SOME ASPECTS OF COMPOSITIONAL THINKING OF FUTURE ARCHITECTS IN ART EDUCATION

The paper is focused on one of the major architectural disciplines, Composition, which is closely related to drawing, painting, history of arts, colour science, aesthetics, and philosophy. The research aims to prove and analyse the reasonableness of forming compositional thinking in the system of art education of future architects. Compositional thinking is considered as an independent kind of mental activity, since it involves compositional mental process with its operations and final result, which is the basis for creative and imaginative thinking. Theoretical knowledge obtained by students studying the subject “Drawing, Painting, Sculpture” is the basis for professional deep understanding of the rules, principles and means of artistic and compositional shaping of artificial systems as an essential component of a student’s professional competence and creative thinking. This theoretical and practical knowledge enables future artists or architects to estimate aesthetic and imaginative value of compositional artworks, gain an insight of their harmonious composition, be fully aware of the mechanisms of these works’ impact on the sphere of human emotions and feelings. While dealing with artistic and compositional tasks provided by the training course, students’ compositional thinking is activated, their creative potential is developed. The latter implies comprehensive understanding of the problematic area of an architect’s or artist’s activities and correlating it with the system of methodological principles of solving certain problem situations in his/her career.

Keywords: architectural education, composition, compositional thinking, art education, drawing.

Introduction. One of the major tasks of contemporary education is the qualitative change of the system of training specialists, which is focused on the high level of development of their thinking corresponding to their profession. The quality of future architects’ work is determined by the combination of the acquired scientific theoretical knowledge, abilities and skills in composition as well as the ability to deal with creative tasks. Therefore, the formation of compositional thinking in the process of teaching composition to students indicates the quality of professional training, is a creative tool and a means of creative personality becoming.

One of the main features of spatial thinking in an architect’s creative work is the skills of creating an illusory image of a designed project on a sheet of paper. In this case, two things should be taken into account: “geometrical representation” of the depicted real space and the perceptive space.

The issues of training architects were studied by B. Barkhin, O. Hutnov, O. Stepanov. The research works of P. Halperin, V. Davydov, O. Denysov, L. Zankov, I. Zymnia, I. Lerner, O. Matiushkin, R. Niemov, M. Makhmutov, D. Elkonin, et al. covered the aspects of the activation of learning and cognitive activity in contemporary educational system. Theoretical basis for the organisation of training architects by means of fine arts was formed in the works of H. Bida, V. Lebedko, V. Kuzin, N. Rostovstev, E. Shorokhov, and others. Contemporary practice of art education incorporates a great number of methods aimed at the development of creative (compositional) thinking. Experience of their use is represented in special methodological and scientific works of N. Beschastnova, K. Dahlidian, N. Nikonenko, H. Lohvynenko, H. Panksonion, M. Surin, N. Tretiakov, and others. Theoretical aspect of composition is based on the researches of M. Alpatov, Ye. Adamov, R. Arnkheim, V. Asmus, N. Volkov, V. Kandynsky, Ye. Kibrik, A. Losiev, Yu. Lotman, B. Raushenbakh, A. Svieshnikov, N. Tretiakov, V. Favorisky, and others.

High priority is placed on teaching composition, as future specialists often have to deal with compositional tasks in their work. Compositional proficiency is the basis for creative professionalism of any specialist of arts (an artist, a designer, an architect). Composition course is naturally related to all profession-related disciplines of the curriculum.

The development of compositional thinking is also connected with other psychological attributes of a personality — capabilities, memory, imagination, working style, etc., which makes it possible to consider the development of future specialists’ creative potential to be based on the formation of their general compositional culture. Insufficient theoretical information about the issues of compositional thinking, the need for training practice in the formation of architect’s creative personality and dependence of students’ creative development on the maturity of
compositional thinking are the aspects that determined the relevance of the study.

The paper aims to prove and analyse the reasonability of forming compositional thinking in the system of art education of future architects.

