

# Cultural Centers as a Forming Factor of Contemporary Architecture of Universities

## Abstract

University cultural center and the general concept of its spatial and functional organization are analyzed as mean of forming of architectural environment and public space of universities.

Keywords: projecting, university culture center, cultural-educational facility, typology principles, inter-college culture objects

## Introduction

Higher education institutes are the cradle of traditions, specific scientific and spiritual atmosphere, depicted in architectural environment. University complexes are important elements of the municipal landscape, their development. The supporting of prestige and high educational level are often supplied by state politics. Cultural, social and economical development of society create the new tasks for education system, demands fundamental reforms. This process requires changes of the educational space and leads to creation of new types of building. Experience of American and Western-European universities gives an example for creation of university culture centers in Central and Eastern Europe. The idea of its creating originated in the USA in early 90's of XX century. [1] These public facilities perform many functions, positively effects not only at image of the university, but also the state at all.

During recent years the department of AED implements the trend of research and design of inter-college culture objects and university culture centers. The results of this work are reflected in publications and conferences.

**The purpose of this publication** is review and analysis of global designing and constructing experience of inter-collegiate and university cultural centers.

## The analysis of recent researches and publications

Alvar Aalto, Walter Gropius, William Marinus Diudoc, Philippe Johnson, James Sterling and Michael Willford, Paul Rudolph, Ludwig Mies van der Rohe, Zaha Hadid and other world-famous architects have contributed in work at typological development and improvement of universities spaces.

Many architects-scientists conduct active research and analysis at the field of university architecture, it's historical development tendencies and actual directions in improving educational environment: Richard P. Dober [2], Jonathan Coulson, Paul Roberts, Isabelle Taylor [3]; Martin Pearce [4]; Sibylle Kramer [5]; David J. Neuman [6]; Katy Lee [7].

Among Ukrainian architects-scientists we can point out such names as: P.Solobai [8], V.Kutsevych [9], H. Kovalska [10], V. Bondarenko, G. Tsytovych, K. Murashov [11], U.Platonov, K.S. ergeyev, G. Zosymov [12], in particular at Lviv Polytechnic: P. Mar'yev [13], V. Proskuryakov [14], G.Proskuryakova [15], L. Shuldan [16], O.Stasiuk [17] and others.

However, in the most of the researches are devoted insufficient attention to designing of university cultural and educational buildings, study of trends of its typological characteristics and principles. It shows the relevance of the topic, so dictated the choice of research direction in the scientific and practical aspects.

## The main part

Nowadays, at the beginning of XXI century, is the time when states and culture borders tend to disappear, when an international style dominates in the most of things surroundings us, the new multicultural centers has been forming.

European space is not torn to pieces by borders of many small countries now. Accordingly, the main roles have the cities, scientific, sport and cultural centers in it, nowadays. Universities have found their place among them. Each university has it's own historical heritage, own culture achievements, scientific direction, attainments and experience. And the integrity of the university into global educational system is very important. That is why the creating of cultural-educational centers based on high schools arises the important issue in the development of each of the university in the network.

\*Olga Dmytrash - Master of Architecture, *PhD student*, Assistant of Department of Design of Architectural Environment of the Institute of Architecture of Lviv Polytechnic National University (Lviv, Ukraine), e-mail: boh dang@ua.fm

\*\*Ihor Kopylyak - Master of Architecture, Assistant of Department of Design of Architectural Environment of the Institute of Architecture of Lviv Polytechnic National University (Lviv, Ukraine)



Il. 1. Civil space created for students' free time. Students' center of San Diego University, California, USA

The inter-college culture object, same as university culture center – are new and little-known architectural vocabulary terms. Overview of design and construction experience of such centers allows to analyze spatial, volume and planning solutions, fillings with functional zones, determine principles of their arrangement in the structure of the university and the city generally, and create principles of architectural typology of these public buildings.

Besides the university culture objects – theaters, libraries, exhibitions, universal centers, museums, etc., forming inter-college culture objects is important. The goal of such objects (for example, the culture centers) is the process of integration of all colleges into global educational system. Various conferences, congresses, art exhibitions, students contests, lectures, workshops and others will take part here. Creation of inter-college culture objects would make possible for students and scientific-teachers' staff of universities to achieve access to foremost progress of European and global community, would make possible to exchange experience and use achieved skills in practice.

