



## METHODOLOGY OF TEACHING ENGINEERING GRAPHICS IN TECHNOLOGICAL EDUCATION

**Sharapova Firuza Iskandarovna**

TerDUPI 1-stage masters

mail: [sharapovaferuza25@gmail.com](mailto:sharapovaferuza25@gmail.com)

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### ABSTRACT

*This article discusses the role of engineering graphics in teaching technology education and an improved way of teaching modern automated design programs.*

The role and importance of the subject "Engineering Graphics", which is currently taught in universities, can be considered as meeting the material and spiritual needs of our social life, as well as the wide range of opportunities for professionals in all fields to automate their work.

Therefore, at the present time in the universities of the Republic to study engineering graphics in different fields, to create a methodological framework for its use in a number of areas, the effective use of computer technology and new areas that come into our lives (specialized artist, special effector, vector artist, The issue of providing qualified specialists such as CAD-master, modeler, animator, texturist, visualizer, etc.) has led to an increase in the need for teaching "Engineering Graphics" as a science in universities. Today, when teaching the subject of "Engineering

Graphics" in higher education, it is important to apply the necessary pedagogical and psychological tools and scientifically substantiate them in order to form students' purposeful actions in relation to science and thus achieve a certain result.

It is known that before coming to the university, if students have the necessary basic knowledge and skills in the field of "Engineering Graphics", they will develop the necessary spatial imagination, the ability to read drawings. This suggests that it is advisable to start this course with a secondary special, vocational education system.

Thanks to the scientific research of a number of researchers in this field, practical results are being achieved that can have a great impact on the educational process.



K.A. Grebennikov studied the problem of developing pedagogical and technological bases for the use of computer graphics in the teaching of general vocational subjects in the system of secondary special, vocational education in the specialty "Design". This study created a pedagogical model of engineering graphics in the professional training of specialists in secondary special, vocational education, which explains the importance of computer graphics, drawing, descriptive geometry.

1. Also, the scientific research conducted by D.C. Saidakhmedova developed the theoretical basis for teaching the subject "Technical Drawing" in vocational colleges using the capabilities of computer technology.

The method of activating the learning process of students through the use of master didactic games, the creation of its pedagogical conditions and the possibility of increasing the effectiveness of the course through the use of computer graphics, including engineering graphics in teaching the subject "Technical Drawing" substantiated. The author has developed a multimedia e-textbook "Technical Drawing" for students of vocational colleges based on interactive methods, didactic games and computer technology and combining it with traditional teaching methods. , tasks to improve teaching methods, including the development of students' spatial imagination, correct and fast reading of drawings, as well as the formation of such qualities as observation,

ingenuity and intelligence, computer-based intellectual game programs ("Crossword", "Rebus", "Wheel" and "Labyrinth").

2 As a result of research conducted by LV Pavlova, interesting issues in the formation of students' knowledge of engineering graphics and computer graphics in the field of engineering and the use of computer graphics in teaching graphics and the development of creative activity of students using AutoCAD graphics program.

3 M.V. According to Matveeva, the illustrative function of computer graphics is performed when students master the finished graphic, animated and video materials. They acquire knowledge by creating a mathematical model of the object under study.

The illustrative and cognitive functions of computer graphics are conditionally different. On the one hand, a simple graphic image can also give a student a new idea or open up new perspectives. On the other hand, the cognitive function is not always fully realized, for example, when the student reflects only the already known features of the object under study, only the illustrative function is performed.

4. Indian scientist J.Rash has shown in his research work that the main purpose of teaching the subject of "Engineering Graphics" should be to develop creative activity in students in computer design of production i

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