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THE IMPORTANCE OF COMPLETING TASKS USING AUTOCAD GRAPHICS PROGRAM IN DEVELOPING STUDENTS' CREATIVITY

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Annotation:
This article highlights the role and importance of the AutoCAD graphic program in improving students' graphic literacy. Issues related to the development of spatial perception are presented with examples of execution using the AutoCAD graphic program. During the execution of tasks in the AutoCAD graphics program, students' creative competence, i.e. creative ability, increases.

Keywords: spatial perception, assignments, AutoCAD graphics program, module creation, views, creativity, creative competence

TALABALARNING KREATIVLIK QOBILIYATINI RIVOJLANTIRISHDA TOPSHIRIQLARNI AutoCAD GRAFIK DASTURI YORDAMIDA BAJARISHNING AHAMIYATI

Annotatsiya:
Ushbu maqolada talabalarning grafik savodxonligini oshirishda AutoCAD grafik dasturining o‘rni va ahamiyati yoritib berilgan. Fazoviy tasavvurni rivojlantirishga oid masalalar AutoCAD grafik dasturi yordamida bajarishga namunalar keltirilgan. AutoCAD grafik dasturida topshiriqlarni bajarish davomida talabalarning kreativ kompetentligi ya’ni ijodiy qobiliyati oshib boradi.

Kalit so‘zlar: fazoviy tasavvur, topshiriqlar, AutoCAD grafik dasturi, modul yasash, ko‘rinishlar, kreativlik, kreativ kompetentlik

ВАЖНОСТЬ ВЫПОЛНЕНИЯ ЗАДАЧ С ИСПОЛЬЗОВАНИЕМ ПРОГРАММЫ AutoCAD GRAPHICS В РАЗВИТИИ ТВОРЧЕСТВА СТУДЕНТОВ

Аннотация:
В этой статье подчеркивается роль и важность графической программы AutoCAD в повышении графической грамотности из студентов. Вопросы,

связанные с развитием пространственного восприятия, представлены на примерах выполнения с помощью графической программы AutoCAD. В ходе выполнения заданий в графической программе AutoCAD повышается творческая компетентность учащихся, т.е. творческие способности.

Ключевые слова: пространственное восприятие, задания, графическая программа AutoCAD, создание модулей, виды, креативность, творческая компетентность

Introduction

Due to independence, great importance is attached to the selection of the best methods of educational work in teaching methodology and pedagogy-psychology, to the inclusion of issues that activate students' cognitive activity in the educational process. Especially in the course of the lesson, implementation of students' interchangeability of educational activities is one of the tasks in the focus of the methodology of teaching drawing among all educational subjects.

It is known that the graphic activity is characterized by its specific nature and ultimately by the combination of knowledge in the field of reading drawings and systematized knowledge related to the technique with the volume of studies, that is, the graphic given to students tasks will be developed according to the principle of simple to complex.

One of the main tasks of teaching this subject is the formation and development of competence of the student's spatial imagination, independent creativity in the teaching of drawing.

Creativity is a mental process that leads to the ability to create something new, unique, create an artistic form, think, idea and solve.

In the pedagogical and psychological literature, the concept of "competence" (lat. "compete", visual. "competens" (competents) - ability, competent, competent) is interpreted as: to discuss something, acquire knowledge; to have complete information about a matter; an area of well-informed issues; belonging to a certain field, capable, knowledgeable and good assimilator; a competent, knowledgeable, respected person in a field [4, 672].

Creative competence is the most basic and active form of manifestation of independent thinking qualities in a person [5, 83]. Despite the fact that all tariffs differ sharply from each other, some common aspects can be pointed out.

The use of automated design system (ALT) programs in the teaching of drawing science is highly effective. These programs include AutoCAD, 3d Max (USA); Compass (Russia) can be included.

T. Jelena, M. Sroka, B. Radovan, H. Stachel, Kaiping Feng, N. D. Yadgorov, D. S. Saidakhmedovalar and others on the use of computer technologies in graphic education, P. Odilov, T. Rikhsiboev, A. Valiev gave scientific recommendations [3, 104].

