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ArchéA
Architectural
European Medium-sized City
Arrangement

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Erasmus+ Programme
of the European Union

IO3
2021

Manual of best practices for a blended flexible training activity in architecture for higher education institutions

UNIVERSITÀ DI PARMA
DIA Dipartimento di Ingegneria e Architettura
ALMA MATER STUDIORUM UNIVERSITÀ DI BOLOGNA
Silesian University of Technology
RWTH AACHEN UNIVERSITY
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FAMagazine. Research and projects on architecture and the city

ArchéA. Architectural European Medium sized City Arrangement

Editor: Festival Architettura Edizioni, Parma, Italy

ISSN: 2039-0491
DOI: 10.12838/fam/issn2039-0491/n0-2021

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This volume returns the results of the Intellectual Output 03 of the research project “ArchéA. Architectural European Medium-sized City Arrangement”, with the aim of analyzing and restating the state of the art achieved in the field of flexible mixed training in architecture, strongly encouraged by the emergency period of the Covid-19 pandemic. The result is a collection of good practices carried out internally and externally to the ArchéA partner network, in the context of higher education institutions, made possible by new virtual tools capable of mediating teaching and mixed and flexible learning around the disciplines related to the project.

ArchéA. Architectural European Medium-sized City Arrangement

Project Reference: 2018-1-IT02-KA203-048305
Programme: Erasmus+
Key Action: Cooperation for innovation and the exchange of good practices
Action Type: Strategic Partnerships for higher education

https://ec.europa.eu

This manual comes out as a special issue of the “FAMagazine. Researches and projects on architecture and the city”, associated partner of the ArchéA research project.

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edited by Enrico Prandi and Paolo Strina

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State of Art: the experiences of ArchéA's Network

