

Assumptions of interdisciplinarity in educating interior designers

Agnieszka Rek-Lipczyńska & Izabela Kozłowska

West Pomeranian University of Technology
Szczecin, Poland

ABSTRACT: Interdisciplinarity in the context of educational programmes in higher education, focusing, in particular, on architecture and interior design are discussed in this article. Thorough analysis of interdisciplinarity in interior design led to a conclusion that learning outcomes of art need to be expanded by technical sciences related to engineering competencies (architecture and urban planning) and even agricultural, forestry and veterinary sciences (including, for example, gardening). Through case studies, the new Bachelor programme, Interior and Landscape Design (ILD), was established in 2016 in the Faculty of Civil Engineering and Architecture at West Pomeranian University of Technology (FCEA-WPUT), Szczecin, Poland. The FCEA-WPUT programme, with its interdisciplinary paradigm, should ensure a more complete development of the skills and attributes vital for modern professional interior designers.

INTRODUCTION

The aim of the authors in presenting this article is to outline the concept of interdisciplinarity in curricula and the development of this concept for interior design. The conclusions drawn from the study have directly influenced the shaping of the Interior and Landscape Design (ILD) programme. The new Bachelor programme, PAWiO, which was established at West Pomeranian University of Technology (WPUT), Szczecin, Poland, is an example of an innovative approach to education in interior design. For the aforementioned major, the authors of the programme proposed an alternative to the traditional approach to teaching interior design. Interior designers' traditional programmes combine learning outcomes with the discipline of art, without referring to aspects of architecture and construction. As a result of analysis aimed at creating a complete profile of a graduate of the new major, the source of learning outcomes has been expanded for the ILD programme (in terms of outcomes of knowledge, skills and social competencies) to include engineering outcomes.

INTERDISCIPLINARITY IN THE UNIVERSITY CURRICULA

The prospect of combining several scientific disciplines into a single research or teaching project is most desirable. Crossing the methodological and epistemological boundaries of disciplines is a proven practice that allows the obtaining of novel results in the research or teaching process. In science, the idea of interdisciplinary research is not new and as evidenced by the emergence of new academic units.

In education, interdisciplinarity will lead to improved curricula or new fields of study. Interdisciplinarity of curricula is an issue widely discussed in academia [1-4]. Interdisciplinarity has been to some extent a marketing gimmick employed by many universities to make their educational offer more attractive, but it is also becoming a necessity in the evolution of scientific disciplines. Many university curricula are based on the concept of interdisciplinarity. The concept itself can be understood in different ways, and thus the programmes built on the principle of multi-directionality usually assume interdisciplinary. Therefore, the question should be asked: can the parallelism of disciplines implemented in the curriculum be sufficient to make the curriculum interdisciplinary? The key conclusion turns out to be disciplinary synergy. This means multidisciplinary is far from sufficient.

According to Gagatsek:

...Disciplines are an active system of knowledge, not a passive object of cognition. Interdisciplinarity defined in this way differs from multidisciplinary, for which the condition of integration is not necessary. Here, too, there is an exchange of views or a ranking of disciplinary perspectives, but there is no integration. Disciplines are separated and independent [1].

The source literature gives many definitions describing the concept of interdisciplinary education. One of them is given below:

...The method of developing the study programme and educational methods (...) consisting of identifying, evaluating and integrating information, data, techniques, perspectives, concepts and theories from two or more disciplines or areas of knowledge in order to increase students' skills to focus on specific problems, their understanding and creating new approaches and solutions that go beyond the scope of a single discipline or area of teaching [2].

A consensus is that the most important goal and outcome of interdisciplinary education is the ability to synthesise and integrate disciplinary approaches [2]. A curriculum, which is to go beyond mere multidisciplinary, meaning that it is characterised by something more than a combination of objects from several disciplines conducted in parallel, will possess such a synthesis.

To prepare an interdisciplinary programme, it is necessary to collaborate in the process of creating syllabuses for courses, as well as their subsequent joint management. Research questions and problems within a specific area of knowledge become key to such an activity. Of particular importance is the joint development of a collection of reference sources, which should be updated continuously with the latest research results within a given discipline.

