

SHORT TERM SCIENTIFIC MISSION (STSM) SCIENTIFIC REPORT

This report is submitted for approval by the STSM applicant to the STSM coordinator

Action number: TD1408

STSM title: “Analysis of barriers and enabling factors for inter – and transdisciplinary knowledge in urban curricula across Europe”

STSM start and end date: 10/09/2018 to 14/09/2018

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PURPOSE OF THE STSM:

(max.200 words)

As an active member of the EU Cost action INTREPID (TD1408) I am chairing working group three on enablers for inter- and transdisciplinary urban research. During the previous three years of INTREPID, my interest in the impact of urban development on how we educate the planners of the future has increased.

Higher Educational Institutions (HEI) should prepare the next generations to respond to societal challenges related to sustainability, promoting transformative knowledge within society in line with SDGs, studies confirm that there is still a long way to go to achieve this great transformation (WBGU, 2011). Despite various international initiatives, notably those launched by UNESCO since Agenda 21 was approved in 1992 and which include the Decade of Education for Sustainable Development (2005-2014), progress is unsustainably slow (UNESCO, 2014). In this context, despite the scale and pace of urbanization requiring urgent shift toward sustainable thinking, urban curricula across the world have been reluctant to integrate the necessary content and skills such as sustainability and interdisciplinarity (Bina et al., 2016).

Within INTREPID, more specifically working group 3, a smaller group of scholars reconfirms the urgency to address the obstacles to the production of inter- and transdisciplinary knowledge, seen as precondition to enable real transformative knowledge and consequently greater sustainability (Bina et al., 2017, Verdini et al., 2018).

The STSM was successfully conducted in September 2018.

AIM AND OBJECTIVE

The aim of the STSM was to setup and to conduct a survey among INTREPID members from all 28 countries on urban curricula in order to be able to publish a joint paper and to develop recommendations for how to re-think urban curricula in order to enable transformative knowledge and skills for a more sustainable future.

HOST INSTITUTION

The host was the School of Architecture and Cities at the University of Westminster, where the INTREPID member Giulio Verdini is based. He is an experienced scholar in developing urban curricula and is the course leader of the BA Designing Cities: Planning and Architecture.

DESCRIPTION OF WORK CARRIED OUT DURING THE STSMS

Prior to conducting the STSM, we handed in a joint abstract with the title “The ‘urban’ dimension of ESD (Education for Sustainable Development): Which skills and knowledge future University urban-related curricula should pursue?” to the Sustainable Development Solution Network (SDSN) which was accepted. The Call was jointly made by SDSN and the center for Sustainable Development at Columbia University. The full papers will become part of the global report on *Education for Sustainable Development*.

During the STSM in September 2018 we jointly

- 1) Developed a survey for capturing the state of the art in terms of barriers and enabling factors for inter – and transdisciplinary knowledge at HEIs which was circulated among INTREPID members.
- 2) Conceptualized the line of argumentation for the full paper and divided the workload for the following steps to be taken.
- 3) Discussed further cooperation possibilities. Within the frame of INTREPID, we conceptualized a workshop to follow up on the survey we developed. This workshop will include further experts on urban curricula and the inclusion of sustainability and will allow us to expand the scope of the full paper into a research application (see next point).
- 4) Decided to respond to the next Erasmus Plus call from the European Union in March 2019 continuing working on the topic of re-imagining the urban curricula.

