

The System of Training Future Specialists in Integrated Technologies Environment

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Abstract:

The article covers the issues of training future specialists in the digital educational environment using an integrative approach. The importance of integrated technologies in the educational process and its content are revealed. Information about systems that make up integrated technologies is given.

Keywords: digital technologies, computer, information technologies, pedagogical technologies, integration.

Introduction. In today's globalized society, in order to achieve positive results in any field, it is necessary to pay special attention to the use of high efficiency digital technologies and the intellectual potential of society.

A lot of practical research works are being carried out in our country to develop the education system and increase its efficiency. The main content of such research works is as follows:

- upgrading the educational content according to foreign experiences and creating a new generation of educational literature based on it;
- improvement of the teaching process of educational subjects using computer technologies;
- implementation of new generation information and communication technologies into the educational process;
- implementation of modern pedagogical, innovative and integrative technologies in the educational process, etc.

Methods. The purpose of the research is to develop integrated technologies in the educational system and working out the content and methodical system basing on their usage. The study

describes the issues of integrated technologies in the educational system and the basis of their use, their content and methodological system development. Observation, scientific-methodical analysis and generalization methods were used in the research.

Results and Analysis. Methods and tools of education are of particular importance in providing quality and guaranteed education in the educational process. It is important to use integrative, i.e. integrated technologies, in the organization of the educational process at the level of modern requirements.

The word “integration” corresponds to the Latin word "integratio" and in Uzbek it means “to restore”, “start again”, “fill”. It is a concept that expresses the state of dependence of individual parts, elements, and their integration [1].

When the term “integrated technologies” is used, it also expresses the process of approaching of two or more technologies to each other, as well as the process of interconnection of technologies.

The concept of integration is one of the important scientific terms, it is a methodological tool for generalization and drawing conclusions. In science and technology, general harmony models and algorithms are created between the contents of a process or events with the help of this methodological tool.

The essence of integration is of particular importance in solving the problems of ensuring harmony in the content of education provided in the continuous education system. The main concepts of educational subjects taught through integration are summarized. The concept of integration is also used to establish a relationship between information on a research object and methodology.

Integrated technology refers to technologies resulting from combining, generalizing and establishing relationships between two or more technologies.

The use of integrated technology in the educational process means the state of conducting activities by combining, summarizing, and establishing connections between pedagogical, information and communication technologies.

The level of learners’ mastery of educational subjects is one of the main factors determining the quality and effectiveness of the lesson. In order to improve the quality of education, it is important to properly plan the lesson and define the goal correctly and clearly. When setting a goal, it is important to determine the time it takes to achieve the result, the needs and capabilities of the learner, the methods directed at the learner to try to achieve the goal, and the types of control that determine the result. In order to achieve this goal, it is necessary to introduce modern pedagogical technologies into the educational process.

Pedagogical technology is a product of the integration of pedagogical and technological approaches used in the educational process. Different pedagogues approached the concept of pedagogical technology in different ways and defined it differently. The UNESCO organization defined pedagogical technology as follows: "Pedagogical technology is the most optimal process of knowledge transfer by creation, application, and integration of teaching and learning methods, using human potential and technical means in accordance with all the possibilities" [2].

Pedagogical technology is a set of educational methods, ways and educational tools, it is a set of organizational and methodological tools of the pedagogical process. Pedagogical technology is a systematic method of creation, application and determination of the entire process of learning and knowledge acquisition, taking into account technical resources and human interaction, which sets itself the task of optimizing educational forms. Pedagogical technology consists of the process of transferring and assimilating information in a form and method convenient for assimilation. Pedagogical technology is a process that guarantees the student's independent study, learning, and

thinking. In the process of pedagogical technology, under the guidance of the teacher, the student independently acquires knowledge, learns and assimilates [2].

Therefore, pedagogical technology consists of the activity of influencing a person according to a predetermined goal.

Information technology is a total of methods, devices, methods and processes used to collect, store, search, process and disseminate information. Information technologies – ways, methods and methods of using a computer in the process of collecting, processing, storing, transmitting and using data. Information technology is a process related to the use of a modern computer in order to reduce the laboriousness of the processes that use this information for processing information and increase their reliability and speed [3].

Thus, information technology means a set of methods and tools for collecting, storing, transmitting, changing, and processing information.

Modern information technology is a technology that can enable young people studying in educational institutions to raise education to a new level of quality by organizing an educational process related to the formation of knowledge, skills and abilities based on new approaches.

The word "communication" is used in the Uzbek language in accordance with the English word "communication" in the sense of communication, message, means of communication, means of information, connection, dialogue, connection, methods and means of information transmission. A communication system is a system that, among other systems, performs auxiliary tasks related to information transmission [3].

Communication technologies are technologies that perform the function of routing (characterizing) and switching connections for the transmission of information between computers in a network.