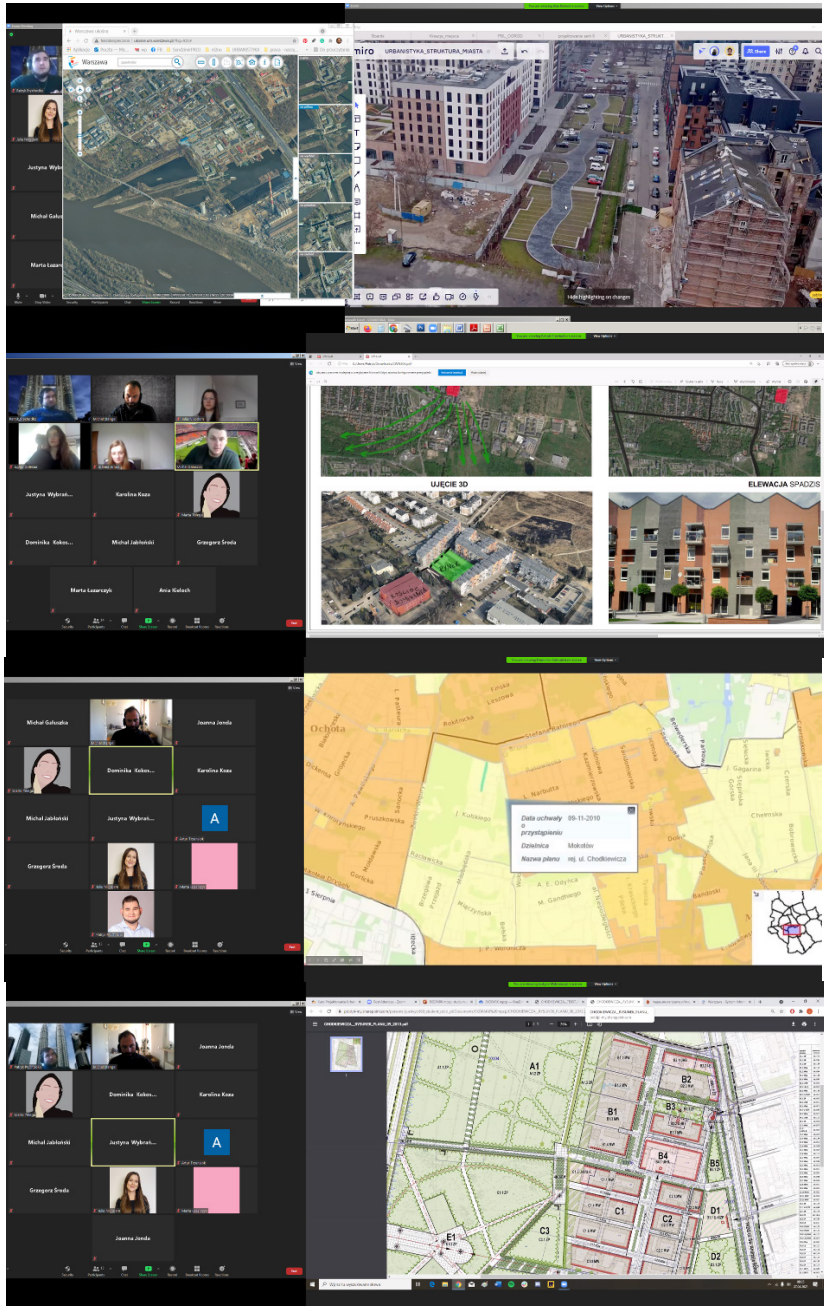

Fig.01 Online ZOOM discussions about the structure of selected contemporary urban developments - seamless blending of various imaging tools: online maps, aerial images, moodboards, own sketchy analyses, municipal land use geo-portals and master-planning **documents**

DOI: 10.12838/fam/issn2039-0491/n0-2021/839

Michał Stangel

Blended training activities in on-line and on-site exploration of the urban structures

Silesian University of Technology, Poland

Abstract

Training activities at the Architecture Faculty of Silesian University of Technology have shown the success of extending educational forms beyond traditional classes, and have incorporated interactive and immersive methods, such as workshops, site trips, Project Based Learning, interdisciplinary seminars, etc. Such practices resulted in better engagement from the students and generally improvement of the quality educational experiences. However, the lock-down and imposing of distant learning since March 2020 have largely limited the innovative teaching forms and limited them to online interaction through various communication platforms. While the university seems to have adapted very well to the new situation in terms of lectures, design studios and drawing consultations; it proved quite challenging to realize engaging seminars and vivid discussions.

The paper presents authors search and experiments with methods of extending beyond basic content to fruitful discussions and evoking interest and enthusiasm in the students, to find immersive educational methods in the new situation. These included testing various available online tools for communication, teamwork and urban analyses; deliberately blending online communication with traditional paper sketching and note taking; online workshops with invited guest speakers; as well as mixing online classes with real-life on-site activities and analyses performed by the students. An opposite situation was also tested, where the teacher was located in the urban space, lecturing and recording clips for the *ArchéA* online course. The evaluation of the course has shown that the students have highly appreciated the created training milieu, which resulted in their commitment, activeness, eagerness to both sharing own experiences and teamwork, and generally evoked the desired sensitivity and interest in urbanity and understanding the urban structures.

Teaching architecture and urban design at the Architecture Faculty of Silesian University of Technology has been incorporating interactive and immersive methods, such as workshops, field trips, Project Based Learning, design studios with realistic clients, competitions, interdisciplinary work, guest presentations, etc. Experiences has shown the success of extending educational forms beyond traditional classes, which resulted in better engagement from the students, satisfaction for teachers, innovative outcomes with research potential and generally improvement of the quality educational experiences (Stangel, Witeczek, 2015).

The outbreak of the pandemics and the lockdown introduced in Poland in March 2020 resulted in closing the faculty for the students for three semesters and switching to distant learning. It seamed that after a short period of anxiety, the university has adapted surprisingly well to the new situation. Students were happy with the convenience of learning from home and saving of time for travel and classes. It turned out that distant learning was quite efficient in both lectures (live and prerecorded) and project consultations. However, what was most challenging were the seminars and discussions, and maintaining an intellectually stimulating, immersive and creative learning environment in the distant learning conditions.

