

**THE ROLE AND SIGNIFICANCE OF CONSTRUCTIVE DRAWING IN ENHANCING
THE CREATIVE ACTIVITY OF ARCHITECTURE STUDENTS****Abdullaev S.S.**

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Annotation

This article examines the specifics and characteristics of constructive drawing. The features of architectural drawing are identified, the most important of which lies in the unity of artistic creativity and educational-cognitive activity. A step-by-step methodology for performing constructive drawing is proposed from the perspective of modern didactic principles. The proposed methodology is based on the didactic principle of the method of sequence.

Keywords

Constructive drawing, Didactic principles, Sketch, Ancient sculpture, Capital, Frieze, Rosette, Drawing from memory and imagination.

Conceptual, logical, and artistic-creative approaches, underpinned by professional mastery, remain the core essence of the professional activities of future art teachers, fine artists, architects, designers, and other representatives of creative professions.

In this regard, a primary task arises: identifying and developing strategies to enhance the quality of instruction aimed at fostering spatial and compositional thinking through the design of tools and methods for depicting the environment in drawings. The role and significance of constructive drawing are particularly substantial in the representation of urban motifs and compositions, specifically in the depiction of architectural structures.

Architectural creativity is inextricably linked to the fundamentals of visual literacy and the methods of conveying spatial relationships on a two-dimensional plane. For an architect, drawing serves as the primary medium for articulating a conceptual design and represents the initial step in the creation of a future structure. The architectural compositional intent—encompassing the adherence to compositional rules and techniques such as scale, focal point, rhythm, and color lighting—originates in sketches and preliminary drawings. Consequently, identifying the specific characteristics of architectural drawing, as distinct from the general conventions of academic drawing, constitutes a vital component of contemporary architectural practice.

What defines an architectural drawing, and what are the specific methodological characteristics of its execution? A number of authors define architectural drawing as any freehand drawing created to develop an architectural design task, including sketches, preliminary drafts, and project renderings (1, p. 6).

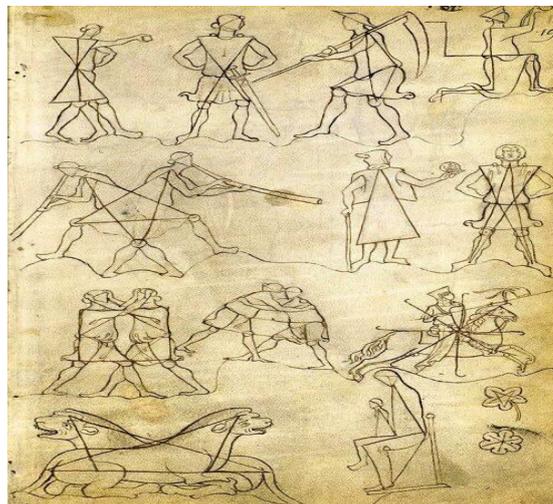
Drawing occupies a distinctive position in the professional training of an architect as an integral part of architectural creativity. The role of drawing in architectural education is

evidenced by the fact that the hand-drawn sketch marks the inception of architectural morphology, spanning from initial conceptual sketches to the concrete realization of an architectural image in a constructed object. As a reflection of the architect's creative intent, the sketch embodies a conceptual approach to architectural thought based on the artistic interpretation of form-making. Naturally, even the most sophisticated digital technologies cannot replace the hand-drawn sketch, which is imbued, above all, with the soul of the artist and the architect. It should be noted that an artist's sketch often possesses independent aesthetic value, attracting viewers and specialists alike through its "freshness," immediacy, and the sharpness of the impression it conveys.

As the renowned scholar and artist O. A. Avsiyan aptly observes: "...not infrequently, such sketches, through their striking boldness, freedom, and beauty of execution—notwithstanding their incompleteness and lack of refinement—possess independent artistic value" (2, p. 52).

To a large extent, an architect's success depends on their professional and artistic proficiency, of which draftsmanship is an integral part. The primary and most significant feature of architectural drawing lies in the synthesis of artistic creativity and educational inquiry. A second characteristic of architectural drawing is the cultivation of observational skills, imagination, and creativity in students as they address design challenges.

The third characteristic of architectural drawing is the successful mastery of the general methodological foundations of visual literacy, as well as the development of a specialized system and structure of exercises and assignments. This pedagogical framework is designed for the staged development of spatial perception, creative imagination, and innovative thinking. For



instance, the French architect Villard de Honnecourt...

