UDC 72.01

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ARCHITECTURAL MODERNIZATION BOARDING SCHOOL FOR CHILDREN WITH VISUAL IMPAIRMENTS

Abstract. This article attempts to identify the main features of the boarding school for blind children, based on the specific defect. Provides recommendations to help solve research problems.
Keywords: children with disabilities, architectural environment, the city.

Statement of the problem . According to experts, the most urgent task of solving problems of visually impaired children today is their training and self-realization, development of skills and , eventually , - integration into social life , free communication with the sighted . To date, according to the Ministry of Health in the country is home to around 10,000 children visually impaired , of whom 1000 - in both eyes .

In Ukraine, created a powerful network of specialized educational institutions whose primary purpose is the right combination of training and rehabilitation and educational work . According to the central control Ukrainian Society for the Blind in specialized schools across the country has about 850 totally blind children and 7000 children with vision problems. In Ukraine there are 30 special schools for children with visual impairments , 6 of them - for totally blind children (Kiev, Slovyansk , Kharkiv, Lviv, Odessa , Mukachevo) .

Along with the issues of forming a network of specialized institutions for children with visual impairment important aspects of the problem is the typological directly related to the issues forming the architectural environment agencies. Here first is determining the nature of the defect, which affects the number of children in groups and classes , the total capacity of buildings , floors , functional structure , architectural and planning techniques , the characteristic elements of the internal environment .

At the present stage of socio- political development of Ukraine has opened new perspectives in special education , related to the new child with visual impairment . This calls for a global update of existing specialized institutions , their form and content , the introduction of new approaches to design and innovative technology .

Analysis of the latest research. Extensive domestic work to develop the principles and bases of training , education, treatment and adaptation of disabled children encompasses a variety of scientific works of authors such as L. Solntseva, AG Litvak , N. Morozov , VA Feoktistov, LI Plaksina , AI Zotov , LF Kasatkin, OI Egorova , MI Zemtsova By Buerkle . This issue directly or indirectly focused on the study of authors such as VO Mosin OV Proskurin , K Komarov .

In Western Europe and North America for many years maintained the practice of creating such institutions , the study of certain aspects on this subject carried out in order to develop the original schema, based on which further design . That such studies as: pre-project analysis within the design school in Hazelwood (Glasgow , Scotland) Company «GM + AD Architects», school Julie Andrews Mc Mork in Denver (Colorado , USA) «Davis Partnership», School B. Ross Mc Donald (W. Ross Mac Donald) in Brendford (Ontario , USA). For descriptive studies include articles by David Sokol collection «Schools of the XXI century» magazine Architectural Records, which address architectural solutions schools for children with visual impairment ; article Annette Espinoza , where laid overview of the main architectural design decisions school Julie Andrews Mc Mork Denver ; Rice Phillips article «School design for the blind» methods listed independent blind orientation and principles of functional organization of the school W. Ross Mac Donald.

The study of materials relating to research [1-8] revealed no elaboration questions architectural modernization boarding schools for children with visual impairment .

The wording of the purposes of article. The purpose of this study is to identify the sources of the principles of humanization of space to create an

environment that will help children with vision problems to meet their needs, based on the real possibilities of the individual and the requirements of society.

The main part . An important prerequisite for the implementation of modern requirements is a systematic approach to solving this problem - understanding the personality of the child , taking into account its zakonomernosteynostey development associated with visual impairment , to determine the degree of compensatory and corrective impact on child development in the conditions of the special institution , designing relevant content , technological and material software.

In his work " Psihololgiya blind" Buerkle K. wrote: " Blind vigorously uses the feelings that bring him the remaining senses. They form the basis of his mental life. Sighted people mostly little need and therefore not fully use them , and only with difficulty can get an idea of their wealth . " According to various estimates by sight man gets 75 to 90 % of the information . For blind important task is the development of skills to compensate for visual impairment due to the use of intact senses. Among the Visually Impaired is customary to distinguish two groups: blind and visually impaired . The basis of this division is indicator of visual acuity. Do impaired main source of information perception is vision. Blind use other senses.

Based on the experience of the world of medical practice to conduct a detailed study of the specificity of the defect and the existing methods of its compensation , and then develop on this basis, the basic principles of spatial planning and spatial domain- making when creating specialized agencies and modernizing existing ones.

The objectives of this work may be: a review of existing methods of compensation , identify examples of architectural attraction means to solve this problem and search for prototyping , development of a common set of requirements for a boarding school for children with visual impairment .

