Urban design teaching and social inclusion

Ľubica Vitková, Viktor Kasala, Olena Lemak & Oto Nováček

Slovak University of Technology in Bratislava
Bratislava, Slovakia

ABSTRACT: The creation of an inclusive environment is one of the pillars on which the principle of a sustainable city is based. Therefore, it cannot be missing in the syllabi of the study programmes of architectural schools. In the article, the authors present the teaching methods applied in studio work in relation to social inclusion on the city scale in the Faculty of Architecture and Design at Slovak University of Technology in Bratislava (FAD-STU) in Slovakia. The main aim of this approach is to develop students' ability to analyse and evaluate social problems, as well as cultural and economic characteristics of the area. In particular, the authors focus on the teaching methods that support the skills needed to shape a sustainable environment with an emphasis on social inclusion, and thus its richness and viability. They also outline the methods leading to the development of skills necessary to shape, guide and promote a sustainable environment with an emphasis on social diversity. Special attention is paid to international co-operation and its positive inspiration through international educational programmes.

INTRODUCTION

The area of social inclusion is an important part of teaching urbanism in the Faculty of Architecture and Design at Slovak University of Technology in Bratislava (FAD-STU), Bratislava, Slovakia. This follows the aim to design a sustainable city via creating an inclusive environment. The topic of social inclusion has become an important part of the current urban agenda (viz. global summits, such as Habitat III or national strategies), and therefore, it cannot be omitted in the syllabi of the study programmes of architectural schools. At the FAD-STU, the authors of this article are involved in work on the aforementioned topic both within theoretical subjects, as well as through studio-based teaching.

In this article, the focus is on the way of teaching urban design related to the issue of social inclusion in studio work. The emphasis is on the development of the students' ability to create a socially sustainable environment through the design of viable communities, the formation of quality public spaces or an environment that supports the local culture and economy, while integrating different groups of residents and visitors. As part of the teaching, the authors also reflect on the impact of the Covid-19 pandemic on society, which has led to the formation of new requirements for shaping the environment. In this context, the concept of the city of short distances is particularly highlighted.

In terms of teaching methodology of urban planning, within the vertical studio Vitková - Špaček, the authors focus on thematically oriented assignments that develop students' ability to perceive and realise topics with social sustainability aspects in various contexts and scales. In addition, the social inclusion topic is supported by the Faculty's current research and doctoral dissertations. In teaching, the emphasis is on the application of methods related to social inclusion, which include observation, collection and evaluation of socio-economic data, evaluation of environmental quality through current techniques and tools (emotional maps, sensitive mapping) or participation and communication.

The added value to the social inclusion methods in teaching urban planning is the FAD-STU's current participation in the project Erasmus+ Creative Danube. Within the project, the Faculty is responsible for developing social inclusion assessment methodology, for its application to the teaching process and its testing within the assignment of studio work.

THE CONTEXT OF SOCIAL SUSTAINABILITY IN URBAN PLANNING AND SPATIAL PLANNING

Social integration is a topical issue, especially in countries with a high degree of social diversity and, more recently, with an increase in migrant inflow. It is widely researched in political, economic, social and cultural sciences. Moreover, it is especially relevant in architecture, urbanism and spatial planning, i.e. the disciplines that shape the environment. Social inclusion and a sense of belonging have been identified as key values inseparable from creating social sustainability in urban communities. Inclusion is based on accepting diversity in terms of gender, nationality, race, language, social background, performance or disability.

On the contrary, social exclusion can be seen as the opposite of social inclusion. It represents a lack of resources, rights, goods and services for certain groups of the population, as well as their exclusion from participating in the normal economic, social, cultural or political activities available to the majority of people in that population. Exclusion affects the quality of life of individuals, as well as the equality and cohesion of society as a whole [1].

Researchers - urban planners and sociologists have been dealing with the topic of social inclusion and diversity since the 1960s, with the turning point marked by the activities and publications of Jane Jacobs [2]. Since then, this issue has become a serious agenda for sustainable urban development in the following years.

In Slovakia and in post-socialist countries in general, the topic began to be recognised as an integral part of spatial planning and architecture only in the early 1990s. After all, the socialist establishment tried to build a classless society and aimed at egalitarianism, reflected in the construction of cities, characterised by massive and uniformed housing estates. After the democratisation of society, topics such as marginalised groups, the isolation of new suburbs from the original settlements or the overall differentiation of society came to the fore.

