

PRINCIPLES OF EXECUTION OF ARCHITECTURAL AND CONSTRUCTION DRAWINGS IN MODERN CULTURE

Ismailova Mahmuda Tulkinovna

1st Year Master's Degree in Engineering Graphics and Design Theory,
Tashkent State Pedagogical University named after Nizami

ANNOTATION

Creative technologies in construction amaze the imagination with their individuality and fantasticness, they are based both on the achievements of the latest scientific research and on the existing experience of design activities. When designing such facilities, complex technologies are used, special computer programs are written, a whole staff of highly qualified engineers, specialists of various profiles, works. Modern projects can only be created by a highly qualified architect.

Keywords: architecture, drawing, design, engineer, computer technology, drawing, descriptive geometry, project.

INTRODUCTION

The culture of developing drawings and technical drawing plays a big role in the work of architects. The modern development of science and technology, the improvement of computer technologies in design suggest that designers should be able to navigate freely in the flow of scientific and technical information, constantly replenish their knowledge, foresee and understand the nature and direction of development of scientific and technical progress, be able to create - to think positively.

Drawing is the basis of all types of project activity. Drawing is one of the oldest forms of fine arts. Cave painting (rock art) – drawings in caves created by people of the Paleolithic era, is one of the types of primitive art, has been an object of considerable interest from scientists around the world since its discovery in the 19th century. It should be noted that the drawings of an ancient person in terms of graphics and creativity are made at the highest level. One of the elements of primitive fine art is the linearity of drawing creation. The concept of "drawing" is the main component of visual literacy. Lines create the illusion of space on a plane. The drawing is universal in terms of application, it can be both preparatory to some further work, and an independent work of art. Michelangelo Buonarroti believed that "drawing ... is the highest point of painting, sculpture, and architecture, is the root of all science".

The word "drawing" is most often understood as an expression of the image and logic of the main form of the depicted and individual objects and the connection between them in a single plot composition.

Modern drawing methods have a long history. For example, the history of the creation of writing includes examples of "picture writing", in which objects were depicted in a drawing. Then it became important for a person to make drawings not only of the object that he saw, but also those that needed to be created. And when large structures began to be erected (for example, dwellings, fortresses), the first drawings appeared - plans that were carried out on the ground where the structure was to be built.

A drawing is an image of objects as we see them in reality, performed using perspective methods. A drawing differs from a drawing in that the display of an object consists of two or three of its projections.

A technical drawing is made by hand in compliance with the proportions by eye and according to the rules of axonometry. The main requirement when performing a technical drawing is visibility. In this case, the same rules are observed as in the construction of axonometric projections. In some cases, a technical drawing made with dimensions can replace a drawing and be a document used to manufacture simple objects.

Technical drawing forms professional design thinking among designers, the ability and practical skills of making drawings, develops the ability to see spatial objects from a flat drawing, develops spatial thinking and imagination, and also overcomes stereotypes of thinking and perception.

Reconstruction drawings. In these drawings, architects recreate objects of the past and do so based on historical descriptions. These are drawings - drawings that contain a scale bar showing the proportions of an object. Drawings - reconstructions recreate objects and elements of architectural structures.

Descriptive geometry develops spatial thinking and imagination and is widely used by designers. The main tasks of descriptive geometry:

- Study of the graphic language of drawings, various methods for displaying objects on the drawing plane and reading rules;
- Development of spatial, creative, logical thinking, static, dynamic spatial concepts.

Descriptive geometry is one of the branches of mathematics. The course of algebra and geometry receives a visual geometric interpretation as a set of multidimensional linear forms and relations between them. These methods of cognition are dialectically dependent, i.e. they both contradict and complement each other. "Our comparison of descriptive geometry with algebra is not aimless: both sciences have the closest connection. There is not a single construction in descriptive geometry that could not be translated into the language of analysis: one should wish that both these sciences were studied together: descriptive geometry would introduce its inherent clarity into the most complex analytical operations: analysis would, in turn, introduce into geometry generality characteristic of him "G. Monge.

The execution and reading of drawings consists in reading visual information. An important step in the formation of ideas about an object is the perception of some visual information contained, for example, in a drawing, diagram, model, figure. To do this, one should not only look at the visual images presented for understanding, but also see the information embedded in them, that is, analyze the visual information. The study of visual information begins with the organization of the general structure of the visual image (model, drawing, drawing, scheme) and the definition of its elements.

The professional development of a specialist is most effective when performing practical tasks. Thinking itself is always "a set of operations consciously and subconsciously aimed at solving problems, which means that to develop thinking is to form, improve certain mental operations." In modern culture, it is necessary to regulate and predict the design activities of architects, designers and engineers. Today, sometimes engineers ask the question: why make flat drawings, use the knowledge of descriptive geometry, if it is possible to obtain three-

dimensional images, 3D models of any three-dimensional geometric objects on a monitor screen using modern computer technologies? The article convincingly shows that before computer design, a “mental” project of an object is created, which is built in the head of the designer, and drawings, sketches, drawings are made.

At present, the application of knowledge of descriptive geometry occurs at the level of everyday life. And the opinion of designers about the loss of relevance of the technical drawing can be heard from such designers who are well aware of descriptive geometry and drawing and do not notice their application in practice. Modern projects can only be created by an architect with developed spatial thinking. The role of descriptive geometry and drawing is indisputable.

Descriptive geometry is a striking phenomenon of human culture. It is necessary to preserve the valuable knowledge that mankind has been creating for centuries, and to preserve the name under which descriptive geometry has occupied an important place for two centuries. “Geometry, which stood at the cradle of the human mind, can help a person today make another leap in his development. Intellectual, spiritual and moral. We must not miss this opportunity.” It is necessary to prevent and stop experiments on replacing technical drawing and descriptive geometry with computer graphics. Currently, there is a need for highly qualified, creative, prepared for professional activities, who have an idea of the latest scientific developments in the field of design.

REFERENCES

1. Borovikov I.F., Potapova L.A. Descriptive geometry and engineering education / engineering and engineering education, 2019, №1, P. 62–67
2. Botvinnikov A.D. Graphic activities: author. dis. dr ped sciences. M., 1968.
3. Gerchuk Yu.Ya. Fundamentals of artistic literacy: the language and meaning of art: a textbook, ed. 2nd, rev. and add. / Yu.Ya. Gerchuk. M.: Publishing house "RIP-holding", 2013. 192 p.
4. Gusakova I.M. Pictorial conventions of the artistic language of arts and crafts // Law and Practice. 2016. № 4. P. 268–272.
5. Gusakova I.M. On the interaction of drawing and drawing / Construction – the formation of the environment of life [Electronic resource]: Sat. tr. XX International Scientific and Practical Conference of Students, Masters, Graduate Students and Young Scientists, 2017. P. 50–52.
6. Kovalev A.A. The formal method in the search and organizational stage of work on a realistic composition: monograph. Moscow: Prometheus MPGU, 2005. 120 p.