

Urban planning education and the problems of cities in the regions of Slovakia

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ABSTRACT: The focus of the work described in this article is on the co-operation between the Faculty of Architecture at Slovak University of Technology in Bratislava (FA-STU); namely, the Institute of Land Use Planning and Urban Design, and the municipal authorities, particularly in the teaching of design studio targeted at urbanism. Students solve real assignments in *simulated* conditions under the supervision of their tutors, and with the co-operation of other professionals, as well as the public plus representatives of towns and municipalities. The goal is to link learning and practice in order to develop student creativity and critical thinking, as well as their ability to communicate and understand other professions, and future users of the regions. The authors scrutinise teaching methods that support the skills proven to be successful. They are presented as case studies from recent pedagogical practice.

INTRODUCTION

Cities and regions in Slovakia present a specific and demanding challenge for the field of urban planning and urban design. Apart from often-discussed and researched European urban problems, such as suburbanisation or urban-rural migration, the problems of Slovak cities are connected also to broad regional disparities and social instability, decay and exclusion. At the same time, in these areas live more than 70 percent of the country's population.

Therefore, these towns and municipalities, with their problems, potentialities and opportunities represent the most natural research opportunities and creative space for future architects and urban planners. They are the laboratories. They represent the ideal interconnection of teaching and practice. However, this situation still suggests that a lot needs to be done when developing effective solutions to address problems of these areas. Having an adequate number of professionals who can creatively design and lead this process presents a great challenge for education.

ARCHITECTURAL EDUCATION CONNECTED TO CITIES

Due to the fundamental and rapidly changing social, cultural, technical, environmental and financial conditions, European and world fora devoted to architectural education are increasingly discussing the future role of the architect, as well as the need for changes in architectural education. Architectural schools worldwide often develop a graduate or *star-architect* focused on aesthetically very attractive, form-based sculptures [1].

It stems from the traditional perception of architecture ...*considered to be the queen of all arts for ages* [2]. This has led to the abandonment of the *public* in the design process. However, this social aspect - creation for people - understanding the needs of society, community or individual is essential in the work of an architect.

Spiridonidis and Voytzaki also recognise that it is essential for ...*an architect to recognise qualities in different socio-cultural contexts* [3]. Various authors point out to a change of this approach, especially in the urban dimension, where the importance of direct co-operation with communities is growing. Also, development is moving from urban engineering to creative city-making: ...*a city that encourages people to work with their imagination goes well beyond the urban engineering paradigm in city-making* [4].

Worthington, when summarising the situation in the professional practice of architects, urban planners and designers, sees that ...*there is still a significant gap between the vision of the architect's role, as characterised in schools of architecture and the reality of practice. There is a need to develop a distinctive knowledge base in respect of the areas perceived as of greatest value to clients and users* [5]. Therefore, there has already started a great discussion, innovation and experimentation with the architect education curricula, and individual courses, particularly design studios.

According to Findeli, an archetypical model of a curriculum for design education can be described in ...*the form of a three-part structure, art/science/technology, enclosed within a general purpose for design* [6]. This author suggests that the current complexity of the design process needs to go from a ...*canonical, linear, causal and instrumental model* of education to a model that is *inspired by systems science, complexity theory, and practical philosophy* [6].

Spiridonidis and Voyatzaki also point to the complexity of the architect education [3]. The current education of architects should meet the following set of values: ...*transparency, flexibility, adaptability, quality, openness, creativity, innovation, mobility, experimentation, diversity, compatibility, comparability, parametricism*.

As a result, the major current focus of education, as well as practice, might lie in the need for complexity and the interconnection of education and practice. Apart from essential theoretical preparation - reflecting ongoing changes through new *themes* and new research and design areas - the focus should be on gaining practical experience based on co-operation with other professions, institutions, communities and also with other countries, as well as work in different social and geographical conditions.

Future professionals should be prepared for the role of leader. As argued by Paprzyca ...*The task of higher education is to prepare young people for work. To achieve this goal, it is necessary to combine the teaching with the practical side of the profession, which develops the skills required for the integration of knowledge and practical experience* [7]. At the same time, Paprzyca perceives as fundamental a link to local government and the business sector [8].

