THE NEED TO INTRODUCE INDEPENDENT LEARNING TECHNOLOGIES

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Pedagogical technologies of distance education are a set of teaching methods that provide the educational process of distance education based on the selected teaching concept.

There are different models and forms in the educational system of distance learning, which differ in the following terms of use [1]:

- geographical conditions (for example, the territory of the country, location away from the center, climate);
- general level of informatization and computerization of the country;
- level of development of communication and vehicles;
- level of use of information and communication technologies in the educational process;
- traditions used in education;
- availability of scientific-pedagogical personnel for the distance education system and their potential, etc.

Distance education is mainly carried out using the following technologies:

Reproductive technologies. Reproductive technologies are implemented through the distribution of educational materials. The main purpose of the technology is to send educational and methodical materials to the student. In this case, communication between the teacher and the student is carried out by e-mail.

Interactive technologies. This technology of distance education is based on a model of teaching focused on an individual. An example of an interactive technology is Keys technology. In this case, complete educational and methodological materials (curriculums, educational materials, self-examination tasks, etc.) are delivered to those studying in the network, communication between the teacher and the student is carried out by e-mail [2].

Collaborative learning technologies. Studying in this technology is conducted in small study groups. A virtual environment is created between the teacher and students with the help of multi-functional, team-use technical means of sending information. The collective action of students is under the control of the teacher.

Technological platforms. Distance education platforms mean a set of software and technical tools, which include management and implementation of the educational process aimed at distance education. Today, distance education technological platforms are implemented in the form of "TV-technology", "Case technology", "Network technology".

Telecommunication (TV) technology. In TV-technology, it is envisaged to use the television system in order to deliver teaching-methodical materials to students and to organize constant teacher-tutor consultation. "Live" training can be organized using television and telebridges.

Case technologies. Case technologies are based on the use of textual, audio-visual and multimedia teaching-methodical materials (cases) and constant advice by the teacher-tutor for students to learn independently [3].

Network technologies. Network technologies, telecommunication networks are used to provide students with various interactive levels of interaction with the teacher and student and educational materials. Network technologies are divided into asynchronous and synchronous types.

Asynchronous network technologies. Currently, two groups of asynchronous technologies are used more in our educational system:

RESULTS AND DISCUSSION

- Computer-Based training (SVT) – independent education with the help of computer training programs of various degrees of interactivity.

- Web-Based training (WBT) - different levels independent and collective education based on interactive computer training programs.

Synchronous network technologies. It is a modern technology of distance education, in which the participants of the study are located in a distant area from each other during the educational process. Synchronous technologies are based on the creation of virtual classrooms using video conferencing tools and additional collaboration equipment. Synchronous technologies require the participation of all students in the virtual classroom at the same time and create the possibility of combining different models of teaching during one session [4].

The main technologies of distance education can be divided into the following two groups:

INTERACTIVE technologies [5]:

· Internet distance education portal.

· Video and audio conferences.

· Education by e-mail.

· Self-study through the Internet.

· Remote control systems.
· Online stimulants and training programs.
· Test submission systems.

NON-INTERACTIVE TECHNOLOGIES:

· Video, audio and printed materials.
· Television and radio broadcasts.
· Programs located on disks.

Video and audio conferencing is a way of organizing education by connecting two remote audiences with each other through telecommunication technologies using the Internet and other telecommunication communication channels. However, video and audio conferencing will require a large amount of special equipment, a high-speed communication channel, and the involvement of service professionals to organize training [6].

Independent education on the Internet is a way to independently work on a large amount of information located on many Internet sites and acquire new knowledge.

E-mail education is a way of getting education by establishing communication between the student and the teacher through letters using the most popular Internet services. With its help, we can send and receive various tests, assignments, questions and answers and instructions (in the form of text, graphics, multimedia, programs and other forms) [7].

Remote control systems - a way to acquire knowledge using special systems that create opportunities to control and operate complex software, systems and equipment in real-time. The main task of remote control systems is to give the student only practical knowledge.

Stimulator, e-textbooks and training programs are mainly ways of transferring theoretical and practical knowledge to students online through computer programs. Stimulators and electronic textbooks are now widely used in the field of education.

Testing systems are used to check and evaluate students' practical and theoretical knowledge with the help of special programs.

Distance education portals of the Internet are special Internet sites (on-line resources). The main task of these sites is to organize the educational process or to establish an electronic online communication between the student and the teacher, to allow teachers to enter educational materials on the site, to create an opportunity for students to work on this information and to use other distance education services.

