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**ARCHITECTS AND THEATRICAL DESIGNERS
COOPERATION: MAIN ASPECTS**

**(based on the results of the student Ukrainian – Canadian
project seminar in Lviv in 2017 on the renovation of the hall of the first
academic building of “Lviv Polytechnic” and expansion of theatrical-
entertaining and cultural-educational functions)**

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Abstract. According to the results of the student Ukrainian – Canadian seminar in Lviv, 2017, on the renovation of the hall of the First academic building of “Lviv Polytechnic” with the expansion of theatrical-entertaining and cultural-educational functions the features of cooperation of theatrical architects and theatrical designers are highlighted.

Key words: architectural, scenographic, technological, technical and functional construction of space, organization of activities in the environment of the theatre stage and the hall..

Problem statement

The need to present the results of the 2017 student project seminar organized by the Department of Architectural Environment Design at Lviv Polytechnic National University, the most notable educational event between PQ 15, PQ 19, to the high-ranking colleagues and fans of the Quadrennial, 2019, did not come from the desire to formally add results to other creative achievements (educational, scientific, search achievements) of its students and educators⁵. The time allotted by the department for its formation and constituting is over. The first important question which arises today is whether it succeeded in implementing the educational ideas that underpinned the concept of educational and creative activity of the department. And the second important question is what directions to move and to develop in the near and distant future.

⁵ For fifteen years, 9 Ph.Ds of Architecture, hundreds of holders of master’s and specialist’s degree, more than 500 bachelor’s degree recipients have defended their theses at the department. Teachers of the department published dozens of monographs, manuals, 200 articles. The department has participated in 88 conferences and 80 exhibitions of all ranks and received more than 100 awards, including Grand Prix and 40 diplomas of the 1st degree. Teachers and students of the department participated in the design and construction of more than 150 real architectural objects.

The department has acquired the characteristics of a large workshop – a laboratory in which during the development of various projects in recent years: educational, competitive, search, experimental, etc. Students and teachers are co-authors of the whole design process.

The lectures at the department are integrated into the topics of the current design. The bearers of knowledge and the “tool of integration” are leading educators who are united in creative working environments in the following areas: classical design of the architectural environment, interior design, equipment, furniture, cultural, monumental, futuristic design and its main applied aspects: typological design, urban design, landscape, and in particular, in recent years, stage design.

Thus, the genesis and development of cultural, monumental, futuristic, scenographic and landscape design are researched by Professor V. Proskuryakov, Associate Professors Y. Dzhigil, B. Goy, O. Kordunyan, R. Stotsko, I. Voronkova, I. Humennyk; teachers Y. Bohdanova, M. Yagolnyk, I. Kopylyak, T. Garashchak, and graduate students K. Yanchuk, Y. Filipchuk. (Proskuryakov V., Hoy B., 2008, 64 s.), (Proskuryakov V., I. 2014, s. 5–8), (Proskuryakov V. I., 2018, s. 4–10).

At the department, new disciplines have been timely introduced into the educational process, the fundamental components of which are reflected in the dissertations of our teachers, who have successfully defended them. After all, the result of quality education of an architect-designer is a student who should become not just a specialist, but a modern person – knowledgeable and willing to solve any problems that may arise during professional work in the future.

From the above mentioned scientific and educational vectors of activity of the department special attention was paid to cultural, theatrical-architectural, scenographic, technical and technological design.

Assistant Professor M. Yatsiv and teacher R. Kubay, who introduced, especially in the technical and technological design, elements of architectural light, acoustic, ergonomic design, helped to make this direction a leading branch.

Some aspects of such educational activity were tested by the department also in joint educational-design seminars, lectures, semester and diploma design process, with the participation of partners from Ukraine: departments of the Prydneprovska State Academy of Civil Engineering and Architecture, Poltava National Technical University and the Department of the City Council: Dresden, Department of Architecture and Urban Studies of Swietokrzyska Polytechnic University, Kielce. Comparison, use of our own and world experience and their role in the concept of Ukrainian national activity – science, practice, education is one of the least adapted sections of our architecture, especially the project – educational experience in all its possible manifestations. Although, recently in Ukraine professors V. Proskuryakov, V. Timokhin and others (Fomyn Y., Kashchenko A., 2004, s. 20–31), (Proskuryakov V. I., 2003, s. 176–186), (V. Proskuryakov, B. Cherkes, 2007, s. 651–662), (V. Proskuryakov, 2011, p. 25–32), (Proskuryakov V. I., Voronkova I. S., 2013, p. 5–10) have been proactive in this sector of education, yet it remains unclear which forms of educational and project seminars occupy a leading position in contemporary national architectural creativity, and in both creative and organizational experience.

