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TEACHING ARCHITECTURE THROUGH EXPERIENCE. NARRATIVE AND MULTISENSORY DESIGN IN THE "STAWIAMY" INITIATIVE

NAUCZANIE ARCHITEKTURY POPRZEZ DOŚWIADCZENIE. NARRACYJNE I WIELOZMYSŁOWE PROJEKTOWANIE W INICJATYWIE „STAWIAMY"

Abstract

This paper presents the results of research on experiential-learning-based architectural education conducted within the "stawiamy" initiative at the Faculty of Architecture of the Warsaw University of Technology from 2023 to 2026. The study aims to evaluate the role of individual and collective experience in the design process and to verify the usefulness of narrative methodology as a teaching tool. The research applies the Research by Design approach and narrative analysis. The findings demonstrate that multisensory design and collaborative construction enhance design competence, responsibility, and awareness of the relationship between people and architectural space.

Keywords: *architectural education, experiential learning, multisensory design, narrative methodology, Research by Design*

Streszczenie

Artykuł przedstawia wyniki badań nad dydaktyką architektury opartą na doświadczeniu, realizowaną w inicjatywie „stawiamy" w latach 2023–2026 na WAPW. Celem badań jest ocena znaczenia doświadczenia indywidualnego i zbiorowego w procesie projektowania oraz weryfikacja przydatności metodologii narracyjnej jako narzędzia dydaktycznego. Zastosowano metodę Research by Design oraz metodologię narracyjną. Wyniki wskazują, że wielozmysłowe projektowanie i wspólne doświadczenie przez wznoszenie obiektów rozwijają kompetencje projektowe, odpowiedzialność i świadomość relacji człowieka z przestrzenią.

Słowa kluczowe: *dydaktyka architektury, metodologia narracyjna, projektowanie wielozmysłowe, Research by Design, uczenie przez doświadczenie*

1. INTRODUCTION

Higher education is undergoing dynamic changes driven by social, technological, and cultural shifts. As Alvin Toffler notes, the modern world is characterized by an ever-accelerating pace of change, which requires education to develop new ways to prepare students to function in

the realities of the future (Toffler, 1970)[1]. Today's generations learn differently from their predecessors, and the latest research in neurobiology indicates that prolonged use of digital technologies affects the way the brain processes information and alters the mechanisms of learning and attention (Small and Vorgan, 2008; Carr, 2010, among others)[2]. This raises the question of whether the education system should adopt these changes exclusively or return to proven teaching methods grounded in hands-on activities, direct experience, and active participation. The response to this challenge is the "stawiamy"[3] initiative, which has been underway since 2023 at the Faculty of Architecture of the Warsaw University of Technology under the direction of Prof. Anna Maria Wierzbicka. As part of this initiative, master's students specializing in Architecture, Technology, and Structure collaborate with instructors to design and then personally construct an architectural structure in a public space. The educational process does not end with the development of a concept. Instead, it encompasses all stages of the project – from the initial idea through the construction drawings, securing partners and sponsors, organizing construction, and supervising implementation, all the way to the building's commissioning.

The most important element of this educational model is personal and collective experience. Students participate in the actual process of creating architecture, learning about technical and aesthetic aspects as well as organizational, social, and economic ones. They independently make decisions regarding materials, solve construction-related problems, learn to collaborate with contractors, and take responsibility for the quality and safety of the structure being built. Physical contact with materials and the opportunity to observe the consequences of their own design decisions lead to a much deeper understanding of the design process than teaching based solely on models and visualizations. Another key element of the initiative is a commitment to sustainable development. Each completed structure is given a "second life," finding a new purpose after the exhibition ends. This allows students to learn to design with the entire architectural life cycle in mind, rather than focusing solely on its temporary presentation.

The methodological foundation of the project is a proprietary narrative methodology that structures the design process by analyzing the relationships among place, time, user, narrator, and narrative. It allows architecture to be perceived as a process of constructing meanings and experiences, rather than merely a composition of form. Teaching understood in this way fosters a sense of responsibility for space and develops the social competencies of future architects. This approach also aligns with the classical understanding of the architectural profession, in which architects have for centuries learned through practice and participation in the construction process. As Konrad Kucza-Kuczyński emphasizes in his publication *The Ethics of the Architectural Profession*, responsibility for an architectural work arises primarily from action and direct experience of the process of its creation[4].

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[1] A.Toffler., *Future Shock*, Random House, New York 1970, pp. 342–345.

