

## **Shaping the competence of future spatial policymakers for small- and medium-sized towns**

**Piotr Lorens & Anna Gołędzinowska**

Gdańsk University of Technology  
Gdańsk, Poland

**ABSTRACT:** In this article, the authors aim to present issues addressed within the framework of the architecture and spatial development courses offered by the Faculty of Architecture at Gdańsk University of Technology (FA-GUT), Gdańsk, Poland. These issues concern competence in the education of future spatial planners and their readiness to deal with the development challenges facing small- and medium-sized towns. Within the article, the similarities and differences are pointed out that relate to curriculum structure and academic outcomes that can influence the professional profile of graduates. Similarities between the two courses enable identification of the most effective model. The article includes a summary of the educational problem, an outline of design studio profiles for both courses, comparison of the results achieved and conclusions regarding future educational efforts, including relevant lessons for other planning and engineering schools. The conclusions focus on the lessons learnt and suggest improvements that can be made worldwide within educational programmes.

### **INTRODUCTION**

Despite the ongoing metropolisation processes, Poland remains a country in which a significant share of the population remains in small- and medium-sized towns. Consequently, these municipalities are in need of professional planning policymakers, as well as modern and up-to-date urban development and transformation plans. This is of special interest to contemporary universities, such as Gdańsk University of Technology (GUT), Gdańsk, Poland, at which are offered in the Faculty of Architecture both Bachelor's and Master's degrees in architecture and spatial planning. Both specialisations address key issues for development and contribute to the education of planning specialists. It is noteworthy that significant differences in curriculum content affect the profile of future professionals, as can be observed by participants of both courses. Architecture students are more focused on the spatial and urban design dimension of development, while spatial development students tend to deal more with socio-economic and geographical issues. In the future, these complementary perspectives can positively influence professional decision-making and the overall competence within planning offices.

For several reasons, small- and medium-sized towns are becoming an attractive topic for both students and teaching staff. First of all, both groups spot an opportunity to identify and present to local communities, new solutions for municipalities that lack professional discourse on the direction of future development. This problem stems from the absence of well-established local spatial planning offices within these municipalities. Second, the scale of the small- and medium-sized towns allows students to better understand the context for urban design and planning within the entire scope of processes that take place in the city space. Finally, students, equipped with knowledge of the conditions of spatial planning on this scale, become attractive potential employees who can contribute to the process of improving local governance and upgrading professional competencies within the municipal management bodies. Having these reasons in mind, it seems necessary to discuss the matter of adjusting the competence of course graduates to meet local requirements in respect of legal, social and economic issues. It also has to be noted that these problems are not limited to Poland only - similar issues can be identified in a number of countries [1].

### **EDUCATIONAL ISSUES**

A university graduate who will work in the future as an urban planner must understand the specificity of development processes associated with the very different scales of cities and regions. In fact, such a professional should be able to deal both with regional/metropolitan planning and development issues, as well as with local site planning for small cities and/or villages. It is important to note that the departure from the modernist vision of urban development forced radical changes in the scope of the urban design and planning course curriculum. Urban planning has ceased to be a domain assigned exclusively to technical sciences, although to a large extent it remains taught at universities under this profile (see Table 1).

Table 1: A comparison of urban planning classes in architecture and spatial development.

Class name	Urban Design (IV)	Urban Planning and Development Policy
Field of study	Architecture	Spatial development
Type of study	I (engineering)	
Semester	VI	
Scope of class project	An entire small town or district of medium/large town	An entire small town
Purpose of class	Develop competence in ability to conceptualise spatial policy focused on the completion of settlement structures.	Develop competence in ability to conceptualise development plans that include spatial, social and economic elements.
Scale of final project	1:5000, 1:1000	Agreed by teacher
Final presentation format	B1 boards (100 x 70 cm)	Electronic media
Type of class and number of hours	Lecture - 45 hrs, design studio - 30 hrs, seminar - 30 hrs	Lecture - 15 hrs, design studio - 30 hrs, seminar - 30 hrs
Form of co-operation with local governments	Group meetings	Individual consultations

At the same time various planning courses are offered within the field of social sciences. But to prepare the planning professional for future work challenges, courses in planning must deal with the complexity of contemporary urban space transformation processes. This means that, in addition to technical and/or design issues, social, economic and environmental factors have also to be taken into account. This also affects the question of using the proper scale in relation to project tasks, which should allow students to capture the entire scope of aspects associated with planning for urban development. In addition, education in the Bologna system requires equipping students not only with knowledge, but also with practical competence.