Therefore, what Ukrainian architectural schools achieved in the design and competition activities in 2000–2015 in Kyiv, Lviv, Dnipro, does not look superfluous because this activity is the most effective form of testing their creative courses by practising educators-architects (they attend these activities much more frequently than any other), and such courses are generally considered to be the basic platform for generating progressive architectural ideas. However, the most significant are the results of the architectural event held in May 2017, organized by the Lviv School of Architecture – Department of Architectural Environment Design. Students and teaching staff from Ryerson University (Toronto, Canada) were invited, and later on joined by the representatives of the Technical University (Dresden, Germany) and the representatives of the Dnipro State Academy of Civil Engineering and Architecture (Dnipro). This event is known in Ukraine and Europe by the name “Student Ukrainian – Canadian Design Seminar in Lviv, 2017, on the renovation of the hall of the first academic building in “Lviv Polytechnic” with the expansion of theatrical-entertaining and cultural-educational functions”. The conceptual part of the seminar was developed by Professors V. Proskuryakov (Lviv) and Sh. Dolgoy and P. Bosyy (Toronto) (Proskuryakov V., Filipchuk Y., Krasnykh V., 2017, p. 68–73).

Objective of the article

The purpose of the project workshop was to accept for consideration the following objectives: to develop an architectural concept for the restoration of the historic hall, ensuring the use of a wide range of modern activities and means of spectacular and educational functional activity; to ensure the aesthetic solution for its environment following the requirements of the 21st century, while maintaining the tectonics and imagery of the time during which construction took place; to use the experience of the Department of Architectural Environment Design, Lviv Polytechnic National University, and Ryerson University, Toronto, in theater design for the objectives of the seminar.

Results and discussions

The theme of the seminar was not chosen randomly, the department has been cultivating educational design for several years in such a way that one of the semesters was completely dedicated to the issue of architectural and environmental needs of Lviv Polytechnic National University, which resulted in construction opportunities. One can mention at least the landscaping around the main building (Lviv Polytechnic National University), or the projects of educational and lecture buildings on Ustiyanovich or Sheptytsky Street, the projects of night lighting of buildings facades, the projects of the bookstore network in the university's study area.

In 2017, the main hall of the first academic building was due (Fig. 1).

The first academic building with a hall for 1000 seats was designed by Prof. I. Bagensky, R. Lipka, A. Rudnitsky. The building was commissioned in 1965 and is not well described in scientific publications.



Fig. 1. General view of the ground floor and balconies of the assembly hall of the first academic building. Current state. (Materials from the archive of DAE department)

This building has all the characteristic features of an elite international class institution: the exterior of the monumental simplicity best conveys the authors' main idea – not to break the synthesis between the dominant volume of the multifunctional hall and the two 4-storey wings extension that resemble the Latin letter Z in terms of design. According to the authors' plan, the hall was not only supposed to be a place for crowded gatherings, symposia and conferences, but was also designed to host meetings with a relatively small number of participants. This was facilitated by excellent acoustics. As a result, many concerts and festivals have been held here for many years. Despite the incredibly difficult construction conditions, the building's structure is generally simple and organic. At the same time, it meets a wide range of different functional tasks and requirements: classrooms, large lecture halls, student canteen. Everything is not combined by a mechanistic addition, but is generalized as a common set. It is widely believed that it was this building which linked the architecture of our university's past (main, chemical buildings) to everything that was built later. The main façade of the first building on the one side strongly completes the axis of the town-building pearl – E. Konovalts Street, and on the other seems to crown the whole system of other academic buildings of “Lviv Polytechnic” between S. Bandera, O. Nevsky, I. Karpinskiy Streets (Shevchenko T., 1996, s. 16–21), (Proskuryakov V., 2019, s. 19–33), (Cherkes B., Linda S., Bohdanova Yu., 2016, s. 61–67) (Fig. 2).

But in the early twentieth century not only the technical and technological but also the functional capacities of the hall were exhausted. The contingent of students in Lviv Polytechnic National University has grown to 40,000; their cultural and aesthetic needs have increased.



Pic. 2. The main façade of the first academic building from Konovalts St. in Lviv
(Materials from the archive of DAE department)

The hall was used for educational, methodological, ideological, and, to a great extent, for art events; yet, 60 % of the time, this largest university space was half empty. At the request of the Rector, the head of the department and its leading educators decided to expand the functional palette of the existing hall.

