



FUNDAMENTALS OF THE METHODOLOGY OF USING MULTIMEDIA TECHNOLOGIES AND ARTIFICIAL INTELLIGENCE IN STUDENT EDUCATION.

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INTRODUCTION

The priority for the higher education system is to achieve a quality of training for future specialists that will allow them to compete in the international labor market. The point is to prepare a person for continuous learning – for learning as a process that constantly accompanies the process of work. From this point of view, the purpose of training and education is the formation of creativity as an integral quality of personality, which will open up the opportunity for a specialist to generate new ways and types of activities himself, enter new professional spheres for him, and allow him to reorient the focus of his work in a short time.

Presentation of the main material. Currently, multimedia and artificial intelligence systems represent an independent infrastructure of the information industry, whose products are increasingly being used in social, economic, educational and other spheres of human activity. This fact marked the beginning of a new stage in the development of modern information technologies. The main feature of such technologies is that, with the help of artificial intelligence, they systematize and unify computer hardware and software tools and the methodological foundations of digital technologies, which made it possible to combine information presented in the form of text, graphics, video, and sound into a single software product called multimedia. Multimedia is "a modern computer information technology that allows you to combine text, sound, video, graphic image and animation (animation) in a computer system." Multimedia is understood as the relationship between visual effects and audio effects [7]. This relationship is controlled by special interactive software. Multimedia uses both the latest technical, software and artificial intelligence tools. The purpose of using these tools is to combine text, graphics, photos, videos, and sound into one digital representation. The use of multimedia technologies in vocational education allows students to influence several sensory organs at once, which indicates increased interest and attention on the part of students. At the present stage of modernization of education, the use of multimedia tools and artificial intelligence as a method of educational and cognitive activity is increasingly penetrating into various branches of



knowledge, and the educational process, under the influence of the ideology of multimedia activity, is built in accordance with the understanding as a cycle of innovative activity [2]. The use of multimedia and artificial intelligence technologies in the educational process changes the ratio of methods, forms, teaching tools, and the entire methodological apparatus. This leads to a change in the volume and content of educational material; deepening of the subject area by modeling or imitating phenomena and processes through dialogical interaction, information compression, logical and stylistic processing; the use of instrumental software tools to develop logical, visual and imaginative thinking, as well as the formation of verbal, communicative and practical skills.

Modern computer multimedia textbooks, including hypertext, illustrations, video and sound fragments, perform not only the functions of tools used to solve individual pedagogical tasks, but also stimulate the development of didactics and methodology, thereby contributing to the creation of new effective forms of learning [4].

The use of multimedia tools in open education allows students to work on educational materials in different ways. In this case, the student has the opportunity to decide how to study the materials, how to use the interactive features of the multimedia application, and how to collaborate with their fellow students. Thus, students become active participants in the educational process.

Multimedia tools can be used in the context of a wide variety of learning styles and can be perceived by people with different psychological and age characteristics of perception and learning: some students prefer to learn by reading, others by listening, and others by watching videos. In the process of open learning, students can influence the process of learning new material, adapting it to their individual abilities and preferences. They can study the material that interests them, repeat the study of the material as many times as they need, which helps to eliminate many problems of individual perception. The use of high-quality multimedia tools makes the open learning process flexible in relation to the social and cultural differences between students, their individual learning styles and rates, and their interests. Individual learning is the implementation of the principle of active, independent learning, in which students choose which questions to answer and which topics to study. The effectiveness of the educational process in professional education is enhanced by the use of any software products by teachers, they can be electronic textbooks, books, any developments of the teacher, etc. Frequent use of the Internet, since it is one of the most common ways to obtain information, suggests that it is an assistant to both teachers and students.. Multimedia learning technologies are a set of technical learning tools (TCO) and didactic learning media (DSO) [1]. The use of multimedia technologies in vocational education expands the



possibility of further intensification of the learning process. The features of using multimedia technologies are:

- An auditorium equipped with computers. The application is carried out in a specific location equipped with a multimedia projector;
- the use of programs such as Microsoft Teams, Word, Excel, PowerPoint, Outlook, OneNote, and OneDrive in the educational process is considered useful and important for students to master in modern society;
- the use of video materials in the educational process allows you to visualize the learning process in order to acquire new knowledge, etc.

A teacher who uses multimedia technologies in the learning process opens up wide opportunities that affect the improvement of the educational process. Developing a lecture course and reading it in an unconventional way will be an example of broad opportunities. The advantages of multimedia technologies in comparison with traditional education are:

- using web elements, such as tests. They are very popular;
- the variability of the passage is an example of obtaining deep knowledge;
- the use of animation and various graphic elements, as well as sound to visualize the learning process;
- use of electronic libraries, etc.

Multimedia technologies combine verbal and visual-sensory information, which gives students motivation for the learning process. And the organization of classroom training sessions using various multimedia technologies in professional education allows both teachers and students to save time, saturate the educational process with information, and present the educational material in a simpler way with the means available to all students, thanks to which the assimilation of educational material by students will become deeper and more conscious [2].

Studying at the institute today is unthinkable without the diverse and widespread use of technical training tools. Also, learning tools have great information content, reliability, allow you to penetrate into the depth of the studied phenomena and processes, increase the visibility of learning, contribute to the intensification of the educational process, enhance the emotionality of the perception of educational material. Therefore, the use of multimedia technologies contributes to the improvement of the educational process, increasing the effectiveness of pedagogical work, and improving the quality of knowledge, skills, and abilities of students [6].

Conclusions Thus, to summarize, multimedia and artificial intelligence are one of the most promising areas of using computer technology in education. The scope of multimedia is very wide and its possibilities in education have not yet been fully exhausted. The use of multimedia technologies is assessed in the



ability to improve the quality of the educational process in vocational education and its effectiveness. However, the content of the most powerful educational potential in multimedia technologies makes it possible to create a fruitful environment for future specialists to develop their competencies. The enrichment and effectiveness of the educational process in vocational education is caused by the use of multimedia technologies in it.

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