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ISSUES OF DESIGN OF INFORMAL LEARNING SPACES IN THE UNIVERSITY CULTURAL CENTERS

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Abstract. The article presents an overview and analysis of the state of research in the field of design and exploitation of modern educational spaces in universities around the world, namely areas with flexible planning, called informal learning space. According to the research conducted, the general characteristic and classification were developed and the basic principles of designing this space were revealed. The study identified several problems that arise during its exploitation, which should be taken into account in the designing process. There is described the experience of educational design of interuniversity cultural centres with the application of the developed theoretical bases of designing of informal educational space.

Key words: informal learning space, educational environment, campus, university cultural centre

Problem statement

The active social life of students has been an inseparable component of university starting from the medieval age. However, many modern campuses lack public cultural spaces. Students spend most of their time outside the lecture hall or the classroom, which can be classified as official or formal spaces for education. They communicate with each other, study individually, have some rest, but this happens, unfortunately, outside the university. The reason lies in the absence of the so-called informal space in most of the campuses. Such space triggers social interaction, e.g. unexpected meetings or extemporaneous talks. It promotes personal and professional growth. According to M. Brown (Brown, M. 2006), food establishments, corridors, halls, squares, yards, and dormitories are significant elements for designing informal zones for individual and group study. Even though the nature of the enlisted groups is either chaotic and unadjusted or just not designed for performing such functions.

Analysis of recent research and publications

For hundreds of years, the construction of the campus followed a stable formula: universities had to provide places for teaching, lunch, sleep and entertainment. However, today this formula is much more complicated. This context has a significant impact on the physical design of campuses. We see new types of buildings and new approaches to planning. The book University Trends (Taylor, I., Coulson, J., Roberts, P., 2014) highlights this changing climate and how various institutions have responded physically to the financial, pedagogical, and technological conditions of modern higher education and we can see it on real projects from around the world. An analysis of the types of modern construction and planning projects was also conducted,

based on which a list of the main trends that form the planning and architecture of universities today was established: adaptive reuse; flexible architecture; hub houses; interdisciplinary research facilities; transnational education; commercial urbanization; large-scale campus expansions; revitalization (revival) of master plans; online learning.

The book Educational Environment (Yee, R., 2005), based on the analysis of real examples, highlights the peculiarities of the creation and reorganization of educational spaces in US and Canadian universities and summarizes that modern campuses look much friendlier to students than ever before. Shirley Dugdale in publication Spatial Strategies for the New Learning Landscape (Dugdale, S., 2009), considers campus not as a space between academic buildings, but as one of the effective learning tools and learning space objects.

Diana Oblinger (Oblinger, D., 2006) in the book Learning Spaces, treats these spaces not just as places for several approved activities, they provide an environment for people. Factors such as the availability of food and drink, comfortable chairs and furniture that are adapted to a variety of learning activities are becoming important criteria in the design of learning spaces that take human factors into account as integral to the design of learning spaces. The rapidly growing availability of digital technologies is also changing the design of the space. Digital technologies continue to evolve at an increasing rate, offering students greater access to information while becoming more mobile.

The issue of adapting existing learning spaces to the needs of modern students is actively studied. In particular, in the study Colleges and Universities – Educational Spaces (Kramer, S., 2010), the author elucidates the need for access to an ever-increasing knowledge of mankind and the provision of communications, which are becoming important aspects of campus design, along with the multimedia requirements of modern universities for the organization of an educational process.

The publication devoted to the exploration of university architecture, Campus Planning (Dober, R.,1992), illustrates ideas on how campus design can advance and support important institutional goals. Illustrated examples from around the world show how higher education institutions have a strong sense of place, a unique image and the ability to rebuild a campus, and how professional design can help achieve these goals. A wide range of case studies covering all types of campuses illustrates how to create a campus that is functional, attractive and accessible.

Objective of the article

The purpose of the article is to highlight positive experiences of integration of new type – informal educational spaces into the functional content of university or interuniversity cultural centres, which will significantly improve the attendance of such establishments and fill in the gaps in the organization of educational processes on the university territories.

