THE TECHNOLOGY OF DEVELOPING THE DESIGN COMPETENCY OF FUTURE DRAWING SCIENCE TEACHERS THROUGH AutoCAD GRAPHICS SOFTWARE

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In the development of the design competency of future drawing science teachers through the AutoCAD graphics program, the activity in the organization and conduct of training sessions, the intensity in the performance of the teaching task, as well as the implementation of independence require the need to rely on several didactic and methodological foundations. This didactic-methodical basis was the following:
To develop the technology of developing the design competency of future drawing science teachers through the AutoCAD graphics program;
Students reliance on the spatial imagination characteristics of spatial imagination in the development of design competence. The role of drawing reading in the development of design competency of students in drawing lessons. Modeling of geometrical images in the tool of the AutoCAD graphics program for the development of the design competency of future drawing science teachers.
Now we will consider the peculiarities of the didactic-methodological foundations listed above.
I. Experience in the development of technology for the development of design competency of future drawing science teachers in the tool of AutoCAD graphics program shows that the development of student's design competency in the tool of AutoCAD graphics program is a rather complex and long-lasting process. To do this, it is necessary to cooperate with the teacher with the student. The teacher puts the educational objectives on the subject, the composition of his full - fledged operation-predicate, gives examples of the order of each individual operation, controls the course of each action and the execution of the Operation, Finally, he considers the performance of the tasks of each student, if it is done, in what ways it is necessary to process, gives advice.
II. In the development of the student's design competence, along with the spatial imagination, spatial imagination is of great importance. Based on our existing imaginations, we say that the activity of our consciousness, which consists in creating images of what we first perceive and events, is a fantasy. According to specific tasks in human practical activity, imagination can be interpreted in different contexts.
III. Students will get acquainted with all of the geometrical bodies in drawing and mathematics lessons. When the teacher explains the methods of describing subjects in a plane, the students will be able to fantastically imagine what items should be depicted in one, two or three projections, and what objects should be projected in a CT scan. For example, one view of the cylinder is a rectangle, the second view is a circle, one view of a full cone is a triangle, the second one is a circle, the third view of the cube is also a square, etc. Since these concepts are inherent only in graphic activity, they can be called Graphic concepts. The importance of spatial imagination and thinking, especially when reading the drawing, is incomparable. If, when reading a drawing, a cross-comparison of views one after another, spatial transformations are carried out by a clear image reflection of the detail, the mark (for example, a drawing or scheme with conditional marks in one view) is drawn, work is performed on graphic models of different levels of abstraction according to the Real characteristics of the details.
IV. In order to develop the design competency of future drawing science teachers, modeling of geometrical images through the AutoCAD graphics program is important. Modeling and modeling. Model-this is a lot. modulus – copy means Manos that are called samples, and modeling means Manos that are called samples or copies. That is, modeling requires the creation of such a copy sample, it is necessary to imagine that this copy will give complete or sufficient information about the actual (Real) object.
Geometrical modeling apparatus is based on the method of orthogonal (rectangular) projection. 1-the picture depicts a detail consisting of two geometrical figures from the front and the top. About the first geometrical

form can be said unequivocally – this is a truncated prism, but the second geometrical form has uncertainty. It can also be a parallelopiped, prism or surface. Figure 1, a) two views of the geometrical form presented in Figure 1 are not enough to call it an exact geometrical form. Figure 1, b) the desired range of geometrical figures presented in Figure 2 corresponds to two views.

This means that in order to have an idea of some geometrical figures or to have an idea, it is also necessary to have a third view.

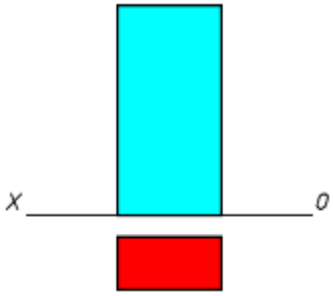

Figure 1

Figure 1 a) Figure 1 b)

At the third stage, the knowledge studied in the model is transferred to the original object. Ie the information that the model gives is compared with the original object and checked for authenticity.

In our study, we will consider its didactic properties, since geometrical modeling is of great methodological importance. Geometrical modeling. Modeling of spatial images on the basis of geometrical elements and dimensions is called geometrical modeling. The physical, chemical, biological properties of these objects are not taken into account. For the implementation or further use of geometrical modeling, it is necessary to have a certain knowledge. Let's first get acquainted with the device of modeling (apparatus). Geometrical modeling apparatus as is the case with hardware (device) in any modeling.

