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**METHOD OF DEVELOPING STUDENTS' CREATIVE THINKING SKILLS AND
EFFECTIVELY ORGANIZING THE EDUCATIONAL PROCESS**

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Annotation: This article presents a methodology for the development of students' creative thinking abilities and the effective organization of the educational process by solving problems in descriptive geometry and engineering graphics using information and communication technologies.

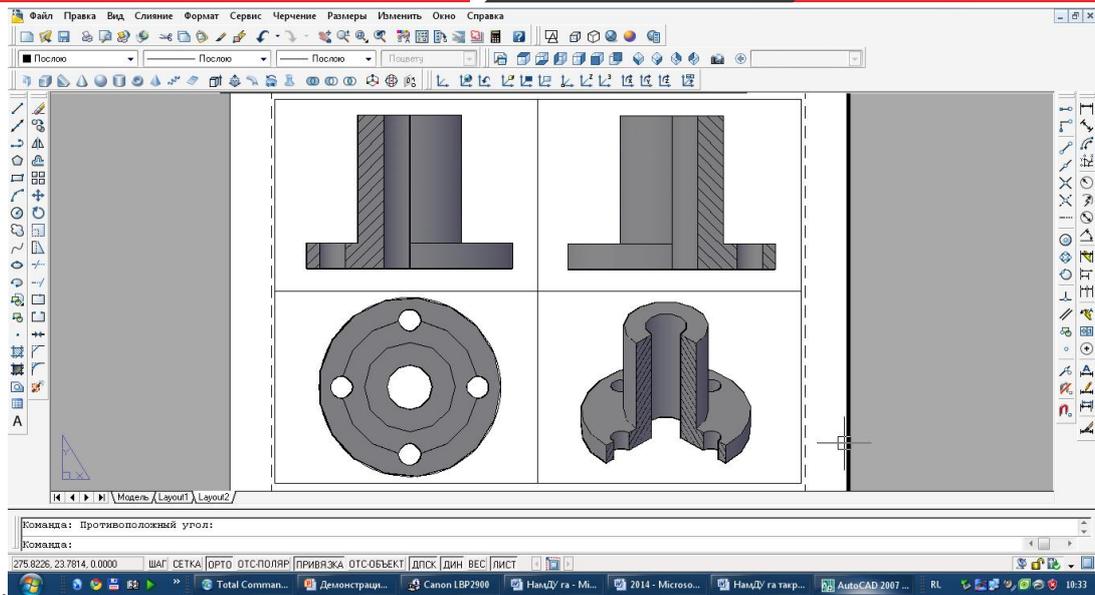
Keyword: Creativity, invention, technique, ICT, AutoCAD, program, graphics, hole, nest, edge, edge, cut.

A person faces creative problems throughout his life, but only rarely does he solve them creatively. What is creativity? It is a simple solution to a problem that seems extremely difficult to understand. In most cases, such solutions are called very ingenious and inventive solutions. The paradox of creating innovation is that it is not easy to create a random novelty, while creating a simple novelty is extremely difficult, that is, not every novelty is considered a product of creativity. Analyzing the accumulated experience in solving inventive problems and the theories of thinking makes it possible to form the basic principles of creative thinking and develop psychological and pedagogical methods for teaching creative thinking. Without developed creative thinking, humanity cannot survive in the 21st century [1].

In an era of rapid development of science and technology, teaching students using old traditional methods can become an obstacle to their ability to keep pace with the times. Therefore, today, when teaching students, the teacher himself must keep up with the times, know computer technologies, and be able to use programs correctly and rationally. The simultaneous effective use of the blackboard and computer technology by the teacher in conducting lessons leads to an increase in the quality of the lesson and the development of students' creative thinking.

Modern computer technologies and graphic programs make it easier for students to master the subject. With the help of the AutoCAD graphic program, students can see various situations of the given model in a clear image (3D model), and as a result of being able to see what they could not imagine in the views (holes, grooves, invisible lines, edges and ribs) using the graphic program, they can apply the necessary cuts and sections. When drawing a drawing on the board in the traditional way, students do not have the opportunity to fully imagine the details (holes, grooves, invisible lines, edges and ribs). As a result, students make many shortcomings and errors in drawing a clear image of the detail and performing cuts and sections.

During the practical lesson, the teacher, while explaining the topic "Cutting Details" to the students, constructs three views and a clear image of the given detail on the board, shows how to make the necessary cuts. When answering questions from students, the teacher: erases and redraws the necessary parts of the drawing to explain, resulting in insufficient time to fully explain the



material.

Figure 1. A detailed model cutout in AutoCAD graphics software with views and a clear image.

In such cases, the teacher uses computer technology and graphic programs to solve the problem by showing the drawing on the board using AutoCAD, its views and 3D model. In such cases, the teacher can provide the materials shown in the program in their entirety and also provide additional materials.

The teacher using a computer to show electronic materials in an animated way through a video projector creates opportunities for students' interest in science and creative thinking (Fig. 1).

Students will have an idea of how to cut a given detail, and when answering the questions, the teacher can use the AutoCAD program to quickly call up any 3 or 6 different views of the given model and apply the necessary cuts. As a result, the teacher fully achieves his goal. Students will also increase their interest in science and have a positive impact on the development of creative thinking skills.

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