The schedule below was followed in detail during the STSM

	10.09.2018	11.09.2018	12.09.2018	13.09.2018	14.09.2018
Morning	Arrival	Meeting: Discussion of available material on surveys of urban curricula	Meeting: Discussion of variables and issues to be covered by the survey	Testing of the first draft of the survey on the urban curricula of the sending and host institutions	Finalization of the survey
Afternoon	Informal Meeting with local partners to discuss the final details of the week	Presentation of urban curricula at the sending and hosting institutions	Development of first draft of the survey	Evaluation and modification of the survey	Departure

Table 1: Overview of the work plan during the STSM

DESCRIPTION OF THE MAIN RESULTS OBTAINED

Based on the dimensions for sustainable education defined by UNESCO (Pedagogy and learning environment, Learning outcomes and ethic of societal transformation), following results of the survey should be mentioned here:

PEDAGOGY AND LEARNING ENVIRONMENT

We refer here to interdisciplinarity as the production of knowledge that integrates at least two disciplinary fields of academic knowledge in order to define problems and solutions using a combination of theories and methods, and we understand transdisciplinarity as the production of knowledge that involves academic and other types of knowledge (thus, integrating content, but also a diverse range of actors and ways of knowing).

For 100% of the respondents interdisciplinarity is present in their respective programmes. For almost all, this is ensured by both the diversity of students and staff background. In a very high proportion, 74%, this is ensured by the presence of modules co-taught by staff with different disciplinary background. Sometimes this is facilitated by the studio setting, which is the main format of teaching for at least 30% of the respondents, while the rest is still based on lectures and seminars.

For more than 90% transdisciplinarity is present in their respective programmes. For almost all this is ensured by engaging with local communities, practitioners and the private sectors and, relatively less but still highly rated, with policy makers (for more than 70% of respondents). For almost 40%, they are frequently or very frequently approached by any of these actors for topics or projects. Normally in most cases the engagement takes form if students are involved in data collection (56%), or if external actors participate in feedback sessions or discussions (48%). Just for 35% they frequently or very frequently co-frame together problems. In almost 50% of cases real world problems are framed by teaching staff without engaging with non-academic stakeholders.

LEARNING OUTCOMES AND ETHIC OF SOCIETAL TRANSFORMATION

Respondents were asked to rate the importance of a series of practical skills for their respective programmes. The result shows that:

- For at least 40% the following skills are very important: collaborative problem-solving in interdisciplinary setting; conceptualization and practical implication; visual communication and team work; thinking in terms of concept and practical application.
- For almost 25% the following are very important: techniques for data collection; assessing and managing urban dynamics; methods for strategic urban development;
- The rest are relatively less important, including: anticipating future needs of society; integrating aesthetic and design into urban processes, devising urban solutions;

Respondents were also asked to rate the importance of ethic and values in their respective programmes. The result shows that:

- For at least 40% the following ethical aspects and values are very important: acknowledging and respecting cultural diversity; environmental responsibility;
- For almost 25% the following are very important: solving the needs of society; consequences of social fragmentation;
- The rest are relatively less important, including: consequences of income inequality; clarifying one's own value; understanding the ethical implication of urban development.

Further, respondents were asked to rate the importance of ICT in their respective programmes. The result shows that for more than 50% it is important or very important and for almost 60% its importance has increased or increased significantly over the last years.

In terms of learning contents there is an understandable convergence towards the most common definition of sustainable development as a balance between economic, societal and environmental aspects of development, despite its shortcomings. However, when it comes to specify more precisely the very nature of the definition of sustainable development supported by urban-related programmes, a bias towards much focus put on environmental issues and just societies seems to emerge, while there is limited or no focus on economic or cultural diversity (this partly echoes findings on urban studies masters courses presented in a previous publication, Bina et al. 2016). Nevertheless, content-wise, while urban-related

curricula seem to have positioned themselves around the broader environmental agenda, shadowing other urgent problems like cultural diversity, this appears to inform the ethical dimension of urban-related programmes quite importantly.

