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MULTIMEDIA TECHNOLOGIES IN THE EDUCATIONAL PROCESS OF A HIGHER EDUCATION INSTITUTION

Idiyeva Lola Ismatovna

Teacher, Department of Uzbek language and literature, Bukhara Institute of Natural Resources Management of the National Research University of Tashkent Institute of Irrigation and Agricultural Mechanization Engineers

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Abstract: As we know at present, one of the promising areas of educational process improvement is the application of multimedia technologies. The article is about the analysis of the literature on the problems of the study that shows that there are many different definitions of the concept of "multimedia".

Key words: educational process, multimedia technologies, problems of the study, poll, text, sound, video image, graphic representation and animation.

At present, one of the promising areas of educational process improvement is the application of multimedia technologies. The analysis of the literature on the problems of the study shows that there are many different definitions of the concept of "multimedia". It seems expedient in the context of our research to adhere to the following definition of multimedia - it is "modern computer information technology, which allows combining text, sound, video image, graphic representation and animation (animation) in a computer system". This definition is largely of a "technocratic" nature. If we look at the didactic aspects of the phenomenon in question, it is appropriate to recall that technologies of learning, which are part of social technologies, are understood as "a way of implementing the content of learning provided by the curriculum, representing a system of forms, methods and means of learning that ensures the most effective achievement of the goals.

Among modern learning technologies, computer technologies have occupied a special place in recent decades. Multimedia technologies of education are rightfully positioned as a new stage of development of computer technologies of education, since they are based on the teaching capabilities of the computer and imply the use of modern programming technologies. In this study, we define multimedia learning technologies as multi-media learning technologies that allow for the effective design and implementation of content, methods and forms of learning to achieve the goals of the educational process, involving the use of technical and software multimedia and interactive software.

The relevance of the introduction of multimedia technologies in the learning process is due to a number of advantages that allow the use of these tools: stimulation of cognitive interest of students, integrated use of audio and visual effects in the learning process, increasing the level of individualization of learning, increasing the information capacity of classes without compromising the quality of learning material, the involvement of more channels for the perception of learning information.

The peculiarities of the educational process in a higher education institution, which significantly differ it from school, determine the demand for multimedia technologies in almost all the disciplines studied. Let us consider these features in more details.

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For educational process in higher education it is characteristic studying of great volumes of the scientific information that is a necessary condition of preparation of competent experts. The student has a task not only to assimilate educational material, but also to conduct analytical research of considerable volumes of information, because among the formed types of activities of future specialists a significant place is occupied by research, which involves working with large amounts of information.

A special role in the educational process is played by students' independent work. The modern educational paradigm considers the ability to self-education as the priority symbols of learning, which implies the formation of skills and abilities of independent search for knowledge, self-acquisition. A modern graduate, who should become a competitive specialist in demand on the labor market, capable of effectively solving non-standard professional tasks, is unthinkable without these skills and abilities. In this connection, the university should create the necessary psychological and didactic conditions in which a gradual transition from the independent work of a student under the guidance of a teacher to his or her own independent work would be made. The formation of skills and abilities for independent work should certainly take place simultaneously with the acquisition of professional knowledge, the development of cognitive interest, and the mastering of methods and techniques of scientific cognition.

The specifics of the educational process at a university may also include a combination of training and research activities. Preparation of a competent specialist capable of self-development and participation in innovative activity is impossible with the use of only reproductive methods of education that imply elementary transfer of ready knowledge to students and reproduction of the obtained information. It is necessary to reduce the share of passive knowledge consumption and increase the degree of students' activity in independent creative search for new knowledge, discoveries and non-standard solutions to problems. The share of a student's independence in a competent formulation of a research problem, vision and analysis of possible ways of its solution, competent search for the most rational way to achieve the goal of research, critical and objective evaluation of the results of the research work should gradually increase.

The need to bring the content and organization of the learning process as close as possible to the future professional activity causes a pronounced professional orientation of the educational process in a higher education institution. This peculiarity of education is manifested in the specifics of the pedagogical means used, which allow not only to form the necessary professional competences, but also a value attitude to the future profession, sustainable interest in the chosen type of activity, personal qualities demanded in the profession. Among these means should be mentioned active methods of education (business games, case solution, project method, simulation modeling method, etc.), different types of practice (introductory, training, production, pre-diploma), stimulation of different directions and forms of research, creative, independent work of students. The professional orientation of the future specialist. Being a complex motivational education that reflects a person's attitude to professional activity in general, the professional orientation of a student's personality largely determines the success of achieving the goals of study at the university.