Cities may become natural laboratories for such an approach [1]. Thus, the Faculty of Architecture at Gdańsk University of Technology in Poland has found a natural partner for co-operation in the local governments of the Pomeranian region, of which Gdańsk is the capital. The management bodies of the largest cities of Gdańsk and Gdynia are also open to co-operation. Although, both cities have their own planning authorities and the scale of these cities is much larger than the average in the region, it seems unwise to focus only on their problems.

At this time, it is important to point out that the spectrum of tasks for which a specialist in spatial development is needed is no longer limited to drawing up spatial development plans. This mostly is due to the emergence of development trends based on strategies and policies dedicated to selected problems, e.g. local regeneration plans, sustainable urban mobility plans or adaptation plans for climate change.

The provisions of Polish law do not usually require the creation of this type of policy, but it becomes a necessary condition for obtaining financing from European Union programmes. As a result, the search for appropriate planning staff is becoming increasingly important in the case of small- and medium-sized towns. Also in 2017, the Polish government introduced competitions for towns with 20,000 inhabitants that are not the capital of the region [2].

## COMPARING STUDY PROGRAMMES

As regards Gdańsk University of Technology, the beginnings of urban planning education should have been established, when the University was revived after World War II. Nevertheless, co-operation with local governments focused on the exchange of knowledge, experience and ideas only became a practice after the beginning of the political transformation (after 1989). Finally, in the second decade of the 21st Century (2012), it was decided to establish a new specialisation, Spatial Development, which is dedicated solely to the education of planning professionals.

Although urban planning topics in Architecture and Spatial Development are focused on different subject areas and problems, both groups of student deal with the same scale for designing a complex urban unit (the district of a large city or the entire area of a small/medium town) during the design studio, which takes place in semester six of the Bachelor of Science (BSc) studies [3].

Architecture students are acquainted with planning issues in the third year of their undergraduate studies. These planning issues relate to the development of complex urban organisms; for example, residential districts, problem areas located in the Gdańsk agglomeration or small towns in the region of Gdańsk. The task to be carried out is the development of an urban concept for the transformation of such an area. As a result, students become familiar with the need for systematic and integrated urban planning and design, taking into account the conditions and potential of urban structures studied at various scales (see Figure 1 and Figure 2).



Figure 1: Exhibition and critique of student projects in Reda, northwestern Poland (Authors: K. Tatarata, K. Ułasińska, K. Zorn and W. Żmuda - Architecture course).



Figure 2: Development concept for the Janowo district in Rumia, Eastern Pomerania region of northwestern Poland (Authors: M. Brzezicka, K. Łakis, I. Malinowska and A. Maruszak - Architecture course).

Architecture design studio requirements include the completion of multi-faceted analyses of the functional and spatial structure of a selected district and its connections with the environment; a clear definition of the district value and the associated problems; a conceptual vision and proposal for transformation; and a formal plan for development of the selected district supplemented by a 3D model. All analyses and designs are performed most often in the scales 1:5,000 and 1:1,000.

The architecture design studio is held alongside lectures on urban design. The programme for this part of the course covers a broad spectrum of issues including the basics of city structure, components of different urban analyses, key urban manifestos and current trends in spatial planning. In addition, students are required to attend supplementary lectures in urban engineering and road engineering [4].