Immersive, flexible training activities - theoretical framework

Education of urban designers and planners requires an understanding of complex, interdisciplinary urban issues and mechanisms of development, as well as a range of soft capabilities such as team work, negotiating and continuous learning. A successful process of education shall allow gaining knowledge, competencies and practical skills. Gordon Lindsay (2009) describes three necessary elements of such learning experience as:

- *Immersion –students are immersed in a project whose "scope and complexity is greater than the capacity of the individual student". In other words the projects are too complex for one student to be able to complete them on their own.*
- *Exemplarity – the work and processes related to the project is a good example of what is found in their profession.*
- *Social contract – while being accountable for their own learning, students also share responsibility within the team and learn from each other in the process.*

The described search for meaningful educational experiences recall the psychological theory flow (Csikszentmihalyi, 1990). It describes the conditions for optimal experience and efficient activity, which simultaneously gives satisfaction (in various aspects of life, including work and education). Csíkszentmihályi argues, that optimal effects and satisfaction results from performing realistic, concrete tasks, which have right defined goals, where feedback is available, and which give the possibility of using the possessed skills. It seems that this principles applied to urban design education, can result in higher quality, efficiency, motivation and other positive outcomes of the architects education process.

On entry levels of education it is important to teach not just design basics, but to give some experience and understanding of the complex, interdisciplinary mechanisms that form urban space. For more advanced students, working in teams and undertaking design challenges, in an environment similar to real professional life gives best results. In general, in order to evoke students engagement and interest it urbanism, it seems essential to provide meaningful and engaging educational experiences.

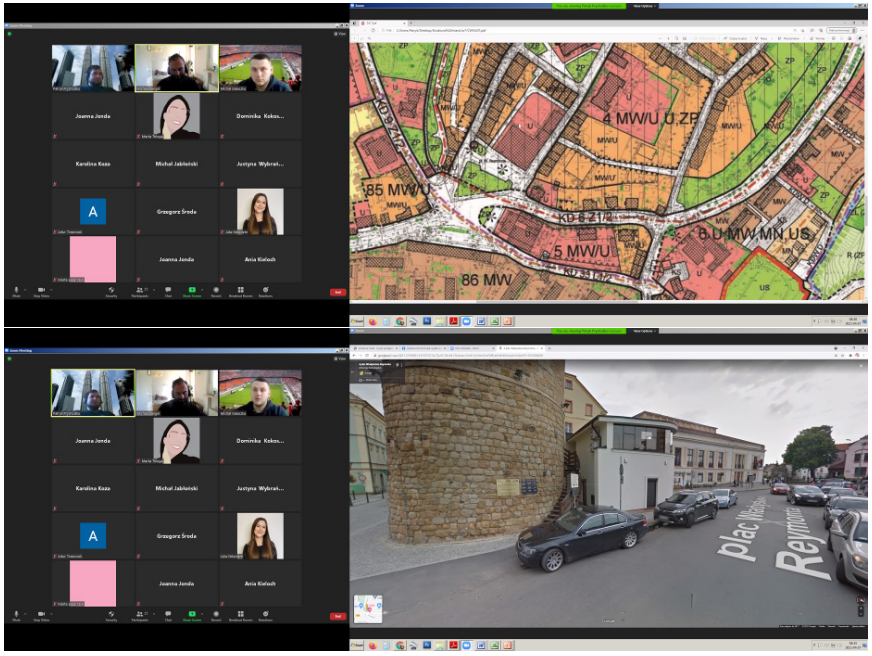

Fig.02 Seamless comparison of planning situation and built reality, which led to some unexpected discoveries of evident clashes and planning mistakes

Emphasizing real-live urban analysis and evaluation in urban design and planning subjects at the Faculty of Architecture in Gliwice has been effective in evoking and strengthening students' sensitivity to urban space. For several students the methods resulted in a growing interest of urban design issues, and pursuing urban design specialization within their elective courses and master thesis topic. Students who successfully accomplished the entry projects and tasks were encouraged to continue with realistic design challenges at the design studios, competitions, workshops, diploma projects etc. Upon completion they were offered the possibility to conceptualize their work in research papers, as well as to apply for grants for further research (Stangel, Szóstek, 2015).

