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**SYSTEM APPROACH IN DIAGNOSTICS OF INNOVATIVE
ATTRACTIVENESS OF BUILDINGS AND CONSTRUCTIONS**

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The widespread use of innovative hardware and devices entails the need for specialists involved in both the creation and maintenance of technologies and devices, as well as in specialists who combine creative skills and knowledge in the technical field.

The architectural formation of the complex of high school of arts and technologies should be made taking into account the features of both directions of activity and ensuring their interconnection. In view of this, a systemic approach to design solutions is required, which will allow students to access advanced technology (databases, tools and equipment, etc.), and will promote the creation of social interactions between students of different fields, to enrich skills and knowledge.

Keywords: System organization, functional structure of the university, interconnection between technical and creative areas, independent type of interconnection, combined type of interconnection.

The urgency and necessity of scientific support for the solution of an important innovation problem in providing students of the region with the university of arts and technology, determined the choice of the topic, its purpose and research structure.

The purpose of the study is to justify the adoption of a managerial decision to stimulate the development of universities of art and technology.

The object of research is a complex of high schools of technical and creative orientation.

Higher educational institutions with technical and creative areas of student training should ensure maximum interrelation between art and technology in their functional and planning structure to create a comfortable environment for students' learning and extracurricular activities.

On the basis of the analysis of world and domestic experience and architectural and compositional models (on the basis of theoretical studies proposed by the doctor of architecture Ryabov E.K.) [7] higher educational establishments with creative and technical areas of student training can be distinguished three main types of interrelation of creative and technical directions of preparation of students in the planning structure of a higher educational establishment:

1. Independent type – creative and technical specialties are taught as independent educational units, for each of the areas of training allocated a number of training facilities within the complex of buildings, buildings or departments (Fig.1).

2. Interconnected type – joint studying in a single space of a higher educational institution of creative and technical specialties in general educational and specialized classrooms (Fig.2).

3. Combined type – technical and creative specialties are studied separately, but social communication between students of different specialties is provided due to extra-curricular activities of students and open work spaces for work on individual projects (Fig.3).

An independent type of interconnection is characteristic for large and largest universities, the formation of their campuses which took place over a long period of time due to a number of factors (historical, economic, social).

Creative and technical specialties in this type of higher education institution are clearly separated at the planning level of individual buildings or at the level of the entire campus (complex of buildings) of a higher educational institution.

The main architectural and planning techniques with an independent type of interconnection are:

1. Admission on the basis of horizontal communications - in which the main training rooms are formed along horizontal communications (corridors, galleries).

2. Admission on the basis of the atrium.

The basis of the formation of the training space is a vertical or horizontal atrium.

The main advantage of these techniques is: the clarity and structure of the architectural and spatial structure, which provides the necessary conditions for conducting classes with a certain profile; compact planning solutions; economy.

The disadvantages of these techniques can be attributed to: lack of flexibility and versatility in the training rooms; low level of cooperation between students in educational and extra-curricular activities; conservatism in the planning structure of the school building.

Typically, this type of interconnection of creative and technical areas of student preparation in the planning structure of a higher educational institution is used in large polytechnic and technical higher education institutions, in which creative areas of training, as a rule, architecture and design are one of the components of a comprehensive educational process.

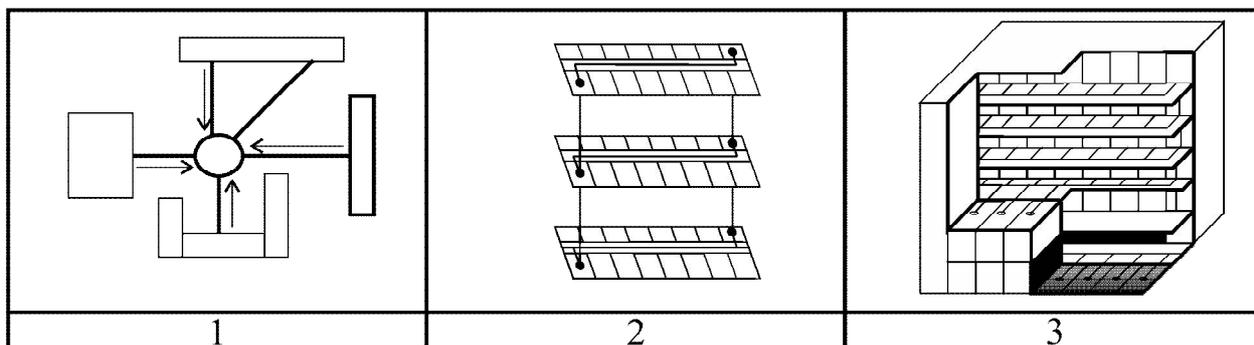


Fig.1 Independent type of interconnection

1 – When placed in different buildings; 2 – Up-to-date scheme of the type of interconnection; 3 – Axonometric scheme of interconnection;

The interconnected type is characteristic for small and medium-sized multifunctional higher educational institutions, independent or included in the composition of large higher educational institutions.

With this type, the maximum interconnection between technical and creative specialties is ensured, due to the lack of precise zoning of educational premises in specialties and the use of universal training spaces.

The advantages of this interconnected type include the flexibility and versatility of educational facilities, a developed environment for student social interactions.

The disadvantages include lowering the level of specialization, due to increased universality and complexity of the architectural and planning structure of high school buildings.

