

METHODOLOGICAL SUPPORT FORMING COMPOSITE THINKING AMONG STUDENTS ARCHITECTURAL SPECIALTIES DURING ART EDUCATION

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У статті досліджено питання однієї з визначальних дисциплін архітектурного напрямку – композиції, яка тісно взаємодіє з рисунком, живописом, історією мистецтв, кольорознавством, естетикою та філософією. Розглянуто та окреслено систему вправ що до формування композиційного мислення у системі художньої освіти студентів архітектурних спеціальностей.

This article explores the question one of the key disciplines of architectural direction – composition, works closely with the drawing, painting, art history, cromatics, aesthetics and philosophy. Considered and outlined a system of exercises about forming a compositional thinking in the system of art education students of architectural specialties.

Ключові слова: архітектурна освіта, композиція, композиційне мислення, художня освіта, рисунок.

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

Relevance of research. Qualitative level of professional activity of the future specialist areas of art expressed in the conjunction gained scientific and theoretical knowledge, skills and abilities in composition, and the ability to solve creative problems. In the architect creative work one of the features of spatial thinking is skills of creating the plane of area sheet illusory image projected object. It is important to take into account, on the one hand, "Geometric model" real space depicted on the other - perceptual space given in perception. Therefore, in teaching students composition forming composite index is thinking as training, creation tool and a means of formation of creative personality.

Analysis of recent research and publications. In the study of the architect training dedicated research B. Barhina, A. Hutnova, A. Stepanov and others. Problems activation is teaching and learning activities in modern educational environment is considered in the works P. Galperin, V Davydova, J. Lerner, R. Nemova, M. Makhmutova, D. El'konina and others. The theoretical basis of professional training of the architect means fine art became works G.Bida, , V Kuzina, H. Rostovtseva, E. Shorokhova and others. The modern practice presupposes study of art presupposes many methodologies, aimed at the development creative (compositional) thinking. The experience of their use in the different schools well represented in the special

methodical and scientific literature N. Beschastnova, H. Lohvynenko, H. Panks'onova and others. The theoretical aspect of the problem of the composition is based on the works of the great researchers of art: R. Arnkheym, V. Kandyns'kyi, YU. Lotman, A. Svyeshnikova, V. Favors'kyi and others.

Allotment previously unsolved aspects of the problem. The development of compositional thinking is closely associated with other mental personality traits - ability, memory, imagination, theme activities, etc., which suggests the development of the creative potential of the future specialist based on the formation of its overall composition culture. Lack of knowledge on compositional thinking in theory, the need for practice teaching in the formation of the creative person of architect and dependence creative development of students by forming compositional thinking is a problem, which also outlined the choice of the theme of our research methodological support forming composite thinking among students architectural specialties during art education.

Purpose of Article - delineation system of exercises that thought to form a composite system of art education in the students of architectural specialties.

Presentation of the main content. A characteristic feature of the artistic education of students, who receive the architectural specialty, focus is on mastering the expressive means of images regardless of its figurative base, because architecture geometrical forms pointless act as constructive objects, with specific functional properties. Therefore mastering of students - future architects, graphic art image means includes not only the development of academic literacy execution drawing from nature, but above all the knowledge of compositional structuring principles of abstract forms.

Programs of architectural specialization 191 "Architecture & Town Planning" is not provided course "Composition", the necessity of which is obvious. Therefore there is a need to implement it in the educational process at lessons of drawing as certain compositional tasks and exercises. These tasks are performed

in the set of constraints images form elements: Point, spot, line, area, volume, space. Work on them regulated educational hours, most of them are assigned for independent creative activity with the obligatory sketches discussion on individual and collective consultation.

Looking at composition as a process of creative activity, mark it as a major component of operating mental images: dissociation and association process, analysis and synthesis, comparison and generalization, the appearance of images of perception, ideas, imagination, which accompanied by "empathy and identification." Solving the entire complex compositional tasks (to achieve integrity and balance transfer space and movement etc.) promotes the theme and create an artistic image in the composition. While composite activity develops some kind of thinking, which is characterized by the use of artistic expression.