The Spatial Development course provides students with a different specificity of planning knowledge. In the class, Urban Planning and Development Policy, the subjects of study are towns of an even smaller scale, such as Hel,



Jastarnia, Krynica Morska, Leba, Puck, Ustka and Władysławowo (all located in the Pomeranian region). Each of these have not more than 10 to 15 thousand inhabitants. The class is held to familiarise students with the particular issues related to shaping the spatial policy of a small city - understood more broadly than the issues of spatial planning (see Figure 3, Figure 4 and Figure 5). In this case, the scale of the design depends on the size of the city and the agreement of the teacher who supervises each team.



Figure 3: Student concept for the development of Hel (Authors: K. Balcerzak, J. Czeronko, M. Kalich and A. Ostrowicka - Spatial Development course).

The Spatial Development design studio is conducted in three-hour blocks that cover subsequent stages in the preparation of the master plan of a city. At this stage of the design process, students should develop their own impression of the city in a graphic form; identify conditions for transformation; determine conclusions regarding possible directions for transformation of the city space; determine the direction of spatial development; determine crucial projects; define a comprehensive city spatial policy; and determine the main investment priorities for the city. Seminars are also conducted in three-hour blocks, and involve the work of student pairs whose task is to present key topics raised earlier in the semester and also refer to the specificity of the next stages of project work [5].

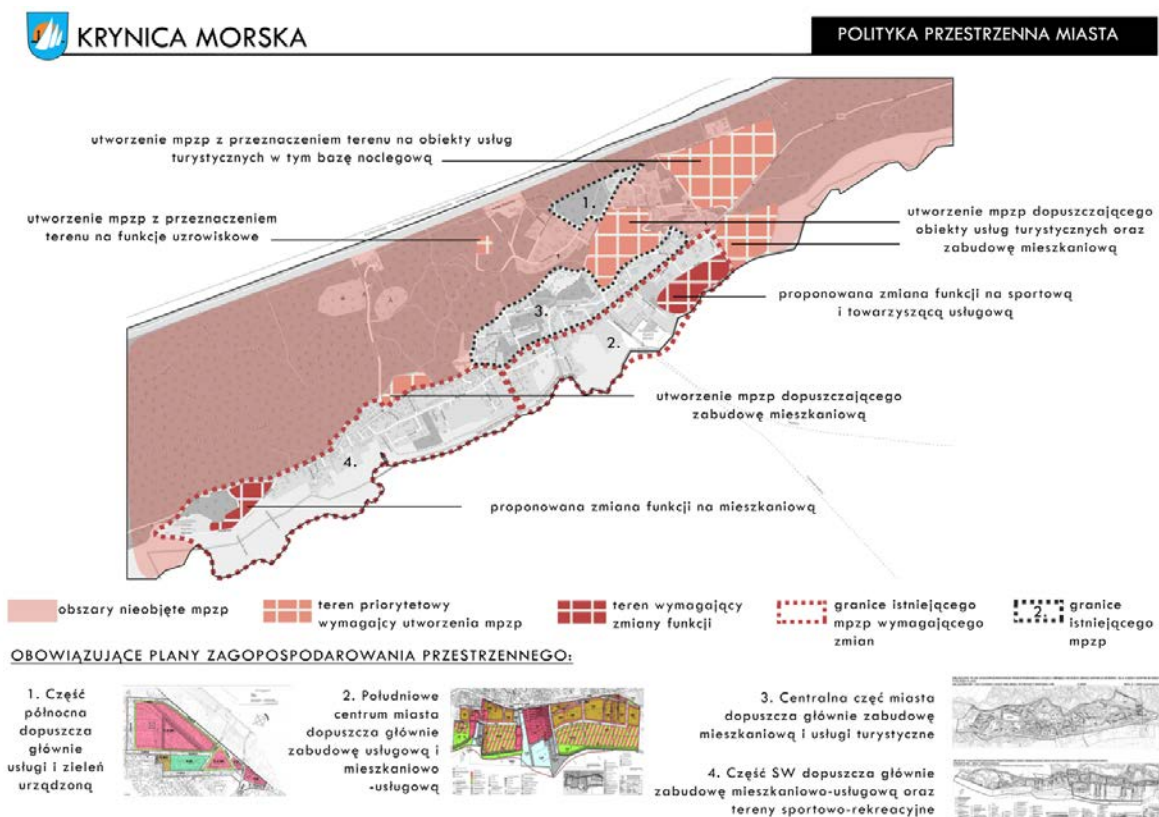


Figure 4: Student concept for shaping the spatial policy of Krynica Morska (Authors: A. Biernacik, P. Kleina, K. Kulas, N. Pietrzycka and F. Wiewiórka - Spatial Development course).