Understanding the urban structure

The course of "Urban structure" gives a comprehensive introduction to various aspects of cities. The course has been run by professor Zbigniew Kaminski, who has encouraged teachers to test various methods and exercises with particular students groups. The basic exercises involve analyzing and critique of various systems of a given city, such as land use, urban form, transportation, nature or public spaces. Discussions with students shall give them awareness of the interdisciplinary issues beyond spatial, such as economics, demography, politics etc.

The focus is on mid-size Polish cities chosen by the students. However, the students are encouraged to also refer to distinct international examples of cities, particularly those they experienced first-hand, when travelling. Before the pandemics and lock-down, several issues were experienced on-site in locations in the centre of Gliwice. For example, urban transportation was experienced by site visits, on site analyses of streets and crossroads, as well as a visit to municipal Traffic Management System and Surveillance System, which gave a new perspective on how the street grid works and is managed. The relation of urban real-estate and build form infill was concretized in a site visits of current developments and discussion with a real estate developer. In this way the value of downtown location was not just an abstract idea, but a true business opportunity. The site visits proved to be a valuable experience for the students, who acknowledged and appreciated the practical hands-on experience.

Within the lock-down and the pandemic situation, the university has worked out procedures for distant teaching and supplied teachers and students with licenses for MS Teams and ZOOM. These, together with a previously operating Moodle "distant learning platform" were to be the basic tools for distant learning. As a basic tool for communication ZOOM enabled lectures, discussions, presentations as well as group work in break-out rooms. As students were online and using their own computers, it allowed them to access all sort of online resources such as: online maps, aerial images, Pintrest moodboards, own sketchy analyses, municipal land use geo-portals and master-planning documents, as well as an endless amount of documents and websites. The students have shown a great flexibility and skills in seamless blending these various sources in their presentations and discussions.

Flexible navigation between various sources of information stimulated discussions and exploration and allowed looking at the same spatial issues at different perspectives.

Some of the interesting discoveries were evident clashes between planning situation and built reality, such as in the city of Złotoryja, when a plan description error allowed for building a modern

