SPECIFIC ASPECTS OF EDUCATIONAL MATERIAL DEMONSTRATION ON THE BASIS OF VISUAL TECHNOLOGIES.

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ABSTRACT

This article analyzes the problems of increasing the effectiveness of the educational process through the use of didactic visual aids that help to increase the mental and cognitive activity of students in higher education. Demonstration of educational material on the basis of visual technology allows them to implement educational content in a multimedia and interactive way. In addition, the need for teachers to visualize the teaching material and master the methods and tools for their practical application.

Key words and concepts: presentation based on visual technology, multimedia technologies, interactivity, students' cognitive activity, visual teaching aids.

INTRODUCTION

In today's information society, the exchange of information has increased significantly and new methods of presenting educational material on the basis of visual technology have been created. The rapid development of information technology, the formation of new visual technologies places special demands on the work of teachers. The richness of different types of information in a rapidly evolving society implies special processing of educational material before presenting it to students. To overcome this problem, teachers must not only have the skills of research, analysis, processing, but also the ability to present the teaching material using visual technologies.

PURPOSE

The demand for the formation of knowledge, skills and abilities in an informed society always necessitates the visual representation of the knowledge base. Accordingly, adequate solutions to the above problems can be found by visualizing the training material using modern technologies. "Visualization" is a controlled presentation of educational material using pictures, graphics, tables to simplify comprehension and processing. Indeed, the word "visualization" is derived from the Latin word "visualis" - means visual, visual [1, 17].

The use of modern graphics programs and programming languages, as well as their visual capabilities, allows you to find effective solutions to the above problems. The following are recommendations for reviewing and analyzing the process of perceiving the learning material, visual thinking, and selecting the most effective methods of visualizing the learning material.

SCIENTIFIC NOVELTY OF THE ARTICLE

Serious work is being done by researchers to solve the problem of providing the education system with e-learning resources. However, the analysis shows that the formation of centralized banks of digital resources in higher education, the placement, methodological support and presentation of visual learning materials in them has not always been carried out in a purposeful manner. This requires the improvement of the practical and technological system of visualization on the basis of modern technologies, factors of pedagogical presentation of educational materials to students, pedagogical and psychological features. It is argued below that understanding higher education institutions as a goal-oriented and guaranteed result-oriented visual technology based on visual and figurative presentation of teaching materials will ensure the effectiveness of learning.

RESULTS AND PRACTICAL APPLICATIONS

A number of studies by some researchers have shown that new information can be perfectly assimilated when the learning material is presented in a systematic way. This helps students to easily master the system and methods of new concepts. Due to the significant differences in the nature and characteristics of knowledge in different subject areas, there are a number of methods of visual systematization. According to the achievements of neuropsychology, learning is effective when the capacity of the human brain develops by overcoming intellectual difficulties in the search for meaning by setting laws [2, 307].

The interaction of multimedia-based visual aids in teaching using information and communication technologies allows students and teachers to actively interact, manage the presentation of educational material, determine the sequence of use of information parts and change, supplement or reduce meaningful information. Consequently, interactivity improves the cognitive features of the educational process, incorporates the components of play and research into teaching, encourages students to comprehensively analyze the characteristics of the objects and processes being studied [3, 361].

Today, the use of visual teaching aids based on modern information technologies still causes many teachers the difficulties associated with the choice of visual aids to solve certain pedagogical problems and the problem of shaping the organization of educational activities. Specialists and teachers who use educational materials in their professional activities on the basis of visual technologies will need to constantly improve their skills. As an effective solution to these problems, the following can be cited as the main aspects of the presentation of educational material on the basis of visual technologies:

Animation technology **-** allows you to change the color, size of objects, create animated fragments, select one or more objects. To do this, use bottom lines, frames, seals and more. With the help of animation it is possible to create the illusion of movement, change, development, which creates a vivid and high-resolution image in the presentation of educational material on the basis of visual technology. Animation can visually reflect the dynamics of any event, images of events and processes being studied. Thus, the dynamics of computer animation can be used to increase cognitive activity.

Multimedia **-**is an integral part of modern information technology based on the simultaneous use of different means of presenting different types of information. It is a set of techniques, methods and tools for collecting, processing, storing, transmitting various data in the context of interaction between the user and the information system. Multimedia technology allows you to present audiovisual information on the screen. Due to this, multimedia technologies are widely used in the development and creation of visual aids. Their components include static and animated images, as well as audio text and video data.

With the development of 3D (*3 dimensional* - visual three-dimensional space) graphics, presentation based on scientific visual technology has emerged as an independent branch of science. The transition to 3D technology has transformed graphics from a presentation tool into a powerful method of solving scientific problems and visualizing learning material. At present, the presentation on the basis of three-dimensional visual technology is widely used in educational systems in various fields of science, technology, medicine. Teaching using three-dimensional models is very visual, allowing to diversify the forms of presentation of the material (lot.diversificatio - change, diversified development) and increase student interest [4, 102].

Programming languages **-** usually implemented through high-level programming languages (Delphi, C ++, Phyton, Java). Because the semantics of these programming languages are close to human language, the programming process is much easier. Programming languages are one of the most complex technologies of

visualization, which requires in-depth knowledge and skills in this area from the programmer. However, it is very effective and is one of the most advanced methods of visualizing teaching materials.

Conclusions and suggestions. It will be necessary to apply the trends in the development of methods of using modern information and communication technologies in teaching methods using computer graphics and visual aids. The study of new technologies is carried out through methods and solutions for the use of new software products, distance learning, web conferences, remote testing and various forms of certification.

Based on the above visual technologies, the following positive results can be achieved through the use of key aspects of demonstration in the educational process:

- allows the teacher to continuously improve their skills;

- allows to master methods and means of visualization of educational material and to successfully apply them in practice.

- Demonstration of educational material in the educational process on the basis of visual technologies, serves to improve the quality and efficiency of the educational process.

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