Inclusion and diversity are two poles of the same issue. Diversity can be perceived either as a *source of possible conflict and tension, or as a positive value that can lead to sustainable growth of the locality and society* [1]. The role of architects and urban planners is to create sustainable settlements that are based on an inclusive environment without social and spatial fragmentation and segregation.

The professional literature on urban issues identifies the concept of diversity, its meaning and research goals differently depending on the discipline (architects and urban planners, planners, sociologists, sociologists, cultural anthropologists). Diversity can refer to many aspects, and therefore, it is important to examine it in a wider context. The FA-STU strives for this holistic approach in both its teaching and research activities. Diversity is a fundamental feature of systems and should be perceived as the base of their stability. In the event of crisis, the system based on diversity remains functional, by contrast the uniform system collapses.

Therefore, socially sustainable development has to be based on a harmonious civil society that creates an environment conducive to the coexistence of culturally and socially diversified groups. Social integration contributes to improving the quality of life of all segments of the population [3]. The following is essential for social balance:

- To provide facilities and services accessible to all groups of the population in suitable distance, thereby supporting the integrity of communities.
- To eliminate spatial segregation and social polarisation, thereby supporting the vitality of environment;
- To facilitate accessibility of urban transport for all groups of the population, including handicapped, thereby supporting the effective city operation;
- To provide employment with the diversity of economic activities, thereby supporting the viability of the city, and its public spaces [3].

SOCIAL INCLUSION ISSUES IN EDUCATION IN THE FAD-STU

In this article, the authors present the teaching of social inclusion in the FAD-STU with emphasis on the urban dimension, and in the context of current scientific trends and practical requirements. This education prepares graduates to adequately formulate, design and guide progressive approaches to a sustainable environment of cities. The issue of social inclusion is especially valuable and irreplaceable in the FAD-STU. It is realised both through theoretical subjects with practical verification of knowledge within exercises, but especially through design studio work, so crucial in architectural learning.

Basis for the Introduction of the Topic - Social Inclusion

The topic of inclusion in the FAD-STU is linked to several areas of teaching. Firstly, in universal design, which has a particularly strong background and tradition in the Faculty, supported by practice, research and publishing activities [4]. Within the teaching of architecture, teaching related to social housing also has its place. The topic of social inclusion in the context of urban scale is partly reflected in the teaching of several subjects (Urbanism 1, Studio Seminar, BSc Thesis, Public Spaces), but especially in practical teaching in urban design studio work.

The vertical studio Vitková - Špaček also deals with the topic of social inclusion. The studio is focused on the issue of sustainability in the context of creating the environment from the urban scale to the interior. Within the issue of sustainability, it centres on energy sustainability, social and cultural sustainability, and operational and spatial efficiency of urban structures. The complexity of the issue is supported by interdisciplinary penetrations.

From the point of view of social sustainability, the main topics applied in studio work include those of social inclusion, the prevention of marginalisation and of crime. Within the framework of cultural sustainability, the studio develops the issue of *genius loci* and identity. These topics are supported by both previous and current grants and, of course, teachers' publications, who work in the studio Vitková [5], Smatanová [6], and Legény et al [7][8]. It was the concept

of social and cultural inclusion that received special attention in the studio in the last two semesters through thematic assignments.

Social Inclusion in Relation to the Choice of Assignment Topics

The choice of assignment topics is also important for the development of skills to solve social inclusion issues. In the last two years, it has been treated with increased attention in the vertical studio. Within the topic of *Bratislava 2050*, students were looking for solutions to stop the current *unsustainable* development. In their projects, they verified changes that could lead to a reduction in CO_2 emissions to the atmosphere as part of the transformation of urban structures and the design of buildings. One of the areas that students addressed was developing and supporting communities. The complex, diversified and multifunctional environment is one of the pillars of the city of short distances. This concept eliminates the demands on transport and the resulting undesirable phenomena, and it supports the city's vitality.