The main vector of the refurbishing was the expansion of the theatrical and entertainment function, which would satisfy not only the needs of the students but also the residents and visitors of the city.

All participants of the seminar, students and teachers, came to Lviv on the eve of its opening. And on May 22, the seminar began with the formulation of project tasks and the development of project teams. The educational experience of the Department of Architectural Environment Design for the creation of the

architecture of theatrical and spectacular buildings was taken as the foundation of the exploratory seminar: the construction of space, the organization of action and their aesthetic design, and the experience of the Toronto School of Theater Arts in preparing theatre designers not only to use materials, their textures, colours of the set design projects, but also to use light in theatrical action, stage space, hall space.

Among the ideas presented by students from Lviv, Dnipro, Dresden and Toronto in the form of clausura projects, which were later designed in the form of bachelor's degree theses, the following work completed by student Jenny Hong (Ryerson University), master's degree holders D.Dulov and K.Tverdohlib (Lviv Polytechnic National University), bachelor's degree holders O. Kotous, M. Nagorna, A. Zykova (Lviv Polytechnic National University), under the guidance of Y. Filipchuk, a graduate student of the DAE (Lviv Polytechnic) Department, deserved more attention as they decided to extend stage space providing a whole range of options.

The existing stage – a niche in the hall, according to their design, could be changed due to the transformation of tablet and equipment structures into a stage – an arena, a deep, a transverse and a three-sided stage. The parameters of the space of the stage and the hall could also be changed by a movable portal that acted as a light bridge with battery operated lights. The project also provided for the installation of soffits on columns at an altitude of +11.00. The project proposed the replacement of seats on the ground floor, removable front rows, the possibility of designing small playgrounds in the depths of the hall, for better game communication with the audience. In the upper levels of the auditorium, a lodge for the disabled and the guests of the event was designed.

Behind the backstage, in the hallway on the mark +3.60, the creative team provided dressing rooms, which facilitated the actors convenient and fast getting onto the stage. Since the projected room provided various functions for its operation, it was decided to install movable wooden blinds in the existing windows, which would allow fast and high-quality control of natural light, depending on the various genres of work. To enhance the acoustics in the space of the hall under the ceiling, the authors offered suspended acoustic panels (Fig. 3).

