



**METHODOLOGY OF USING MODERN GRAPHICS PROGRAMS IN  
TEACHING ENGINEERING GRAPHICS**

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**ABSTRACT**

This article reflects the role of computer graphics in the teaching of engineering graphics and an improved method of teaching modern automated design software.

**KEYWORDS**

CAD, natural processing,  
artificial processing,  
computer graphics,  
engineering graphics.

**Introduction**

The role and importance of "Computer graphics" science, which is currently being taught in higher education institutions, can be considered in the satisfaction of material and spiritual needs necessary in our social life, and in the wide range of opportunities for automating the work of all specialists in this field. That is why, at the same time, computer graphics are divided into various fields in the HEIs of our Republic, creating methodical bases for using its capabilities in a number of fields, effective use of computer technologies and new fields that are entering our lives (specialized artist, special effector, vector art master, The issue of providing qualified specialists such as CAD-master, modeler, animator, texturist, visualizer, etc.) has led to an increase in the need to teach "Computer graphics" as a subject in HEIs. Today, it is important to apply the necessary pedagogical and psychological tools and their scientific justification in teaching the subject of "Computer graphics" in higher education institutions, in order to form students' purposeful actions towards the subject and to instill the possibility of achieving a certain result.

It is known that before coming to OTM, if students have the necessary basic knowledge and skills in the field of "Computer graphics", they will develop the necessary spatial imagination and ability to read drawings. This indicates that it is appropriate to start the related courses from the secondary special vocational education system. Thanks to the scientific research of a number of researchers in this regard, scientific results are being achieved, which can have a great effect on the educational process.

K.A.Grebennikov studied the problem of developing the pedagogical and technological basis of using computer graphics in the teaching of general professional subjects in the secondary special vocational education system in the "Design" specialty. In this research work, a specialist in the secondary special, vocational education system

- a pedagogical model of the use of computer graphics in professional training of designers was created and the importance of computer graphics was revealed in it. 1

E.M. In the scientific research conducted by Tretyakova, the technology of designing and implementing the content of "Computer graphics" for the construction specialty in vocational colleges was developed. In it, a special course "Computer graphics" was designed, based on the sample program developed according to it, it was scientifically proven that it is possible to increase the knowledge and skills of the students regarding the use of computer technologies.

Also, in the scientific research carried out by D.C. Saidahmedova, the theoretical basis of teaching the subject "Technical drawing" using the possibilities of computer technologies was developed in vocational colleges. The dissertation scientifically justified the method of activating the learning process of students by using didactic games, the creation of pedagogical conditions and the possibility of increasing the effectiveness of the lesson by using computer graphics in the teaching of "Technical drawing". The author has developed a multimedia electronic study guide called "Technical drawing" based on interactive methods, didactic games and computer technologies for students of vocational colleges and combined it with traditional teaching methods. , improved the teaching methodology, including tasks designed to develop students' spatial imagination, to read drawings correctly and quickly, as well as to form such qualities as observation, resourcefulness and intelligence in them, intellectual game programs used on the computer style ("Crossword", "Rebus", "Charkhpalak" and "Labyrinth").

Working with information in graphic programs is focused on the organs of sight, hearing and sensation, that is, images and sound are widely used to provide information. The main goal is to convert information into images and sounds. Although there are many computer graphics programs available today, they differ from each other depending on their areas of application. Professionals in each field choose a graphic program that is convenient for their activities. The capabilities of the programs are also focused on a specific field. Therefore, when choosing a graphic program, it is necessary to take into account its capabilities. In most cases, it is necessary to master other programs or disciplines before using a graphics program.

In order to develop spatial imagination in the student's mind, first of all, it is observed that interest in science is formed in him and based on this interest, he acquires knowledge and remembers it, knowledge is gathered and turned into skills and competencies.

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