Consequence of a breach of a developmental delay , which can be removed under appropriate conditions, training and education. Such conditions allow even the totally blind to form adequate ideas and concepts to automate a variety of skills

, raise the necessary money. However, the process of achieving these results has some characteristics and requires well- organized space .

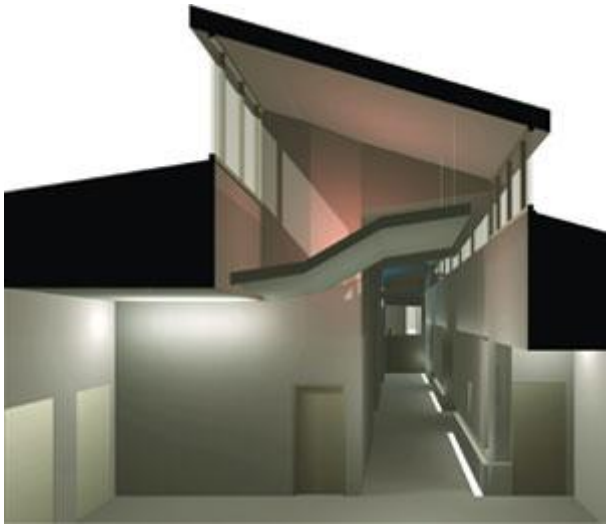

Fig. 1. Julie Andrews School Mack Mork in Denver

Visual analyzer among the visually impaired depending on the level of visual acuity continues to some extent involved in the process of perception. So even at very low visual acuity , he occupies a leading position in the orientation of a large space . Because of this architecture in boarding schools used techniques such as painting buildings in a contrasting color , blocking sunlight using cornices, shutters, skylights use in covering space (Fig. 1) (important elements for children with residual vision , sensitive to blinding sunlight) .

In total absence of information is becoming an important source of touch. Already dominated by skin-mechanical and engine analyzers underlying tactile perception. It gives you the opportunity to reflect spatial and physical properties of objects, with the participation of various kinds of sensitivity: tactile, pain, temperature, musculoarticular.

The main body of tactile perception in humans - hand. Is therefore important for the selection of materials for finishing the building so as to allow independent movement using tactile perception (Fig. 2). Changing the tactile properties of surfaces, it becomes possible to provide children with important clues to guide.

In everyday practice touch provides information on the part of the space in which

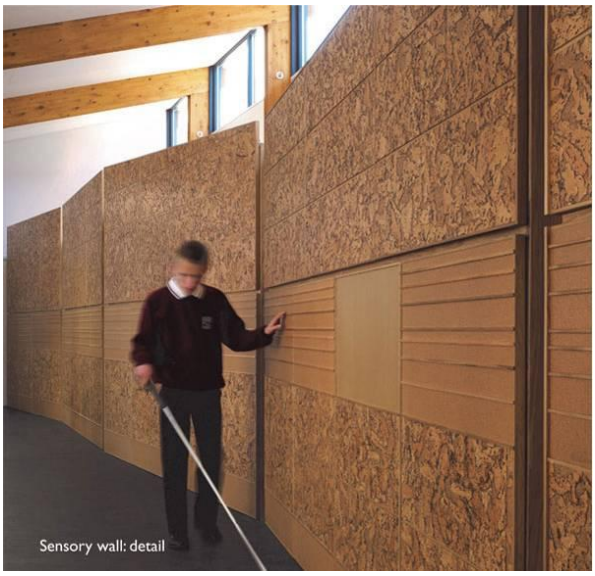

Fig. 2. School in Hazelwood

the blind is directly . Path ahead is usually examined with a cane to detect obstacles and famous landmarks . The general perception of a large space occurs mainly through hearing. He becomes the leading type of sensitivity for distant perception. On the basis of auditory sensation and perception of the blind are able to locate objects in space that are the source of sound, and the nature of sound propagation to judge the size and fullness of a closed space. It uses reflected sound made when driving . Western architectural firms use alternate flooring materials that gives you the opportunity to feel the texture , but also hear the sound of the cane , characterized by a variety of surfaces , as well as ceiling height difference , which helps determine the distance from the hearing aid (Fig. 3) .

Often during orientation blind use smell as it may , as rumor distant signal obstacle.

