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METHODS AND TECHNIQUES FOR FINDING CREATIVE SOLUTIONS

The purpose of the article is to identify and systematize the methods and techniques used by artists, designers, architects and representatives of other creative professions in the process of performing creative tasks. **The research methodology** is to use analytical, interdisciplinary and systematic approaches, allowed to analyze and to systematize the literature on the research topic, comprehensively study the factual material, classify and systematize the data. To achieve the goal of the study used methods of observation, comparative analysis, synthesis, systematization, classification, theoretical generalization. **Scientific novelty:** the results of previous researches devoted to revealing of receptions and methods of the decision of creative problems are generalized. Certain approaches, methods and techniques of creative solutions are systematized by classifying them into three groups: 1. approaches, methods and techniques that are used mainly in the process of finding general design solutions; 2. approaches, methods and techniques that are used mainly in the process of forming and searching for artistic images of individual objects, plots or complexes; 3. approaches, methods and techniques used in the process of finding general design solutions, and in the process of formation and development of artistic images of individual objects, plots or complexes. **Conclusions.** There are certain types of approaches, methods and techniques that can be used only by certain types of project activities. But most of the identified approaches, methods and techniques of finding creative solutions can be used in architecture, and in various types of design, and in other areas of project activities. In the process of research of such methods and techniques, their systematization was carried out by classifying them into three groups: the first group includes approaches, methods and techniques that can be used mainly in the process of finding common design solutions; the second group includes those that are mainly used in the search for artistic images and the formation of individual objects; to the third group – those that can be used in solving general design issues, and in the process of forming and searching for artistic images of individual objects or their complexes. At the same time, some methods and techniques commonly used to find general design solutions under certain conditions may be involved in the search for individual artistic images, and vice versa, what potentially allowing to lead to completely unexpected solutions. This study covers only a small number of known approaches, methods and techniques, in order to systematize them in principle. Using the proposed classification, it is possible to develop a clear system that would cover most of the available approaches, techniques, methods (ideally – all), which are used in some types of project work, and the general system of all available techniques and methods. Further research will be devoted to the implementation of these tasks, as well as the search and analysis of not yet known to the scientific and practical society approaches, techniques and methods developed in various fields of activity and by individual specialists. Such a clear system should expand the knowledge and skills of designers, make their creative search more conscious and effective, which should ultimately raise the quality of design decisions.

Keywords: design, design theory, architecture theory, methods of finding creative solutions, techniques of finding creative solutions, methodology of design.

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Методи та прийоми пошуку творчих рішень

Мета роботи – виявити й систематизувати методи і прийоми, що використовують художники, дизайнери, архітектори та представники інших творчих професій в процесі виконання ними творчих задач. **Методологія дослідження** полягає у застосуванні аналітичного, міждисциплінарного і системного підходів, що дозволило проаналізувати та систематизувати літературні джерела за темою дослідження, всебічно вивчити фактологічний матеріал, класифікувати та систематизувати отримані дані. Для досягнення мети дослідження використовувались методи спостереження, порівняльного аналізу, синтезу, систематизації, класифікації, теоретичного узагальнення. **Наукова новизна:** узагальнено результати попередніх досліджень, присвячених виявленню прийомів і методів рішення творчих задач. Систематизовано певні підходи, методи і прийоми творчих рішень, шляхом їх класифікації за трьома групами: перша – підходи, методи і прийоми, що використовуються в процесі пошуку загальних проектних рішень; друга – підходи, методи і прийоми, що використовуються в процесі формоутворення та пошуку художніх образів окремих об'єктів, сюжетів чи комплексів; третя – підходи, методи і прийоми, що використовуються і в процесі пошуку загальних проектних рішень і в процесі формоутворення та розробки художніх образів окремих об'єктів, сюжетів чи комплексів. **Висновки.** Існують певні види підходів, методів і прийомів, що можуть використовуватись лише окремими видами проектною діяльністю. Але більшість виявлених підходів, методів і прийомів пошуку творчих рішень можуть застосовуватись і в архітектурі, і в різних видах дизайну, і в інших сферах проектною діяльності. В процесі дослідження саме таких методів і прийомів була здійснена їх систематизація шляхом класифікаційного розподілення їх на три групи, що зазначені у науковій новизні статті. При цьому, деякі методи і прийоми, що зазвичай використовуються для пошуку загальних проектних рішень за певних умов можуть бути залученими для пошуку окремих художніх образів. Можливим є і зворотній процес, що потенційно дає змогу привести проектувальника до абсолютно несподіваних рішень. Це дослідження охоплює лише невелику кількість відомих підходів, методів і прийомів, з метою їх принципової систематизації. Використовуючи запропоновану класифікацію, можна розробити чітку систему, що має охопити більшість наявних підходів, прийомів і методів (в ідеалі – всіх), що застосовуються в окремих видах проектною творчості і загальній системі всіх наявних прийомів та методів. Подальші наукові дослідження, будуть присвячені виконанню цих завдань, а також пошуку та аналізу, ще не відомих науковцям і практикам, підходів, прийомів і методів, розроблених в різних сферах діяльності та окремими спеціалістами. Така чітка система повинна розширити знання та вміння проектувальників, зробити їх творчі пошуки більш свідомими й ефективними, що вплине на якість проектних рішень.