Results and discussions

The question of public space in the form of informal educational zones is topical nowadays because of the following reasons:

– Understanding that the majority of educational events take place outside the formal space;

– Absence of the open zones for individual learning during free time or between lectures in campuses of many modern Ukrainian universities;

– Construction of the informal educational environment is innovative and can bring many advantages, for instance, such spaces usually are adjoined with canteens and outlets that have the positive impact on their profitability and can become a source of income for the university;

– Modern teaching and learning methods rely on informal learning space. Educational space should ensure the possibility for students to get to know each other and enter into dialogue while working on a group project and cooperating in different directions.

Taking into account the importance of this issue, universities should re-organize or construct new learning spaces to meet the expectations of future students. For example, Student Culture Zone, located in Wrocław University of Technology, Poland (Fig. 2), illustrates how the created informal learning space contributes to the effectiveness of exploiting the existing environment, makes it more attractive and comfortable.
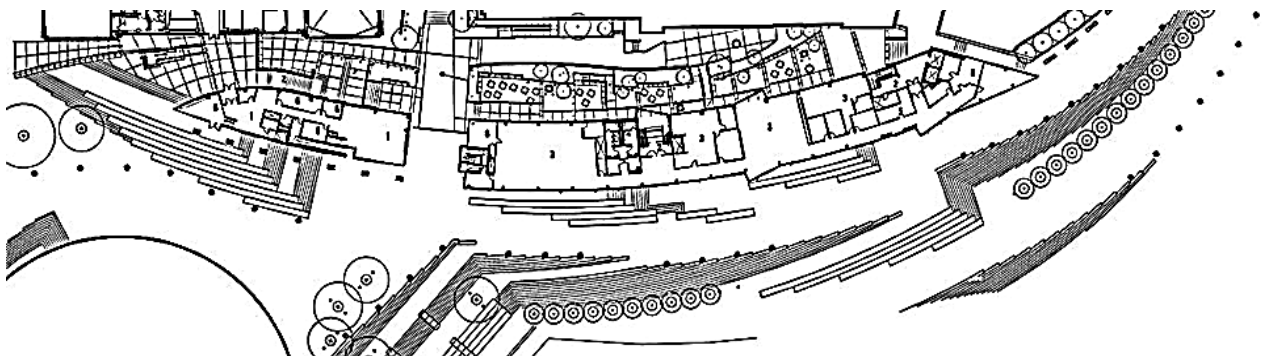
The Joseph A. Steger Student Life Center at the University of Cincinnati (Fig. 3) serves as another example of how informal educational zones increase the amount of time spent by students while studying. The mentioned object shows that its space is not limited by the walls but interacts harmoniously with the surrounding environment and performs the range of practical tasks, particularly, integration of separate buildings into a united system and creation of the environment suitable for the long-term stay of its visitors.

Fig. 2. Interiors of Student Culture Zone, located in Wrocław University of Technology, Poland

a

b

Fig. 3. The public space around Joseph A. Steger Student Center at the University
of Cincinnati (USA), the main highway turns into a lively campus space (a); master plan (b)

The provided data display the integration of space into university cultural objects, which is based on a thorough understanding of how students work and live.

Informal learning spaces on the territory of campus can be divided into two main subtypes:

Outdoors	Indoors
· Garden squares	· Entrance halls
· Courtyards	· Corridors

- Pedestrian routes
- Amphitheatres
- Gardens on roofs

- Indoor atriums
- Halls
- Public canteens
- Adjusted rooms

According to the activity organization criterion, such space can be divided into the following zones:
- Zone for silent individual study
- Zone for group study
- Zone for conducting presentations and meetings

These principles should be followed while designing informal learning spaces:

The right space design should be visually interesting, but, at the same time, should not distract the ability to concentrate.

Motivation: well-planned places for studying have a motivational effect on students. Informal educational zones create the environment, which is simple and pleasant for working outside the classroom. Involving students in terms of design is significant since it means that students can choose their comfortable studying conditions.

Individualization and interaction: students as a social group are peers and this factor decreases communicative barriers between them. Therefore, learning zones with open planning ensure both individual and collective environments. Changes in the interior and landscape design can help students' navigation in space and improve their behaviour depending on the space function. Such an approach is supported by all types of students since it encourages them to different ways of studying.

