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Iryna O. Merylova,  
ORCID 0000-0001-5375-1359,  
mail: irina.merilova@gmail.com,  
Prydniprov's'ka State Academy of Civil Engineering and Architecture

## FEATURES OUT-OF-SCHOOL EDUCATION ESTABLISHMENTS NETWORK AS THE URBAN PLANNING SYSTEM

*The article considers the network of out-of-school educational institutions as a component of the city-planning system. It is found that according to the system approach, the system of out-of-school education is a set of out-of-school establishments and their territories with their purpose, resources and connection with other elements of the city-planning system. The study also defines the main systemic features of the network of out-of-school educational institutions as a city-planning system.*

*Key words: out-of-school educational establishments network, systemic features of the network of out-of-school educational institutions, system approach city-planning system.*

### 1. INTRODUCTION

Ukrainian national model of out-of-school education is unique and reflects social and national specification of pedagogical development. All integrated innovations should be thoroughly comprehended and analyzed.

The system approach considers the system of out-of-school education as a set of out-of-school establishments and their territories having the purpose, resources and connection with the whole urban development, with a network of public service institutions and, most importantly, with other educational institutions. The essence of the approach is to implement the requirements of the general theory of systems, according to which each object in the process of its study should be regarded as a separate complex system and at the same time as an element of a more general system. The system approach allows to develop functional and planning models of the organization of the network of institutions of extracurricular education, as well as establish the relationship between the architectural and planning and territorial organization of the elements of the institution.

The relevance of this research is defined by need of improvement and expansion of the out-of-school educational establishments network in the conditions of reorganization of urban development. By creation of flexible network of out-of-school institutions of different types and definition of settlement indicators for various town-planning conditions.

## **2. THEORIES**

The methodological foundation for the study was the fundamental works of Ukrainian urban planners on the general theory of urban planning systems. These scientific works allowed to consider the network of institutions of extracurricular education as a component of the overall urban development system and led to the use of a systematic approach as the basic direction of the methodology of scientific knowledge. The study relies on the works, devoted to the general theoretical and practical problems of architecture and town planning, by Y. M. Bilokon [1], M. M. Gabrel [2], M. M. Demin [3], G. L. Kovalska [4], T. F. Panchenko [5], Z. N. Yargina [6] etc.

## **3. RESULTS AND DISCUSSION**

In order to establish definitions and concepts, an analysis of the current legislative documents of Ukraine was conducted in this research, which give an explanation of the terms "education system" and "system of out-of-school education".

According to the Law of Ukraine "On Education", the out-of-school education is a structural component of the education system, which consists of educational institutions, scientific, methodological and methodological institutions, scientific and production enterprises, state and local education authorities and local self-government bodies in the field of education, which are in a certain relationship with each other and with the environment.

The Law of Ukraine "On Extracurricular Education" introduces the concept of "out-of-school education" as an educational subsystem, which includes state, municipal, private out-of-school educational institutions; other educational institutions as centers of extracurricular education during extracurricular time.

On the basis of the general theory of systems, Doctor of Architecture M. M. Demin considered the problems of functional and planning organization of urban cities, their dynamics, development and optimization of the structure of city-planning objects of various levels. In his work "Management of the development of urban systems" [3] the author introduced the following concept: the urban system is a set of spatially organized and interrelated material elements of technically developed territories, buildings and structures, roads and engineering communications, which, together with natural components, form the environment of social activity.

In urban science, the following variations of the notion of "system" and "urban planning system" are defined, which should be taken into account in this study:

- system is a combination of objects (with their features and relationships) with ordered interconnections that give the combination of new qualities: integrity, autonomy and stability [1];

- town-planning system is a complex dynamic system that is a composition of settlements, their ties and relationships in a multidimensional natural and socio-economic space [2];
- urban planning system is a set of spatially organized and interrelated material elements of technically developed territories, buildings and structures, ways and engineering communications, in combination with natural components that form the environment of social life at different territorial levels. The town-planning system is constantly evolving, changing depending on the needs of society, in accordance with the development of its social functions [6];

The object of this study is a network of out-of-school educational institutions. One of the tasks of this scientific work was to establish the definition of "network of out-of-school educational institutions."

In the general sense, the term "network" is interpreted as an association of homogeneous objects. Networks can be members of a more general network, thus forming a hierarchy.

The essence of the term "network" as an element of a city-planning system is discussed in the textbook "Fundamentals of Urban Planning Theory" ("Fundamentals of Urban Planning Theory"), edited by Z. N. Yargina: "The network is a group of point or linear objects that are ordered locally on the territory under consideration (network of cultural and consumer services, transport network, etc.)» [6].

The Doctor of Architecture, professor T. M. Panchenko in the "Designer's Guide" reveals the concept of a network of educational institutions as an integral part of a city-planning system, consisting of pre-school, general education, higher education institutions, vocational schools and out-of-school education institutions [5].

The Doctor of Architecture G. L. Kovalska considers the network of general and pre-school educational institutions as a hierarchically subordinated set of buildings and land plots, united in complexes, clusters, territorial educational districts, which functionally and planably interconnected the network of transport and pedestrian communications with taking into account zones of influence and are placed in residential groups, microdistricts, residential areas [4].

Based on a number of researches about the general theories of city-building systems it can be concluded that a grid of educational institutions is an integral part of the general urban-building system of material educational resources. In fact, the elements of this grid are urban planning objects such as buildings and sites of educational institutions. All elements of the system interact with each other and form a unified network of educational institutions at different territorial levels.