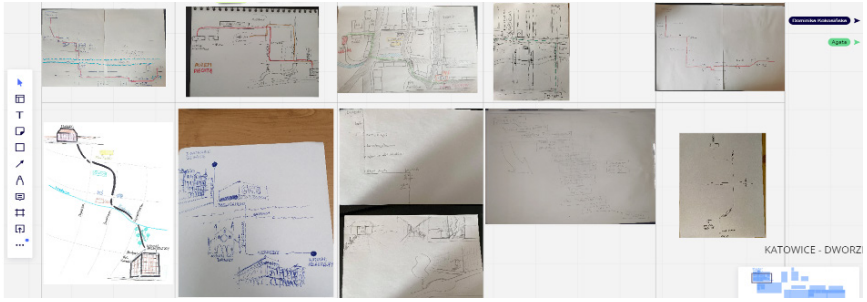

Fig.03 Combining traditional sketches with online presentations and discussions

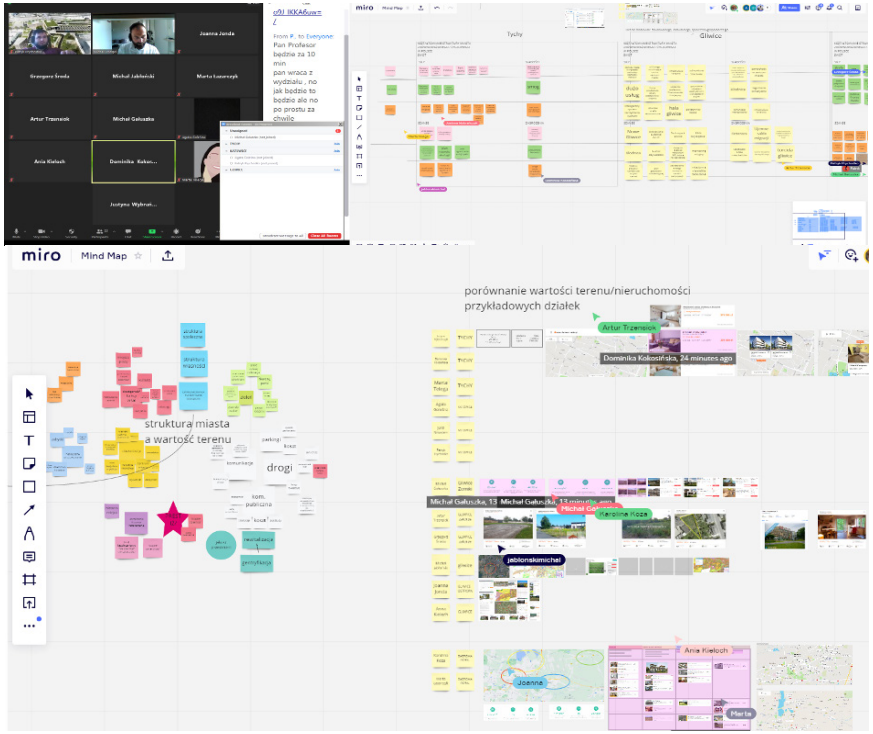

Fig.04 Brainstorming, sticky notes and visual moderation using Miro. Blending ZOOM transmission with the feeling of sticky notes visual moderation

building attached to a listed historic monument.
Within the proliferation of available online techniques, however, some methods were tested to deliberately constrain the media and let the students focus on their spatial experiences and memories. Such was the classic exercise based on Kevin Lynchs The Image of the City (1960), when the students were asked to draw from memory, not looking at online maps, a commonly frequented way from the railway station in Gliwice to the architecture faculty. The sketches were then put together and compared and discussed, leading to the introduction of Kevin Lynchs renown typology of paths, edges, districts, nodes and landmarks.
One of the challenges of online teaching was to perform team workshops and brainstorming sessions, which in personal meetings would normally involve direct interaction with sticky notes and flipcharts and enable instant visual moderation. A very helpful tool came in form of Miro - an online collaborative whiteboard platform. Blending ZOOM with Miro in tratining actually enabled an online equivalent of visual moderation. To encourage students to tap into their direct experiences and look at their urban surroundings in new ways there were exercises in which students were asked to go outside and perform specific tasks near their home. In the first exercise, students, based on Kevin Lynch's earlier discussion of pattern language, explored similarities and differences in patterns of space such as street, frontage, dominant, entrance zone, etc. Students performed photographic analyses in the field, which they then presented to the group in front of the computer.
A similar exercise involved analyzing selected public spaces along with their surroundings using the Place Game method, by Project for Public Spaces (2000). This time the students worked on printed forms in the field and directly transmitted the results of their work and commentary on the places via cell phones. Some students managed to meet and work in pairs or threes. The direct transmission and sharing of experiences allowed students to relate their knowledge to their direct