Flexibility and transformation in project decisions of informal learning zones have become the requirements, conditioned by the rapid technological changes and the increase of students' quantity. The possibility to change space parameters quickly and without any obstacles gives a chance to extend the target range of exploitation.

Ergonomics is something more than just a comfortable chair. Ergonomic thinking considers the whole environment and its interaction with the human body. Well-planned pedestrian connections, open access to equipment and consumable materials, and easily movable furniture are the preconditions of ergonomic space. The variety of human parameters presupposes that furniture should be regulatory. We have to remember two main principles of ergonomics, which are the following: should not bring pain and should not traumatize.

Modern educational spaces should be oriented to students and equipped with all technologies necessary for satisfying their subjective needs. Particular attention should be paid to the fact that each modern student has his technical devices used for studying. Thus, the demands connected with access to Internet resources and the electrical grid should be considered. It should also be noted that the correct spatial design of educational spaces with flexible planning should be visually interesting, and at the same time should not distract from the ability to concentrate.

Taking into account the fact that special zones for conducting large-scale cultural and educational events, having rest or individual studying during the free time were not envisaged while designing campuses of national universities, the Department of architectural environment design at the Lviv Polytechnic National University launches the educational subject of projecting university and interuniversity cultural centres. As the analyzed foreign experience shows, informal learning zones are their inherent component.

Among students' works, we would like to single out the educational project of the student Iryna Seniv, supervisors Sc.D., Prof. Viktor Proskuryakov and PhD-student assistant Olga Dmytrash. The area, chosen for the student centre, is located within the campus of Lviv Polytechnic at 8 Ustyyanovych Str. The three-floored building with a walkable roof and a cellar satisfies the needs of a modern university community. There are two small cinema halls, a cafeteria, a book shop, a copy-centre, conference rooms, an exhibition area, an open amphitheatre in the hall, which links the ground and first floors and can serve as a place for conducting different cultural and educational events, or a room for individual studying during free time (Fig. 4).

Fig. 4. Educational project of the student Iryna Seniv,
Lviv Polytechnic Student center at 8 Ustyyanovych Str., in Lviv

There also should be mentioned the educational project of the student Lina Yakym, supervisors Sc.D., Prof. Viktor Proskuryakov and PhD-student assistant Olga Dmytrash. The complex of the interuniversity cultural centre is planned in the square garden at Pekarska Str., next to the campuses of the Lviv National Medical University and the Lviv National University of Veterinary Medicine and Biotechnology (Fig. 5). The complex consists of an interuniversity centre building, the front face of which will serve as a big media screen, and an open landscape amphitheatre.
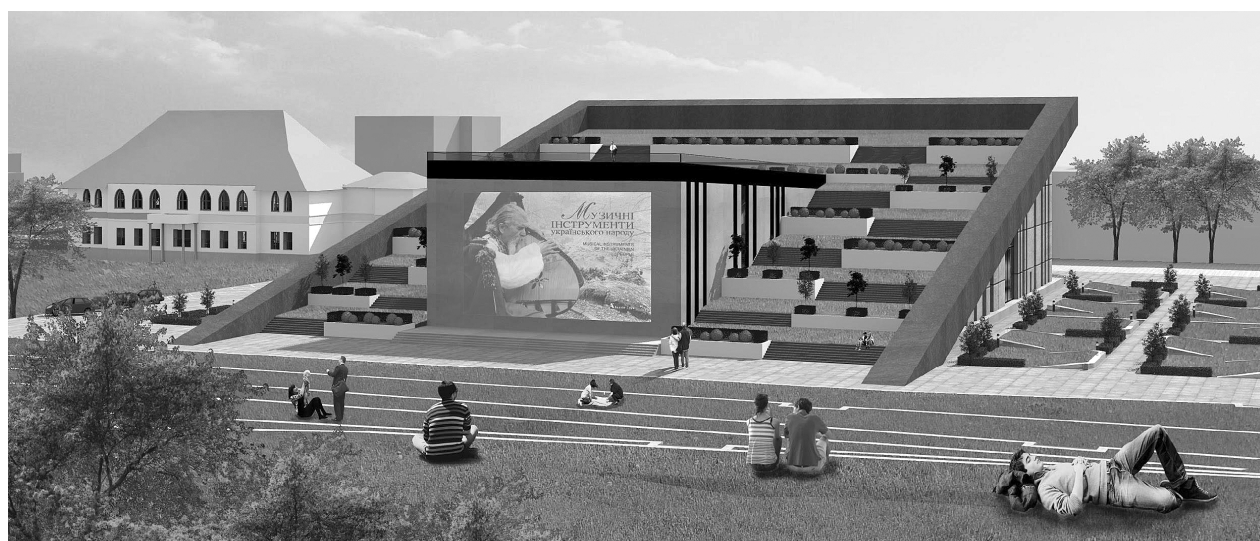