The main part

Currently, three-dimensional computer modeling tools are in the attention of users, and this is certainly not accidental. Their use allows the high-quality execution of construction and design works and allows the user to quickly, qualitatively, and accurately print out drawings.

Creating different models in drawing students' knowledge and spatial imagination gives a very effective result. It will be more effective if it is explained using AutoCAD graphics software. Taking this into account, we will consider several different ways of making a model based on tasks.

Task-1. Figure 1 shows the front and top views of a single-element body. Find out what kind of body it is by looking at it from the left.

Solving. a) The intersection of a straight line at an angle of 45' to H and V proves that it is a rectangle.. (Figure 1, a) .

b) The equilateral triangle indicates that it is half a cube (Figure 1, b).

c) Using a square equal to the front and top views, it is determined that it is a cube (Figure 1, c).

d) Its axonometry is drawn in the AutoCAD graphics program (Figure 2)

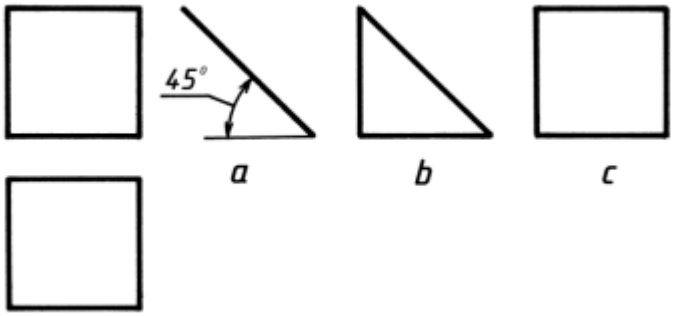

Figure 1.

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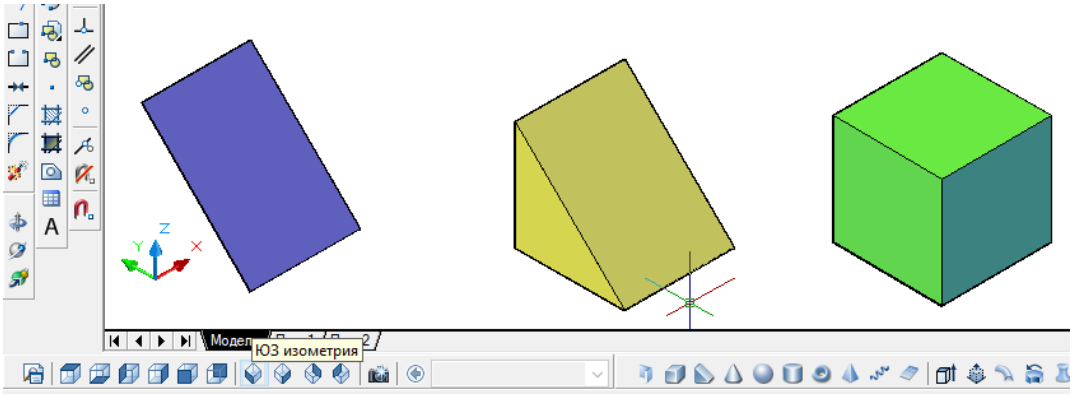


Figure 2.

Task-2. Figure 3 shows the front and top views of the two-element model. Let it be determined by its side view and what kind of body it is. From its views from the left, it is known that it is a cube whose parts have been cut in six different ways. (Figure 3 and 4).

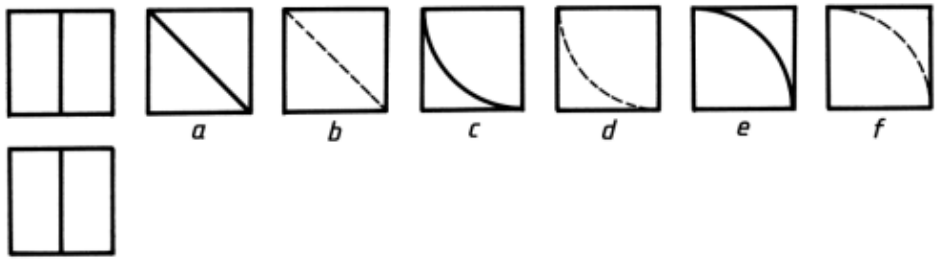


Figure 3.