The availability of universal free access to technology is one of the main factors in choosing it. It mainly depends on the composition of the selected group and the learning environment (location of the user: home, workplace, university, training center). Therefore, it is necessary that the technology should be convenient for all members of the study group and not require additional tools from the users.

Bates's 12 golden rules for choosing a distance learning technology are as follows [8]:

- good education means many things;
- any technology has its attractive positive aspects;
- educational technologies are flexible;
- super-technology does not exist;
- provide access to all tools for the teacher;
- it is necessary to connect with all kinds of economic factors;
- communication and communication are important;
- the number of students is the most important factor;
- new technology is not necessarily better than old technology;
- training is required for the teacher to use the new technology more effectively;
- presence of a team is necessary;
- technology is not a problem.

The organization of distance education should begin with the formation of the course task, the selection of the methodology and technology that meets the set goal, and the creation of the following various educational situations:

- ✓ cooperation pedagogy;
- ✓ traditional teaching;
- ✓ educational assignments and practice;
- ✓ interactive discussions;
- ✓ modeling;
- ✓ demonstration;
- ✓ innovation;
- ✓ games; solving problems and problems;
- ✓ coaching.

Organizing online distance learning requires a lot of planning and preparation. Preparation of educational materials and programs is the main component of Distance Education, especially in this form of education.

Table 1

Description of online distance learning

No time limit	Mail can be retrieved and read at any convenient time. Student and teacher strict lesson can be interconnected without a table.
No distance limit	Materials can be sent and received anywhere.
Simultaneous teaching	A form of dialogic learning that allows the teacher and the student to participate in the learning process at the same time.
Asynchronous teaching	A form of dialogic learning that does not require the teacher and the student to participate in the learning process at the same time.
Linear and non-linear training forms	Reading can be organized by the teacher or by the student. It is advisable to use a text or hypertext form of reading.

The following basic principles must be taken into account when organizing a training system based on distance education [9]:

- to ensure the priority of the pedagogical direction in the design of the educational process of distance education. The essence of this principle is that when designing a teaching system based on distance education, it will be effective if first of all a didactic model of the educational process is developed, and the pedagogical side of the project is considered a priority;
- the principle of pedagogical appropriateness of the new information technologies used;
- the principle of selection of the educational content, that is, the compliance of the content of distance education courses and subjects with the requirements of DTS;
- the principle of ensuring the security of information transmitted or received in distance education;
- the principle of the necessity of primary education;
- matching principle of teaching technology;
- the principle of mobile teaching;

➢ the principle that distance education should not be opposed to the existing form of traditional education.

Forms of organization of distance education

Chat training is an educational training based on chat technologies. Chat sessions are synchronous, that is, all participants enter the chat at the same time. For this purpose, chat rooms are organized at the distance learning center (country) [10].

Web-based trainings are remote trainings that are conducted in the form of conferences, seminars, work games, laboratory work, and practical trainings using telecommunications and other means. Special educational web forums are used for web classes. The difference between this form of training and chat sessions is that the sessions are conducted asynchronously, that is, users record their information. In this case, the interaction between the student and the teacher can be long-term.

Teleconferencing is carried out by sending information and information using e-mail. Such a teaching system is called "Natural Learning Manner".

Telecommuting. An example of this is participation in distance education with the help of the R.Bot 100 robot. For example, distance education training of disabled children with the help of this robot is being carried out as an experiment in Moscow schools. A disabled student learns by hearing, seeing and talking with the help of a robot while standing next to a computer at home. The teacher asks questions, he answers. Also, with the help of a robot monitor, the teacher watches the student, and the student feels as if he is sitting in the audience among his peers. During the break, he can also communicate with his peers.

The organization of the educational process in distance education can be carried out on the basis of the following stages:

► Defining course objectives. It is determined which knowledge (subjects, science, etc.) should be given and who should be taught.

► Selection of teaching methods. During the educational process, it is necessary to carry out a diagnosis of the level of knowledge and skills, as well as to determine the sources and methods of verification.

► Development of methodological requirements for educational material. It is necessary to determine the methods and volumes of imparting new knowledge.

► Development of lesson schedule. It is necessary to divide the entire course into several modules, to determine what knowledge the student should have after the completion of each module.

► Organization of educational process monitoring.

► Planning inspection processes,

► Planning students' independent work,

► Preliminary evaluation of the results of the educational process;

Results detection and analysis software.

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