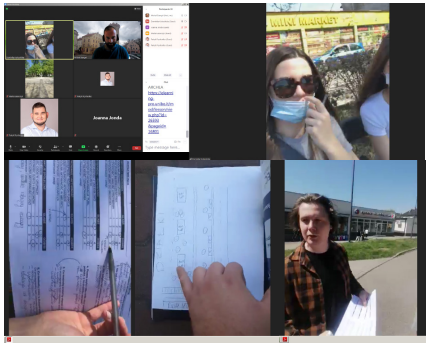

Fig.05 Site analyses blending phone transmissions with paper surveys and sketches

experience and brought freshness and enthusiasm to the class.
An opposite situation was also tested, where the teacher was located in the urban space, lecturing and recording clips for the *ArchéA* online course. Again, the urbanist perspective in the commentary to the pandemic images of places certainly known to the students, in the centre of Gliwice, allowed blending personal experiences with professional knowledge and perspective.
The course was supplemented with guest presentations and workshops with invited experts from external institutions. In the discussed course it was three guests sessions. Agnieszka Czachowska from Sendzimir Foundation, a leading Polish environmental think-tank presented the issues of urban green and blue infrastructure. The students were applying the insights directly into their analyzed sites and presenting possible applications, with experts feedback.
Other guest speakers were Jakub Świdziński from Medusa Group, a large architectural firm, presenting new housing districts and Michał Adamczyk from the Municipal office of Ruda Śląska, responsible for urban regeneration. With the loosening of the pandemic restrictions it was later actually possible to organize real on-site visits to both Ruda Śląska regenerated brownfield sites and Medusas "First District" - a housing estate on former coal mine site in Katowice.

Evaluation and discussion

The course of the blended training and its components was evaluated by the students in a final survey based on the "starfish retrospective" method. Students were asked to summarize their experiences answering five questions: what they liked, what they didn't like and would recommend to abandon, what could be improved, what could be added; and finally: what were the personal take-aways from the course. Representative answers are listed below:

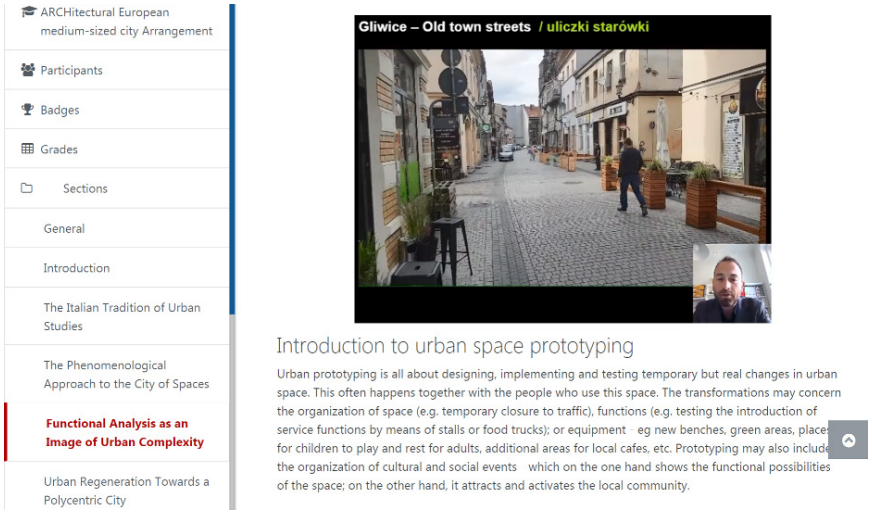

Fig.06 Video clips with comentary prerecorded on site used within the ArchéA online course ARCHitectural European medium-sized city Arrangement, section Functional Analysis as an Image of Urban Complexity, lesson 4 - Urban space prototyping. https://digitale.unibo.it/course/view.php?id=154&section=4