ARCHITECTURE AND INTERIOR DESIGN: AN INTERDISCIPLINARY APPROACH

Niezabitowska believes that:

...Architecture has always been interdisciplinary and promoted many today independently functioning scientific fields such as: structures, construction, materials science, mechanical engineering, facility management and others, as well as due to intensive development and sophistication of social life, it has distinguished specialities such as spatial planning, urban planning or building design, interior design, computer design, etc [3].

Architecture is an example of a scientific discipline that is interdisciplinary in nature. In historical stages of its development, architecture gave rise to such specialities, and later to separate disciplines, such as construction or mechanical engineering. Apart from technical aspects, there are numerous humanistic disciplines of interest in architecture, such as ergonomics, psychology and sociology.

Every architect, as part of their professional work, ultimately faces the need to work in a multidisciplinary team and to be able to co-ordinate such a team. An architect, in relation to the specificity of their profession, should possess knowledge in building physics, plumbing, electrical engineering, road construction, geology and geodesy, cost estimation, urban planning, ecology, landscaping, spatial planning, monument conservation and construction. Usually, interdisciplinary research in architecture takes place in industry, e.g. architecture, construction, material and mechanical or social engineering (psychology and environmental sociology).

Interior design has been separated from architecture and gained independence based on the design arts belonging to art. Education in interior design is based on art, and therefore, it is carried out predominantly by fine arts academies. The education of interior designers is mainly related to the visual and aesthetic side of architectural space. Therefore, interior design does not contain knowledge of the technical aspects of the life of a building and is not imbued with basic knowledge in this area. Thorough analysis of interdisciplinarity in interior design led to the conclusion that the subject should be expanded to include technical sciences (architecture and urban planning) and even agricultural, forestry and veterinary sciences (including, for example gardening).

INTERDISCIPLINARITY IN THE WPUT PROGRAMME: A CASE STUDY

The ILD major was launched in the academic year 2016/2017 in the Faculty of Construction and Architecture at the WPUT. The major is a Bachelor programme (S1) as part of the *general studies profile*.

In creating the ILD programme, assumptions were made to ensure interdisciplinarity, such as:

- The idea of intermingling architectural interiors with the surroundings (small urban interiors).
- Introducing learning outcomes in architecture and urban planning related to engineering competencies.
- Introducing issues related to sustainable development.
- Developing interdisciplinary courses.

Architectural Interiors and the Surroundings

The ILD programme is based on the idea of intermingling the interior space of architectural features with the surroundings. This vision is in line with the latest design trends, according to which the view on architecture and the role of it in the context of the natural environment has changed [5-8]. The ILD programme exposes the process of

blurring boundaries between the building and surroundings, simultaneously indicating the user of these spaces as the subject of design. This assumption is implemented in courses from architecture and urban planning and gardening, such as: Basics of Designing Small Urban Interiors; Basics of Designing the Surroundings of Buildings; Specialised Design of Green Assumptions; and Selection of Plant Material in the Interior.

Learning Outcomes Leading to Engineering Competencies

An additional advantage of the newly created ILD programme is the introduction of engineering competencies into the educational process. The ILD programme covers technical sciences (field of architecture and urban planning), the area of art (fine art, design arts), engineering competencies and subjects in the field of agricultural, forestry and veterinary sciences (including gardening).

Learning outcomes for the education programme as part of the ILD major are (see Figure 1):

- In terms of knowledge: there are 28 outcomes, all of which have references to learning outcomes for technical sciences, 11 outcomes have references to learning outcomes for art sciences, and four outcomes have references to learning outcomes leading to engineering competencies.
- In terms of skills: there are 31 outcomes, of which 29 have references to learning outcomes for technical sciences, 11 outcomes have references to learning outcomes for art sciences, and six outcomes have references to learning outcomes leading to engineering competencies.
- In terms of social competencies: there are 12 outcomes. All outcomes have references to the learning outcomes for technical sciences and lead to obtaining engineering competencies, and 3 outcomes have references to the effects of education for art sciences.

