



**THE VALUE AND SIGNIFICANCE OF ACADEMIC DRAWING IN THE FORMATION OF FUTURE ARCHITECTS IN THE PROCESSES OF HIGHER EDUCATION**

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**Annotation:** *The article examines current problems in the teaching of architecture in higher education today and issues related to its elimination are presented.*

**Key words:** *pencil drawing, painting, sculpture, color science, graphics, composition.*

**Introduction:** An architect is a sought-after and multifaceted profession that includes not only creativity, but also deep engineering and technical knowledge and high responsibility. The profession of an architect is located at the intersection of engineering, technical, humanitarian and artistic fields of knowledge.

A pencil drawing is the urgent language of an architect. The future specialist should quickly and freely create images of his architectural ideas in the space. Architectural drawing and its environment have a special place in the formation of this component of a person in educational activities.

Michelangelo wrote: "Pencil drawing... is the highest point of painting, sculpture, and architecture; "Pencil drawing is the source and soul of all painting, the root of all sciences."

Pencil drawing develops scale in the eye, constructive vision and thinking, the elegance of the line, the orderliness of strokes, the idea of perspective and composition, expands and fills the space of paper, reveals the construction, mutual relations, and connection of objects.

Pencil drawing should be studied for a long time and carefully, like music: the position of the hand, the separate and joint sound of each object, understanding the rhythm in the lines, creating a harmonious composition.

Drawing is one of the leading subjects in the training of an architect. And this is understandable, because the pencil drawing is the main means of representation of the architect's creative method. An architect must constantly strive to improve the solution of all design problems, and drawing is one of the means to achieve this goal. He needs to master the art of drawing - this is the key to successfully completing any project assignment.

The 18th century French philosopher Denis Diderot wrote: "A country that teaches painting as it teaches writing will soon surpass all other countries in arts, sciences, and crafts" [1].

Currently, the architect's drawing is not simply defined as a tool of professional communication or a "language" of dialogue: architect - performer - consumer, but is interpreted as one of the main tools of the creative process. The goal of architectural education is to prepare students for active creative practice. Architecture has a special place in the cultural system, and one of the main roles assigned to the architect is to create beauty. But in order to create beauty, he must be able to "see" it, "pass" it and put it on paper.

To work successfully in architectural graphics, you need to develop the ability to see the world through the eyes of an artist, to notice unusual things, to be observant and enthusiastic. To successfully complete any project assignment, an architect must master the art of pencil drawing.



High penmanship is one of the quality criteria for the professionalism of future architects. In this regard, I would like to highlight such a quality as creativity, which is necessary for an architect.

Creativity is a factor that helps unlock the potential of students and professors, influences resistance to existing difficulties, and helps find extraordinary ways out of extraordinary situations. A creative idea is a unique and integrated idea of the main content and form of an artwork, formed in the creative imagination of the artist before starting work on the artwork. In detail, it is constantly improved, enriched and changed during practical implementation.

What does the concept of "creativity" include? According to the definition of A.I. Subetto, these are:

- creative thinking in any field of human activity, the ability to find unique solutions to life problems ahead of time;
- the ability to solve creative problems in the professional field;
- the ability to manage the psychological inertia of thinking based on knowledge of management methods and techniques;
- ability to make decisions under risk;
- to know the laws of logic and heuristic methods of thinking;
- knowledge and ability to apply the tool of strong thinking theories in life situations, focusing on the ideal quality of the result;
- to understand the basic laws of the world, systems and objects around us.

The world is entering a new form of development, moving from an industrial society to a post-industrial, information society. New technologies, computer network, computer graphics, special reproduction equipment, fast and easy construction of the most complex perspectives and spatial images on automatic drawing machines, Internet is rapidly entering our life. Therefore, the primary task of teachers is to develop creativity in students and future architects. As teachers of fine arts, we see the solution to this problem in the development and improvement of the artistic abilities of students - architects, in particular, in mastering the art of pencil drawing.

The art of pencil drawing includes several stages: observation, holistic vision, visual memory. P.P. Konchalovsky, "... the whole life of an artist should be a continuous chain of observations and impressions"[2]. The following pedagogical tasks are inextricably linked in the process of teaching fine arts:

- education and development of natural observation skills;
- holistic vision and perception of reality;
- development and strengthening of visual memory;
- the ability to think about what was previously perceived.

To better understand the importance of these important qualities, let's briefly analyze the process of learning to draw.

What is a long-term educational pencil drawing in the auditorium? Drawing from life, based on long-term observation and detailed study, is the main traditional form of teaching. What the artist saw; teaches to reliably convey their characteristic features, shapes and plastic properties. Drawing provides basic theoretical knowledge and practical skills. Knowledge includes the basics of observational perspective, some questions of physics (laws of light propagation, optics), concepts of light and shadow relations (tone), basics of human and animal plastic anatomy.