Reflecting on these ideas and, in particular, on architect education, the main challenge is for innovation of the major course - design studio - and the teaching methods of associated courses. Design studio is the optimal way of linking education and practice since ...*design studio teaching is a simulation of design practice, with designer/client interactions over actual projects* [9].

Nicol and Pilling, when summarising the five principles of effective learning in their publication focused on transformation of architectural education, define as one of the principles *authentic learning* [5]. According to these authors, authentic learning tasks develop professional competencies. This is to be followed by providing *active learning* - providing learning as an active rather than a passive process.

Concluding, the tasks associated with working practice include both authentic and active forms of teaching. At the same time, they represent an integrated way of learning, linking theory and practice, critical thinking and creativity ...*Integrative learning as used in the case of engineering (urban) design courses is about making connections between academic knowledge and engineering practice, and this requires active involvement of both the student and the instructor* [10]. Pusca and Northwood, develop a typology of two categories of the integrative learning of design courses, as characterised by problem-based projects, on which the authors reflect:

- *Service learning: students' projects address identified community needs or global issues.*
- *Applied research projects: students' projects address specific business or industry problems* [10] or societal problems.

In the Faculty of Architecture at Slovak University of Technology in Bratislava (FA-STU), the authors use both types of project when combining teaching, research and collaboration with practice.

TEACHING IN THE INSTITUTE OF LAND USE AND URBAN PLANNING OF FA-STU

The connection with real practice is a challenge and a valuable experience for any student of architecture and urbanism. As pinpointed above, it is a very effective method of teaching - theoretical knowledge is applied to real assignments and situations. Interconnection of the practice and education, particularly in the field of urbanism and urban design, offers students a space to verify different methods of urban research and creation in connection with the different stages of the planning process and various urban problems.

In the Institute of Land Use and Urban Planning at FA-STU, the authors try to connect the assignments to practice, based on co-operation with the local municipal authorities. This is accomplished through:

- voluntary workshops and summer schools with selected municipalities;
- selected semestral courses, focused on particular issues, such as urban economy, which are especially relevant for the assignments and are part of scientific research work at the Faculty;
- design studios are the core of teaching and are elaborated into more detail in the following parts of this article.

DESIGN STUDIOS CONNECTED TO PRACTICE AT THE INSTITUTE OF LAND USE AND URBAN PLANNING

Design studio is the core of teaching in the Faculty of Architecture. At the Institute of Land Use and Urban Planning, the authors as a standard teach three design studios each semester (see Table 1). These are divided into 10-14 different assignments dealing with various cities and regions in Slovakia (see Figure 1). It represents 70-90 outcomes of student work each semester, and up to 200 each academic year.

Table 1: Design studio teaching in an academic year at the Institute of Land Use and Urban Planning, FA-STU.

	Winter term			Summer term		
Bachelor level	Module 1	15 students	1-2 assignments	Studio Project V	140 students/ 70 pairs	4-5 assignments
				Bachelor Thesis	15 students	2-3 assignments
Master level	Pre-diploma Project	4 students	Individual assignments	Diploma Project	4 students	Individual assignments
	Studio Design 1	120 students/ 60 pairs	4 assignments			

In the past two academic years (2016/17 and 2017/18), the assignments were based on various problems and issues in Bratislava, and its suburb Záhorská Bystrica. Other assignments were based on the problems of the cities in southern regions of Slovakia (Topoľčany, Štúrovo, Komárno, Lučenec). A few of them, especially those focused on the public space design, were assignments of the more remote regions of the cities of Jelšava, Bardejov and the village of Podkonice (see Figure 1). Specific forms and outputs of co-operation with the city of Komárno are presented by Smatanová and Urban [11] and with the city of Štúrovo by Kristiánová and Joklová [12].