According to the theory of city planning all the systems are divided into 'simple' and 'complex'. 'Simple' systems have a small amount of structural, functional elements and connections. Separate extramural educational institution

might be a good example of a 'simple' system. In contrast, 'complex' system accounts a great amount of structural and functional elements and its connections. A network of extramural institutions may be an example of 'complex' system. It includes the buildings of educational institutions and its sites, the buildings of other educational institutions where there is an option of extramural activities, administrative bodies which are supplemented by public sector objects like libraries, theaters, planetariums, sports establishments, recreational zones, etc.

The study has identified the main systematic features of the extramural educational institution's networks:

- **Structuring provides** spatial and functional relationships between all elements of the system, their organization and order. The system forms at different stages of a city-planning organization and it involves the transformation of traditional extramural institutions under the influence of socio-economic, political and demographic changes;

- **Integrity** - considers the network of 'out-of-school' (extramural) institutions as a multileveled hierarchical structure that involves dependence of each element of the system, its features and relations from its position and functions within the entire structure. In case one element (or a number of elements) of the system have been influenced it would definitely cause a reaction and changes to other elements. The system of educational institutions is influenced by social, economic and demographic changes within the country or state. Therefore, new elements of the system are being made. With regard to this study, such elements may be in the form of home-grown out-of-school clubs within a residential or multi-apartment building.

- **Hierarchy** determines consideration of every element of the system as a subsystem. The system itself is also capable of being considered as a component of a particular over-system. A higher hierarchical level of a such organization can affect the lower level and vice versa. For instance, legislative changes in the general education system can indirectly influence the system of extramural education as its component. The process of copying numerous effective methods of national models of extramural education can have a great deal of impact at this point. Literally, an introduction of an additional element into the system of extracurricular education in Ukraine can affect the whole national model in general;

- **The relationship** between the structure, formation environment and manifestation of the system's features during the process of interaction with different environments.

The system of out-of-school education may be affected to change due to the development of different environments such as educational, economic, socio-cultural, informational, urban planning, etc, that it correlates with.

• **Synergy** involves interconnections with other elements of the network of educational institutions (pre-schools, general education schools, vocational schools, higher educational institutions) and social institutions (libraries, planetariums, theaters, parks, etc.) in order to increase the efficiency of educational process. The national programs of education reform tend to state that cooperation of resources of out-of-school and general education institutions is one of the best and efficient ways for education development in general. For example, the practice of co-operation between extramural and state education institutions is believed to be expedient, because it allows an expansion of educational facilities between institutions and rationalizes the use of materials and technical resources. In the framework of this study, these provisions provide an opportunity to significantly expand the network of extramural institutions and create new types of such institutions, especially in the structure of territorial educational districts.

#### 4. CONCLUSIONS

The proposals, obtained as a result of the study, may be used in the process of organization network of out-of-school educational institutions.

Due to frequent socio-economic changes in society and unstable demographic situation that significantly affect the development of out-of-school education, the reconstruction of extramural institutions, and the creation of new institutions for extra-curricular upbringing of youth population on different levels, the network of out-of-school educational institutions should be considered as a coherent city-features in functional and architectural and urban aspects.

The study determined the prerequisites for the development of a modern out-of-school educational institution, as well as the need for the systematization of the scientific knowledge on architectural design and town-planning organization of network of out-of-school institutions.

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Мерилова І.О.,  
Придніпровська державна академія будівництва та архітектури

### **ВЛАСТИВОСТІ МЕРЕЖІ ЗАКЛАДІВ ПОЗАШКІЛЬНОЇ ОСВІТИ ЯК СКЛАДОВОЇ МІСТОБУДІВНОЇ СИСТЕМИ**

У статті розглянуто мережу закладів позашкільної освіти в якості складової цілісної містобудівної системи. Системний підхід розглядає систему позашкільної освіти як сукупність позашкільних закладів та їх територій, що мають ціль, ресурси та зв'язок зі всією міською забудовою, з мережею установ громадського обслуговування та, найголовніше, з іншими навчальними закладами. Системний підхід дозволяє розробити функціонально-планувальні моделі організації мережі закладів позашкільної освіти, а також встановити взаємозв'язок між архітектурно-планувальною та територіальною організацією елементів закладу. У дослідженні були встановлені основні системні властивості мережі закладів позашкільної освіти, як містобудівної системи.

Ключові слова: системний підхід, містобудівна система, мережа закладів позашкільної освіти, системні властивості мережі позашкільних установ.

Мерилова І.О.,  
Приднепровская государственная академия строительства и архитектуры

### **СВОЙСТВА СЕТИ ОБЪЕКТОВ ВНЕШКОЛЬНОГО ОБРАЗОВАНИЯ КАК СОСТАВНОЙ ЧАСТИ ГРАДОСТРОИТЕЛЬНОЙ СИСТЕМЫ**

В статье рассмотрена сеть объектов внешкольного образования в качестве составной части целостной градостроительной системы. Системный подход рассматривает систему внешкольного образования как совокупность внешкольных учреждений и их территорий, которые имеют цель, ресурсы и связи с другими элементами градостроительной системы. В исследовании были определены основные системные свойства сети объектов внешкольного образования.

Ключевые слова: системный подход, градостроительная система, сеть учреждений внешкольного образования, системные свойства сети внешкольных учреждений.