[2] G. Small, G. Vorgan, *iBrain: Surviving the Technological Alteration of the Modern Mind*, Collins Living, New York 2008, pp. 23–46; Pollak M. (ed.), *The Education of the Architect: Historiography, Urbanism, and the Growth of Architectural Knowledge*, The MIT Press, Cambridge, MA 1997; D.A, Schön, *Educating the Reflective Practitioner: Toward a New Design for Teaching and Learning in the Professions*, Jossey-Bass, San Francisco 1987.

[3] A.M. Wierzbicka, *Laboratorium architektury: Od narracji przestrzennej do realizacji – pawilony tymczasowe jako metoda kształcenia.* Oficyna Wydawnicza Politechniki Warszawskiej, Warszawa 2026.

[4] K. Kucza-Kuczyński, *Zawód – architekt. O etyce zawodowej i moralności architektury* (2nd revised and expanded ed.), Oficyna Wydawnicza Politechniki Warszawskiej, Warszawa 2015, pp. 17–29.

The “stawiamy” initiative represents a contemporary continuation of this tradition, combining the study of design with the real-world experience of building and responsibility for public space.

2. THE “STAWIAMY” INITIATIVE

The “stawiamy” initiative was launched in 2023 at the Faculty of Architecture of the Warsaw University of Technology as an original teaching and research program to develop students’ design skills by constructing architectural structures at 1:1 scale. The initiative was founded by architect Anna Maria Wierzbicka, PhD, a professor at the Warsaw University of Technology, in collaboration with an interdisciplinary team of tutors: architect Maciej Kaufman, architect Szymon Kalata, Kinga Zinowiec-Cieplik, PhD in Landscape Architecture, Mariusz Wrona, MSc, and Paweł Trębacz, PhD in Architecture. Numerous external partners representing the academic community, cultural institutions, public administration, and the business sector are also involved in the project[5]. The initiative aims to move away from a teaching model limited to designing in virtual space, in favor of a comprehensive process that encompasses concept, design, implementation, use, and reflection on the resulting work. Students participate in all stages of the investment process – from analysis, research, and conceptual work, through contact with the investor, design, sourcing materials and sponsors, to construction, assembly, and evaluation of the final results.

Each team member contributes their own professional and academic experience to the teaching process. The tutors’ work includes leading design workshops, providing technical consultations, coordinating implementation, offering organizational support, and supervising students during the construction of the structures. As a result, the teaching process mirrors the actual functioning of design teams, in which collaboration among specialists with diverse expertise forms the foundation for the project’s success. The initiative is interdisciplinary and integrates knowledge from architectural design, landscape architecture, structural engineering, construction technologies, materials science, investment process management, and public communication. As a result, students gain experience that cannot be achieved solely through traditional design classes. Since the program’s inception, four temporary pavilions have been completed: the Pavilion of Freedom (2023), the Pavilion of the Future (2024), the Pavilion of Community (2025), and the “Table” Experiment Pavilion (2026). Over 100 people – including students, doctoral candidates, faculty members, and external partners – have participated in subsequent editions. The initiative has become not only a platform for design education but also a research laboratory where an original narrative methodology (developed by Anna Maria Wierzbicka) for architectural design is being developed, along with teaching methods grounded in the concepts of “Learning by Doing” and “Research by Design.”

3. FROM IDEA TO EXPERIENCE

The design process carried out as part of the “stawiamy” initiative begins with the creation of an architectural narrative. The starting point is not form, but an idea, which becomes

[5] A.M. Wierzbicka, *Laboratorium architektury...*, *op. cit.*, pp. 33–37.

the foundation for all subsequent design decisions. Each pavilion is a response to a specific social, cultural, or spatial problem and is treated as a story expressed through architecture. In subsequent stages, students conduct analyses of the site, users, materials, and construction technologies. The resulting concepts are repeatedly verified through models, scale models, and prototypes, and then implemented at full scale. The most important stage of the process, however, is the construction itself. It is precisely during this collaborative work that technical, organizational, and social problems arise – problems that cannot be predicted during the design phase. The need to make decisions under time pressure teaches responsibility, collaboration, and flexibility. Understood in this way, the process aligns with John Dewey's concept of learning by doing, which emphasizes that people learn most effectively through active engagement and reflection on their own experiences. Knowledge is not passively transmitted but is constructed by the participant in the educational process through their direct actions and interactions with their environment. Architecture, as a practical discipline, embodies this idea particularly well, as it requires not only theoretical knowledge but also experience of materiality, space, and collaboration.