In a number of didactic means used in the process of education at the university a large proportion of control. The importance of control increases as the share of classroom activities decreases along with the increase in independent work of students. The role of a teacher in this situation is undergoing transformation: in the conditions of huge information flows he ceases to be only a source, a carrier and a distributor of knowledge, performing to a greater extent the role of a leader [2], a subject of management of students' cognitive activity, which necessarily implies the

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implementation of functions of control over the process and learning outcomes. It seems to be important to form students' abilities to self-control, ability to independently evaluate and timely correct their learning process, which is an important component of the readiness of young people for constant self-education. Without considering the didactic foundations of the procedure for controlling the educational process in a sufficiently deep way, we will only note the importance of its motivational and diagnostic functions. In other words, the control should not only provide the necessary information for an objective assessment of learning outcomes and identify gaps in the training of students for timely correction, but also stimulate cognitive interest, the need for systematic work, self-control, student activity. Therefore, it is necessary to apply methods and forms of control over the process and results of study at the university, which would really allow achieving these goals.

The above described features of the educational process at the university explain to a great extent the relevance of using multimedia technologies. Application of the above technologies creates conditions for transition from passive to really active variant of educational process organization, in which a student becomes an active subject of educational activity, interested in achievement of professional education goals. The possibility of interactive interaction, a high degree of implementation of the principle of visibility, rationalization of the use of teaching time, expansion of opportunities to visualize complex teaching material, a wide range of areas of influence on the process and content of training and much more are certainly the advantages of multimedia technologies, the use of which can significantly improve the efficiency of the learning process.

In order to improve the learning process, we have developed a multimedia didactic complex in the discipline "Economics", designed for students of technical specialties and areas of training of fulltime education. The didactic complex includes presentations of lectures with control tests, interactive books on each topic and training simulators (exercises in game form). Presentations of lectures and books were made in the PowerPoint program, using the program for creating electronic resources iSpringSuit.

Presentations were created with the use of animation elements, which made it much easier for students to understand the graphic interpretation of economic regularities and to focus on key points of the lecture content. This option provides an opportunity to visually build a chronological sequence of events describing certain economic phenomena in front of the students and helps to remember them more successfully. Multimedia capabilities allowed to include in the content of some presentations videos illustrating certain economic laws and principles, which certainly have a positive impact on the processes of perception, attention, and memorization. The system of hyperlinks, used in the development of presentations, creates convenient conditions for users to search for necessary information, placed on different slides.

The possibilities of this program allowed to accompany each presentation of the lecture with a control test of the corresponding content, which students had to perform within a strictly limited time frame set by the teacher. In our program, three days after the lecture were allocated for this purpose. This option allows students to discipline their work by motivating them to repeat the lecture material until it is forgotten. Within the framework of the rating system of evaluation of the results of training, it is possible to provide penalty points for the late performance of this task, or reduction of the point for the work.

When performing tests, the student has the opportunity to repeatedly refer to the content of the presentation, updating the memory of educational material. Since the priority task facing us during the testing was to consolidate the passed material, and the secondary task was to control the assimilation, the students were given the opportunity to perform test tasks indefinitely. If the purpose

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of the test is to evaluate learning outcomes, the program allows the instructor to significantly limit the time required to complete the test assignments and the number of attempts to answer questions.

At the same time, the program provides an opportunity to quickly assess the work of students: after the completion of the tests, the results are automatically sent to the teacher's e-mail (we chose this option of notification from the list of possible), which has the ability to see a detailed report on the work of the student - the time of the test, the number of attempts to answer each test question, the errors made in the test. Such information allows not only to quickly assess the work of the teacher and the student, but most importantly - to make the necessary adjustments to the content of classes, including practical and seminar classes, which follow the lectures. The instructor can determine which questions should be discussed in more detail, which points in the course material need further clarification and analysis, with which of the students and which questions should be considered more carefully.

The content of any discipline always includes topics that are intended for self-study by students; lectures on such topics are not read in the classroom, and students are forced to independently search for literature recommended by the instructor, study it and report on the work done. In order to control the learning of such material, we have also developed and offered students presentations with control tests. The time for these tests was determined much longer, and the number of attempts to answer questions was reduced, which is due to the purpose of testing independently studied material.

Thus, multimedia technologies do contribute to the efficiency of the process of higher education, integrate powerful educational potential, and provide an enabling environment for the formation of competencies necessary for future specialists.

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