V. Kanunnikova determines the composition as artistic rendering image expressive means of art and see the work of a special type of thinking, directed to solving the tasks of compositional activity with use of means artistic expression. Given the nature of the tasks we examined type of thinking (compositional tasks), Contents (manipulation of images) and purpose of work (the theme and the creation of an artistic image) defines its single term - "Composition - creative thinking" [3].

The concept of "compositional thinking" architects, teachers of art, psychologists and other investing cognitive and mental function, aimed at the final result - the creation of images by the laws of composition. But in the practice thinking as an individual mental process does not exist, it is invisibly present in other cognitive processes: Perception, attention, imagination, memory and language. "Higher forms of these processes necessarily associated with thought and degree of participation in these cognitive processes determine their level of development" says R. Nemov [6]. With the same drive R. Arkheym notes, that thinking elements in the perception and perception in thinking complement each other. They convert human cognition in a single process [1; 6].

On this basis can be concluded that in this case important to develop a formal compositional thinking. It is promoted on the one hand, exercises to create abstract and decorative compositions, on the other hand - exercises to identify compositional schemes through analysis realistic works [5; 9].

For this purpose exercise suited to create small abstract and decorative pieces for the first predetermined schemes or according to the prepared samples. Logically correctly folded tasks and exercises for achieving a balance on a plane (Using geometric shapes, using the division plane, rhythm, symmetry and asymmetry, dominance, etc.) gradually forming a compositional elementary students skills and shape his future as a creative person. Here are examples of exercises to organization of balance on the plane on the example of simple geometric shapes division plane, rhythmic organization of plane.

Exercise number 1: Create a well-formed composition of simple geometric shapes (circle, square, triangle, diamond) based on their simplicity and stability. Find their optimal position in the format on the given plane. **Objectives:** *Achieve a balance between the plane and the image.*

Material: Paper, Color - dark, red F - A4.

Methodical Comment: Any properly constructed composition is balanced. Balance - is the placement of elements of composition, where each item is in a stable position. Its location is not in doubt and the desire to move it to the figurative plane. When dealing with issues of balance in the composition is an important location of elements: From that in which part of the composition object is placed depends on its weight. *The balance in artistic elements* can be static (symmetrical constructions) and dynamic (asymmetrical constructions). Global principle of balance and harmonization of artistic elements, The basic law of composition - the integrity of the internal organization (Subordination forms - weights, movements, and others, the selection of the main ones). The balance of composite masses is achieved during the "lever principle" (Just 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 center) and contrasting read. It should take into account the compositional tectonics format: right and upper part of the picture - a more "light" and should be to achieve a balance be less "loaded", as the main optical center of the composition is shifted to the right and down according to the geometric center. The element that is at the center of the composition, or close to it, or is on the vertical central axis composition weighs less than an element located outside these main lines. Match the picture with lines structural plan of composition introduces an element of stability. Formal compositions can be made of elements of different configurations. In this case, is necessary to correctly identify the position of each shape depending on its form.

1. Compact image looks heavier .
2. Diagonal squared drawn from the bottom left to the top right corner, seen as rising.
3. Diagonal squared directed from the top corner to the lower right downward.
4. Square in stable position - the most "difficult" figure, this property is amplified or attenuated color.
5. Triangle - the most "rapid" form for perception - stable only when one side horizontal. All dynamic figures tend to triangle.
6. Circle - form a focus, it combines centrifugal and centripetal force circular motion. Without severe bases, the range is always unstable.

Exercise number 3: Perform composition of three simple geometric shapes (triangle, circle, square or rectangle) using a simple division of the plane straight lines. Perhaps the use of previously balancing exercise number 1 on "Organization of equilibrium in the plane of the example simple geometric shapes." **Objective:** *Separation of the plane to use dual purpose: to achieve balance and to combine items in a single composition.*

Exercise number 4: Perform a balanced

composition of three simple geometric shapes (triangle, circle, square or rectangle), using a complex division plane parabolic curves and lines. Perhaps the use of previously balancing exercise number 1 on "Organization of equilibrium in the plane of the example simple geometric shapes." Both tasks are placed on the same format. **Objective: Separation of the plane to use dual purpose: to achieve balance and to combine items in a single composition.**