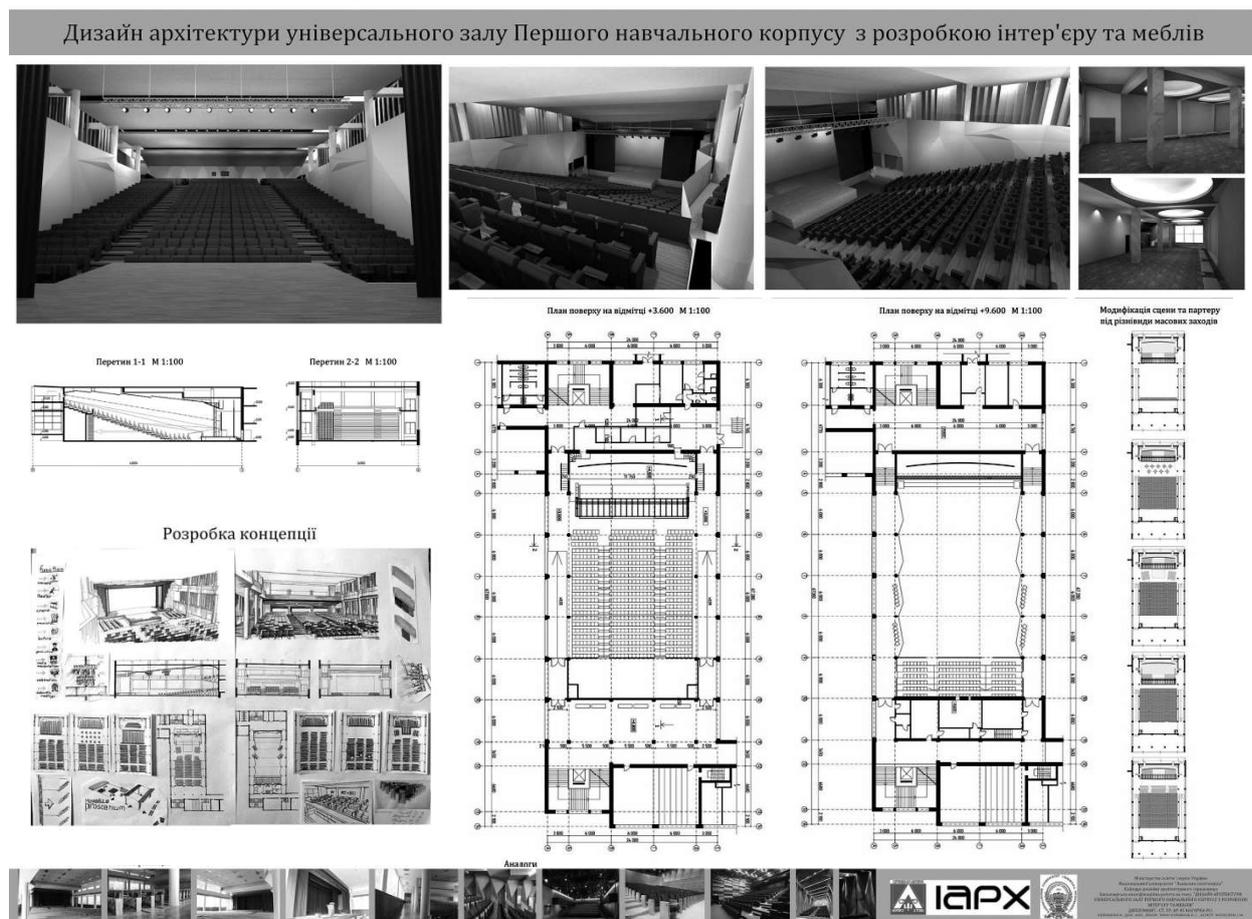


Fig. 3. The project based on the results of the clausura was created by the student M. Nagorna under prof. V. Proskuryakov, tchr. I.Kopylyak, with the participation of graduate student Y. Filipchuk. (Materials from the archive of DAE department)

Particularly noteworthy is the project of student creative team consisting of: master's degree holders A. Stendera (NU "Lviv Polytechnic"), Y. Tutko (NU "Lviv Polytechnic"); bachelor's degree holders S. Folyush (NU "Lviv Polytechnic"), I. Dovha (NU "Lviv Polytechnic"), Adriana Leila (Ryerson University), under the guidance of Ph. D of Architecture I. Voronkova and postgraduate students of the department of DAE O. Krasilnikov and K. Yanchuk, in which considerable attention is paid not only to innovative solutions to the renovation of the assembly hall but also to the architecturally functional organization of the space of the whole building.

According to the design team plans, the assembly hall should undergo significant changes aimed at expanding the capacities of the functional palette, as well as modernizing its aesthetic component. Among the planned changes are the following: enable the change of stage configurations through the introduction of lifting mechanisms, which would lead to the transformation of the existing stage into a three-sided, stage-arena, stage in the shape of the peninsula; the stage portal should also be supplemented by a metal bridge structure, with the possibility of installing lighting devices on it; the authors proposed a new scheme of spectators' placement and evacuation aisles, which largely brought the hall closer to the theatre and entertainment; changes were made to the architectural and structural arrangement of the ceiling. Modernization of the acoustic requirements of the hall was offered.

Expansion of the functional theatrical and entertainment potential of the hall would inevitably lead to the need for additional technical facilities. The project features interpreters' rooms, audio and video recording and radio, video projector rooms.

Special attention was paid to the integration of dressing rooms and changing rooms into the existing environment of the academic building. However, this task was also solved by separating a small hall space on the second floor behind the stage, both for new dressing rooms and existing ones, which functional needs were altered.

The project of reconstruction of the assembly hall and improvement of its theatrical and entertainment function became conceptually connected with the transformation of the space of the whole building given the existing and new functional premises.

For the functional expansion of the space of the assembly hall, the project authors proposed to use the space of the first floor. The new improvements should include the following: renovation of all premises of the existing wardrobe; an arrangement of service and office premises; transformation of the former student cafeteria into a cabaret cafeteria. It was planned to arrange ramps for low-mobility groups. Installation of elevators in the adjacent stairway locations was also proposed.

The ideas stated above, together with other implemented projects, were first rendered in creative clausuras, diagrams, sketches, drawings, photos. And on May 27, their defence took place in the premises of Lviv Polytechnic National University, where representatives of various departments of the Institute of Architecture were invited. In an atmosphere of benevolent but critical consideration, most of the ideas presented were allowed to be further elaborated in the form of the semester and bachelor qualification projects (Fig. 4).