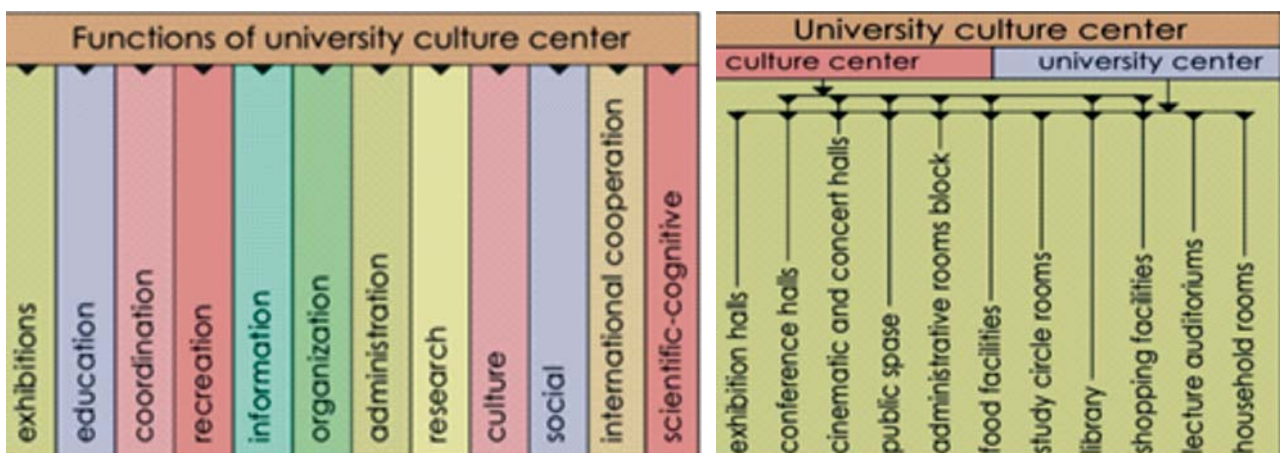
The inter-college culture objects and university culture centers projecting direction has appeared at the architectural environment design chair of the Institute of Architecture Lviv Polytechnic National University at the beginning of XXI

century with the initiative from head of chair, Sc.D., Professor Viktor Proskuryakov. Taking into account that such university spaces development direction is not enough famous in Ukraine, colleagues and students take part in active research of this topic. The global experience of projecting and building inter-college culture objects is being analyzed, analysis of publications and scientific works regarding architectural typology and building laconic space of such buildings and complexes is taking part.

First step on the way of learning the topic was the following: finishing the Masters degree project of the AED-12 student Olga Dmytrash under supervision of Sc.D., Professor Viktor Proskuryakov. and AED chair assistant Igor Kopylyak on topic: «The principles of projecting university culture centers of polytechnic schools in Europe». The results of this research was determining the most important functions of such object (il. 2.1), and the nomenclature of rooms which form synthesized structure of students and culture space (il. 2.2).

il. 2.1. Functional palette of university and inter-college culture objects;

il. 2.2. Nomenclature of room groups which are projected in the buildings of inter-college culture objects.



Contemporary global experience of projecting and building universities' culture centers



Eastern Michigan University,  
Student Center



Oklahoma State University,  
Student Union



Boston University,  
Student Services Center



The Integrated Student Center, Wroclaw  
University of Technology



University Centre Hampshire,  
England, UK



Scarborough Student Centre,  
University of Toronto



Barnard College – Diana Center  
New York, NY



Karolinska Institutet – Future Learning  
Environment Solna, Sweden



California State Polytechnic University, Bronco  
Student Center



Hamline University, Anderson University  
Center



University Centre  
at Blackburn College



University of Wisconsin,  
Union South



New Mexico Highlands University,  
Student Center, Las Vegas



University of California,  
San Diego the Price Center



The University Center in Rapid City,  
South Dakota, USA



il. 3. View of projected university culture center at Kielce, Poland

The next step was the project of university culture center in the environment of campus of Kielce University of Technology, Poland (il. 3). A detailed analysis of the site was undertaken and an optimal place for positioning the projected center was determined. The building also has the function of the visual domination of front of university buildings from the 70s years of past century.

