

# **METHODOLOGY OF USING MODERN MULTIMEDIA TOOLS TO INCREASE THE EFFICIENCY OF EDUCATION**

**ABDULLAEVA SANOBAR BERDIEVNA**

**Assistant Professor, Samarkand State Medical University**

**JURAKULOVA MUHLISA JAHONGIROVNA**

**Student at Samarkand State Medical University**

**ABDALIMOVA ALO KHAKIMOVNA**

**Student at Samarkand State Medical University**

**Abstract:** As is known, modern teaching technologies are one of the main elements of the educational process. The use of modern multimedia technologies further expands the pedagogical skills and technological capabilities of the teacher, simplifies the topic of the lesson, and makes it easier for the audience to understand. This article provides information on the methodology for using modern multimedia tools to increase the effectiveness of teaching.

**Keywords:** Education, student, modern multimedia technologies, pedagogical devices, efficiency.

**INTRODUCTION:** The process of providing education, skills and abilities is the main means of preparing a person for work. In the process of education, knowledge is mastered and upbringing is carried out. In addition, modern information technologies can be mentioned, based on the requirements of the present time. Modern information technologies are constantly developing and evolving in order to further improve human life, without standing still. As a result of the rapid development of modern information technologies, new opportunities appear in various spheres of human activity. Taking into account the rapid development of social life, the expansion of development needs and opportunities, and the acceleration of the flow of various information, it is necessary to take on the task of creating a mechanism for using modern educational technologies, tools and methods. It is necessary to develop methodological foundations, specific mechanisms, methods and tools for diagnosing the educational process and

implementing the created theories and educational methodological complexes into practice on the basis of experience and testing. It should be aimed at identifying the achievements and shortcomings of the educational process, the quality indicators of educational results, pedagogical theories applied to the educational process, the degree to which modern technologies can develop educational practice or hinder the development of education. The main task of the teacher-pedagogue is to make his subject interesting to students and at the same time increase students' interest in science and modern technical means used in modern education. In this regard, it is appropriate to use modern technical and software tools for teaching.

**LITERATURE ANALYSIS AND METHODOLOGY:** Multimedia emerged as a new and independent direction in the USA in the 1980s and began to become popular. During these years, 10 multimedia programs were prepared and included on CDs. Multimedia began to develop in European countries, including Russia, at the same time. In the 1990s, scientists such as D. Jonassen, R. Grabindger, S. Carver, R. Lehrer, D. Davidson conducted research on the use of multimedia in the educational process in the USA. In Russia, D. Kreman, A. Pushkov, L. Mikerova, E. Ryazumovskaya, M. Moisseyeva and others worked on the use of multimedia in the educational process of secondary and higher schools. After 1990, research on multimedia in the USA, European countries, including Russia, accelerated on a large scale and in a mass manner, and many articles, books, manuals were published and many dissertations were defended based on their results. N.Yu. Rotmistrov's article "Multimedia in Education" emphasizes the prospects for using multimedia in the educational process, including as one of the methods for increasing the effectiveness of the educational process. MB Alekseyeva and SN Balan's textbook "Technology of using multimedia systems" covers the methods of using multimedia tools in the educational process. OV Shlykova created a textbook for students called "Culture Multimedia", which studies the socio-cultural aspects of multimedia development, provides a general understanding of multimedia products and their development tools, and the use of multimedia technologies in various fields of activity, especially

in the fields of education and culture. It is stated that students should follow the rules of the textbook when working independently, performing practical and laboratory work. In Uzbekistan, a number of multimedia textbooks have been created by different authors in different years. The initial information about multimedia was described in the textbooks “Economic Informatics” by SS Gulyamov and others, published in 1990. The textbook “Fundamentals of Informatics and Computing” by M. Aripov, published in 2001, provides detailed information about the multimedia capabilities of Windows. The multimedia electronic textbook is also defined as follows: “A multimedia electronic textbook is a modern manual based on the capabilities of collecting, storing and presenting information based on modern information and telecommunication technologies.”