4. EDUCATIONAL EXPERIENCE 2023–2026

Between 2023 and 2026, four consecutive editions of the "stawiamy" program were carried out. Each edition focused on a different research topic and resulted in the creation of a temporary architectural pavilion. Although each project had its own central theme – an idea – all the projects shared common educational objectives: teamwork, responsibility for the final result, experimentation with materials, and acquiring knowledge through direct experience of the design and construction process.

4.1. PAVILION OF FREEDOM (2023), PAVILION OF THE FUTURE (2024), PAVILION OF COMMUNITY (2025), PAVILION OF EXPERIMENT – "THE TABLE" (2026)

The first edition of the project was dedicated to the concept of freedom, understood as the ability to shape space and consciously take responsibility for the common good. The pavilion became a symbol of openness and dialogue, and its construction enabled students to experience the entire process – from concept to completion – for the first time. The second edition focused on exploring new building materials and technologies. Of particular significance were experiments with biological materials, including elements utilizing mycelium, which align with the principles of sustainable development and the circular economy. The third project explored the role of architecture as a tool for building social relationships. The resulting structure was designed to foster encounters, conversation, and integration among its users. The project developed skills related to participatory design and collaboration with community partners. The fourth edition built upon previous experiences. The overarching theme was experimentation, understood both as a design method and as a way of exploring architecture. The central element of the project was a table – a symbol of community, dialogue, and collaboration. The pavilion was created through collaboration among students, faculty, cultural institutions, and business partners, serving as an example of integrating education, science, and professional practice.

5. WORK METHODOLOGY – LEARNING BY DOING

The methodology used in the "stawiamy" initiative is based on the concept of Learning by Doing, whose foundations were laid by John Dewey. It posits that the most lasting knowledge is acquired through conscious action, solving real-world problems, and critical reflection on the process. The proprietary method developed as part of the program combines this concept with the narrative approach to architectural design and "Research by Design." The educational process begins with the creation of a narrative, then proceeds through the stages of analysis, design, material experimentation, structural construction, use, and final evaluation. Education understood in this way develops not only design competencies but also skills in communication, team management, responsibility, entrepreneurship, and interdisciplinary collaboration. Students cease to be passive recipients of knowledge and become active participants in the research and design process. This model embodies the ideas of John Dewey[6], according to whom education is not preparation for life but life itself. Knowledge is acquired through experience, and reflection on one's own actions leads to the sustained development of professional and social competencies. In the case of architectural education, this means a shift from teaching about architecture to learning architecture through its actual creation.

6. EXPERIENCE GAINED DURING THE "STAWIAMY" PROJECT

The construction of the pavilions as part of the "stawiamy" initiative is a key stage in the educational process, during which students transition from design to actual implementation. It is precisely during the construction phase that design assumptions are confronted with the realities of implementation, organization, and the social context. The knowledge gained in design classes is verified through practice, and the educational process becomes professional experience. The basis for organizing the work is Anna Maria Wierzbicka's original narrative methodology, which holds that architecture emerges through dialogue[7]. Narrative is understood not only as a story inscribed in space, but also as a process of communication among all participants in the project. Every design decision results from conversation, the exchange of arguments, and a shared search for the best solutions. This dialogue encompasses not only the relationships between students, tutors, and the client, but also collaboration with contractors, sponsors, and representatives of institutions involved in the project's implementation. An essential element of the educational process is the conscious cultivation of responsibility. Each project participant is responsible for a specific part of the work while being aware of how their decisions affect the success of the entire project. Students learn that architecture is the result of collaboration among many people, and that the success of a project depends on mutual trust, meeting deadlines, and taking responsibility for one's actions.

Work organization is based on dividing students into task-oriented teams led by student team leaders. Leaders are not merely coordinators of activities but, above all, individuals responsible for communication, decision-making, and motivating team members. Entrusting

[6] J. Dewey, *Democracy and Education: An Introduction to the Philosophy of Education*, Free Press, New York 1966. pp. 163–177.

[7] A.M. Wierzbicka, *Architektura jako narracja znaczeniowa*, Oficyna Wydawnicza Politechniki Warszawskiej, Warszawa 2013, p. 34.

students with leadership roles allows them to develop the leadership, organizational, and interpersonal skills essential to their future professional practice as architects. The initiative's organizational structure comprises three core teams. The design team is responsible for developing the architectural concept, preparing design documentation, coordinating functional, material, and structural solutions, and collaborating with tutors during the design phase. The construction team is responsible for preparing the construction site, managing material logistics, organizing assembly, and coordinating construction work. The marketing and communications team, meanwhile, conducts promotional activities, prepares press and graphic materials, documents project progress, manages social media, and maintains contact with the project's partners and sponsors.