The methodological comment: separation of plane provides for the establishment of various relationships, tone or color between the formed parts, skillful use of which achieves the desired balance in the composition. *Separation of the plane into pieces* - a compositional device achieving a balance in the composition, when regrouping elements undesirable or insufficient. This method is used in conjunction with other means of expression. Separation of plane provides for the establishment of various relationships, or color tone between the formed parts, skillful play which allows to achieve the desired balance in the composition. If these ratios are based on the same parts, appears moment of static, if unequal - speakers. Separation carried straight or curved lines and maintained color or tone. Possible separation in one or more directions. Separation is simple straight lines, different looks using parabolic division lines as they themselves are the stress and to combine in one plane contradictory straight and curved movements.

Exercises for rhythmic organization continue plane formation of composite thinking. *Rhythm* - one of the most important means of artistic expression in all forms of art. In the fine arts rhythm performs organization and aesthetic function (as basis of imagery). It organizes the movement in the formal structure more adequately and intensively than other artistic means. Its efficiency is provided in the graphics features of the composition, tonal contrasts, contrasts of shapes and volumes. In psychological aspect is an activator rhythm perception. In the classic definition of rhythm (from Greek .. rheo - leakage) - the alternation of any elements that happens with some con-

sistency, speed, speed. Divided by the components of the work, he combines them, creating a dynamic sense of integrity. There are several types of rhythm. One of them - the rhythmic direction so that the total space orientation or the general direction of composite elements. If the main direction the rhythmic work of fine art vertical or horizontal, the character rate statement provides evenly, quiet dynamical and emotional mood. If the rhythmic direction the composition diagonal or radial, the energy - dynamic, active, fast. Another type of rhythm - *rhythmic motion*. Rhythmic motion - alternation accented elements at regular intervals - pause, void (similar music - rhythmic pattern). Distance in the interval between elements called *metric step*, and the same sequence of steps - *meter*.

The wider interval (larger metric step) the less the speed of movement (tempo); than less the interval (the smaller the metric step), the faster the tempo.

Rhythmic progress can be uniform and not uniform. The breaks in continuity in the image rhythmic course increase the dynamic effect. In art the course of rhythmic may be directed to the depth (centripetal) or from the periphery to the center (centrifugal). The centrifugal movement of rhythmic move complicates perception, creates the effect of overcoming spatial barriers. Consistent narrowing intervals rhythmic way (increase rate) leads to a perspective effect.

Another type of rhythm - *rhythmic amplitude*. Rhythmic amplitude - the magnitude of fluctuations in rhythmic units, perpendicular to the direction of rhythmic (as opposed to the rhythmic motion, where the development of rhythmic intervals along the pass direction). In the art of rhythmic amplitude function determines the scale. Strong clench and active dotting gain cause internal dynamics of the composition. The most difficult and important type of rhythm is a plastic reason.

Rhythmic organization reasons. Plastic reason - rhythmic motion, formed by a combination of certain single directions, artistic synthesized into one element. We can underline a basic composition and related by plastic

reasons. Plastic reason can be not only a special case of the interpretation of compositional forms, but the stylistic quantum of work (Cubism, Suprematism). Perhaps the rhythmic alternation of various shapes descending or increase any qualities (size, rotation, complexity, color or tone saturation degree of graphic or decorative treatment form). Depending on the arrangement of figures composition can be static or dynamic. In static composition elements are arranged symmetrically about the axes format. In a dynamic composition following options are available:

1. When sameness motives dynamic is achieved by varying the distance between the elements of the composition, and by their condensation on some sections of the composition and thinness others. There is this one dimension - length.
2. Elements of the same reason have different sizes and located at different distances from each other. Dynamic contrast is achieved through three areas: the distance between the elements, their size and turns.

Exercise number 5: Perform a balanced static composition of the same elements (strips of black or gray paper). Use as a base white, gray and black paper. Group the strips so that the spots equilibrated one another. **Objective: Achieve a balance between line and plane.** Material: White, black, gray paper F - A3.

