BETWEEN ENTHUSIASM AND ESTABLISHMENT – AN ANALYSIS OF THE BOUNDARY CONDITIONS OF A MULTIDISCIPLINARY PROGRAMME IN URBAN STUDIES AND PLANNING

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ABSTRACT

In 2015, a joint multidisciplinary urban planning initiative was undertaken in Finland, eventually leading to the establishment of the first multidisciplinary master's programme in Urban Studies and Planning (USP). The initiation process of a unique multidisciplinary collaboration between the University of Helsinki and Aalto University is documented here, shedding light on the motivations and expectations of those involved in establishing the new master's programme. Finally, conclusions are drawn on the difficulties in the implementation of such a complex programme and in fitting it into siloed university structures.

The need to gain multidisciplinary knowledge for planning processes and practices and to advance and comprehend urban development is already well documented. Furthermore, the quality of the built environment has been seen to lack sustainable grounds and has been criticised as a concrete example of the problem of present-day planning practices. The need for reform to meet the challenges in practice-based studies similar to urban planning is recognised in several domains. A considerable body of university pedagogical studies has challenged disciplinary-based knowledge creation while problem-based learning has generated its own recognised challenges. These challenges form the background of the urban planning initiative leading to the establishment of the first multidisciplinary master's programme in Urban Studies and Planning (USP) in Finland.

Keywords*: Urban studies, urban planning, multidisciplinarity, education reform.*

THE NEED FOR MULTIDISCIPLINARY COLLABORATION IN URBAN STUDIES AND PLANNING

In recent decades the field of urban planning has witnessed significant advances in disciplinary approaches. This has advanced the understanding of urban development but also generated disciplinary spaces or 'silos' within a complex mosaic of types of knowledge, responsibilities, and competences. This process has been connected with both academic structures (universities, faculties, or schools) and with the consolidation or adjustment of conventional professions. It has also become evident, however, that within cities the sum of their parts is smaller than the whole, and that the interplay between and across disciplines needs further exploration (Baker 2014; Rode 2019).

The perception of urban change as a complex phenomenon of spatial, social, environmental, and economic components has become a rich field for multiple disciplines. Increasing specialised knowledge and added complexity challenge the expertise in planning. A major share of criticism is targeted at the so-called rational-comprehensive planning ideal (Friedmann 1971; Innes 1996). More concrete fallacies are found within classical forms of planning the physical environment, its administration or decision-making structures commonly wrapped in principles of zoning and national planning legislation.

Criticisms of siloed disciplines and the dissatisfying results of institutional friction, the power games of established activities and professions, and the failures of large-scale urban operations have been reported (Hall 1980; Forester 1989; Flyvbjerg 1998). Furthermore, an increasing amount of urban and planning history research and planning discussions have focused on the physical outcome of present-day planning practice and on how or why these unsatisfactory outcomes are produced. Less attention is paid to the fact that there are such huge differences in planning practices from country to country, that drawing parallels from generalised theoretical explorations to the planned and realised outcomes is nearly impossible (Knieling & Othengrafen 2009).

In Finland, the higher education associated with urban planning and design is organised in various disciplines and universities. Typically, those disciplines are architecture, landscape architecture, urban design, geography, engineering in varying fields of the built environment, social sciences, environmental sciences and environmental law. Finland has not had the same kind of planning profession, education and degree system as several

other European countries and the United States. Finnish planning traditions strongly emphasise the physical planning issues of urban design due to the planner-architect tradition that dates back to the institutionalised roles from the early 20th century (Puustinen 2006; Korvenmaa 1992). However, in regional and rural areas other disciplines have also been more involved.

The counter-reaction to rational-comprehensive planning and its expert knowledge has accumulated in theories of collaborative or participatory approaches (Healey 1992). The good intention of turning recognised problems of the institutional planning frame into alternate ideals of social justice in order to master future changes has not been seen as successful. A shift from top-down administrative challenges to systemically different bottom-up approaches to distributed decision-making is a completely separate situation with different internal challenges in knowledge creation and assessment. In fact, the need for inclusiveness serves entirely different purposes in a democratic society than the request for a decent outcome. This relates first to the legitimacy of the planning process, and second to the legitimacy of the planning output. The teaching of planning should be able to cover both of these perspectives.

Planning as an institutionalised activity or exercise in governance operates with altogether different entities than the ones that are relevant in actual *plan-making*. We analysed this activity from the basis of concrete experiences of the first five years of the master's programme discussed here.