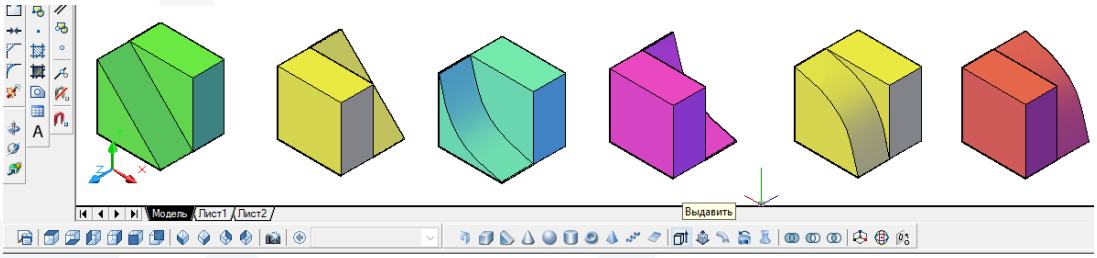
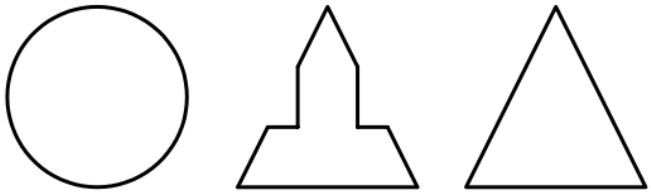


Figure 4.

Task-3. Make a clear picture of the model that fits through the given hole (Figure 5) [1, 61].



a) b) c)

Figure 5.

Solving. In order to perform this task, it is necessary to take into account the fact that the detailed model being designed must pass all three views.

1. The overall dimensions of the model are equal. At the first stage, we will draw a cylinder, the diameter of the cylinder should be equal to its height (Fig. 6, a).
2. In the second step, we draw a view corresponding to Fig. 5, b and perform its axonometry (Fig. 6, b).
3. In the third step, we draw a view corresponding to Fig. 5, c and perform its axonometry (Fig. 6, c).
4. At the fourth stage, we combine the axonometric images of Fig. 6, a, b, c (Fig. 6, d).
5. In the fifth step, we get the desired axonometric image using the "Peresechenie"-"Intersection" command of the "Modelirovanie" panel (Fig. 6, e).

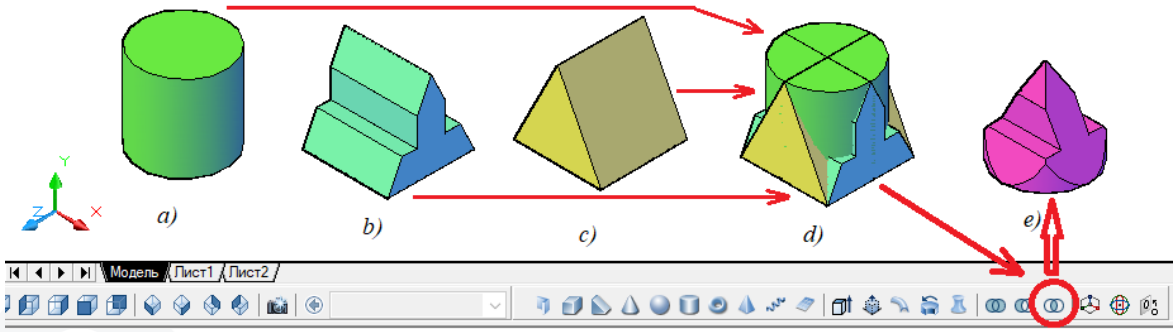


Figure 6.

Summary

Due to the dialectical relationship between drawing (technical drawing) and spatial thinking, they complement each other with interesting ideas. As a result, spatial thinking leaves the drawing behind and reinforces it by drawing the thought image on paper. By doing this, it helps to determine the thought image and to check the interrelationship of some elements, then to continue the construction, and to think spatially.

In the creative activity of a person, the graphic image performs two interconnected tasks. First, the drawing is a special tool of thinking, and secondly, it is a tool that gives a flkr (idea). That's why we should mainly study graphic aspects in the design activity.

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