Fig. 1. Villard de Honnecourt (first half of the 13th century)

In his *Album* (or "Book of Drawings"), he writes: "And here you will find the art of drawing, as well as the fundamentals required and taught by the science of geometry" (3, p. 248).

Another fundamental characteristic of architectural drawing is that the specific nature of a future architect's work involves the creation of exploratory material—preliminary sketches, studies, and short-term gestural drawings—which serve as the foundation for developing an architectural image.

It is essential to consider that in professional practice, architects must work with a diverse range of graphic media, including pencil, India ink, pen, gel pen, felt-tip pen, marker, charcoal, and sauce (sauce crayon).

The specific nature of architectural drawing, along with the structure of its exercises and assignments, must be primarily oriented toward the artistic education of architects. This involves covering fundamental sections of academic drawing, such as the depiction of simple and complex geometric forms, as well as the study of classical antique sculptures, including Apollo, David, and Venus. Furthermore, drawing architectural objects—which includes exercises in sketches, studies, and gestural drawings from both life and imagination—plays a vital role, particularly within the framework of independent study.

Training in architectural drawing is established through the mastery of visual literacy—specifically, the ability to analyze simple geometric forms and express them through linear-constructive drawings, prolonged academic studies, and short-term sketches from memory and imagination. Consequently, the methodology for teaching architectural drawing should embody the following didactic principles:

-drawing simple and complex geometric forms for the purpose of linear-constructive analysis;

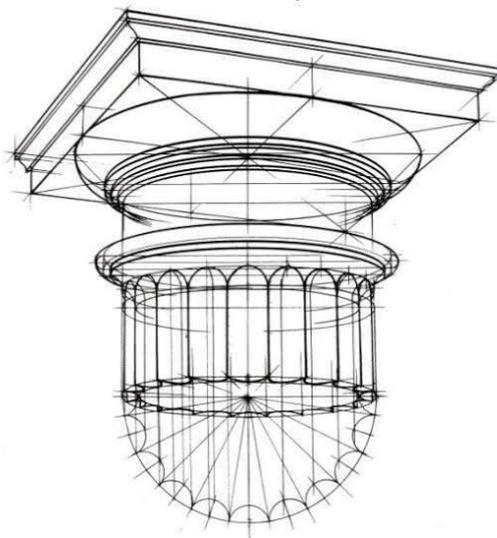


Fig. 2. Structural construction of a capital

-drawing architectural forms, including details, fragments, rosettes, capitals, friezes, and other classical motifs;

- drawing antique plaster heads and figures to analyze the harmony and proportional relationships developed in the classical art of Ancient Greece and the Renaissance (casts of works by great masters such as Donatello, Michelangelo, and others);

- gestural drawings in dynamics, specifically involving figures and groups of people within an architectural environment, to study scale within interior and exterior perspectives;

- development of conceptual sketches that integrate architectural space into the composition, leading to a final assignment focused on the creation of a conceptual work.

Let us examine in more detail the specific characteristics of drawing simple and complex geometric bodies.

The objective of the assignments is the linear-constructive analysis of geometric forms.

Task: To study the fundamental rules for the perspective representation of geometric objects.

1. Formation of spatial perception (development of eye measurement and visual memory, mastery of drawing techniques, tone, and hatching, selection of a viewpoint, ability to observe nature, and execution of preliminary sketches);

2. As objects recede into the distance, they appear to decrease in size; therefore, the representation on paper must evoke the same visual perception as the real object, maintaining its proper relationship to the horizon line.

3. Construction of orthogonal projections of the entire setup and individual objects, identifying the proportions of each item separately as well as their proportional relationships and mutual arrangement;

4. Identification of the structural features of each object (cube, sphere, pyramid) based on perspective foreshortening.

Thus, the specific characteristics of drawing simple geometric bodies—the cube, the sphere, and the pyramid—consist of the following stages of work:

Stage 1. Selection of forms and viewpoint. Determination of the overall parameters for the compositional placement of the image on the sheet (position in space and the character of the future drawing).

Stage 2. Establishing the spatial relationships of height, width, and depth of the setup (the group of geometric bodies).

Stage 3. Structural construction of each object individually and in relation to the structural features of the objects as a whole.

Stage 4. Achieving the overall graphic expressiveness of the drawing, taking into account the multi-layered depth (planes) through the use of perspective and linear variety.