The following architectural and compositional techniques are typical for this type:

1. Admission based on a free plan;
2. Reception with embedded volumes under a single shell;
3. Reception based on the central universal space;

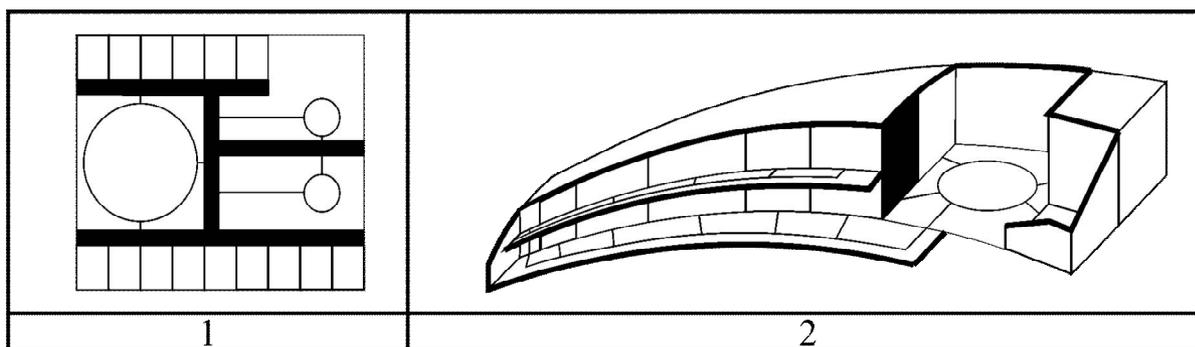


Fig.2 Interconnected type of interconnection

1 – Principal scheme of reception; 2 – Axonometric scheme of reception based on the central universal space.

An example of the use of this interconnected type of interconnection in the structure of a higher educational institution can be:

Faculty of Architecture and Artificial Environment of the Delft Technical University, thanks to the structure with open-air universal spaces and individual centers for self-training students. The Faculty building provides a comfortable environment for students of creative specialties (architecture, design), as well as for technical specialties (Geomatics, composite graphics).

The School of Art, Design and Media Technologies of the Nevyanysky Technological University, thanks to the flexible structure and application of innovative facilities in the field of study facilities, provides a high level of technical preparation (digital technologies in film production, computer technologies) and creative (architecture, design, photo and video, etc.).

Educational Building "CREATE" Olborgsky University (AAU), "Aalborg, Denmark. Along with other training programs (architecture, design, computer graphics, industrial design, etc.), the bachelors are trained in art and technology. the training rooms are grouped around the courtyard, in the structure of the building there are both classical lecture and practical audiences, as well as a universal space for the preparation of students.

The Creative Computing Institute (UAL Creative Computing Institute), London, UK – serves as a unique higher education institution. which trains

specialists in the field of digital arts and computing. The institute is part of the London University of the Arts (UAL), but acts as an independent educational entity. He trains specialists in the field of 3D printing, videogame development, virtual reality, 2D and 3D graphics, including the use of neural networks.

The combined type of interconnection of creative and technical directions of preparation is typical for medium and large technical and creative universities. Due to the developed system of transitions between buildings of different specialization and creation of the environment for, self-study and extra-curricular activities of students, the social connection between students of technical and creative specialties is intensified.

The advantage of this type is the possibility of creating an innovative educational structure with a sufficient level of universality and a clear planning structure.

The following architectural-compositional models are characteristic for this type of interconnection:

1. Reception on the basis of the courtyard;
2. Acceptance of the formation of the interconnected structure of the university on the basis of transitions.

As an example of the application of this type of interconnection in the world of design experience, one can distinguish the University of Arts and Design Emily Carr and the Center for Digital Media in Vancouver, Canada. Two independent universities are in close cooperation and create a comfortable environment for students and conduct joint educational programs.

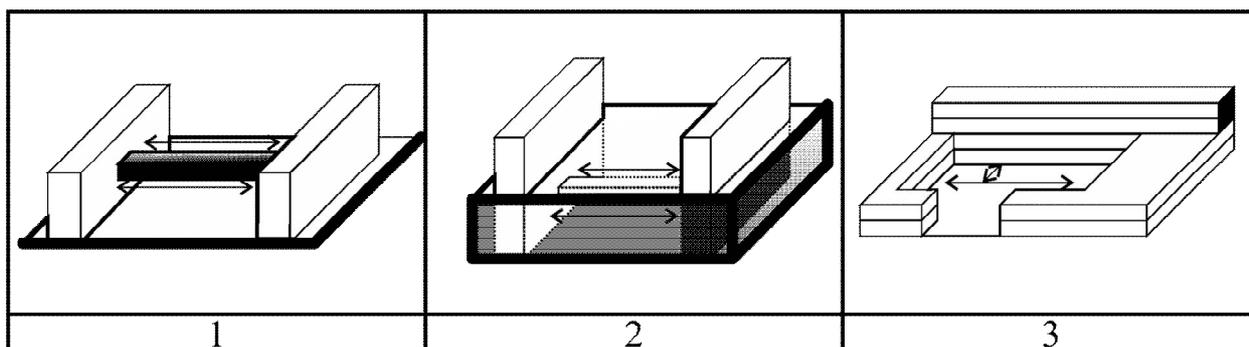


Fig. 3. Combined type of interconnection

1 – Principal scheme of reception; 2 – Axonometric scheme of reception based on the central universal space; 3 – Axonometric scheme of reception

Conclusion.

1. In Ukraine, institutions of higher education with technical and creative training of students, primarily represented by a number of technical and polytechnic institutions with a low level of interrelation between creative and technical areas.

2. To improve the level of Ukrainian higher education institutions with technical and creative areas of student training, the development of a new innovative higher education institution is proposed. A review of similar projects in the world of design experience has been conducted.

3. There are 3 types of interrelation between creative and technical areas of training of specialists in the architectural and planning structure of a higher educational institution, of which the interconnected type is the most modern and effective.

Thus, the definition of innovation attractiveness confirms the practical feasibility of introducing in Odessa, an innovative higher education institution.

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