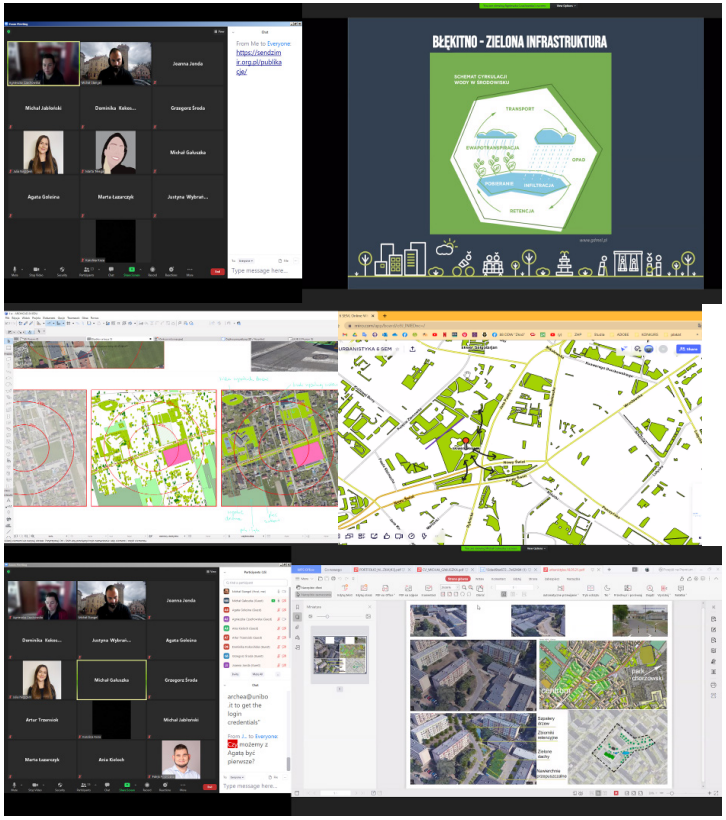

Fig.07 Guest presentation and online workshop about urban green and blue infrastructure. Agnieszka Czachowska, Sendzimir Foundation

We liked:

-The opportunity to gain urban planning knowledge and practical experience;
-Discussing various examples of spaces and projects as an introduction to the class;
- The conversations created a good atmosphere during the classes;
-Team work;
-Partner approach, discussions instead of assignments;
- nFocusing on specific tasks without spending a too much time on graphic design;
-Analysis of our own cities and neighborhoods;looking at the spaces around us with "fresh eyes";
-Workshop approach to classes;
-Working in small groups on a given topic, but discussing it together in a larger group;
-Various forms of classes;
-Possibility of analysis and comparing of various cities
-Learning through conversation.

We didn't like, would abandon

-Lack of contact classes;
-That I did not read everything that was recommended

We would add o/improve:

-If we could present our work in the same classes as we prepare it;
-A common group, for uploading materials/ topics that intrigued us, interested us;
-Live workshops;
-Even more field trips;
-A proposal to add as a "fixed point" field activities for the entire course;
-Even more classes with invited guests;
-Not enough books I've read to describe how much I enjoyed it.

What are your personal take-aways from the course?

-drawing attention to aspects that we had not noticed before - the work of officials, the actions taken and their importance, involvement
-paying attention not only to beautiful architecture, but also to your immediate surroundings and urban conditions
-paying attention to the city around us - public spaces, greenery, buildings, landmarks
-ability to search for materials
-view on the real work and tasks of urban planners
-sharing the teachers experience; showing own work and projects develop live
-time to stop, to be aware of different things in the city
-going out into the field, the opportunity to see the city live

Conclusions and recommendations for blended, flexible training activity and practices

Education of architects in understanding the complexities and potential of urban structure requires not only knowledge and skills, but also - or perhaps, most of all - a sensitivity towards several aspects of space. The course Urban Structure was aimed to inspire, develop and nourish such sensitivity, by a variety of means - including several team work assignments and field trips and exercises. Switching to distant learning in the pandemic realities brought a thread, that the course will be severely limited. Te author was seeking to find equivalent forms in blended training, which would be beneficial for the students.

It turned out that the situation when students, rather than in class, meet on-line, being in front of their computers, actually brought about several possibilities. The students were at their homes, but could go out individually and perform several assignments in their neighborhoods. Also the teacher could at times go out and record real-live urban space situations. Online tools enabled, despite the difficulties, to maintain a creative, teamwork atmosphere of curiosity, reaching to own experiences and stimulating sensitivity and empathy.

