Implementation of the conditions for successful preparation of the designer for project activities

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Abstract. The article is devoted to the substantiation of the conditions for the successful preparation of the designer for project activities, as well as the implementation of these conditions using technology based on accumulated knowledge about the logical laws of compositional structure. It is established that the designer in the selection of techniques, methods and graphic tools relies on compositional training. The structure of the basic compositional concepts on the basis of professional terminology is considered, a methodically justified sequence of mastering professional competencies is built, which ensures the implementation of step-by-step preparation of the designer for design activities.

1. Introduction
The solution to the problem of creating a comfortable urban environment has been and remains the most important and most priority goal for the development of society. The transformation of the urban environment throughout the Russian Federation is possible through the implementation of a set of priority measures to form a modern urban space [1]. This problem became especially urgent with the growth of urbanization.

For the implementation of the priority project ‘Formation of a Comfortable Urban Environment’, it is necessary to train gifted, creatively active, unconventionally thinking designers with high intellectual potential, able to generate and create creative projects, multifacetedly solve actual problems, achieve optimal results in various areas of design. The appeal to the propaedeutic approach as a means of developing the creative activity of the designer’s personality is due, on the one hand, to science [2-5], and, on the other hand, the possibilities of propaedeutics in developing the ability for art and design activities.

2. Implementation of conditions for training designers
The basis of this approach is a combination of certain conditions selected and tested in the process of training designers:
• providing positive motivation for art and design activities in the system of restrictions;
• development of a set of tasks that provide phased assimilation of theoretical material according to the logical laws of composition;
• mastery of new ways of working with plastic art tools (color, shape, composition).

2.1. Implementation of the first condition
Providing positive motivation in the art and design activities is carried out by interactive methods, for example, ‘brainstorming’ or a method that involves the limitation of funds, tools and materials for the implementation of the project assignment. Such design tasks are formed taking into account the provision of a ‘situation of success’, exposure to the group by means of creative stress (the student gets confident skills on successful actions).

The maximum efficiency in mastering the artistic and design activity of its logical laws is brought not by mechanical activity, but by active infection with creativity, which is achieved with optimal motivation and an appropriate level of emotional excitement and forms the need for self-expression through the solution of design problems [6]. The greater the amount of plastic arts a designer possesses, the more varied the approaches to solving design problems will be. We include various techniques and techniques for working with color, shape, composition to such means of plastic arts.

Propaedeutic project activity requires only the student’s receptive efforts, this is not enough for his fruitful professional creative activity. In other words, it is not enough to understand the logic of the basic laws of composition; it is also necessary to be familiar with the variety of the graphic language, with the technique of its formation, as well as shaping and composition.

The active position of a mentor should create the basis for flexible, emotional and smart co-creation in the first steps of introduction to design. Empathy of the teacher has a direct impact on the formation of the student’s personality, on the activation of all components of creative activity. Consequently, the role of the mentor is not only to create motivation and pose problems, but also to become infected with creativity, in a joint search for ways to solve the problem. Not only in discussing the results and consolidating impressions, but also in helping to achieve maximum success for each student. Such a setup allows you to get your own experience, giving an impetus to the formation of an active creative position in project activities.

2.2. Implementation of the second condition
The implementation of the second condition for the formation of the creative activity of a designer depends on his individual abilities, on his emotional, cognitive and social development, on the skills, knowledge and skills he mastered for the implementation of plastic arts in propaedeutic activity. At this stage, the teacher, in addition to applying a set of standardized methods for the diagnosis of verbal and non-verbal thinking, emotional competence [7, 8], can evaluate the effectiveness of the mastered competencies according to the method of D. Karpov [9].

A set of tasks of the propaedeutic course has been developed, taking into account subsequent project activities [10]. All tasks are built on the principle of mastering uniformly simple forms to forms more heterogeneous and complex with complex internal differentiation of structures and functions. Such a teaching method is expressed in the formula “from general to particular”, from the development of sensory experience to mental operations through the expression of a plastic idea by compositional means to ingenuity. From the transformation of planar characteristics of the shape of an object into volumetric ones and vice versa. The use of hybrid composite geometric models as two interrelated types of planar and volumetric-spatial are defined as the most universal and have wide formative and expressive capabilities. Where a planar composition is presented as the most convenient means of searching for an artistic idea and the laws of the structural organization of form. Volumetric-spatial composition continues the logical development of a planar idea and gives a visual representation of the perception of the image of the form in the selected spatial conditions [11].

The conversion of volumetric images into planar ones, in turn, made it possible to form the ability, very important for the development of a design student, to include an object in various contexts and build detailed compositions in accordance with the task. Tasks of this kind contribute to the formation of the student’s skills to carry out operations on the design and modeling of elements not only at the level of manipulation, but also in the internal plane of thinking.

To implement the skills of organizing the picture plane and space, the following laws of composition composition were adapted and introduced into the course of the discipline ‘Propaedeutics’ [12]: 
- tertiary picture plane;
- development of a dominant (main and secondary);
- the law of contrasts and nuances in meaning, shape and color;
- the law of dynamics and statics as a form of organization of the plane and space;
- rhythm and chaos;
- asymmetry and symmetry;
- mass and space;
- co-scale of the figure and background;
- abstract (non-objective) and concrete (subject).