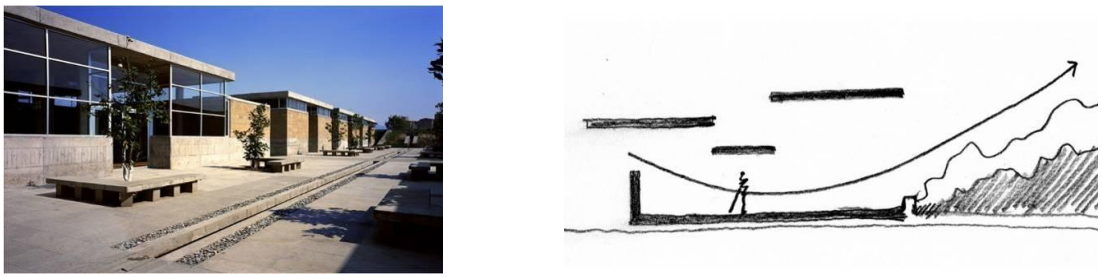

Fig. 3. Center for the Blind and Visually Impaired, Mexico.
Taller de Arquitectura-Mauricio Rocha

Smells are blind as guidelines when traveling in space. From smell blind can determine the location of objects with specific odors. On this basis, in the territories of specialized schools all plants should be chosen with regard to their tactile properties and flavor. Regionally Lake Park in Florida exists specifically for blind users " Garden of Senses » (Sensory Garden), where collected plants , brightly allocates its qualities - color brightness , surface texture , smells , etc.

The orientation process occurs in the blind on the basis of the integrative activity of intact analyzers, each of which can act as a leading under certain conditions.

Based on this , we can conclude that the defect of vision is not an insurmountable obstacle in the formation of an adequate representation of the environment. In this particular blind interaction with the outside world require creating special conditions for the implementation and development of compensatory abilities, providing orientation in space. They, in turn, arise when

the blind actively and independently seizes space. Mastering these skills requires focused training.

It should be noted that today in our country begins a gradual introduction to the work of individual methods of the above methods . However, the adoption system in our country the education of blind and visually impaired children , mostly with severe pathology , in boarding schools far from perfect , there is practically no possibility to take into account the individual characteristics of the child. Based on the studies appears to offer a new version of the organization of a boarding school for children with visual impairment .

The main characteristics of children with visual impairment , affecting the formation of architectural spaces of buildings and the external environment, and compensatory processes that affect organizational and functional structure of buildings, proposed the basic recommendations for the modernization of the existing stock of architectural institutions.

First of all , you need to make changes to the planning and functional structure of buildings with a view to rationalizing the relationship between different groups of rooms , adding the necessary facilities and optimizing the parameters of existing ones. According to its organizational decision data boarding schools should be a barrier-free environment , appropriate to the needs of children with visual impairment . As previously mentioned , in such spaces are important individual furnishings, color, texture , shape, lighting. Everything should be as adapted to the peculiarities of perception and blind at the same time does not cause apparent addiction to such an environment.

Very good condition would be the location of the object in the natural or in the modernization of artificially reproduced the natural environment as a unique property wildlife harmonize and calm mental state of a person will be able to make the process of acquiring skills softer and loyal, will help create the illusion of an isolated personal space . School yard can be used for training in survival skills , self- orientation and movement within the blind area .

Conclusions . Boarding school - a specific example of human habitat . This particular space has within itself the goal - the creation of necessary conditions for the development of the child with the maximum use of its potential. Principles of

humanization of this particular space should be implemented at the expense of modernization , its openness that will help create the conditions that help children with vision problems to meet their needs . Based on the preliminary analysis of the data collected, it became evident that the need for serious work on updating the existing architectural environment for children with visual impairment .

Prospects for further research. Need to identify priority areas of architectural modernization, form the basic principles upgrading existing boarding schools for children with visual impairment.

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Анотація.

Назарук А.А., Мироненко О.В. Архітектурна модернізація шкіл-інтернатів для дітей з порушенням зору. *У даній статті зроблена спроба виявити основні риси шкіл-інтернатів для сліпих дітей, виходячи із специфіки дефекту. Пропонуються рекомендації, що сприяють вирішенню проблеми дослідження.*

Ключові слова: *діти-інваліди, архітектурне середовище, місто.*

Аннотация.

Назарук А.А., Мироненко О.В. Архитектурная модернизация школ-интернатов для детей с нарушением зрения*. В данной статье сделана попытка выявить основные черты школ-интернатов для слепых детей, исходя из специфики дефекта. Предлагаются рекомендации, способствующие решению проблемы исследования.*

Ключевые слова*: дети-инвалиды, архитектурную среду, город.*