BACKGROUND OF THE PROGRAMME AND OUR STUDY APPROACH

The Urban Studies and Planning (USP) master's programme (UoH 2023) was set up during a hectic 1.5-year planning period between late 2015 and the summer of 2017. Development of the programme became possible when the University of Helsinki started a renewal of its educational system called *Iso pyörä* [Big Wheel]. Its aims were to attract more international students and thus increase its profile as an international university (Rantala 2017), but to also reduce the number of programmes while broadening the scope of masters programmes. A concrete task was to separate the departmental administration from the study programme structures. During the process, the university established 32 bachelors and 60 masters programmes, less than half of the number of programmes previously avail-

able. New degree programmes were marketed as multidisciplinary and the possibility of completing studies in different disciplines without committing to only one discipline was emphasised (Heinonen 2021). Thus, USP seemed like a textbook example for this renewal – in May 2016 it was chosen as one of ten University of Helsinki programmes spearheaded for international marketing for its launching semester in 2017–2018.

The development did not start from scratch, but had several supporting structures that enabled rapid development. The development of the USP programme had deep roots in cross-disciplinary collaboration, which already started in early 2000 when the specificity of urban issues was recognised nationally. Due to the lack of a shared understanding of research and planning needs, an extensive joint project of urban research in the Helsinki metropolitan area was carried out in 1998–2010. Nine professorships in varying urban themes were funded by the University of Helsinki and Helsinki University of Technology, one of the predecessor institutions of Aalto University (CoH 2007).[1] Together with professors of corresponding fields, two joint doctoral schools – those of the Built Environment and of Housing and Planning – were set up to start doctoral programmes. Collaboration was followed by the Urban and Metropolitan Policy Research and Cooperation Programme (KATUMETRO) funding programme, which ran in 2010–2018. For more strategic collaboration, the City of Helsinki and two universities created the Urban Academy in 2012 (UA, 2023).

Joint teaching arose from initiatives to overcome the limitations of disciplinary approaches and was coordinated through the Urban Academy. The two universities had their own internal administration procedures, which made student and teaching exchange difficult, yet nevertheless encouraged actively collaborating professors to set up a successful minor programme between the two universities. The main benefits included ease of admission and teaching exchange, but with several legal hurdles. The effort was recognised in an editorial in *Helsingin Sanomat* (HS 18.5.2014), the main Finnish national newspaper. The joint minor programme was an immediate success (Eskelä 2015) and paved the way for the USP programme. Altogether 120 students completed these minor studies by 2017, before it was put on hold when the USP master's programme started. It is worth mentioning that international support for the development of the programme was realised by establishing an International Advisory Board,[2] initiated conceptually in the summer of 2015 (UA 14.8.2015), and then finally established in the spring of 2016 (Jokela & Ala-Outinen 2016).

The crucial phases of the curriculum planning and content development took place in a short 1-year period before the first management board for the programme was officially nominated. Programme development continued with the official status of a USP Board in the beginning of 2017 and emphasised the role of its members in further development. In Aalto University, parallel preparation continued, and participating departments were confirmed one year later. Eventually, USP student quotas were decided separately from the two active masters programmes and the Department of Design, despite their involvement in preparatory work.[3]

The minutes of internal decision-making meetings held by the USP programme quickly became the main procedure over informal discussions. The meetings grew into monthly 4-hour-long marathon meetings, due to the unavoidable fact that each decision item fell into domains of multiple administrative units[4]. Initially the administrative process was thought to be simple: a joint programme ought to have joint decision-making where all degrees are involved. In December 2016, USP board was nominated and tasked with programme preparation.[5] Three board members were from the University of Helsinki and three from Aalto University.[6] Professor Mari Vaattovaara was appointed director of this crew (UH 2016c).[7]

Urban studies was considered a field that could not be enclosed in a single faculty. It was given office space and relative independence together with sustainability studies when the Helsinki Sustainability Science Centre (later HELSUS) and the Urban Studies Institute (later Urbaria) were established in June 2017. The founding document of Urbaria defined a broad role for the new institutional structure. In addition to the direct research, tasks included integration into 'teaching and training entities and networks of social interaction'. It also made Urbaria a co-operative entity with degree programmes in the University of Helsinki and Aalto University[8] in fields of urban research and its education (HY 2017). Professors Mari Vaattovaara and Jari Niemelä were nominated as heads of these cross-faculty platforms.

Decisions in Aalto University came later. Initiatives for a joint programme came from the University of Helsinki and got traction and preliminary approval by Aalto University leadership (USP 30.5.2016). For the mid-management at Aalto University, this proposal came as a bit of a surprise and was pushed through a strategy process that suggested a one-year delay for the launch. Since preparation took place rapidly and the University of Helsinki had already committed to student intake beginning with the 2017–2018 academic year, a complicated situation emerged. Half

