# ORGANIZATION OF DESIGN AND ARCHITECTURAL ENVIRONMENT WITH MODERNIZATION OF BUILDINGS OF PRESCHOOL EDUCATIONAL ORGANIZATIONS IN SMALL URBAN AREAS

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**Abstract:** Taking into account the rapid pace of life in the modernization of small towns, the importance of organizing the process of educating children in the buildings of preschool educational organizations, as well as the object of design as an element of a multifunctional complex, the complex includes changes in its volumetric and functional compliance. In the architectural design of a preschool educational organization, functional-planning requirements are mainly taken into account in the formation of the structure and the development of the area of the premises.

**Keywords:** Small towns, pre-school educational organizations, element of a multifunctional complex, equipment and interior solutions of buildings, functional and planning requirements.

**Introduction.** Today, the role of architecture of preschool organizations in organizing a comfortable environment of modern life in society is important. Given the rapid pace of life in the modernization of small towns, as well as the intensive employment of parents in the professional activities of the population, the importance of the organization of the process of raising children in preschool educational organizations is increasing. As a small city, settlements are formed not only by capital cities, but also by enterprises that form developed areas and districts with large populations, in which centers with rich infrastructure are also formed.

Population growth and the pace of life lead to the creation of small towns. Buildings of preschool educational organization in a small town are considered as an object of design not as independent, but as an element of a multifunctional complex, including changes in the volumetric and functional compliance of the complex [1].

In small towns and villages, the preschool education system plays an important role in the development of society. Modernization of preschools in these regions will not only improve the quality of education, but also enhance the overall well-being of the community. Modernization of preschools in these regions will not only improve the quality of education, but also enhance the overall well-being of the community. However, the specificity of educational buildings in small towns and villages requires limited resources and the need for changes in traditional architecture. Therefore, at present, one of the urgent issues is to strengthen the material and

technical base of such organizations, introduce innovative approaches and erect buildings that meet environmental requirements.

**The main part.** The volumetric and spatial structure of preschool educational organizations, the arrangement of children's playgrounds and the shape of the building should be solved in their connection with other buildings. When designing the access to the building of pre-school organization in the territory of cities, villages and settlements, the structure of residential buildings and streets in the territory is analyzed and investigated. The analysis will carefully plan for the provision of a through transportation system to create a comfortable pedestrian environment.

Preschool educational organizations in small towns are mostly located in dilapidated buildings that need to be renovated and equipped with new technologies. Because nowadays more and more people pay attention to the fact that in apartments that are in an emergency condition, sanitary and hygienic requirements for the operation of old buildings are not observed. Therefore, today we need a favorable environment for the introduction of modern teaching methods - new pedagogical approaches, innovative educational technologies.

According to architects and urban planners, architecture design is a fundamental and important branch. On the school grounds, schoolchildren learn how to organize functional architecture on the basis of various forms of learning. The architectural solution of the building of a preschool educational organization should be defined as a system of requirements and norms imposed on the basis of the rules of town-planning norms and rules for the development of premises [2].

**Materials and Methods.** Urban planning requirements are requirements for the territory. They primarily establish certain boundaries and conditions:

for the formation of a system of transportation communications construction sites;

- land organization, as well as landscaping, arrangement;
- landscape design of the territory and landscape solutions of the territory

In the architectural design of a preschool educational organization, functional-planning requirements are mainly taken into account in the development of the forms and area of the building structure.

The development of a preschool educational organization shall take into account:

- the ratio of the total capacity of students and age groups in the preschool educational organization;
- equipment and interior design of buildings;
- a place of public catering;
- connect the building of the preschool educational organization with the land plot and organize children's summer playgrounds.
- observe all necessary conditions to protect and promote health;
- Learn, teach, teach, teach, teach, teach, teach, teach, teach, teach, teach, teach, teach, teach, teach, teach, teach, teach, teach, teach, teach, teach, teach, teach, teach;
- after training as a logistics specialist.

The rules for drawing up architectural and design documentation are defined in normative acts. However, the specific requirements for preschool educational organizations built or converted into residential buildings may differ. At the same time, it is necessary first of all to provide a limited functional process in the hall of the building of the preschool educational

organization. When designing the second building by changing the mode of operation of the organization, the limitation of the area assumes the performance of certain functions.