Ключові слова: дизайн, теорія дизайну, теорія архітектури, прийоми пошуку творчих рішень, методи пошуку творчих рішень, методика проектування.

Relevance of the research topic. Contemporary creative activity is based, on the one hand, on the experience gained by artists over the centuries, on the other hand - on the achievement of theory and practice, and borrowing techniques and methods from various contemporary spheres of life, and on the third source of knowledge and skills is the study of contemporary artists, designers, architects and other artists who consciously or intuitively find interesting approaches to solving creative problems and developing the necessary artistic images and characters. The modern world is accelerating and complicating the process of education and acquisition of knowledge and skills by artists, designers and architects. But part of the conscious or accidental experience of using techniques and methods of solving creative problems can be made public, and the other part remains unknown to the general public or scattered in little-known sources. It seems necessary to collect, systematize and implement in educational and practical design knowledge and skills,

principles, approaches, methods and techniques that can be used in the process of finding creative solutions, which will certainly improve the speed and quality of project work. It is relevant in our time, which requires quick, interesting, and often non-standard decisions. Analysis of research and publications. An electronic publication on the "Arthuss" publishing house's page "Generating ideas in graphic design" is quite useful for researching modern approaches to generating creative ideas. Where is to start "[2]. Leonard Neil's and Ambrose Gavin's book "Basics Graphic Design 03: Idea Generation" is a powerful work devoted to the techniques and methods of developing creative thinking and opportunities for generating new creative ideas [9]. Quite an important work on the topic of research is a scientific article of Kliuchko S. V., Maznichenko O. V. "Methods of stylization of natural forms in graphic design". The article structured methods of stylization of natural forms as "one of the main means of graphic design" [4].

Combinatorial design methods (combinatory, transformation, and kinetics), which are widely used in clothing design, is considered in detail by V. V. Dutka in "Design methods in clothing design" [3]. Shymanska T. A. considers such principles of formations of forms as combinatory, aggregation, unification, and use of modularity. At the same time, she notes that "one of the methods that introduce the principle of combinatory in the design process is kinematic" [6, 205]. Struminska T. V. and Prasol S. I. consider the effectiveness of associative methods and note their effectiveness in the creative work of designers [5]. But, despite the existence of these and other studies on the solution of certain aspects of this issue, we have not yet found works that would fully systematize and summarize most of the identified approaches, methods and techniques of finding creative solutions. The purpose of the article is to identify and systematize the methods and techniques used by artists, designers, architects and representatives of other creative professions in the process of performing creative tasks. Discussion. "Ideas do not arise just like that, but they arise on a certain basis of knowledge, experiments and observations" [2]. This quote very accurately identifies the sources of ideas, including creative ideas, and indicates the directions in which research should be conducted on the nature and possibilities of approaches, methods and techniques for finding creative solutions. The main task of architects and designers, as well as other professionals involved in the organization of anything, is to create projects. In a broad sense, "project" is a plan, organization of anything "[1, 233]. And the organization of anything (of space – in architecture; of volume - in the design of furniture or other objects of use; of planes – often in graphic design; of production, sales or any event in marketing, management, politics or other similar activities) always requires creative approaches, creative solutions. Therefore, the methods and techniques of these creative decisions, developed in various fields, can always be studied and used in creative activities, even, at first glance, far from the kind of occupation where these approaches, methods and techniques originated. And a large number of methods and techniques have emerged in management or marketing, such methods as "Methods of associations", "Methods of analogies", "Methods of morphological maps", "Methods of synthetics", "Method of inversion",

"Method of brainstorming", "The idea diagram method", "Opportunity matrix method", etc., can be used and are already widely used in architecture, in various types of design, and in other areas of project activities. According to Struminska T. V. and, Prasol S. I., "the most effective methods of finding creative solutions used in the design are associative methods: the method of formological analysis, the method of focal objects, the method of garlands of coincidences and associations, which as a result give a large number of conceptual solutions and can change not only the shape of the design object but also the functional purpose of the object, design, manufacturing technology, material, principle of operation, appearance and design of the object" [5].

It should be noted that all project creative tasks facing architects and designers, we can divide into two groups:

1. Solving the concept and issues of organization of design and operation of the object under development (its ideas, spatial or compositional solution, choice of materials, technologies, and other issues of the overall design solution).

2. Search and development of individual plots, and artistic images of individual objects or characters (the question of forming the constituent elements of the overall design solution).

It should be noted that certain methods and techniques can be used only for macro-level tasks - ie for general design decisions, and certain methods and techniques are suitable only for the development of individual objects and elements (for micro-level solutions), although there are approaches, methods and techniques that can solve creative problems at both macro and micro levels (Fig. 1).

There are three approaches to project development that are equally effective in working on the overall design solution and working on the individual components of the overall solution, for example, in the process of finding artistic images of individual plots, objects or characters. These are "Design by analogs", "Design without analogs" and "Design by a prototype», which carries some components of the first two approaches.