Working in teams organized in this way allows students to experience a real-world model of how design firms operate and how the investment process works. They learn about collaboration among specialists in various fields, conflict resolution, negotiation, and decision-making under time and budget constraints. Reflection on the course of the process – conducted both during implementation and after construction is completed – becomes a particularly important element. As a result, practical experience is transformed into lasting knowledge and professional competencies. Understood in this way, the educational experience aligns with John Dewey's "Learning by Doing" concept, David A. Kolb's experiential learning cycle, and Anna Maria Wierzbicka's original narrative methodology[8]. What they have in common is the belief that architects learn most fully through conscious participation in the design process, responsibility for their decisions, and constant dialogue with people, place, and the materials of architecture.

7. SECOND LIFE FOR THE PAVILIONS

One of the fundamental principles of the "stawiamy" initiative is to design pavilions with their second life in mind. The structures being built are not treated as temporary installations intended for dismantling and disposal, but rather as architecture capable of functioning in subsequent locations and responding to new social needs. After the exhibition ended, the Freedom Pavilion was moved to the Vistula Boulevards in Warsaw, where it gained a new functional context as part of the public space. The Future Pavilion found its home at the Center for Combating Homelessness run by the Chmielewski Sisters, becoming a space that serves the local community. The Community Pavilion, created as part of the celebrations marking the 200th anniversary of the Warsaw University of Technology, was moved to the BIS campus of the Warsaw University of Technology after the exhibition ended, where it serves as a venue for meetings, social gatherings, and academic events. The "Table" Experiment Pavilion, following its exhibition at the Royal Łazienki Museum, is scheduled to be relocated to Konstancin-Jeziorna, where it will serve as part of the public space, providing residents with a place for meetings, dialogue, and social activities. This concept of a "second life" for the pavilions is an integral part of the author's teaching methodology, teaching students responsibility for the full life cycle of architecture and embedding the design process within the principles of sustainable development and the circular economy[9].

[8] P. Zumthor, *Atmospheres: Architectural Environments – Surrounding Objects*, Birkhäuser, Basel 2006, pp. 11–18.

[9] A.M. Wierzbicka, *Laboratorium architektury...*, *op. cit.*, pp. 105–117.

8. SUMMARY

This article presents an original concept of experience-based architectural education, developed as part of the "stawiamy" initiative at the Faculty of Architecture of the Warsaw University of Technology. The starting point is a critical analysis of the contemporary educational model, dominated by digital tools and visualization, which often limit students' direct contact with building materials, construction, and the building process. The response to these challenges is a teaching model based on the Research by Design method, experiential learning, and narrative methodology, in which architecture is understood as a multidimensional story created by place, time, the user, the narrator, and the narrative.

The research was based on an analysis of successive editions of the "stawiamy" initiative, which involves designing and constructing temporary pavilions. Students participate in the entire process – from concept development, through technical design, collaboration with the client and contractors, to construction and the use of the facility. This approach fosters the development of design, technical, and social competencies, teaching students responsibility for their decisions and collaboration within an interdisciplinary team.

Multisensory design plays a special role, as it involves exploring architecture through direct experience of space, materials, light, sound, and movement. When combined with a narrative methodology, it allows students to move beyond perceiving architecture solely as a formal composition and to understand it as a medium of meanings, relationships, and experiences[10]. Research findings indicate that the physical realization of projects enhances the learning process, fosters creativity and independence, and raises awareness of the architect's social role. The "stawiamy" initiative confirms that experience is one of the most important tools of contemporary architectural education, integrating theory with practice and preparing students for responsible design in real-world conditions. The conclusions presented in this article expand upon the principles described in the monograph *Laboratory of Architecture. From Spatial Narrative to Realization – Temporary Pavilions as a Method of Education*, pointing to the possibility of applying this method in other models of design education as well.

[10] M. Heidegger, *Being and Time*, Harper & Row, New York 1962, 135–148.



Ill. 1. Freedom Pavilion – Royal Łazienki Museum, Warsaw. Photo: Krzysztof Koszewski



Ill. 2. Freedom Pavilion – Vistula Boulevards, Warsaw. Photo: Maciej Kaufman



Ill. 3. Future Pavilion – Royal Łazienki Museum, Warsaw. Photo: Artur Brzozowski



Ill. 4. Community Pavilion – Royal Łazienki Museum, Warsaw. Photo: Artur Brzozowski



Ill. 5. Experiment Pavilion – Royal Łazienki Museum, Warsaw. Photo: Artur Brzozowski

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