Fig. 5. Educational project of the student Lina Yakym, Interuniversity cultural center at Pekarska Str., Lviv

Conclusions

Informal learning space can positively change the educational process perception. Each decision made by an architect influences the behaviour of people studying and teaching in this environment. The educational process will be more effective if the environment works as its integral powerful tool. However, the number of problems can be faced:

1. Public space is rarely envisaged by the project of university major construction works.

2. If such zones still are envisaged by the project, they get re-organized into formal learning rooms in the process of exploitation. This happens because of the increasing number of students that results in the lack of lecture halls.

3. Usually, informal learning space does not belong to a certain department or an organization, which is the precondition for the lack of technical equipment.

4. Zones of this type are mainly organized in the already existing environment. Because of the adjusted character, they often fail to perform their function.

5. There are only a few implemented examples for determining the universal model or design norms, which would be based on practical experience.

Students and lecturers, like other people, are willing to live or work in a pleasant, stimulating, attractive, and safe environment. However, such aspirations are often ignored in the process of university designing. Large sums of money are used to construct objects that hide their active assets behind the blind walls. It would be reasonable to direct some investments into creating an open public space since researches and opinion surveys proved that universities with an open system of public cultural and educational objects enjoy more popularity among school graduates, investors, and partners.

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ПРОБЛЕМАТИКА ПРОЕКТУВАННЯ НЕФОРМАЛЬНИХ НАВЧАЛЬНИХ ПРОСТОРІВ В УНІВЕРСИТЕТСЬКИХ КУЛЬТУРНИХ ЦЕНТРАХ

Анотація: З часів Середньовіччя складовою ідеї університету було активне суспільне життя студентів. Однак багато сучасних кампусів позбавлені загальнодоступних громадських культурних просторів. Студенти проводять більшу частину свого часу за межами лекційної зали чи навчальної аудиторії (групи приміщень, які ми можемо віднести до офіційного або формального простору для навчання). В цей час вони спілкуються, самостійно навчаються, відпочивають. А відбувається це, на жаль, за межами університету. Причиною цього є відсутність у більшості студ-містечок так званого неформального простору. Це простір, який провокує соціальну взаємодію: несподівані зустрічі, імпровізовані розмови. Він сприяє особистісному і професійному зростанню. Заклади харчування, коридори, холи, площі, двори, гуртожитки стають важливими елементами для формування неофіційних зон для самостійного і групового навчання. Проте, характер перерахованих існуючих груп приміщень здебільшого є хаотичним та непристосованим, або просто не передбаченим для такої функції. Тому інтеграція неофіційних навчальних просторів у склад функціонального наповнення університетського чи міжвузівського центру культури значно покращить відвідуваність таких закладів і заповнить прогалини в організації навчального процесу на території університету.

У статті представлено огляд та аналіз стану досліджень у галузі проектування та експлуатації сучасних освітніх просторів в університетах світу, а саме просторів з гнучким плануванням, які називаються неформальним навчальним простором. Внаслідок проведених досліджень була розроблена загальна характеристика, класифікація, розкрито основні принципи проектування цього простору. Зокрема, визначено низку проблем, що виникають під час його експлуатації, які слід враховувати при проектуванні. Висвітлено досвід навчального проектування міжвузівських культурних центрів із застосуванням розроблених теоретичних основ проектування неформального освітнього простору.

Ключові слова: неформальний навчальний простір, освітнє середовище, кампус, університетський культурний центр.