Stage 5. Light tonal rendering of the structural drawings, taking into account the gradations of light and shadow.

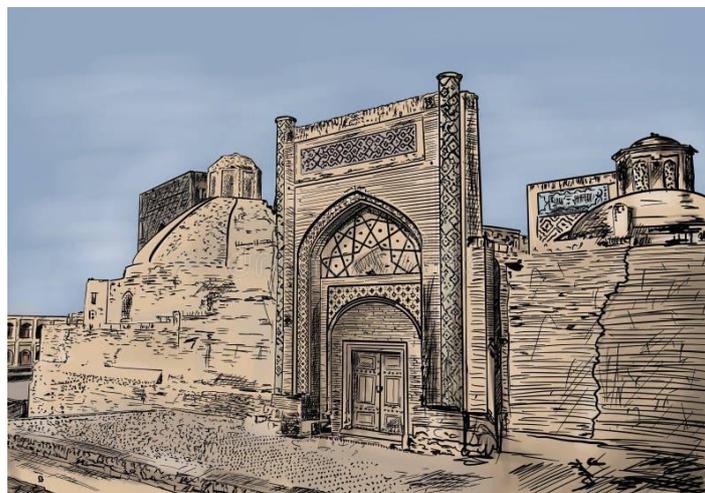
Independent work by students, both in the classroom/studio and at home, occupies a special place in the "Architectural Drawing" curricula. Following the completion of a classroom setup, students are assigned an independent task aimed at cultivating visual memory and drawing from imagination. The objective is to reinforce the structural drawing skills acquired during the process performed under the instructor's guidance. (4, p. 5)

Experience shows that students should independently perform tasks similar to the classroom assignments they have already completed. For instance, after finishing the academic drawing "Still Life of Simple Geometric Forms" (cube, cylinder, pyramid) in the studio, students are tasked with the structural drawing of a pitcher (based on a sphere and cylinder), a book (based on a rectangular prism), or a glass (faceted or plastic) containing pencils and a brush. This methodical approach lays the foundation for subsequent drawing from memory and imagination, fostering the development of creative vision.

To identify the specific characteristics and features of teaching drawing to students in the "Architecture" field of study, it is necessary to define the pedagogical term "learning process." According to the renowned scholar Yu. K. Babansky, "The learning process is an integral part of the holistic pedagogical process... aimed at the formation of a comprehensively and harmoniously developed personality. To characterize the structure of the learning process, it is necessary, firstly, to identify the main components of this process; secondly, to describe the nature of the connections between these components; thirdly, to reveal the contradictions inherent in the process itself; and fourthly, to determine the typical stages of its development." The author further points out: "The learning process includes teaching and learning as constituent elements, which are interconnected" (5, p. 19).

Fig. 3. An example of a structural approach to the representation of an architectural monument (the gates of Bukhara).

In the new approach to methodological terms and concepts, the learning process is



interpreted as being designed for the meaningful analysis of the construction of objects and the identification of the specific characteristics of architectural drawing, during which the tasks of instruction and general development are addressed. (6, p. 12)

Based on the goal and objectives, the specific characteristics and features of teaching drawing to students—future architects—must derive from the following principles:

- The process of teaching drawing to students in the "Architecture" field of study (by types) must be considered based on the general didactic aspects of education and upbringing;

- The theoretical substantiation of the learning process for architecture students must proceed from the fact that, in the process of the modern development of pedagogical science and pedagogical practice, objective opportunities arise for solving the tasks of effectively teaching the specific characteristics of the art of drawing to future architects;

- Defining the methodology and mechanisms of the specific features of the drawing instruction process for architecture students allows for the search for the most optimal solutions in the development of didactic techniques for education and upbringing through the selection of the most effective innovative teaching methods;

- The improvement of instruction, the methods and means of organizing students' educational and cognitive activities, the form of educational organization, and the effectiveness of the drawing curriculum are directly linked to the creation of a comfortable educational environment;

- The development of students' creative activity in the process of learning to draw, both during and outside of scheduled class hours, inherently depends on the formation of their cognitive motivation and their drive toward creativity and innovation. Global practice, including the long-standing experience of master architects, points to the necessity of teaching structural drawing throughout the entire educational process.

Thus, the role and significance of structural drawing in shaping the creative activity of architecture students are increasing in modern conditions; this necessitates a creative approach to the development and cultivation of the creative potential of future architects, designers, and other creative professionals.

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