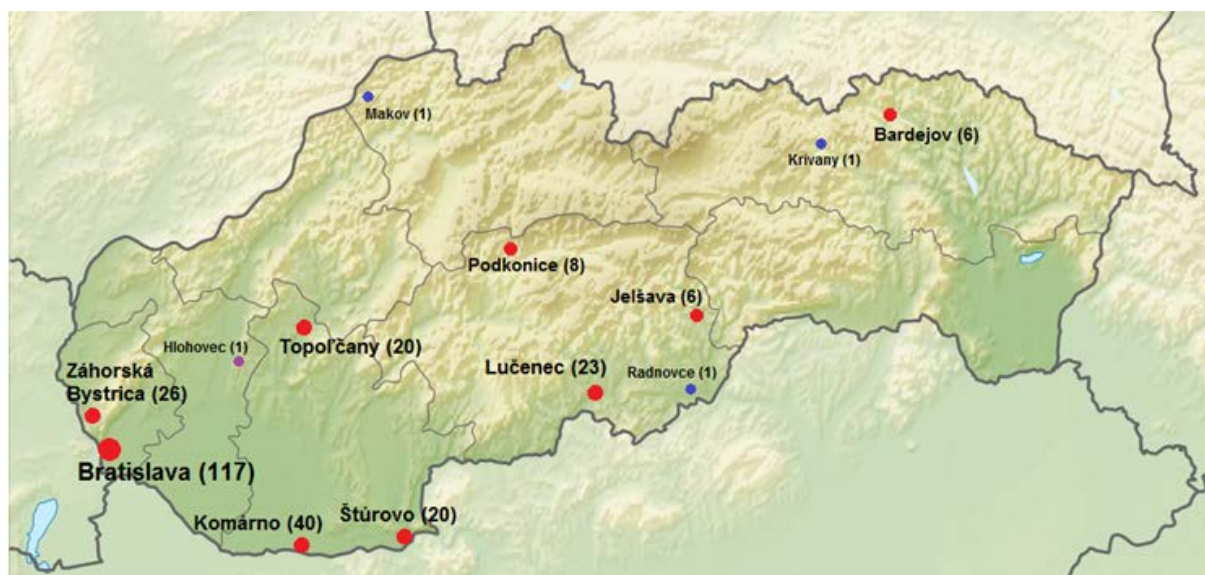


Figure 1: Sites and areas of student assignments in academic years 2016/17 and 2017/18.

In Figure 1, the number in brackets represents the number of student works. The colour represents the type of design studio, with red colour: obligatory assignment; blue colour: picked by the students (diploma design studio); purple colour: summer school.

Co-operation with the Municipalities

The assignments at FA-STU involve both *service-learning* and *applied research* projects. In the context of co-operation with the municipalities, the authors aimed to combine the advantages of both of these approaches. The standard procedure is initially based on the *service-learning* activity. The municipality contacts the Faculty with a specific problem or task. After that, teachers contextualise this in general urban theory, in order to create a space for *applied research*. In academic years 2016/17 and 2017/18, the co-operation with municipalities was also supported via international grant projects focused on small- and medium-sized cities, as well as excluded communities. These two approaches reflect local issues and can develop into all-society overarching research on specific issues. This is further developed within the site-specific contexts.

In the assignment specifications, the general rule for solving an *overarching issue* reflected in site-specific conditions, is generally through a *masterplan* (see example in Figure 2). According to local conditions and requirements, this can be supplemented by further detailed elaboration, and/or the opposite - greater visionary or strategic proposals. In the terms of practice, these proposals are usually ideas with/without further elaboration. In practice, they serve as inspiration for the municipality. In some of the cases, student works provide materials for further specialised architectural/urban competitions.



Figure 2: Examples of possible outcomes of assignments in design studio connected to the city of Jelšava (left to right): masterplan, ideas for quick-fix interventions. Student: Mrvová, D.; Supervisor: Smatanová, K. (2018).

Aims and Outcomes

The aim of each design studio is to provide teaching that will lead students to develop their creativity, critical thinking and analytical ability, as well as their ability to communicate with citizens and professionals from other disciplines. The standard design studio is divided into four stages, with different outcomes: analysis concept formulation, design, outcome (preparation) and presentation (see Table 2).