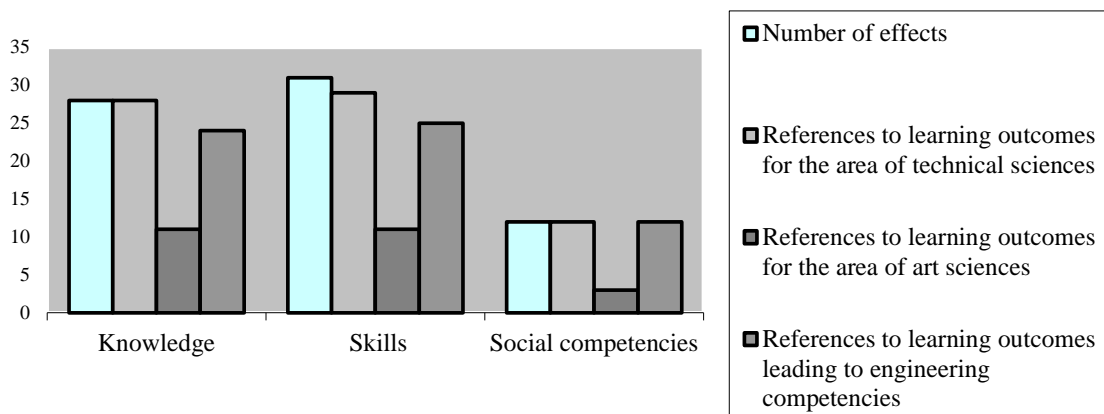


Figure 1: Learning outcomes of the ILD programme.

Expanding the outcomes of educating an interior designer with engineering competencies will significantly increase the design awareness and range of design options of future graduates of the ILD major.

Sustainable Development

In the ILD programme, social aspects of architectural design intertwine with ecological tendencies that open places created by people to nature. In the design process, the need to expose the two-way flow of space from the inside to the outside and *vice versa*, involving the selection of materials for creating interiors with elements of nature, such as water, greenery and natural light, is occurring more and more often. The return to nature is based on social movements, European Union policy and, more broadly, as a response to climate change.

The innovative ILD programme proposal is based on contemporary trends and project assumptions generated by the requirements of the natural and economic environment in the face of threats of climate change which has been a fact since the second half of the 20th Century. These aspirations have intensified, especially now. Sustainable development is introduced in the following courses: Social Aspects in Shaping Urban Green Areas; Greenery Design Integrated with Architecture; Immersion Environments and Interactivity in Architectural Interior Design and their Surroundings.

Interdisciplinary Courses

The ILD programme was built on the basis of research questions. The programme includes courses in technical sciences, natural sciences and the arts (see Figure 2). Representatives of various disciplines took part in the creation of syllabuses for the courses.

Leading courses as part of the major are: Multi-Aspect Interior Design and Multi-Aspect Environment Design. Courses include an interdisciplinary approach to design issues involving the participation of several disciplines within one research topic.

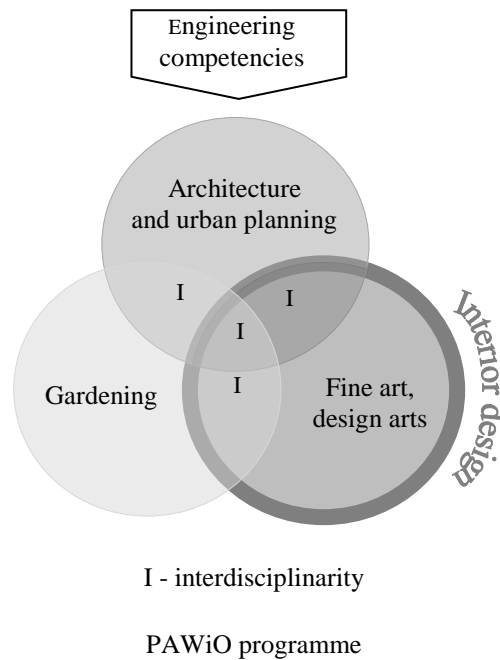


Figure 2: Interdisciplinarity in the PAWiO programme.