In the 2020-2021 academic year, students had the opportunity to develop the topic of *frontiers*. The topic of borders was perceived in a broader context, not just the divisive one, but rather in terms of interconnection and influence. The topic thus enabled students to depart from the commonly used schemes and to look for new scenarios of urban development in the context of sustainability and its future resilience. Again, the issue of social and cultural diversity and inclusion was particularly timely in this context. Moreover, it was thematically and territorially linked to two international projects, Creative Danube and DANUrB+.

Due to the studio's specific focus, connections have been created between education, research and practice, as the topics and localities are linked to real and current problems of specific cities and municipalities. Such an approach can be described as a form of inclusive education due to the applied concept of vertical studios, where students of different years, different specialisations and different study programmes work together. The studio in each year is supplemented by a studio seminar to master the principles of research in the aforementioned issue and at the same time to strengthen the theoretical basis of design.

Methods of Teaching Social Inclusion

When incorporating sustainability and social inclusion into architectural design education, it is important to capture the first impressions related to the context through mastering the theory and key concepts of social sustainability in urbanism and architecture. Observation and analyses related to the environmental context compounded with the involvement of local government representatives, residents, interest groups and entrepreneurs are vital. Equally important is the application of innovative methods in data collection and mapping (including specific methodologies and the use of digital tools) [9]; the formulation of the problem and specifying the focus of the work; and last but not least is the support of experimentation [10] and feedback during the design process.

INNOVATIONS THROUGH INTERNATIONAL EDUCATIONAL ACTIVITIES

The FAD-STU is involved in international educational projects, which aim to innovate the content and methods of teaching in various areas of education. This kind of projects is a positive international confrontation that brings valuable stimuli, and increases participation in international students' workshops [11] and competitions [12]. Currently, the authors are implementing the Creative Danube project within the Erasmus+ programme focused on the transformation of small and medium-sized towns on the Danube River. The post-industrial small and medium-sized towns around the Danube are characterised by a high rate of migration, economic stagnation, and thus a change in their demographic structure.

On the other hand, these cities and regions are rich in underused cultural and natural heritage, which represents significant potential for their transformation and development. At the same time, this area is characterised by the intertwining of ethnicities and cultures, due to their border position between the states of the Danube region. The area's conditions thus represent an ideal study environment for the verification of methods focused on inclusive urban development. The aim of the Creative Danube project is therefore to develop a framework for a training module directed at assessing the inclusive development of Danube cities.

The preparation of this model has several phases:

- The preparatory phase is about new methods for assessing the complex spatial urban structure of the Danube region. It is based on a comparison of the experiences of the project partners in teaching in their home faculties at all levels of study. The project partners prepare a teaching module and a set of testing methods through information sheets on subjects and teaching methods, and through discussions of the involved teachers. Both teachers and students are involved in the analysis.
- The implementation phase is about the verification of the testing methods in joint workshops. *Their goal is for students to gain more confidence in the common methods of their discipline and to learn about the methods of other disciplines. They will learn how to transfer other methods into their own discipline. Finally, they will evaluate used methods through reflection* [13].

- Testing, evaluation and setup. The testing of the new methods of creation and evaluation of the environment is carried out in selected small and medium-sized Danube towns as part of joint workshops, as well as within studio work at partner faculties. The test results are continuously evaluated and commented on by the project partners, including both teachers and students.
- Finalisation. After the final evaluation and comments on the application of the methods of inclusive development, an educational material will be prepared, which will serve as a teaching aid.

Contribution of the FAD-STU to Social Inclusion

The FAD-STU is within the project Erasmus+ responsible for part of the testing, evaluation and setting up of the methodology for creating an inclusive environment. The STU team developed a methodology for environmental assessment focused on the analysis of accessibility and the social structure of residents and visitors. Students apply these methods in joint workshops carried out within the Creative Danube project, as well as in studio work in their home faculties.

Evaluation covers Several Areas

Transport evaluation relates to the development, accessibility, approachability and barrier-free of public transport (rail, bus, boat), including the location of public transport stops, bicycle transport, static transport.

The evaluation of public spaces is carried out in relation to the degree of their accessibility, activity of the ground floor, barrier-free movement, safety and the occupancy density of public spaces.

The evaluation of the population demographic structure, the degree of social inclusion and respective diversity refers to the following aspects:

- Gender, age, educational, social, national structures;
- Degree of diversity and exclusion of social groups;
- Structure of economic activities, rate of employment, trades and the rate of growth or recession;
- Degree of openness of self-government;
- Structure of cultural and educational institutions, associations and societies;
- Population involvement and the natural formation of communities.