As found by Nicol and Pilling ...*Authentic learning contexts and tasks have to be structured for maximum effectiveness. Complex tasks may have to be simplified and their components sequenced for pedagogic purposes* [5]. The degree of structure of the semestral work depends on the academic level of the students - relaxing the obligatory structure with increased knowledge and experience of the students.

Students are confronted with the specific site - first directly through onsite visits, followed by more in-depth, and individualised consultations or specialised discussions with local actors, experts or the public. The co-operation with the municipalities also involves the participation of local experts and community members at various stages in the teaching process. There is activity after the semester has finished - the presentation of the student works at local festivals and other similar occasions, where students meet the local communities in informal ways and present their proposals.

Table 2: Student semestral work, works stages, actors/external professionals and outputs.

	Desk analysis		Week 1
	On-site visit	Onsite workshop	Week 2
Swot analysis	Final problems and potentials		Week 3
Concept - macro scale	Concept sketches		Week 4
Concept - medium scale	Working concept	Review 1	Week 5
Design - individual parts	Working concept	Extra specialised lectures	Week 6
	Detailed elaboration of selected parts	Extra specialised lectures	Week 7
	Detailed elaboration of selected parts		Week 8
	Concepts and detailed parts	Review 2	Week 9
Design - micro scale	Revision of the comments	Extra specialised lectures	Week 10
	Further details		Week 11
Final portfolio	Graphic elaboration		Week 12
PPT presentation	Preparation of oral presentation	Final submission	Week 13
Poster + oral presentation	Meeting with local communities, local public	Community meeting	Week 13 +

DISCUSSION

Based on experience, this type of teaching has many benefits, but also some pitfalls (see Table 3). Undoubtedly, the most positive outcome is based on the problem-based, active learning, where students apply their theoretical knowledge to real-life assignments. Furthermore, students are naturally led to be aware of the necessity of

an interdisciplinary approach in the spatial planning and creation process, as well as the need to communicate with a wide range of professionals, local government representatives, interest groups and citizens. Thus, they acquire a complex experience and skills required by the architect and urban planner.

Table 3: Most common benefits of this design studio teaching and pitfalls of this teaching.

Benefits	Threats/disadvantages
Theoretical knowledge applied to real-life assignments	Travel costs: financial and time
Variety of research methods	Large amount of preparation
Interdisciplinary	Management of expectations
Participation with citizens	Potential clashes with local professionals

The worst side of such teaching is the financial cost and time required. Most are connected to the travel to remote locations. Based on experience, an important part is the interaction with the municipality, in particular the management of *expectations*. Municipalities might have their own visions that student works cannot fulfil or student interaction can lead to conflict or cause clashes with local professionals (architects, urban planners).

Connected Outcomes of Teaching Design Studios

One of the problems of the cities in regions is a lack of young and educated people. This includes also a lack of architectural professionals working in either the private or public sphere (such as a *town architect*). Providing incentives and motivations to keep graduates in the regions contribute to educating local communities and supports sustainable social development of these areas, while raising the overall quality of urban spaces and the regions.

CONCLUSIONS

In this article, the authors highlighted that the architect's education has to undergo a transformation: architectural education should be more focused on people and local communities. A people-centred approach is not just a trend, but a necessity of the architect's profession. One of the ways this can be reflected in teaching is through the interconnection of education processes with practice. The cities and regions in Slovakia provide natural laboratories for this approach.

In education, the most convenient tool for accommodating this transformation is the design studio. The learning process in the design studio should be authentic and active. The Faculty of Architecture has explored practical teaching methods using the design studio.

The Faculty has academic freedom and independence to apply current trends in urban design and appropriate teaching methods to bring forward sustainable urban solutions. Students can propose possibilities for development to transform urban and rural structures. These offer alternative solutions that, after evaluation, may allow a more optimised development that is efficient and of high quality.

Through this approach, the Faculty fulfils its duty to society. The Faculty potential, expressed through pedagogical and scientific research educates competent professionals. The Faculty helps to solve the problems of towns and villages and at the same time educates citizens. From the point of view of teaching methodology, the interconnection of education and practice achieves important goals.

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