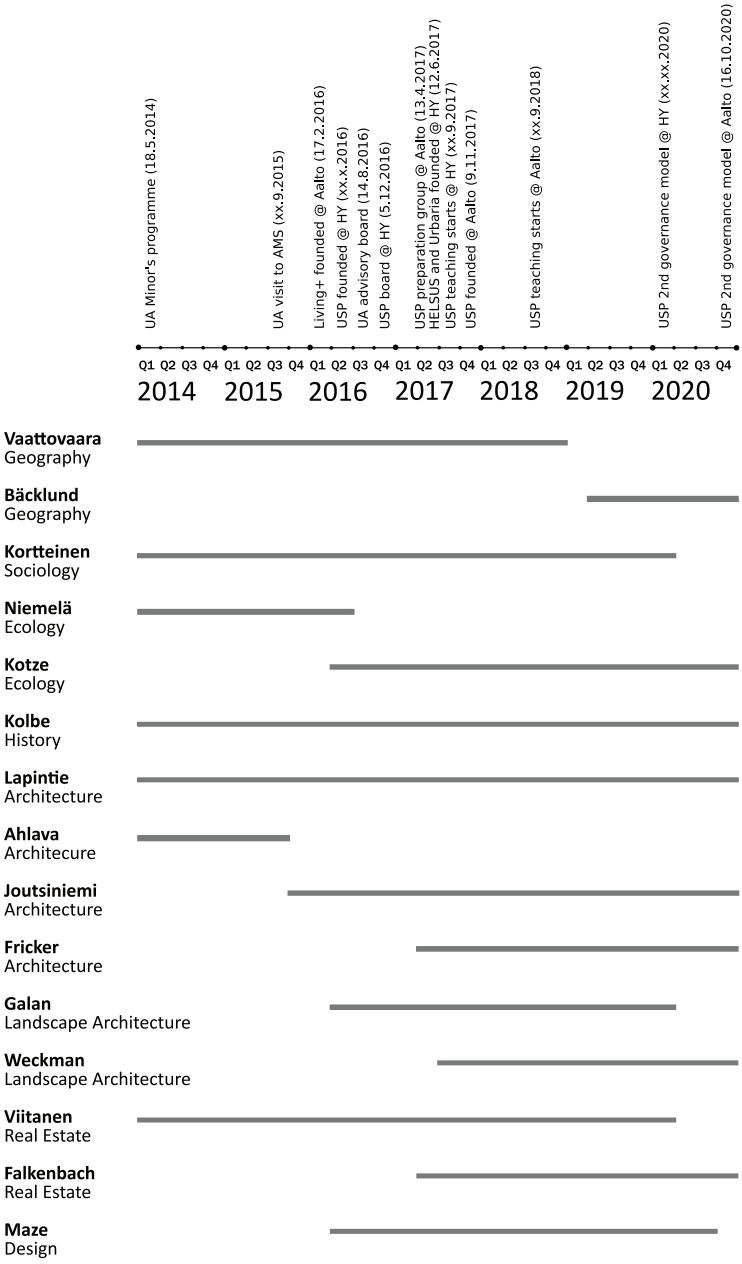

Fig. 1. A timeline of the USP programme development and teacher involvement.

of the studies for the programme were designed to be taught at Aalto University, but participation in the joint programme was not approved by its administration. Since the initiative for a joint programme had full support from the Department of Architecture, it decided to open a minor programme for students of architecture and landscape architecture to fill the missing Aalto share of the spearhead programme. The programme's curriculum and its founding documents were prepared simultaneously during the spring of 2017.[9]

Aalto officially joined the USP programme in November 2017 just before admission of the second student intake in 2018–2019. The founding decision of Aalto-USP contained a clear conflict with the University of Helsinki's administrative decision. The initial logic of programme organisation hierarchy was deliberately low in order to meet the demands of multidisciplinary development. This, which became obvious later, contradicted with budgetary constraints and resourcing that were overruled by existing university faculty structures.

Aalto University's governance model already contained a resolution for the programme's distributed ownership by defining an Executive Board of the deans of both universities.[10] It also defined a Management/Programme Board[11] as well as a Programme Committee. The latter is a standard part of Aalto University's administration to take care of duties related to student intake and the curriculum. It was simply added on top of the structure proposed by the USP programme preparation group and had some overlap with the idealised joint management board.

The timeline (Fig. 1) summarises the meetings held during programme development with selected points of major decisions highlighted. Information was extracted from the USP Board and Programme Committee memos and earlier mentioned documents of Urban Academy collaboration.

BEYOND DISCIPLINES

Drafting of the programme started in the spring of 2016. The programme aimed to be truly interdisciplinary. A wide approach was guaranteed by combining the present and future with the past, by understanding the complex nature of historical developments in planning. The programme was to produce modules that transcended the borders of scientific expertise and knowledge on one hand and design and planning on the other. Kortteinen et al. (2016) noted: '*This is of decisive importance both in relation to*

urban studies and planning: knowledge and understanding on the practices and ways of thinking in design and planning enable the practitioners of urban studies to pose and answer their research questions in ways that are of significance from a planning perspective, and vice versa.' Kortteinen et al. also outlined the professional challenge, focusing on the tension between ecological imperatives and economic competitiveness (ibid.).