Exercise number 6: Perform a static composition of different size and form elements. **Objective: Achieve a balance between the plane and the image. Find the correct location of objects on the form.** Material: White paper F - A3, ink, pen, brush, Rapidographs, colored paper, watercolors, gouache.

Methodical Comment: static characteristic state of peace, stability, balance. Static composition has a center around which the space is formed. Static lines requires calm movements. Possible combinations of two principles - statics and dynamics. Static balance occurs when the symmetrical arrangement of figures on a

plane on vertical and horizontal axes format compositions symmetric shape.

Exercise number 7: Perform a balanced dynamic composition of the same elements. Use as a base white, gray and black paper. Place the black stripes on white, gray on black and white to gray or black. Group the strips so that the spots equilibrated one another.

Objective: Achieve balance by placing strips of gray groups. Material: White, black, gray paper F - A3.

Exercise number 8: Perform a balanced dynamic composition of different size and form elements. (Tasks number 1 and number 2 can be performed in a combined composition).

Objective: Achieve a balance between the plane and the image. Find the correct location of objects on the form. Material: White paper F - A3, ink, pen, brush, Rapidographs, colored paper, watercolors, gouache.

Methodical Comment: The dynamics can be described visual perception of motion, swiftness form. Dynamic form makes visible, active, separating it from others. Dynamic equilibrium occurs when the asymmetric arrangement of the figures on the plane, that is when they shift to the right, left, up, down.

At the stage of composition is an active search for creative thinking work aimed at finding a visual embodiment of the image. Search compositional work activates sensory (intuitive, emotional) perception and analytical (rational) thinking in their relationship. For example, compositional thinking allows you separate the a diversity empirical effects holistic structure, identify the main and reject random, see invisible link in a single artistic projection various time, restore the continuity of the outside plastic being fragmented and find the center of balance, harmony objective world[2; 4; 7; 8].

Conclusions. Thus, the proposed system of exercises in the practical solution of artistic and compositional tasks provided training course, students will intensify compositional thinking, develop creativity, which provides a holistic vision of the general problem field activity architect or artist and correlation it with the methodological principles of system solu-

tions specific problem situations in future careers. Compositional thinking is a separate type of mental activity, because it is fixed compositional thought process with its operations and its end result and which serves as the basis for creativity and for artistic and imaginative thinking. The theoretical knowledge that students acquire the basic themes of the composition classroom discipline "Drawing, painting, sculpture. Drawing", is the starting point for professional deep understanding of the laws, principles and means of artistic and compositional forming artificial systems as an essential component of professional literacy and creative thinking of students. These theoretical and practical knowledge allow future artists and architects to face judge the aesthetic and artistic works usefulness of compositional creativity to penetrate the essence of the harmonic structure, clearly understand the mechanisms of action of such works on the emotional and sensual sphere of human perception. The systemic nature of thinking is the main feature of professional and creative thinking architect conditioned diverse and wide range of its activities in the field of science, art and technology. A wide range of educational and creative activity, expressed specifics of architectural and construction education, character development is a versatile material and spatial environment.

Since not all the issues were sufficiently exposed and analyzed in our study, these works will continue to work in the context of the study of the problem.

Література:

1. Арихейм Р. Визуальное мышление / Хрестоматия по общей психологии. Психология мышления / Под ред. Ю.Б. Гиппенрейтер, В.В. Петухова. М.: Изд-во МГУ, 1981. – С. 97–107.
2. Білгородська О. Є. Методичні вказівки до організації самостійної роботи студентів I курсу за темами формальної композиції з дисципліни «Рисунок» напрям підготовки 6.060102 «Архітектура» освітньо-кваліфікаційний рівень «бакалавр» / Олена Євгенівна Білгородська. – Одеса: Астропринт, 2014. – 40 с.
3. Канунникова Т. А. Методика развития композиционно-образного мышления подростков средствами изобразительного искусства: дис. канд. пед. наук: 13.00.02. – теория и методика обучения и воспитания (изобразительное искусство) / Канунникова Татьяна Александровна – Москва, 2016. – 275 с.
4. Логвиненко Г. М. Декоративная композиция / Галина Михайловна Логвиненко. – Москва: Владос, 2008. – 144 с.
5. Минсабирова В. Н. Формирование композиционного мышления студентов в процессе изучения формальной композиции [Текст] / В. Н. Минсабирова // Научные исследования: от теории к практике : материалы VI Междунар. науч.-практ. конф. (Чебоксары, 31 дек. 2015 г.) / редкол.: О. Н. Широков [и др.]. – Чебоксары: ЦНС «Интерактив плюс», 2015. – № 5 (6). – С. 117–119.
6. Немов Р. С. Психология. Кн. 1: Общие основы психологии. – 4-е изд. / Роберт Семёнович Немов. – Москва: Владос ИМЭПЭ им. Грибоедова, 2001. – 688 с.
7. Садомова Н. И. Некоторые вопросы развития композиционного мышления студентов-дизайнеров [Электронный ресурс] / Наталья Ивановна Садомова // №2 Педагогика искусства. – 2015. – Режим доступа до ресурсу: <http://www.art-education.ru/electronic-journal/nekotorye-voprosy-razvitiya-kompozitsionnogo-myshleniya-studentov-dizaynerov>
8. Свешников А. В. Композиционное мышление в изобразительном искусстве : автореф. дис. на здобуття наук. ступеня докт. мистецтвознавства : спец. 17.00.09 «Теория и история искусств» / Свешников Александр Вячеславович – Санкт-Петербург, 2004. – 52 с.

REFERENCES

1. Arnkheim R. (1981) Vizualnoe myshlenie [Visual thinking / General psychology reader. Psychology of thinking (pp.97-107)] Pod red. Iu.B. Gippenreiter, V.V. Petukhova. M., :Izd-vo MGU. [in Russian].
2. Bilgorodska O. Je. (2014) Metodychni vkazivky do organizatsiji samostijnoi roboty studentiv I kursu za temamy formalnojji kompozycji z dyscypliny «Rysunek» naprjam pidgotovky 6.060102 «Arkhitektura» osvitnjo-kvalifikacijnyj rivenj «bakalavr» [Methodical instructions on organization independent work of first-year students on the topics of formal composition of discipline «Drawing» training direction 6.060102 «Architecture» education level «Bachelor»] – Odesa: Astroprint [in Ukrainian].
3. Kanunnikova T. A. (2016) Metodika razvitiia kompozitsionno-obraznogo myshleniia podrostkov sredstvami izobrazitel'nogo iskusstva [Developing compositional and creative thinking in adolescents through the fine arts]. Candidate's thesis, Moskva [in Russian].
4. Logvinenko G. M. (2008) Dekorativnaia kompozitsiia [Decorative stylization] Moskva: Vlados [in Russian].
5. Minsabirova V. N. (2015) Formirovanie kompozitsionnogo myshleniia studentov v protsesse izucheniiia formalnoi kompozicii [Teksst] [Shaping compositional thinking in formal composition students]. Nauchnye issledovaniia: ot teorii k praktike : materialy VI Mezhdunar. nauch.-prakt. konf. [Science research: from theory to practice: Materials of the VI international scientific-practical conference], article, № 5 (6). Chebokarsy: TeNS «Interaktiv plus», (pp. 117–119). [in Russian].
6. Nemov R. S. (2001) Psikhologiya. Kn. 1: Obshchie osnovy psikhologii. – 4-e izd [Psychology. Volume 1: Fundamentals of psychology. – 4th edition] / Robert

Semenovich Nemov. – Moskva: Vldos IMEPE im. Griboedova [in Russian].

7. Sandomova N. I. (2015) Nekotorye voprosy razvitiia kompozitsionnogo myshleniia studentov-dizainerov [Certain issues of compositional thinking in design students [Digital resource]], article. Retrleved from: <http://www.art-education.ru/electronic-journal/nekotorye-voprosy-razvitiya-kompozitsionnogo-myshleniya-studentov-dizaynerov> [in Russian].
8. Sveshnikov A. V. (2004) Kompozitsionnoe myshlenie v izobrazitelnom iskusstve [Compositional thinking in the fine arts: synopsis of Doctor of Art History dissertation] Extended abstract of Doctor's thesis, Sankt-Peterburg [in Russian].