Discussion. Artistic vision is the basis for an architect’s specific thinking and considered to be the central category of professional thinking from the standpoint of architectural space. The most important psychological trait of an architect’s professionalism is the specific im- agery of his/her thinking, specific quality of perception and vision of spatial environment. The discipline “Composition” is different from other art disciplines, as it combines and updates knowledge concerning fine arts. In N. Krymova’s opinion, composition as “a creative organisation of a picture” is employed for bringing an artist’s or architect’s ideas to life, so searching for formula is the main creative task that helps to achieve a goal [3].

One of the characteristic features of art education of students majoring in architecture is its orientation at mastering expressive means of picturing regardless of its figurative basis. It is explained by the fact that in architecture non-figurative geometrical structures appear as constructive objects with certain functional properties. Accordingly, the mastering of graphical means of depicting by architecture students involves learning academic literacy of painting/drawing from nature and first of all compositional principles of abstract forms’ structuring.

The curriculum for the speciality “Architecture and Urban Planning” does not include the course “Composition”, though its relevance is obvious. Therefore, it should be introduced at Drawing lessons in the form of certain compositional tasks and exercises. These tasks are to be done within the established system of limitations for depicting the elements of the form: point, spodge, line, plane, volume, space. Work on them is regulated by curriculum hours, most of which are allocated for independent creative work that involves discussion of layouts at individual and group consultations.

Composition is considered as a creative process and its main component is handling intellectual images: the processes of dissociation and association, analysis and synthesis, comparison and generalisation, emergence of images related to perception, imagination, fantasy accompanied by empathy and identification. Solving all the compositional problems (achieving integrity and balance, conveying space, movement, etc.) facilitates developing a theme and creating artistic image in a composition. In the process of creating a composition, a certain type of thinking characterised by using artistic expression means is being developed.

V. Kanunnikova defines composition as visualisation of an artistic image using expressive means of art and associates it with a certain type of thinking that is focused on solving compositional problems with the use of expressive artistic means. Considering the character of tasks performed by the way of thinking under study (compositional tasks), the content (the use of images) and aim of the work (developing a theme and creating an artistic image), this way of thinking should be defined as compositional creative thinking [3].

Architects, artists-teachers, psychologists and others believe that the concept “compositional thinking” involves cognitive and mental functions oriented at the eventual result – creating an image in accordance with compositional rules.

For example, L. Pankratova in her research work proves that compositional thinking is the establishing of spatial-temporal relations of an image, which are determined by the worldview peculiar to the epoch in general and the artist in particular [9]. In the research work of V. Iliushchenko, compositional thinking is considered as a kind of creative thinking, which is based on using memory images, perceptions, imagination. Generally, compositional thinking is understood as a component of other types of thinking related to it: creative and imaginative. The latter is defined as a process of artistic cognition consisting of interrelated components (emotional, logical, intuitive), which results in an artistic image reflecting the ability of a person to distinguish the essence of real life phenomena; generalise, create artistically significant image and render this ideal image into the language of pictorial art, graphic art, sculpture, etc. [2].

However, thinking does not exist as a separate mental process, it is a component of other cognitive processes: perception, attention, imagination, memory, language. “Higher forms of these processes are always related to thinking, and the degree of involvement of these processes determine the level of their development”, R. Nemov thinks [7]. R. Arheim notes that the elements of thinking in perception and perception as an element of thinking complement each other. They turn human cognition into a single process [1; 7]. Compositional thinking of an artist or an architect dominates over other types of thinking in the very process of compositional activities, which is obvious in the process of solving compositional problems. “All types of human thinking coexist and can be represented in the same activity. However, depending on its character and final objective, a certain type of thinking dominates. This is the basis for distinguishing these types”, R. Nemov notes [7].

It is worth noting that an artist’s thinking in the process of compositional activities can be verbally-logical, practical and image-bearing. Therefore, compositional thinking includes theoretical and practical compositional activities related to cognitive, research and converting actions. In-depth study of compositional categories starting from the early period of its becoming was conducted by A. Svieshnikov [11]. He distinguished four groups of individually psychological peculiarities of compositional thinking: projective and divisional, projective and stereotyped, distortive and divisional, distortive and stereotyped. Projective character is defined by the researcher as a determination to create the most recognisable image. Distortive interpretation conveys information about the subject figuratively. In the first group of students he ob-
served obvious primitiveness of imaginative composition-
al thinking. Thus, it can be concluded that in this case it is
more important to develop formal compositional thinking.
On the one hand, it is facilitated by the exercises aimed at
creating abstract and decorative compositions, and on the
other hand – by the exercises aimed at finding composi-
tional patterns through analysing realistic artworks [11].