Courses such as: Architectural and Sculpting Design; Spatial Design Workshop; Colour and Form in Design; Shaping the Form and Shape in the Surrounding Space, have programmes based on experience from disciplines in technical sciences and the arts.

A good example of an interdisciplinary approach to research is the course Architectural and Sculpting Design. The structure of the course is based on the integration of contemporary art with technical disciplines, including architecture, and its influence on the creation of contemporary architectural space. In the design tasks carried out as part of the course, students have the chance to discover the correlation between individual elements of sculptural and architectural compositions. The issues of scale, rhythm and module are examined from the perspective of experiences in these two disciplines. Differences and similarities in the design approach to particular issues are analysed. The result of the research undertaken are designs claimed to go beyond the academic understanding of the discipline of sculpture and architecture.

Similarly, the Spatial Design Workshop programme is based on artistic installation in an architectural space, often placed in an historical space on the basis of the latest achievements in the arts in a historically conditioned space. The confrontation of contemporary media, which is found in art, in connection with the aura of the historical space is the main assumption of study of the relationship between the space and the work of contemporary art. The Colour and Form in Design and the Shaping the Form and Shape in the Surrounding Space courses also combine aspects of art with architectural design.

CONCLUSIONS

Summing up, it can be concluded that the ILD programme has a balance between the learning outcomes for technical sciences and the arts, while introducing engineering competencies. The ILD major is interdisciplinary, and the innovative education of interior designers was dictated by the needs of the modern labour market, as well as the development in the discipline of architectural interior design. According to the authors, developing the ILD programme on the interdisciplinary paradigm will ensure a more complete development of the skills and attributes vital for a modern professional interior designer.

The broad approach to shaping the space of the architectural interior often forces the specialist to look beyond the interior and consider the surrounding spatial context. The ILD programme responds to these new challenges. The programme curriculum contains components of traditional interior architecture design, as well as the design of the space near the architecture.

REFERENCES

1. Gagatek, W., *Dyscyplinarna Analiza czy Interdyscyplinarna Synteza? Uwagi o Europeistyce jako Kierunku Studiów Uniwersyteckich, Studia Europejskie*. In: Czaputowicz, W. (Eds), *Wyzwania Interdyscyplinarności*. Warszawa: Uniwersytet Warszawski Wydział Dziennikarstwa i Nauk Politycznych, 338 (2014) (in Polish).
2. Rhoten, D., Boix Mansilla, V., Chun, M. and Thompson Klein, J., *Interdisciplinary Education at Liberal Arts Institutions* (2006), 06 March 2019, www.evergreen.edu/washcenter/resources/upload/2006ssrcwhitepaper.pdf.

3. Niezabitowska, E.D., Inter- i Transdyscyplinarność Architektury jako Nauki. 06 March 2019, http://delibra.bg.polsl.pl/Content/28945/BCPS_32757_-_Inter--i-transdyscyp_0000.pdf
4. Kuc, S. and Tadewicz, A., Interdisciplinary studies for PhD students in the Faculty of Architecture at Cracow University of Technology: part 1 - first year study. *Global J. of Engng. Educ.*, 20, **3**, 224-229 (2018).
5. Celadyn, M., Multi-criterial evaluation in education of environmentally responsible interior design. *Global J. of Engng. Educ.*, 19, **3**, 207-212 (2017).
6. Kristiánová, K., Putrová, E. and Gécová, K., Landscape architecture for architects - teaching landscape architecture in the architecture and urbanism study programmes. *Global J. of Engng. Educ.*, 19, **1**, 60-65 (2017).
7. Hengrasmee, S. and Chansomsak, S., A novel approach to architectural education for sustainability: a quest for reformation and transformation. *Global J. of Engng. Educ.*, 18, **3**, 160-166 (2016).
8. Haupt, P., Design with nature and design for the people - the principles of architectural education. *World Trans. on Engng. and Technol. Educ.*, 16, **1**, 70-74 (2018).