Information and communication technologies of the educational system perform the following main functions and requirements [4], [5], [6]:

- to record the activities of students and their use of the information environment;
- to take into account support for the activities of educators and learners through counseling;
- to recommend students to learn the necessary educational materials independently;
- to organize the control of the knowledge, skills and abilities acquired by the students during the educational process with the help of tests, as well as oral and written control;
- to enable students to use the recommended educational materials, additional literature and other tools in the information base, to remotely use the information resources of the educational institution;
- to organize advice and other assistance of the employees of the educational institution at a distance during virtual laboratory training and practical assignments, etc.

The main content of educational subjects in the educational process organized on the basis of integrated technologies will consist of the following educational and methodological materials [7], [8], [9]:

- ✓ electronic textbooks, electronic training manuals, electronic methodical manuals and other additional materials;
- ✓ electronic teaching-methodical complexes;
- ✓ test programs and sets of questions for self-control;
- ✓ virtual laboratory works and their description;

- ✓ independent work and control work;
- ✓ computer programs, electronic references, electronic applications;
- ✓ additional software provision.

As a result of the use of integrated technologies, training sessions are organized remotely using the capabilities of network technologies. This is the basis of distance learning. The main task of network technologies in distance education is to ensure communication between teacher and student during the educational process. The educational process organized without constant communication between teacher and student will not give the intended effect. In the daytime form of the educational system, the communication between the teacher and the student is carried out at the same time, in the same place, in the educational auditorium. In distance education, this process is carried out through computer network technologies based on telecommunication tools [10].

The integrated state of the three technologies considered above can be considered the most optimal technology for teaching and mastering. The main task of integrated technologies is to create an information-educational environment for students using the possibilities of pedagogical and information technologies, and to deliver them to students based on the means of communication technologies.

Conclusion. Integrated technologies are of particular importance in organizing the educational process, summarizing and supplementing the educational content at the level of modern requirements, and help to guarantee the achievement of the intended goal.

References:

1. O'zbek tilining izohli lug'ati. 5 tomlik [An explanatory dictionary of the Uzbek language]. Volume 2. – Tashkent: “O'zbekiston”, 2010. – 396 p.
2. Tolipov O'.Q., Usmonboeva M. Pedagogik texnologiyalarning tatbiqiy asoslari. O'quv qo'llanma [Practical foundations of pedagogical technologies. Study guide]. – Tashkent: “Fan”, 2006. – 262 p.
3. Abduqodirov A.A., Pardayev A. Pedagogik texnologiyalarga oid atamalarning izohli lug'ati [Explanatory dictionary of terms related to pedagogical technologies]. – Tashkent: “Fan va texnologiya”, 2012. – 44 p.
4. Abduqodirov A.A., Pardaev A. Ta'lim jarayonini texnologiyalashtirish nazariyasi va metodologiyasi [The theory and methodology of technologization of the educational process]. – Tashkent: “Fan va texnologiya”, 2012. – 104 p.
5. Toshtemirov Doniyor Eshbayevich. ЎҚУВ ЖАРАЁНИДА РАҚАМЛИ ТЕХНОЛОГИЯЛАР ИМКОНИАТЛАРИДАН ФОЙДАЛАНИШ. Science and innovation. 2022. P. 554-560.
6. Toshtemirov Doniyor Eshbayevich. TECHNOLOGIES FOR CREATING E-LEARNING RESOURCES. Science and innovation, 2023. P. 396-401
7. Toshtemirov Doniyor Eshbayevich, Xasanov Baxrom Baxtiboyevich. THE USE OF ELECTRONIC INFORMATION RESOURCES IN THE EDUCATIONAL PROCESS. // GULISTON DAVLAT UNIVERSITETI AXBOROTNOMASI. Pedagogika. 2021. № 4. P. 22-27.
8. Doniyor E. Toshtemirov, Guli P. Isaeva, Akmalxo'ja M. Abduqodirov, Shavkat Sh. Saidov, Yanglish A. Qarshieva. METHODOLOGY OF CREATION AND USE OF E-LEARNING RESOURCES. // International Journal of Mechanical Engineering. Vol. 7 No. 2 February, 2022. P. 1829-1832.

9. Toshtemirov Doniyor Eshbaevich. STAGES OF CREATING MODERN ELECTRONIC EDUCATIONAL RESOURCES. // GULISTON DAVLAT UNIVERSITETI AXBOROTNOMASI. Pedagogika. 2022. № 4. P. 21-25.
10. Toshtemirov Doniyor Eshbayevich, Yuldashev O'lmasbek Abdubannapovich. RAQAMLASHTIRISH SHAROITIDA TA'LIM SIFATINI OSHIRISHGA YO 'NALTIRILGAN ELEKTRON TA'LIM RESURSLARIDAN FOYDALANISH. Science and innovation. 2023. P. 26-31.