For this purpose, it is reasonable to use exercises that
involve crating small abstract and decorative fragments
according to initially given patterns or prepared samples.
Logically correct tasks and exercises developed to
achieve balance on the plane (using geometric figures,
plane articulation, rhythm, symmetry and asymmetry,
centrepiece, etc.) gradually form students’ elementary
compositional abilities and skills and develop them as
creative personalities. Below are the examples of the
exercises aimed at organising balance on the plane using
common geometric figures and plane division (articula-
tion).

**Exercise 1.** Create a properly arranged composition
consisting of simple geometric figures (a circle, a square,
a triangle, a diamond) taking into account their simplicity
and stability. Find their optimal position on the reference
plane. **Objectives:** To achieve balance between the plane
and the image.

**Material:** Dark coloured paper of A4 size.

**Exercise 2:** Balance out the figures of regular geo-
metric shapes (a circle, a square, a triangle, a diamond),
find their optimal position on the reference plane, add a
figure contrasting in colour to the composition. Use
knowledge about the significance of colour. **Objective:** To
master skills of organising balance between the plane
and the image.

**Material:** Dark coloured paper, red paper of A4 size.

**Methodical comment:** Any properly arranged com-
position is balanced. Balance is the arrangement of ele-
ments of a composition, whereby each element occupies
stable position. Its position causes no doubt or desire to
move it within the plane being depicted. When dealing
with the issues of balance in a composition, it is important
to consider placement of its elements: significance of a
subject depends on its placement. **Balance of depicted
elements** can be static (for a symmetrical composition)
and dynamic (for an asymmetrical composition). Global
principle of balance and harmonisation of depicted ele-
ments, the fundamental law of a composition is the integ-
rety of internal organisation (hierarchy of forms – masses,
movements, etc., distinguishing the central ones among
them). Balance of composite masses is achieved by means
of the “lever principle” (the same as in physics): a small
element can balance a large figure if it is located on the
periphery of the image (farther from its geometric centre)
and is contrastive. It is necessary to take into account the
compositional structure of the layout: right and top of
the picture are “lighter” and should be less “loaded” to
achieve balance, because the main optical centre of the
composition is shifted upward to the right in accordance
with the geometric centre. The element that is at the cen-
tre of the composition, or close to it, or is on the vertical
central axis is less significant on a compositional level
than the element that is outside these main lines. Con-
formity of an image with the lines of composition’s struc-
tural plan brings in an element of stability. Formal com-
positions can consist of elements of different configura-
tions. In this case, it is necessary to determine the position
of each figure correctly depending on its form.

1. Compact images look heavier.
2. A diagonal in a square drawn from the bottom left
to the top right corner is perceived as rising.
3. A diagonal in a square drawn from the top left
corner to the bottom right is considered as descending.
4. A square in a stable position is the “heaviest” fig-
ure; this property can be intensified or softened by colour.
5. A triangle as the most “sweeping” form for per-
ception is stable only when one side of it is horizontal. All
dynamic figures tend to a triangle.
6. A circle is a form focused on itself; it combines
outmost and centripetal force, circular motion. Having
no stable basis, a circle is always unstable.

**Exercise 3:** Create a composition consisting of three
simple geometric figures (a triangle, a circle, a square or a
rectangle) using a simple division of the plane with
straight lines. You may use the exercise 1 from the topic
“Organisation of balance on the plane with simple geo-
metric figures”. **Objective:** To use plane division with the
dual purpose: to achieve balance and to combine sub-
jects in one composition.

**Exercise 4:** Create a balanced composition consist-
ing of three simple geometric figures (a triangle, a circle,
a square or a rectangle) using complex division of the
plane with parabolic curves and lines. You may use the
exercise 1 from the topic “Organisation of balance on the
plane with simple geometric figures”. Both tasks are to be
placed on the same paper. **Objective:** To use plane divi-
sion with the dual purpose: to achieve balance and to
combine subjects in one composition.