One more interesting work is the educational project of the student O.Mosiyevskiy, under supervision of Sc.D., Professor Viktor Proskuryakov, assistant I. Kopylyak and post-graduate O.Dmytrash. The analysis covered the general plan of Lviv city and locations of universities in its structures and made possible to determine optimal place of positioning the cultural-educational object for all students in the city. The chosen site is located within the bounds of Lviv Polytechnic National University campus, near the public transportation station at Academic Sakharov street. Architectural image of the building is associated with educational processes, volume and spatial solution successfully resolves the culture center multifunctional destination, which will become the heart of students and scientific life of Lviv universities.

Structure of this inter-college culture center consists of five floors, each has own functional mission and harmonically

connects with other building elements. The pedestrian connection through this building is projected, which connects public transportation station at Sakharov street with students dorms of Lviv Polytechnic. An important item in solving the task is projecting of summer landscape theater. It successfully hides the sites relief disadvantages and turns them into the positive sides. One of the center outside walls will serve as the large screen for broadcasting video information. Such solution would make possible various summertime cultural-educational actions under open air here (il. 4).

The educational project for the degree of Bachelor of Olga Stepien student of Chair of Building Engineering and Architecture of Kielce University of Technology deserves attention. It is done under supervision of Sc.D., Professor Viktor Proskuryakov. The site chosen for projecting international student culture center has good transport communication and located at the Saint George square,

il. 4. The view of Inter-collegiate cultural center at the intersection of Academic Sakharov and Kniagynia Olha streets in Lviv





il. 5a. Project of International student center of culture at the Saint George square, Lviv, Ukraine  
 il. 5b. Project of inter-university center of culture, which is located within the campus of Kielce University of Technology, Poland Educational projects of Olga Stepień, student of Chair of Building Engineering and Architecture of Kielce University of Technology. Supervisor Sc.D., Professor Viktor Proskuryakov

near to the territory of Lviv Polytechnic National University campus. This object is located between 3 and 8 study corps, student library and Saint George church. Center architectural image connects harmonically with surrounding buildings ensemble and successfully gathers a set of functions with compact dimensions. The dynamic image of projected object is achieved by the difference of height of segments of the building, which forms a circle in plan. Such composition reflects the natural slope of the site and creates public space on the roof of the underground level. It has recreational role and also may be used for different summertime cultural actions. (il. 5a).

The next step was the project for the degree of Master. It involves the construction of inter-university center of culture, which is located within the campus of Kielce University of Technology, Poland. The main task was to build a complex of buildings that embody the idea of the multifunction interactive public space for students and residents. (il. 5b).

The diploma project of student Stopachynskyi A. on topic «The architectural design of the international student center in Kielce city». Projected site is located in Kielce city (Poland) close to central part of city, outlined by the streets Swietokrzyska, Warszawska and Aleja Tysaclecia Panstwa Polskiego and Solidarnosci, at the territory of the Kielce University of Technology (fig. 6). The site relief mostly plain, with large greenery square with chaotic arrangement of pedestrian connections. After analysis of international students centers projecting experience, the main constituents were divided: educational zone, administrative zone, temporary dwelling zone. Project offers to divide these zones and locate them in different building blocks. Educational block has the largest square of approx. 9 thousand m<sup>2</sup>. Educational audito-

il. 6. Bachelor qualification work of student A.Stopachansky, supervisors Sc.D., Professor Viktor Proskuryakov. assistant I. Kopylyak, on topic: «Architecture design of the international student center in Kielce city. (Poland)



riums, computer classes, chairs, laboratories, a complex of staff, technical and accessory rooms and cafeteria are located here.

Administrative block (approx. 5 thousand m<sup>2</sup>) is a building where administrative function of the center is concentrated. Administration rooms, archive rooms, large and small conference halls and some educational rooms are located here.

Dwelling block (approx. 3,5 thousand m<sup>2</sup>) locates gym at the ground floor level, dwelling rooms and general recreation rooms.