The evaluation of urban structures is focused on their character in terms of compactness, openness, permeability; in terms of their diversity including spatial and functional aspects; in terms of their safety; and in terms of exclusion.

In relation to social inclusion and diversity, it is also necessary to investigate the socio-cultural development of the place, memory and the relationship to the place. It is also important to examine the structure and behaviour of visitors.

The topics of safety, universal design, the issue of excluded (marginalised) communities are long-term research areas in the Faculty, cyclically tested in the pedagogical process, as well as in practice and the research results are subsequently published.

Figure 1: Student project, Co-working in the Bratislava Old Town. Permeability of the city - for a good life. (Student: D. Podešva, 2019).
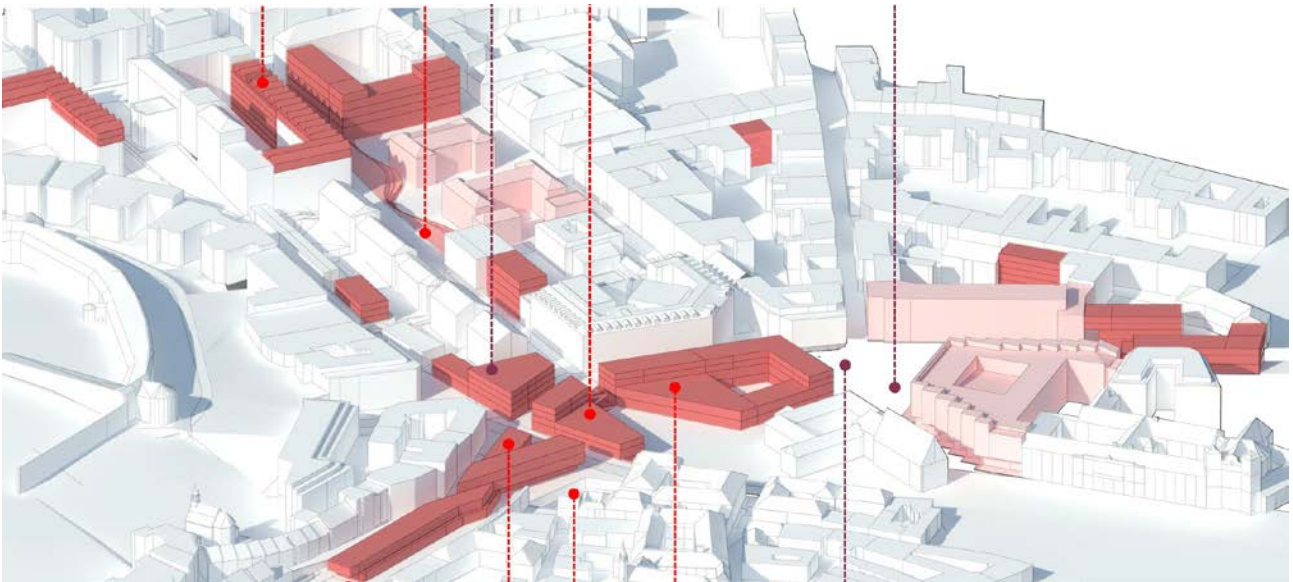
Figure 2: Student project, Co-working in the Bratislava Old Town - for a good life. (D. Podešva, 2019).

INNOVATIVE TOOLS

As part of research in the Faculty of Architecture and Design at the STU, dissertations on innovative methods of evaluation and creating urban environments directly by residents are being processed. These methods are applied and tested in teaching.

Platform for Emotional Mapping

A special approach to the evaluation methodology of public spaces that can be provided by a PhD student in the FAD-STU is a public participation geographic information system (PPGIS) platform for emotional mapping. Emotional maps represent spatial on-line tools to engage citizens in the participatory city creation and are the basis for empirical research involving those citizens in the collection of information and opinions about the city, its public spaces or buildings [14]. The PPGIS platform is based on the principle of GeoParticipation [15] and on the use of MyData [16]. Their functioning principle consists in inserting positive - negative opinions on a given space in the form of points and lines into on-line maps or models, which allows to generate geographically localised characteristics of the area. Such a graphic projection of citizens' opinions provides a better overview of the perception of city spaces by their users.