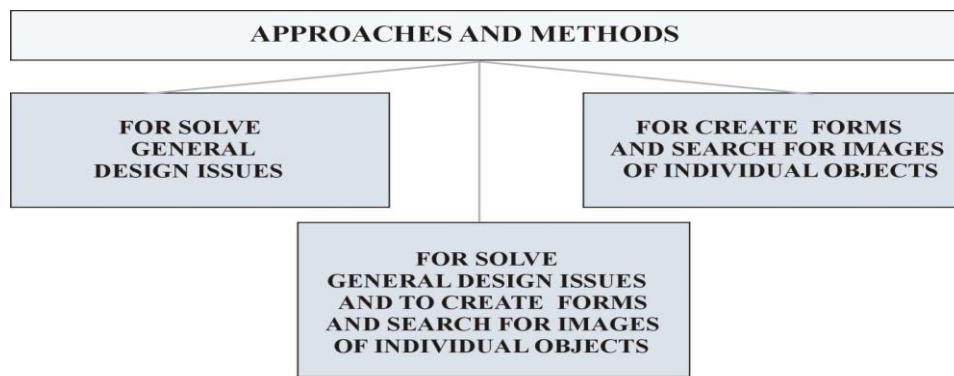


Fig.1. Classification of approaches and methods of design by purpose

"*Designing by analogs*" is the use in their works of ideas, images, and approaches already made by someone, but reworked to their own taste and for certain new tasks;

"*Design without analogs*" is the creation of objects or finding solutions, fundamentally new, which synthesize technical, figurative, or other parameters that have not been encountered before;

"*Designing by Prototype*" – when things that is far from the topic and object of design can be used as a hint of a design decision. Here we can include the well-known method of associations, when, for example, a certain image can be found in the contours of cracks of old plaster or in a random spot of spilled paint or drink, or inadvertently created form of some lying fabric, or in the form of clouds hanging in the sky [7, 523]. The most common methods of finding general design solutions are such methods as "Method of decomposition of the project problem into independent fragmentary actions"; "Method of decomposition", techniques based on imagination: "gluing" something whole from incompatible parts, emphasizing, highlighting a whole of one feature, with its further development to any possible limit; and "advanced reflection" – brought to the extreme point, to the absurdity of forecasting possible options for the development of the object or situation, and other. The methods, that are used, as a rule, only in the process of finding an artistic image or form of individual objects, are such methods as different versions of the Method of Heuristic Analogies ("Direct analogies": borrowing forms from distant design areas, here we can include bionics or the use of ethnic motives, "Subjective analogies" when the author imagines himself as a conditionally chosen character, such as Carlson from a famous children's book, "Symbolic analogies", which give the phenomenon unusual for him properties - "wooden bicycle", "liquid" fire", etc.); "Fantastic analogies" - when there are thinking about phenomena and things, as if in principle impossible ("it would be good if the road was only where the car goes") [8, 24]; "Method of transformation"; "Method of combinatory" and

other. The methods, that can be used in solving general design problems, and in the process of forming and searching for artistic images of individual objects or their complexes, is the "Inversion method" (permutation of terms), which allows to overcome deadlocks in design by changing the angle view of the object of labor; "Design method in imaginary conditions"; "Method of interpretation"; "Brainstorming method", and other. Scientific novelty: made the general results of previous researches devoted to revealing of receptions and methods of the decision of creative problems. Certain approaches, methods and techniques of creative solutions are systematized by classification into three groups:

1. Approaches, methods and techniques that are used mainly in the process of finding general design solutions.

2. Approaches, methods and techniques that are used mainly in the process of shaping and searching for artistic images of individual objects, plots or complexes.

3. Approaches, methods and techniques that are used in the process of finding general design solutions, and in the process of forming and developing artistic images of individual objects, plots or complexes.

Conclusions. There are certain types of approaches, methods and techniques that can be used only by certain types of project activities. But most of the identified approaches, methods and techniques of finding creative solutions can be used in architecture, and in various types of design, and in other areas of project activities. In the process of research of such methods and techniques, their systematization was carried out by classifying them into three groups: the first group includes approaches, methods and techniques that can be used mainly in the process of finding general design solutions; the second group includes those that are mainly used in the process of searching for artistic images and the formation of individual objects; to the third group – those that can be used in solving general design problems, and in the

process of forming and searching for artistic images of individual objects or their complexes. However, some methods and techniques commonly used to find common design solutions under certain conditions may be involved in the search for individual artistic images, and vice versa, which potentially leads to completely unexpected solutions. This study covers only a small number of known approaches, methods and techniques, in order to systematize them. Using the proposed classification, it is possible to develop a clear system that would cover most of the available approaches, techniques, methods (ideally – all), which are used in some types of project work, and the general system of all available techniques and methods. Further scientific research, as well as search and analysis of approaches, methods and techniques not yet known to the scientific and practical society, developed in various fields of activity and by individual specialists, will be devoted to the implementation of these tasks. Such a clear system should expand the knowledge and skills of designers, make their creative search more conscious and effective, which should ultimately raise the quality of design decisions.

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