The last floor of each block is single with functional purpose – a large exhibition hall. It consists of three spaces connected with passages, which may be divided into separated halls and used for various theme exhibitions, gatherings, etc.

This solution connects harmonically with general campus space, gives it original image, building serves as the visual domination. Architectural-constructional constituents and appearance elements were interpreted according to the algorithm of surrounding environment.

The idea of university culture center as a synthetic cultural-educational building was realized, which can change spatial structure and organization not only according to functional and creative tasks, space and surrounding environment formation, but according to social-demographic and other factors too.

### Conclusions

The main task of the university culture center is creating circumstances for inter-college cooperation development, and the main functions are: coordination, education, recreation, exhibition, information, organization, administration, research, culture, scientific-cognitive.

The undertaken analysis of such objects projecting main items, positioning schemes of such complexes in the structure of the city makes possible creating basis for outlining principles of architectural typology both international and national university culture objects. That is why the architectural environment design chair of the Institute of Architecture at Lviv Polytechnic National University during 2011-2013 years researches specific volume-spatial organization using contesting, researching, experimental and diploma projecting. All of these are projects of real directing

and the ideas used suit demands and tendencies of building university centers all around the world.

### BIBLIOGRAPHY:

- [1] A degree closer; Copyright © 2015, Chicago Tribune: <http://www.chicagotribune.com/news/education/chi-edtoday-brilliantidea.story>– Title from the screen.;
- [2] Richard P. Dober - Campus Architecture: Building in the Groves of Academe - McGraw-Hill (Tx), 1996.- 258 p.;
- [3] Jonathan Coulson, Paul Roberts, Isabelle Taylor - University Planning and Architecture: The Search for Perfection - Routledge., 2010.- 272 p.;
- [4] Martin Pearce - University Builders - Academy Press; 1 edition., 2001. - 224 p.;
- [5] Sibylle Kramer - Colleges & Universities- Educational Spaces - Braun Publish,Csi; 1 edition .,2010 - 272 p.;
- [6] David J. Neuman - Building Type Basics for College and University Facilities - Wiley; 2 edition ., 2013.- 416 p.;
- [7] Katy Lee - University Architecture - Design Media Publishing Ltd., 2011. - 256 p.
- [8] П.А. Солобай. Проблемы реконструкции материальной базы вузов г. Харькова. //Традиції та новачі у вищій архітектурно-художній освіті. Вип. 1-2. 2003 р. (218-220).
- [9] Куцевич В.В. Структурна модель нормування культурно-дозвіллевих та культових будівель.// Перспективні напрями проектування громадських будівель. - зб.наук.праць. – КиївЗНДІЕП. – 2004 – с. 26-30.
- [10] Ковальська Гелена Леонідівна. Принципи та методи оптимізації функціонально-планувального розвитку вищих навчальних закладів в існуючій міській забудові: Дис... канд. архітектури: 18.00.02 / Київський національний ун-т будівництва і архітектури. - К., 2002. - 167арк. - Бібліогр.: арк. 156-164.
- [11] Сборник материалов всесоюзной конференции Проектирование объектов высшей школы. Львов, 1974р.
- [12] Ю.П. Платонов, К.И. Сергеев, Г.И. Зосимов Проектирование научных комплексов. Москва, Стройиздат, 1977р.
- [13] Марев П.П. Принципы формирования учебных корпусов общетехнических факультетов политехнических институтов с гибкой планировкой. Автореферат, Москва, 1986.
- [14] Проскураков В.І. Творчий внесок викладачів львівської архітектурної школи у формування архітектури Львова у 60–80 рр. XX ст. Львів. 2006.
- [15] Проскуракова Г.М. Размещение межвузовских культурных центров в городе. – Вісник ЛНІ «Резерви прогресса» №173. с.154.
- [16] Проскураков В.І. Шулдан Л.О., Архітектурні засоби енергозаощаджування під час проектування шкіл для малих сіл України. Львів, 2007.
- [17] Стасюк Олена Степанівна. Формування архітектурного середовища вищих навчальних закладів другої половини XIX - першої половини XX століття (на прикладі Львова): дисертація канд. архітектури: 18.00.01 / Національний ун-т «Львівська політехніка». - Л., 2003.