In addition, participants have the opportunity to comment on their views, which helps for better understanding of reasons for this perception. The objectivity of the collected data increases with a higher number of participants across different demographic and socio-economic groups [14]. The PPGIS platform makes it possible to map the image of the city not only at the whole city level, but also its part, and it should not be a one-time, but a permanent process. This makes it possible to evaluate the development of the relationship to individual areas of the city, in the process of their changes. Emotional maps help to identify the prevailing perception of individual urban spaces, the relationship to the place - a kind of collective identification with certain spaces. Such an approach enriches quantitative data (e.g. mobility statistics or demography) with a qualitative dimension.

Placemaking Tools

As part of joint workshops in co-operation with active communities, PhD students in the FAD-STU offer testing of placemaking methodology. Placemaking is a form of participatory planning, based on the activity of residents, neighbourhoods or communities, regardless of self-government, in the creation of public or community spaces. It tests sustainability - the viability of temporary changes in the area, with minimal demands on resources, preparation of documentation and the actual implementation. Successful solutions form the basis of sustainability by the community or neighbourhood embracing them. *Placemaking strengthens connections between people and the places they share* [17].

Different placemaking tools are verified in the process of various interventions, as part of smaller projects in which the students participate. One of the useful tools for evaluating public spaces is the *space sensation* method. It offers several forms of observation and knowledge of public space through one's own experience or observation of a third party [17].

Mapping via Smartphones within the Creative Danube Project

During the workshop that was part of the Creative Danube project, colleagues from the Vienna University of Technology offered an innovative method of data collection via the OsmAnd application, which is available for

Android and iOS platforms. The method is applicable in different contexts and localities, while generating comparable outputs. This methodology was verified on two topics related to inclusion:

- Through mapping the walking accessibility of selected public spaces in the urban centres of partner cities in relation to existing monuments [18];
- Through mapping the accessibility and safety of cycling within selected routes [18].

Students in individual cities mapped selected routes in terms walking and cycling accessibility. They tracked the data through their mobile phones. Subsequently, they exchanged and evaluated the obtained data. They collected data via their smartphones with a camera and GPS receiver via the OsmAnd application [18]. Due to the situation induced by the Covid-19 pandemic, the workshop was conducted on-line. The method of data collection applied by the students made it possible not only to evaluate the given data, but also to share them remotely. This method thus facilitated professional communication between students in individual cities [19].

CONCLUSIONS

Respecting and reflecting on the diversity of the population and their needs is a natural part of urban creative and planning practice in advanced democracies. The socially sensitive planning that takes into account the diversity of urban lives has changed, developed and improved over the years, but also gone through crises and problems. Self-government plays an important role in the spatial planning process, which is a tool for guiding and regulating urban development and transformation. It initiates, directs and manages the whole process. In developed economies, it is often fulfilled through the implementation of public benefit investments, public spaces or social, cultural, educational facilities or communal housing. However, this public benefit aspect, which local governments together with architects are obliged to defend, is often subject to routine, preference of *visible projects* or pressure from various interest groups.

The approach of public administration and its competence in territorial development management, as well as master plans and projects prepared by architects have a fundamental impact on the quality of life in the city. They decide on the accessibility of services and equipment to the population, on the routing of transport infrastructure, but also on the integration of social groups. However, they have particular effects on disadvantaged groups [20]. The creation of integration policies has become the role of municipal representatives, and thus part of urban planning. It is part of a responsible approach to creating the urban environment, and is therefore an integral part of the education of architects and urban planners [21][22]. The aim of planning, as well as the concept of creating a sustainable city is …*to ensure favourable and (economically) prosperous development of the city, to help solve diagnosed social problems, as well as to create a place identity and mediate the integration of urban society* [23].

Graduates of architectural schools need to acquire the ability to diagnose society's problems and seek solutions to them, so that the intention of *planning is for the people* does not just become a cliché [24]. In view of this, it is necessary to prepare generations of receptive, responsible and principled architects and urban planners, able to create a sustainable environment for people and act responsibly towards themselves and others. Further, they need to be prepared to direct the whole process (in the position of a representative or public administration employee) or its implementation (in the position of a developer or their team member). This should be the main role of urban planning and architectural education, as evidenced by the FAD-STU's continuous efforts and projects.

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