For both courses, interaction with employees of local institutions makes a significant contribution to learning. In addition, students are also required to present the results of field surveys, which can take very different and innovative forms (e.g. the *city walks*) [6][7]. This form of co-operation allows students to familiarise themselves with the practice and function of municipal institutions, and gives them an opportunity to get to know a potential employer. The added value of this work model is motivation. In the case of architecture, students usually meet as a group two or three times a semester - at the beginning and during summary of the work, and in some cases also after completing the

conceptual phase and before starting the detailed study. In the case of Spatial Development, students establish contacts with local governments to obtain materials and verify design directions.



KRYNICA MORSKA MIASTEM DOSTĘPNYM, OFERUJĄCYM CAŁOROCZNY PRODUKT TURYSTYCZNY O WYSOKIM STANDARDZIE I INFRASTRUKTURĘ DOSTOSOWANĄ DO POTRZEB ZARÓWNO MIESZKAŃCÓW, JAK I TURYSTÓW

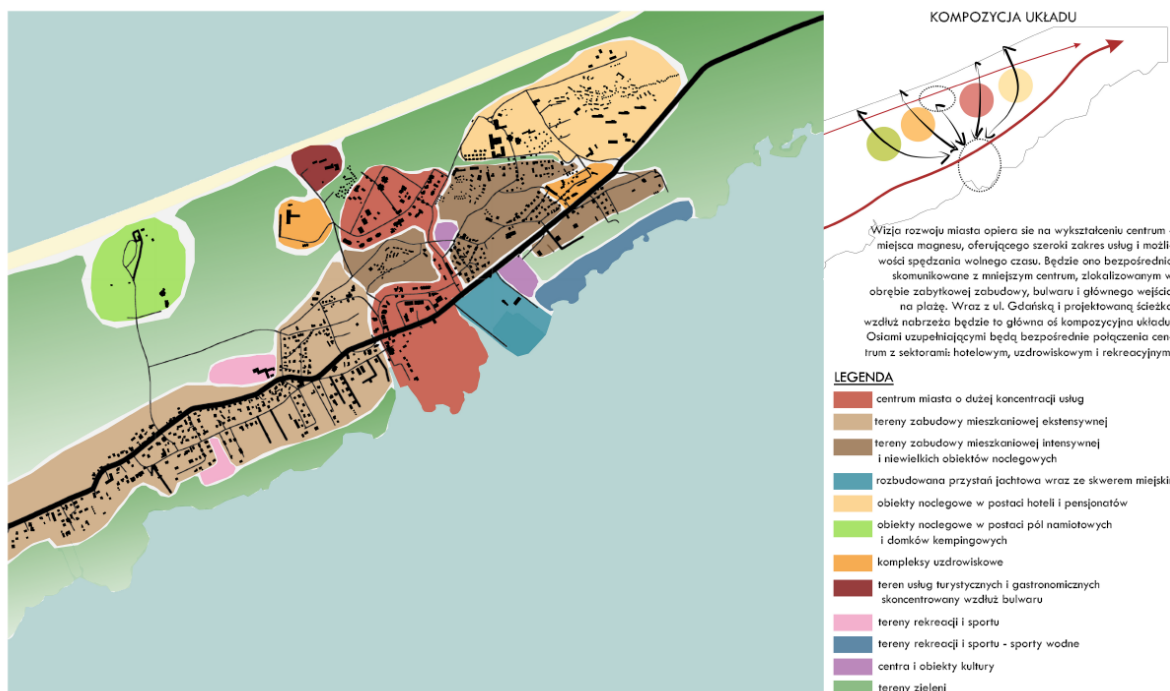


Figure 5: Student concept for development of Krynica Morska (Authors: A. Biernacik, P. Kleina, K. Kulas, N. Pietrzycka and F. Wiewiórka - Spatial Development course).