**DISCUSSION:** Nowadays, multimedia technology is being effectively used in many areas, including education, as the main direction of rapidly developing modern information technology. The educational process is extremely complex and multi-component. The effectiveness of education depends on the activity of the teacher and the student, the availability of educational tools, the organizational, scientific and methodological perfection of the educational process, the need for educated people in society, and many other factors that have not yet been determined. Society requires high educational efficiency based on its socio-political and economic needs.

Currently, many enterprises, companies and firms use various computer technologies to conduct seminars, meetings, trainings and other events. Multimedia technologies are increasingly used to make information rich, memorable and visual. These are multimedia hardware devices that allow processing various forms of information, such as text, graphics and sound, as well as application software packages.

Multimedia has several definitions:

- Multimedia is a technology that describes the procedures for developing, launching, and using tools to process various types of information.

- Multimedia computer hardware (the presence of a CD-ROM drive on the computer, a sound and video card that helps to broadcast audio and video information, and other special devices)

- Multimedia is the integration of several means of presenting information into a single system. Programs that work with multimedia tools are multimodal, that is, they attract the interest and attention of the audience by simultaneously affecting several sensory organs.

**RESULT:** Using modern multimedia technologies in educational processes:

- improves the pedagogical skills of teachers;
- creates new electronic pedagogical technologies;
- automates the learning process;
- makes the work of teachers easier and increases their efficiency;
- leads to the creation of electronic textbooks, tests, and electronic learning materials.

Modern pedagogical devices are many effective technical means of the educational system. They include computers that allow modeling many processes and applying students' knowledge in practice, digital projectors that display computer data and videos on the screen, projection screens, overhead projectors, slide projectors, flip charts, interactive whiteboards, and videoconferencing systems. The use of multimedia tools in higher education institutions in the educational process is of great importance in the formation of certain ideas, interests, and skills in students at the level of the subject being studied. Multimedia tools simultaneously affect the student's perception, that is, the processes of hearing and seeing, as a result of which their level of mastering the lesson being taught becomes much higher.

Multimedia tools can be used in teaching to obtain sound films, school television, and multimedia computer systems equipped with projectors. When teaching lessons using multimedia projectors, it is possible to depict techniques and technologies in moving images and view them repeatedly at different times. A specialist with knowledge and methods of creating graphics and working with sound

next studies the means of presenting and creating multimedia products. This primarily includes HTML programming, that is, working with MS Word, MS FrontPage, Macromedia Dreamweaver, which belong to the WYSIWYG group of programs, and preparing presentations in MS Power Point. It is also possible to recommend other programs such as Macromedia Flash, which is a program for creating more complex multimedia interactive presentations, and Adobe AfterEffect, which is a program for processing graphics and sound, as well as animation. At this stage, the student must know how to create educational multimedia applications on his own.

**CONCLUSION:** Presentation is an effective method of using modern multimedia tools to increase efficiency in teaching. In recent years, the world has experienced a computer revolution. Computers have firmly entered our lives. It is difficult to imagine most aspects of human activity without computers. Business, which is the most rapidly changing dynamic type of activity, has not been left out of this process. In this case, it is necessary to think about how to most conveniently and effectively convey information to others in order to facilitate communication with a computer, attract its attention, and interest. As is known, a person perceives most of the information through the organs of vision and hearing. Multimedia technologies help these important sensory organs work simultaneously. By displaying a dynamic visual sequence with sound, it is possible to attract more people's attention. Based on this, multimedia technologies allow information to be presented in the most effective way, that is, it can be interactive. Multimedia presentation provides direct perception of information. The user sees all the information presented and can use the parts that interest him. Receiving information does not require much effort and time. Unlike other forms of information presentation, multimedia presentation provides low reproduction costs and long storage life, despite the fact that it contains several tens of thousands of pages of text, thousands of pictures and images, several hours of audio and video recordings, animation and three-dimensional graphics.

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