Mastering the patterns contributes to the student’s transition from solving problems of plot composition to skills of solving similar problems by means of formal composition.

The following types of creative tasks are highlighted:

- Tasks that contribute to the combination of theoretical knowledge with the technology of their application in practice, when the conditions are formulated, but do not contain all the data necessary to solve [9].
- Training exercises for the acquisition and strengthening of previously acquired competencies.
- TRIZ tasks requiring a non-standard approach to solving a creative problem and activating creative thinking [10].
- Hybrid models of control measures when a student presents part of the task (for example, an abstract) in the form of an audio recording.
- Independent initial analysis of a creative product (necessary for a student to make the educational process his property) [7].

In general, the complex of educational tasks is approximate, which allows the teacher to vary the number of classes, the sequence of topics, select the stimulus series (verbal, visual and audio means). In the formulation of educational tasks, it is recommended to use situations characterized by incompleteness or openness for the integration of new elements, new tools, skills, knowledge related to the formation of an active creative position, which is an essential condition for development, while the student is encouraged to research and inventive activity.

Propaedeutic design lays the initial level of student's creative activity and becomes a system-forming factor for the subsequent training of the profession. In the process of interacting with the student, it is recommended to create favorable conditions for the latter to acquire a new personal experience. During work in the group, the student should be included in the teacher-led environment, which contains the conditions for the student to gain experience in artistic and creative activity, where he master various methods and techniques, which are in visual practice tools for expressing s artistic ideas [13-14]. In this environment, a personality is formed, which is characterized by activity in the development and transformation of the world, high self-esteem, openness, as well as freedom of opinion and action.

The pedagogical process of the development of creative activity organized in this way should contribute to the student’s creative realization and capabilities. The content of the components of the tasks should depend on the level of their preparedness and meet such requirements that the solution of a number of creative tasks gradually leads to the development of the set qualities. From here follow the rules of constructing educational tasks that we have identified, which should be based on the educational problem and the problem associated with the development of the student. The solution of which, in turn, involves the search and expansion of the range of plastic arts, methods of mental activity [15, 16]. Tasks of a productive type are preferred, in accordance with the rules of constructing a task, its content and conditions of execution are formulated.

The formation of educational material based on the implementation of the basic rules for constructing a composition.

2.3. Implementation of the third condition
When implementing the third condition, it is necessary to master new ways of working with color, form, composition, which will determine the nature of the formation of the creative activity of the future designer, which will contribute to the formation of his professional competencies.

The content of the methodological support of design disciplines includes the development of a system of categories and means of composition (See the Table).

![Diagram of compositional concepts]

**Figure 1** The structure of basic compositional concepts.

In the construction scheme for any composition, types, kinds, as well as principles, properties and qualities of consistent logical pre-project activities in design are highlighted. Including the need for the development of visual skills and knowledge on the stylization of form, on the theory of warm-cold perception of color, as well as various forms of expression of emotional and cognitive characteristics, including the features of mental activity, semantic differential [17,18].

### 3. Implementation technology

Stimulation of the acquisition of propaedeutic knowledge and skills is necessary. Therefore, the methodological support of professional disciplines should be aimed at:

- mastering the skill of structural and spatial transformation of depicted objects;
- mastering the operations of artistic-figurative and abstract-logical thinking in project activities;
- disclosure of meaning through the reflection of the current emotional state in a creative product.

The first stage of technology development ensures the personal involvement of the project process participants in the dialogue – discussion of the topic. With the aim of emotional infection, getting used to the image, for the subjective consciousness inherent in each participant in the project process of an
artistic image, the project manager gives an installation on an artistic and associative perception of the topic.

The second stage is associated with the search for composition, with the choice of plastic means of expressing the image (color, shape, plastic, rhythm, texture, proportions). At the same time, the designer’s own creative activity certainly follows after communication and familiarization with the stimulus series (visual, literary, musical). This approach provides activity, emotionality, immediacy of perception, individual character of work.

The third stage is aimed at developing our own forms of creative activity of the designer, which should be supported by motivation for self-expression. The desire to participate in competitions, exhibitions, to independently achieve a satisfactory result is an important condition for the development of creative activity.

The last – the fourth stage of technology development should have a generalizing character. This includes: a statement of the achievement of the goal, additional work to strengthen artistic generalization, summing up, highlighting and discussing original compositional solutions [19, 20].

The stages of the above technology include the integration of diverse artistic, training, verbal activities, individual and group classes.

4. Conclusion
Designers are not artists, but the way a designer is looking at the world determines his or her style of work. Operating the logical laws of the composition is the basis of professional activity; it helps to stimulate the active creative (emotional-sensory and mental) process.

The development of design is impossible without drawing attention to the expressive possibilities of contemporary art, on the one hand, and the increased demand for creative activity, the ability for productive experimental thinking, on the other.

The set of conditions indicated above in the implementation of the technology of successful preparation of the designer for project activities provides: the development of a set of personality-oriented tasks that take into account the individual characteristics of the designer and provide directional mastery of plastic arts; the development of technology conducive to the development of special skills; rationale for the selection of plastic arts.

The interdependence, structural and hierarchical conditions will ensure the controllability, focus and logic of using plastic art in the development of the creative activity of the designer.

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