**Methodical comment:** Division (articulation) of the
plane involves the establishment of various relationships
in terms of colour or tone between the parts, whose com-
petent use makes it possible to achieve desired balance in
the composition. **The division of the plane into parts** is a
compositional tool for achieving balance in the composi-
tion in case the regrouping of the elements is unaccepta-
ble or insufficient. This tool is used in combination with
other expressive means. If these relations are based on
the same parts, there will appear an element of statics; if
they are based on different parts, there will be an element
of dynamics. The division is carried out with straight or
curved lines and maintained with colour or tone. Division
in one or more directions is possible. The division with
straight lines is simple, division with parabolic lines looks
different as they convey tension themselves, and there is
a need to combine contradictory straight and curved move-
ments in one plane.

Compositional search is characterised by active crea-
tive intellectual work aimed at finding a visual embodi-
ment of the image. Searching compositional work activates sensory (intuitive, emotional) perception and analytical (rational) thinking in their relationship. For example, compositional thinking makes it possible to distinguish comprehensive phenomena from their empirical variety, identify the essential and reject the random, see the invisible, connect the asynchronous in a single artistic projection, reconstruct figurative continuity of the fragmented reality and find the point of balance, harmony of the objective world [10].

The formation of compositional thinking is based on certain pedagogical and methodical principles and aspects.

1. Compositional thinking is being formed gradually in the continuous educational process based on permanent figural activity.

2. Activation of the process of compositional thinking development is achieved by means of engaging students in performing specially organised compositional work.

3. Students’ creative capabilities are being developed when doing tasks in the system of educational and compositional activity that is gradually becoming more complicated and aimed at gradual mastering of the study material on the level of reproduction, compositional experimenting using the example, freer transformation of the perception object on the productive level followed by reaching one’s own creative level of compositional activity.

4. The process of students’ compositional capabilities development will become controlled in case the system of learning activities has been developed in compliance with the didactic principles of consistency and gradual complication of the study material. The content of theoretical and practical parts of “Composition” course should correspond to the complexity of students’ compositional activities.

5. The main condition for the successful development of students’ creative capabilities is pedagogical organisation of their compositional activities, which corresponds to the content of training.

6. Intensive development of students’ compositional capabilities depends greatly on their motivational readiness for compositional creativity, aptitude for this kind of activities [4; 5; 6; 8; 10; 12].

**REFERENCES**


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АСПЕКТИ КОМПОЗИЦІЙНОГО МИСЛЕННЯ МАЙБУТНІХ
АРХІТЕКТОРІВ У ПРОЦЕСІ ХУДОЖНЬОЇ ОСВІТИ

Особливістю художнього навчання студентів, які здобувають архітектурну спеціальність, є її орієнтація та спрямованість на опанування виразними засобами зображення незалежно від його фігуративної основи, оскільки в архітектурі безпредметні геометричні форми виступають як конструктивні об’єкти, що мають певні функціональні властивості. Тому опанування студентами-майбутніми архітекторами графічними засобами зображення включає не тільки освоєння академічної грамоти виконання рисунка з натури, а передусім пізнання композиційних принципів структурування абстрактних форм. Програмою архітектурної спеціальності «Архітектура та мистобудування» не передбачено вивчення курсу «Композиція», необхідність якого очевидна. Іншими словами, вивчення композиції та виконання композиційних завдань та вправ є необхідним у процесі навчання студентів архітектури у навчальному процесі.

Одним із головних завдань сучасної освіти є якісна зміна системи професійної підготовки фахівців, у якій на першому плані постає ступінь розвиненості мислення, що відповідає якості професійної діяльності. Якісний рівень професійної діяльності майбутнього фахівця мистецької сфери виражається в поєднанні набутих науково-теоретичних знань, умінь і навичок у сфері композиції, а також здатності вирішувати творчі завдання. Формування композиційного мислення є показником якості професійної підготовки, інструментом творчості і засобом становлення творчої особистості. Ключові слова: архітектурна освіта, композиція, композиційне мислення, художня освіта, рисунок.

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