**The main part.** Unfortunately, in recent times, we can see that the educational hours of "Pencil drawing", "Rangtasvir" and "Sculpting", which are necessary for future architects, have been reduced in the higher educational institutions that prepare the field of architecture. In previous years, the teaching of these subjects was planned for 3 semesters, but these 3 subjects were called one subject, i.e. "Pencil drawing, painting and sculpture", and the 3-semester taught subject was reduced to 2 semesters, optional subjects included in the block. If we look at this process in the example of higher education of neighboring Commonwealth countries, we can see from the curricula that each of these subjects is recognized as a separate subject. At the Irkutsk National Research and Technical University operating in the Russian Federation, 108 hours of "Pencil Drawing" in the 1st-2-3-4-5th semesters, 72 hours in the 6th semester We can see from the curriculum that 108 hours are allocated to the subject of "Painting" in the 3rd-4th-5th semesters, 72 hours to the 6th semester, 108 hours to the subject of "Sculpture" in the 6th semester, and each is recognized as a separate subject [3 ]. Another one is 324 hours for "Pencil drawing", 180 hours for "Painting", 144 hours for "Sculpture" in the curriculum of "Donbass National Academy of Architecture and Construction" in Ukraine (07.03.01) together with 72 hours for the subject "Colorology and coloristics" [4].

288 hours for the subject "Fundamentals of drawing and painting" and 288 hours for the subject "Architectural drawing and graphics" included in the block of compulsory subjects in the curriculum of the "Moscow State National Research and Construction University" in the direction of Architecture (07.03.01) [5 ], "Moscow State Institute of Architecture" (State Academy) (MARXI) 648 hours for the subject "Pencil drawing" included in the block of compulsory subjects in the curriculum in the direction of Architecture (07.03.01), 360 for "Color drawing", " 68 hours for the subject "Architectural Graphics and Watercolor in Painting", 72 hours for the subject "Painting in Architecture" [6], in the curriculum of the "Ural State University of Art and Architecture named after N.S. Alfyorov" in the field of Architecture (07.03.01) 504 hours were allocated for the subject "Kalamtasvir" and 180 hours [7] for the subject "Rantasvir" included in the block of compulsory subjects.

When creating these curricula, it would be useful to study the opinions of major scientists and experts in this field, as well as study the curricula of developed countries in this field. This is one side of the coin. Let's look at the other side of the coin. It is known that starting from 2020, the creative exams for admission to undergraduate courses in Architecture have been canceled. This causes applicants who are completely ignorant of fine arts or who have no interest or ability to draw to become students of the direction that prepares the owners of this difficult profession. Let's turn to higher education in other countries. In order to enter the higher education courses of architecture of the Russian Federation, they are accepted as students by passing an exam in the subjects of mathematics, pencil drawing, architectural composition and drawing. Now imagine that a student who is completely ignorant of visual arts chooses "Pencil drawing, painting and sculpture" as an elective subject? Even if we choose well, with the above-mentioned hours allocated to this subject, we can develop the level of knowledge, skills and abilities of future architects. Studying this science is a long process that requires a lot of patience, hard work and perseverance.

**Summary.** As we mentioned above, today all fields, especially techniques and technologies, are developing at a very fast pace. Architectural drawings must be specific; based on them, they pass point, line, volumetric-spatial geometry. The pen drawing that appeared in ancient times has its own anatomy, based on points, lines, spots; therefore, drawing in the school of architecture should be

aimed at developing the artist's three-dimensional imagination. Undoubtedly, drawing for a future architect should be logically and fundamentally related to his knowledge of mathematics, geometry, physics, biology, social sciences, labor technology, etc.

Systematic drawing lessons (from nature, memory and imagination) help to develop volumetric, spatial, logical thinking. A pencil drawing allows an architect to transform the living material of his observations into an architectural image, thereby activating the development of his creativity. Architectural drawing is a branch of graphic art that every modern architect should actively work on. "On the one hand, the importance of architectural design is auxiliary, almost technical. On the other hand, it is the sphere of the direct application and live games of the creative forces of the architect, the primary, even if it is a schematic and initial embodiment of the spatial image, unfortunately, not always later not practical" [10].

Personnel training during the period of education at the institute should be carried out in three stages: 1) reproductive activity; 2) reproductive - creative activity; 3) creative activity. This approach ensures the gradual formation of professional skills in students, despite the fact that they initially have different training in the field of pencil drawing. It is especially effective in combining related disciplines: drawing, painting, sculpture, architectural design.

Professional acquisition of architectural graphics is one of the indispensable conditions for the formation of professional skills of future architects, because future architects who have mastered good drawing skills can successfully solve various architectural problems.

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