Decision No. 357 "On measures to bring the field of information and communication technologies to a new stage in 2022-2023". In the adopted decision, special importance was attached to coverage of residential areas with broadband mobile communication network, increase of high-speed mobile internet coverage, organization of IT centers for young people in the regions.

Research object and used methods

An automated learning process was taken as the object of the study. The basis of the

automation of the educational process is information and communication technologies. Information and communication technologies consist of a complex of computer and network technologies, which operate in synchronous and asynchronous modes within local and global Internet networks. Information and communication technologies provide display of video and animation materials located on various Internet resources, implementation of educational information and communication projects, remote classes and various events. Descriptive, comparative, complex and functional analysis methods were used to clarify the research topic.

The obtained results and their analysis

In the application of modern information and communication technologies in the course of the lesson and outside of the lesson, the teacher is required to use unique methods, to increase the interest and activity of the students. Education on the basis of information and communication technologies provides interdisciplinarity, that is, the integration of various fields of science, and introduces an automated educational environment in the educational process.

Currently, synchronous and asynchronous systems of creating an automated educational environment are being used through the means of modern information and communication technologies.

Synchronous systems require the simultaneous participation of students and teachers in the educational process. Such systems include interactive television, audio graphics, teleconferencing.

Asynchronous systems do not require students and teachers to participate in the learning process at the same time. Students themselves determine the schedule and time of training. Such systems include traditional printed materials, audiocassettes, videocassettes, and Internet-based training courses.

Audio graphic system is less common today, it is a method of transmitting sound, computer and graphic information through transmission channels [1]. Graphical information is transmitted by fax machines, television receivers, computer displays and electronic boards. Students draw graphic information on electronic boards, this information is reflected on computer displays. Voice communication is carried out using microphones and loudspeakers. Fax machines are used for tests and for transmitting the text of training manuals. In some cases, video projectors are also used in these systems.

A teleconferencing system is a process of using electronic communication channels to organize the interaction of two or more groups of participants. [2]. Discussions within the topic are managed by a moderator. During teleconferencing, audio, video or computer data is transmitted. The message sent to the teleconference is delivered to all its participants, that is, the communication is carried out like a communication process around a table.

Teleconferencing incorporates such technologies as audio conferencing, video conferencing, and computer conferencing [3]. Currently, the development of computer

technologies, new technical possibilities of interactive information and communication technologies have led to the development of such technologies. The implementation of the interactive distance education system ensures the synchronous exchange of information at any distance with the help of video conference technologies. It is of great importance in the transfer of knowledge, formation of competences and skills.

As in all fields, computers are widely used in the educational process. Modern teachers are using the computer not only to prepare methodical materials for the lesson, but also to use the necessary computer programs in teaching the subject, using it as a means of individual work with students. The convenience of the interface included in computer software tools provides an opportunity for teachers to effectively master modern information and communication technologies. It is desirable to effectively use the possibilities of information and communication technologies in the educational process in the development of person-oriented education, in the formation of creative abilities of students.

Nowadays, one of the promising directions of introduction of modern information and communication technologies in the educational process is computer modeling of events and processes. Computer models are close to the content of a traditional lesson and provide a basis for the teacher to display many effects on the computer screen, organize new, non-traditional educational activities for students.

In the sources, it is defined that information technology is a set of methods and tools for collecting, storing, transmitting, and processing information. There are internal and external factors that determine the emergence and development of information technologies, which can be described as follows [4]:

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- internal factors are the emergence (creation) of information, its types, properties, performing various actions with information, their collection, transmission, storage, etc.

- external factors mean the implementation of various tasks with information through the technical and hardware means of information technologies.

Nowadays, the possibilities of modern information and communication technologies have expanded, computer-mediated multimedia technologies, computer networks, Internet, Intranet, etc. have entered the educational process with a number of concepts. In addition, concepts such as information systems, management of information systems, information transmission systems, data warehouse, data warehouse management system, and knowledge warehouse are used in the educational process.

Since the 90s of the last century in the history of mankind, as a result of the widespread penetration of computers into all fields, new fields such as computerization, automation, and informatization have appeared. To date, this field has been developed and named the information age of the 21st century, the age of informatization.

Nowadays, people in the society work with information in various forms. Textual, graphic,

tabular, audio, picture, video, multimedia, animation and other forms of information can be included in such information. To work with different information, computer devices with different technical indicators are needed.

In the modern education system, a lot of attention is paid to the computerization of the educational process. Computerization of the educational process leads to the implementation of the following priority tasks [5], [6]:

- ensuring the priority of information at all stages of the educational process;
- design and development of information development in education in the fields of knowledge;
- improving the normative bases of information;
- technical and software development;
- expansion of information and communication networks.

In the information society, the independent and conscious activities of computer users include creating information objects, searching for necessary information objects, collecting, analyzing and extracting information, organizing it, depicting it in the desired form, displaying information objects (text, conversation, picture, game and other forms)) transfer, design, modeling, facility planning, etc. can be cited.

Information and communication technology tools include the following [7]:

- computer and its main and additional devices: printer, modem, microphone, sound device, scanner, video camera, video projector, etc.;
- hardware - software;
- virtual text constructors, multiplications, music, models, geographical maps, etc.;
- set of information - reference books, encyclopedias, electronic textbooks, virtual library, virtual museums, etc.;
- training programs - learning to use a set of keys, learning to use software tools, etc.

The introduction of computers into the educational system is gaining special importance in providing lecture materials and monitoring students' knowledge levels. Also, by providing students with animated information based on multimedia tools, it is ensured that lesson processes become more meaningful and interesting.

Today, in the higher education system, modern pedagogues are required to have the following skills:

- drawing up science program, working program, syllabus, thematic plan and technological maps;
- preparation of lesson plans and sets of assignments for lecture texts and practical training;
- creating methodical instructions, control questions for practical and laboratory training;
- analysis of mastering results;
- preparation of teaching materials for lectures.

In order to fulfill these tasks, information and communication technologies are of particular importance in the activities of pedagogues.

Conclusion. With the help of information and communication technologies, the management of the educational institution monitors the dynamics of students' learning, analyzes test results, evaluates the quality of preparation of teachers' lectures and other materials intended

for independent work.

According to the conducted research, computer technologies are being used in educational institutions as new teaching tools in terms of the quality of teaching. It was observed that they are superior to traditional teaching methods in a certain sense.

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