In keeping with the lifestyle characteristic of a small town, the large number of preschool-age children, namely, children

- provide comfortable socialization;
- safety;
- need to create priority opportunities such as efficiency in learning and development.

Contacts in urban life are significantly limited.

Since the emergence of pre-school educational organizations and up to the present time the education of preschool children by educational and pedagogical methods and these processes are carried out. Premises of preschool educational organization differ from each other in terms of location, memorial composition, interior, types of landscape design solutions, as well as the content and quality of additional services. Such changes require socio-demographic changes in small towns, dynamic changes in modern society and the surrounding world, typological flexibility and versatility of the building. In the information practices installed in the buildings of children's preschool educational organizations, the problems of changing information and compliance with the typology of existing buildings are relevant. This results in one-off projects that are checked for compliance with certain requirements.

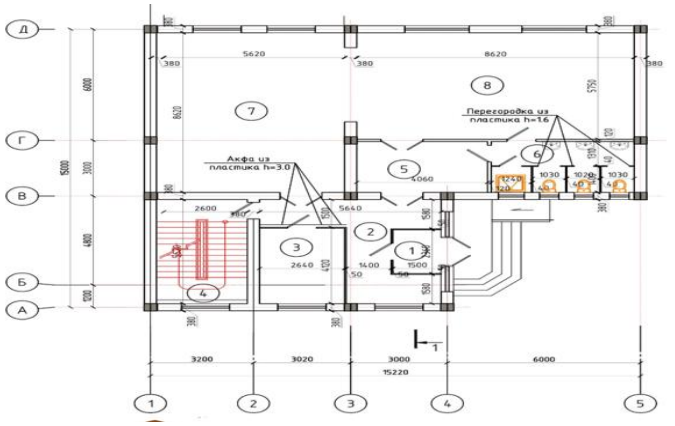
In some cases, the modernization of existing preschool educational organizations proposes changes in the architectural and design solution and the function of the building from the renovation of the building to its completion. When designing new types of preschool organization buildings in small towns, quantitative and qualitative features of the building are taken into account, including: energy efficiency, ecology of the preschool educational organization building, hybridization or fixing of special profiles.

As an example, on the analysis of the reconstruction project of the building of preschool No. 42, located at the gathering of citizens of mahalla “Chekmirzoabad” of Baghdad district of Fergana region, the block of building No. 1 of 2 is presented.



The first block consists of 2 cells, in the first and second cells there are cells with one cell in each of them.

One of the cells is equipped with a sanitary unit designed for picking up, dropping off and dropping off children aged 3 to 4 years. In 2 - x blocks, separated by horizontal and horizontal stripes, there are 2 images each. The building was built in the style of classicism and represented a gazebo and a recreation area for children.




**Results.** In this project, the methods of creating a modern design and architectural environment are discussed. First and foremost, attention is paid to improving the infrastructure in the region. The design of preschool educational organizations pays attention to several aspects of creating a safe and comfortable environment for children.

Rational use of land plot opportunities requires special procedures and theoretical approaches. When selecting a land plot for a pre-school education building, attention is paid to the geographical location of the land plot.

The location of the building, the strength of the ground and environmental factors (e.g. flooding or overloading incidents) are important. Choosing a comfortable and safe area for a preschool educational organization is important for the safety of the children. The design of plants and green areas are also taken into account in the project of children's preschool educational organizations. In doing so, it is very important to integrate the area with nature, i.e. to organize plants and green spaces. These fields contribute to children's psycho-emotional development, recreation and physical activity. Currently, in projects of preschool educational organizations, such as small towns, it is necessary to pay attention to transport and road infrastructure. Because creating suitable transportation corridors for residents and children when locating the building promotes efficient use of the land plot and daily movement. In the designs of preschool educational organizations, attention is paid to the arrangement of rooms, taking into account the circulation of light and natural air. The function of natural lighting is to maximize the natural light into the rooms in the building. Large and wide panoramic window should be designed for the rooms in the building. This will help children to develop well. Natural light mainly utilizes light from the natural position of the sun. When constructing buildings, the focus is on improving internal air circulation. Modern state-of-the-art buildings use equipment consisting of special fans and air circulation systems[3]. Installing this equipment allows for natural air circulation. When placing the building on the area, the main concern is to ensure the circulation of light and air. Because the south side of the building helps to receive a lot of light and also often provides natural air circulation in the summer. The possibility of air intake through the West and East sides organizes well the light and air circulation in the building. The installation of this equipment provides natural air exchange. The main challenge in placing the building on the area is to provide light and air circulation. Because the south side of the building helps to receive “ a lot of light ‘ and in the summer ’ often provides natural air circulation. By being able to receive air from the west and east sides, the light and air in the building is well organized.