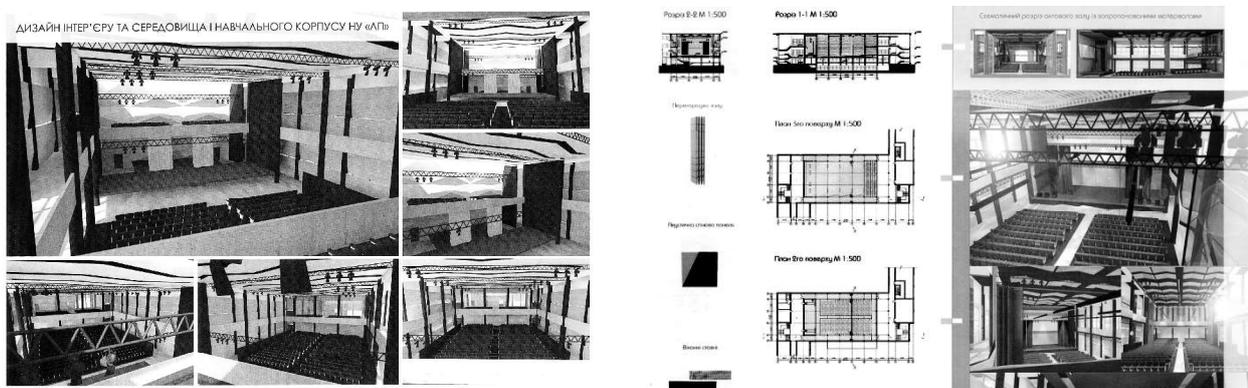


Fig. 4. Seminar project topic. (Materials from the archive of DAE department)

The further design of the clausura received various modifications and refinements. The list of spaces which need improvement has been reduced only to those which are used for the maintenance of the hall. In general, all the projects and annotations presented above have been prepared for review by the management of Lviv Polytechnic National University.

Conclusions

1. The seminar proved that such form of teaching the design of the architectural environment, and in particular the design of the architecture of theatrical and entertainment objects, can not be effective without implementing the knowledge of theatre designers, scenographic designers, technologists and technicians.

2. An important component of the success of this type of educational design can be considered the participation of students of different artistic specialities in international project teams, which allowed Lviv students to obtain a basis of knowledge of various aspects of the art of scenographic design from participants of Ryerson University and knowledge of the issues of monumental organization of the urban environment which were shared by the representatives of the Technical University of Dresden.

3. The practical results of the seminar drew attention not only of teachers of the Lviv Architectural School and Ryerson University but also of the professional creators of theatrical design – participants and organizers of the Prague Quadrennial International Exhibition, 2019 (*Exhibition of Countries & Regions, Fragments*, 2019, p. 26, 58).

4. The management of Lviv Polytechnic National University considers the issues of effective financing of the submitted projects and accumulates funds.

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**СПІВПРАЦЯ АРХІТЕКТОРІВ
І ТЕАТРАЛЬНИХ ДИЗАЙНЕРІВ І ЇЇ ОСОБЛИВОСТІ
(на прикладі результатів студентського українсько-
канадського проєктного семінару у Львові в 2017 році
по реновації зали першого навчального корпусу "Львівської політехніки"
з розміщенням театральних-видовищних і культурно-просвітницьких функцій)**

Анотація. У статті висвітлено результати студентського українсько-канадського проєктного семінару у Львові в 2017 році із реновації залу Першого навчального корпусу "Львівської політехніки" з розширенням театральновидовищної і культурно-просвітницької функції. Концептуально частину семінару розробили професори В. Проскуряков із Львова та Ш. Долгой і П. Босий з Торонто. Метою семінару було: розробити архітектурну концепцію історичного залу, забезпечивши використання в ньому широкої палітри сучасних заходів і засобів видовищно-просвітницької функціональної діяльності; забезпечити естетичне вирішення його середовища відповідно до вимог ХХІ століття і водночас зберегти тектоніку і образність того часу, в якій відбувалось будівництво. До завдань семінару був залучений досвід кафедри дизайну архітектурного середовища Національного університету "Львівська політехніка" в галузі театральної архітектури і досвід школи театральних мистецтв Університету ім. Райєрсона з м. Торонто. Серед ідей, поданих студентами і викладачами Львова і Торонто, до творення яких приєдналися учасники з міст Дніпро і Дрезден, найбільшої уваги заслуговують ті, в яких значну увагу було приділено не лише новаторським рішенням з реновації актового залу, але й модерній архітектурно-функціональній організації сцени і залу і простору корпусу загалом.

Загалом було створено п'ять проєктів – клаузул творчими колективами студентів з України, Канади, Німеччини (схеми, ескізи, малюнки, фото) які стали основою подальшої роботи у вигляді семестрових, бакалаврських, магістерських робіт.

Ключові слова: архітектурна, сценографічна, технологічна, технічна та функціональна побудова простору, організація дії в середовищі театральної сцени і залу.