Geometrical modeling based on the method of orthogonal projection apparatus and the model performed according to the requirements of SSU embody and equalize the original object references (Figure 2).

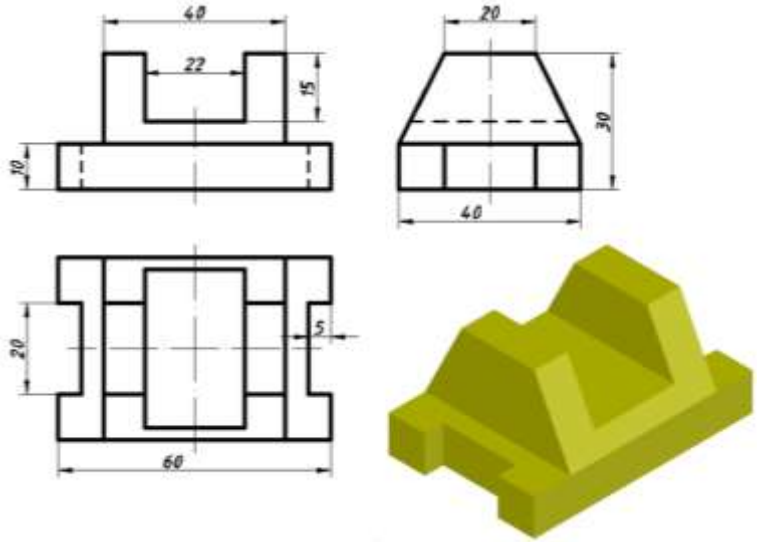

Figure 2

Today, the basic need for geometrical modeling is that the computer needs geometrical models of spatial objects to model various phenomena and processes. By giving the fourth, fifth, sixth and etc parameters to the revenge-sized geometrical models, it is possible to find optimal solutions to complex engineering issues under certain conditions.

The Figure 3 shows that the automotive company has tested the collision process of the car on the basis of the modeling of the newly created car model on the computer. In the absence of computer modeling, the company would have had to test several cars for Real collision and make economic costs.

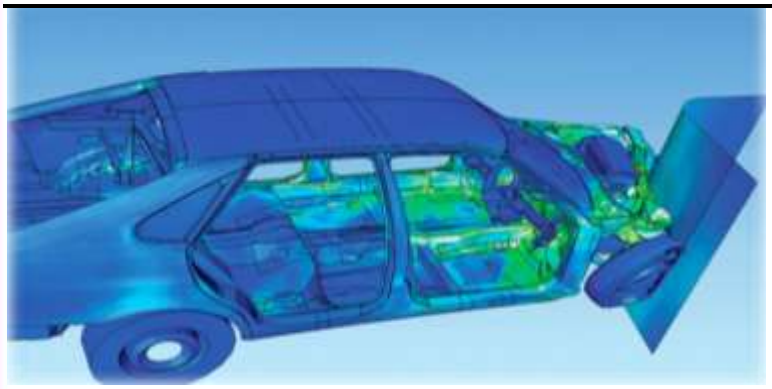

Figure 3

Concept about 3D modeling. Surfaces and their classification. It follows from the word 3D's 3 demination – three-dimensional, on the basis of this concept it is understood that geometrical figures with a surface, volumetric and volumetric having three dimensions.

Volumetric geometrical figures include bodies, superficial geometrical figures with surfaces and volumetric geometrical figures without spatial curves.

Today, 3D models consist mainly of geometrical models belonging to two toyifs, these are bodies (tela) and surfaces (poverxnosti). Figures with exactly the same geometrical structure can consist of a body or a surface.

Thus, we considered that the design competency of the teachers of the future drawing science can be developed through the AutoCAD graphics program. Bunda created models of several didactic – methodological projections of spatial geometrical images, bunda took a place in the content of drawing science and reflected in the above-mentioned topics. He considered the model projections made up of geometrical bodies, the introduction of changes to the detail image, as well as the change of the state of the detail in spacetirib the creation of a new model from several details, that is, the achievement with the help of geometrical modeling. Now we will consider the expression of the spatial phase of the manashu detail with the help of a new generation of AutoCAD graphics software, an example of some of the topics in drawing science.

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