Today, the use of energy-saving materials remains one of the main tasks both in the construction of small towns and in the design of preschool educational organizations. This was stated in the Law of the Republic of Uzbekistan dated August 8, 2024, No. UP-940 “On Energy Saving, Rational Use and Increase of Energy Efficiency”.

In this regard, materials that are unmatched in other buildings are now being used in apartment buildings. This will help to improve the environmental conditions in the region as well as provide an opportunity to increase the outreach to the community.In addition, energy-saving materials are used on building facades. For example, thermal insulation panels, energy-saving coatings and special materials to improve the lighting effect are used on building facades. Including the use of energy-efficient materials is important even in modern preschools that are being built today in small towns. This will not only help to improve the ecological situation in society, but also to reduce operating costs. In addition, energy-saving materials are used on building facades. For example, thermal insulation panels, energy-efficient coatings and special materials to improve lighting are used on building facades. This not only maintains the internal temperature of the building well, but also significantly reduces energy consumption in summer and winter. Energy efficient glazing and solar panels are also used in the design and construction of buildings. They cover the need to use special double- and triple-layer glass in their construction. These glass windows are highly heat efficient and allow for improved air permeability. There is also the option of installing solar panels to utilize solar energy. The use of innovative technology ensures minimal labor costs while improving the environment.

Special insulating materials are used when finishing the roofs and walls of the buildings of the preschool educational organization. This not only reduces the building's energy consumption, but also helps to keep the building's interior temperature cool in winter and cool in summer.

**Discussion.** At present, one of the pressing issues remains the strengthening of the material and technical base of preschool educational organizations, the introduction of innovative approaches and the construction of buildings that meet environmental requirements. Buildings of preschool educational organizations in small towns and some regions of the country are outdated and require reconstruction and equipping with new technologies. Currently, there is an increasing demand for preschool educational organizations due to the growing number of children in small towns and districts. Due to the unserviceability of old buildings, many educational organizations do not fully meet sanitation and safety requirements. Therefore, it is necessary to create a modern design and architectural environment in all regions of the republic and small towns.

When designing and constructing buildings of preschool educational organizations in small towns and newly built massifs, attention should be paid to the improvement of architecture and design. Building facade and interior designs have a positive impact on children's mental and social development. Exterior and interior colors of buildings are based on children's psychology and should be bright and warm. The furniture in the nursery and bedroom should meet ergonomic requirements, indoor and outdoor multipurpose play areas should be organized. Intelligent technologies based on innovative technologies and automated fire safety systems will be used to educate children in the building's classrooms. Today preschool educational organizations are introducing such tools as interactive screens for modern education and digital educational platforms.

It is necessary to create an ecological environment on the territory of the buildings of preschool educational organizations. Because the ecological environment on the territory of some existing preschool educational organizations does not meet the requirements. In this regard, the design of buildings of preschool educational organizations should take into account the proximity to natural areas, increase the number of gardens and flower beds, and introduce water- and energy-saving systems.

**Concluding part.** Thus, when modernizing small towns, the design of public buildings and buildings of preschool educational organizations in settlements is formed on the basis of architectural and functional processes. When designing the buildings of preschool educational organizations, our task is to teach our future cadres studying in the field of architecture to differentiate in terms of residence, architectural composition, types of interior solutions, landscape design, as well as the composition and quality of additional services.

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