While, on the one hand, there is a consensus that teaching sustainability in urban-related programmes means primarily to deal with climate change and environmental degradation, social justice is also highly rated. On the other hand, the more specific and critical issue of income inequality is instead less perceived as central in teaching sustainability in urban studies, perhaps linked to the weak economic dimension of these courses. This is even more evident in the daily teaching practices of staff involved in the survey, responding to the question on SDGs. It is clear that much attention and importance is given to the SDG goal # 11 “Make cities and human settlements inclusive, safe, resilient and sustainable” and it is intuitive that goal 3, 9, 12 and 13 (respectively on wellbeing, infrastructure, responsible consumption and production and climate action) are quite popular. However, despite a general interest declared, concerning the focus of the curricula, for broader social issues and partially on income inequality, de facto goal 1, 2 and 10 (respectively on end poverty, zero hunger and income inequality) are pretty marginal.

Regarding the contents of urban-related curricula, both traditional urban related contents and the relevance of SDGs were analyzed. In the first case, it is noticeable that the ‘multi-scalar understanding of urban regional dynamics and dependencies’ is the least central in current curriculum, being all very focused on the classic topic of ‘developments and regeneration in the natural and built environment and knowledge of the impact of men's exploitation’. In recent studies, however, the centrality of multi-level governance and collaboration across scales in the urban field has been recognized as of strategic importance for sustainable urban futures (Elmqvist et al, 2018).

Concerning SDGs, the most evident risk is to place particular emphasis on Goal #11 on Cities, in association with topics already well established in the urban field as mentioned before, at the expense of the much wider themes and interdependencies of the SDG architecture. In particular, and again partly linked to the weak economic dimension, we find that a series of correlations with poverty reduction, quality education and inequality are far from being fully explored.

Overall, interdisciplinarity (as defined above) is unanimously considered central to the learning environment and as a pedagogical approach in the respective programmes. This is primarily ensured through the diversity of the students and the teaching staff. Very interestingly, according to the respondents, problem-based teaching and practice-oriented learning are crucial, however, they are not reflected in the mode of teaching: seminars and lectures are the predominant formats of teaching, despite studios and case studies were mentioned as a way to facilitate interdisciplinary learning environments.

Transdisciplinarity is ensured through engagement with multiple stakeholders including civil society, private sector and policy makers. However, when asked if these actors are co-framing problems and topics it becomes obvious that they are mainly seen as informant with expertise in a certain field and thus approached for data collection or invited to give feedback and potentially to evaluate students results.

Concerning the learning outcomes, team work and oral and visual communication received top scores for the kind of skills that are being taught in the programmes along with thinking in terms of concepts and their practical application – linking theory and practice and methods for problem definition and collaborative problem solving. Further, respondents show that ICT has significantly gained importance over the last couple of years in most of the surveyed programs. These cross-cutting skills are crucial for students to navigate in an increasing complex urban setting and to be able to develop suitable solutions to complex real-world problems. Despite the fact that many programmes claim to be interdisciplinary and to expose students to interdisciplinary environments, the reality is that not many core modules, for example, are actually co-taught by different disciplines. Thus, the ability to think across silos – both in terms of disciplines and in terms of the SDGs – should be questioned and researched further to enable alumni to play a larger role towards societal transformation.

OUTPUTs PRODUCED

The results of this STSM allowed for a contribution towards the objective of the action to enable change (challenge 3) by identifying the state of the art in urban curricula in terms of barriers and enabling factors for inter – and transdisciplinary knowledge at HEIs represented by INTREPID members. Following outputs were produced as a result of the STSM:

- Survey on barriers and enabling factors for inter – and transdisciplinary knowledge in urban curricula across Europe.
- Joint publication on the results of the survey and following analysis and discussion to the global report on Education for Sustainable Development. The full paper was submitted and accepted. See attached the submission.

FUTURE COLLABORATIONS (if applicable)

Following outputs are being developed based on the work done during the STSM:

- INTREPID workshop with experts in December 2018.
- Based on the findings and discussion a full paper will be handed in to the Journal of Sustainable Higher Education as well as to the SDSN network (if selected).
- Findings will also be presented at the final INTREPID conference March 2019.
- Joint funding application to the Erasmus Plus in march 2019 in order to secure funding for further cooperation.

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