The syllabi do not dictate the size of town, and for both courses students have the option of choosing the topic. However, topics related to small- and medium-sized towns are prevalent. Architecture students more often choose medium-sized towns (between 20,000 and 60,000 inhabitants) or a district of the large city (like Gdańsk or Gdynia) for the design task, while Spatial Development students choose entire towns, often those of an even smaller scale (between 5,000 and 20,000 inhabitants), which often play the role of the local centres.

Differences in the graphic form of project preparation can also be observed between the two different directions of study. Architecture students develop boards in the B1 format which, in principle, can formally be exhibited in public institutions. This particular format corresponds to legal requirements regarding the presentation of planning documents [4]. Students of Spatial Development present their work in a readable format suitable for electronic media, e.g. multimedia presentations that can be easily converted into written text. In this case, such forms of presentation are more commonly used when policies are non-mandatory.

Both groups of students equally tackle various issues in their final design/policy proposals that also include aspects of development that are so far rarely taken into account by planners i.e. the issue of urban resilience or the smart city agenda. Such urban concepts may also serve as an important point of reference in discussions with local governments and/or local communities [8][9].

## CONCLUSIONS

In Poland today, mainly medium-sized towns undergoing development processes are the ones in which significant interest has been shown to establish formal co-operation with university faculties that have specialisation in research and education in architecture, urbanism, spatial development and planning. The development potential of these towns is most often associated with their location in zones at the edge of the metropolis.

Design processes usually are oriented towards the introduction and optimisation of residential functions that serve the larger metropolitan areas. Model design solutions that result from co-operation with the municipality are primarily developed in the sixth semester Urban Design classes. During this semester students are tasked with developing the outline of an urban master plan for a small city (or district).

The proposed projects are developed with methodology similar to the actual method applied in preparing the formal *Study of directions of conditions and directions of spatial development* - a key municipal spatial policy document issued

in accordance with Polish law. Despite having a smaller (more manageable) scale than cities with metropolitan scale, these centres of urban life remain an attractive subject for the didactic process. Here, because the urban processes are somewhat simplified, students are able to understand more intuitively the interdependence of urban issues.

## REFERENCES

1. Smatanová, K. and Vitková, L., Urban planning education and the problems of cities in the regions of Slovakia. *World Trans. on Engng. and Technol. Educ.*, 16, 4, 362-367 (2018).
2. Komornicki, T., Szejgiec-Kolenda, B., Degórska, B., Goch, K., Śleszyński, P., Bednarek-Szczepańska, M. and Siłka, P., Spatial planning determinants of cohesion policy implementation in Polish regions, *EUROPA XXI*, 35, 69-87 (2018).
3. Gołędzinowska, A. and Kostrzevska, M., Co-operation with local stakeholders: a crucial element of urban design. *World Trans. on Engng. and Technol. Educ.*, 17, 4, 490-494 (2019).
4. Syllabus. Architecture Program. Semester VI. Urban Design. Faculty of Architecture, Gdańsk University of Technology.
5. Syllabus. Spatial Economy Program. Semester VI. Urban Planning and Development Policy. Faculty of Architecture, Gdańsk University of Technology.
6. Borucka, J., City walk: a didactic innovative experiment in architectural education. *World Trans. on Engng. and Technol. Educ.*, 17, 2, 158-163 (2019).
7. Vitkova, L., Smatanova, K., Lackova, A. and Urban, J., Educational approaches to the analytical part of urban design. *World Trans. on Engng. and Technol. Educ.*, 16, 3, 206-211 (2019).
8. Kurniawan, F., Nugroho, S.M.S. and Hariadi, M., Promoting smart city research for engineering students. *World Trans. on Engng. and Technol. Educ.*, 17, 1, 93-97 (2019).
9. Nyka, L., Bridging the gap between architectural and environmental engineering education in the context of climate change. *World Trans. on Engng. and Technol. Educ.*, 17, 2, 204-209 (2019).