Fig.08 Site visit with social distancing - "First District" in Katowice with Jakub Świdziński, MedusaGroup

Acknowledgements
This article was based on the blended training experience within the Urban Structure studio with the group of students, including: Agata Goleśna, Patryk Prychodko, Michał Gałuszka, Joanna Jonda, Anna Kieloch, Julia Nikodem, Grzegorz Środa, Artur Trzensiok, Michał Jabłoński, Karolina Koza, Marta Łazarczyk, Justyna Wybrańczyk, Dominika Kokosińska, Marta Telega. The author would like to acknowledge their commintment and input within the course, as well as valuable insights and conclusions in the studio evaluation. The author would also like to thank the quest speakers invited to the course: Agnieszka Czachowska, Sendzimir Foundation; Jakub Świdziński, MedusaGroup; Michał Adamczyk, Municipal office of Ruda Śląska.

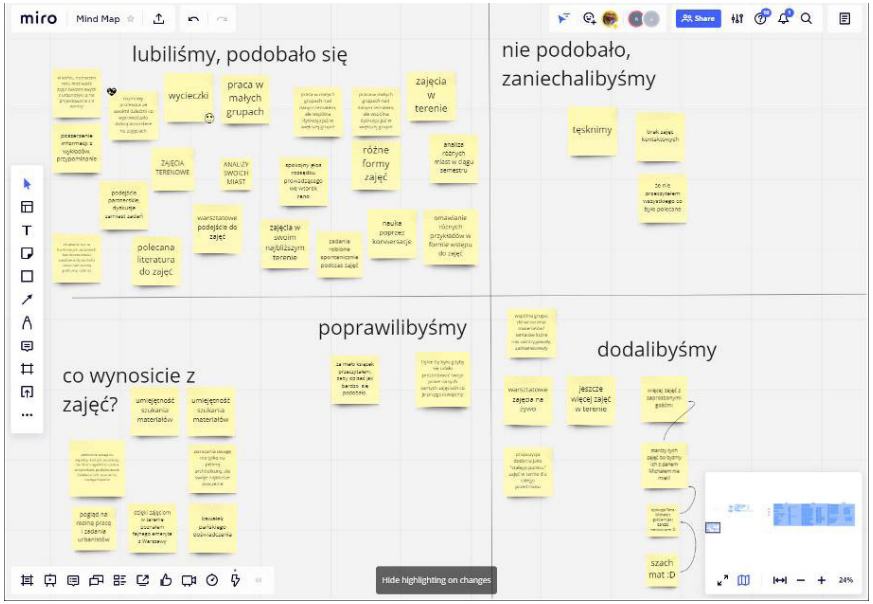

Fig.09 Final evaluation of the seminar using Miro board09

Bibliography:

CSIKSZENTMIHALYI, M. (1990) – *Flow: The Psychology of Optimal Experience*. New York, Harper and Row.

LINDSAY G., H. BLYT (2009) – *Defining, profiling and accommodating Learning Diversity in an International PBL-Environment*, Active Learning for Engineering Education (2009).

LYNCH K. (1960) – *The Image of the City*. Cambridge MA: MIT Press.

STANGEL, M., SZÓSTEK A. (2015) – *Empowering citizens through participatory design: a case study of Mstów, Poland*. ACEE Archit. Civ. Eng. Environ. vol. 9 no. 1, 48-58.

STANGEL, M., WITECZEK A. (2015) – *Design thinking and role-playing in education on brownfields regeneration. Experiences from Polish-Czech cooperation.* ACEE Archit. Civ. Eng. Environ. vol. 12 no. 4, 19-28 (2015)

PROJECT FOR PUBLIC SPACES (2000) – *How to Turn a Place Around. A Handbook for Creating Successful Public Spaces.*

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