Since the beginning of the programme's preparation, it was obvious to all involved that each discipline had their valuable insights that were difficult to merge into perspectives of other disciplinary approaches. It was equally clear that society is largely arranged according to these disciplines and professions, so it would be unlikely to come up with a new umbrella that would require an unrealistically wide knowledge base from a student.

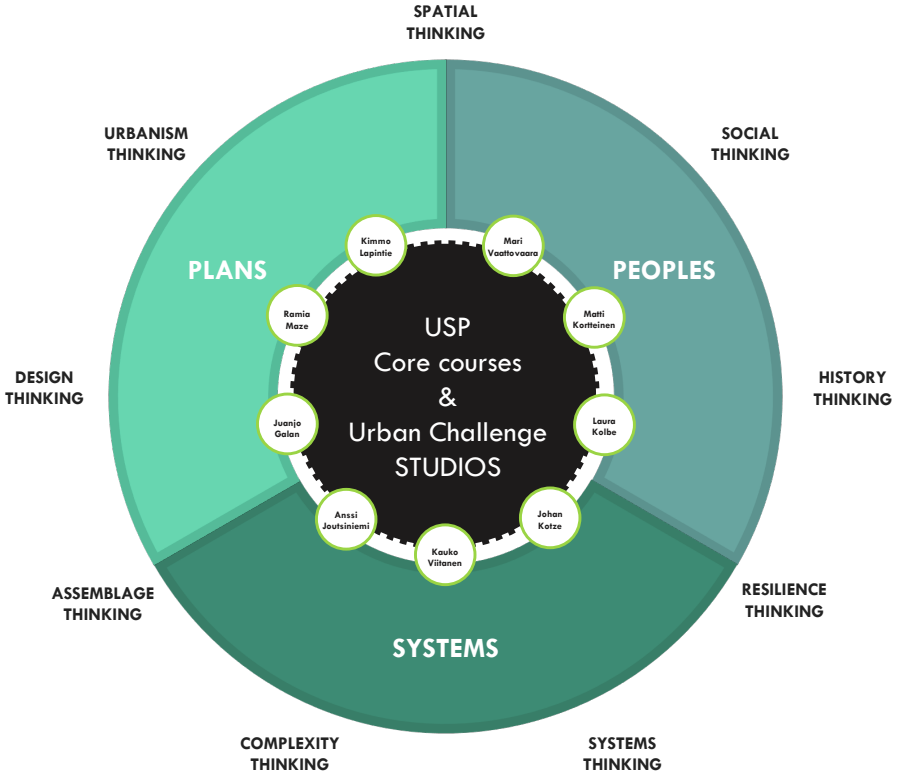

Fig. 2. Early diagram of the USP structuring principle. The role of teachers with respect to study lines and shared core teaching is indicated by the names of some of the active members. Varying 'thinkings' in public discussions are added in the outer ring to build a connection to subsequent figures.

Due to a limited 2-year study frame, the risk was for students to be steered towards broad but unusable generalisations. Thus, the second-best alternative was to determine how professions can develop an understanding of each other's concerns and skills and to develop a more comprehensive team approach. The invented teaching approach of USP turned out to be a classical pedagogical method known as *problem-based learning* (PBL).[12] This was thought to be 'a good way of working towards transdisciplinarity', supported by studio courses with teamwork and collaboration (USP 19.5.2016).

In order to move forward with curriculum development, a considerable amount of delineation between existing teaching was needed. Variation in expertise was notable and even extreme. The variance was present in a number of proposed specific courses – each of which the responsible teachers themselves considered as the most elementary component of the programme. By repackaging course contents into large chunks, demanding teacher collaboration for extracting shared core competences would be easier. Also, it was hoped that more coherent student groups could be achieved regardless of their target degree. The preliminary names of the study lines within USP were 'Urban Planning and Design', 'Urban Life, Economy and Cultures', and 'Urban Ecologies and Systems'. The coordination of these study lines was performed by professors Kimmo Lapintie, Matti Kortteinen and Anssi Joutsiniemi accordingly (USP 19.5.2016). The structure is visualised as a diagram, which also demonstrates the complementary roles of the two universities (Fig. 2). The expertise on the left side of the diagram primarily represents Aalto University and expertise on the right side the University of Helsinki.

CURRICULUM DEVELOPMENT AND THE LAUNCH OF THE PROGRAMME

Moving from shared principles to the programme per se required some learning from existing masters programmes. Concrete examples of teaching pedagogy were found from KTH (Royal Institute of Technology, Stockholm) study programme of Sustainable Urban Planning and Design (SUPD), in which Professor Ramia Mazé had been involved. Similarities included students first taking courses in common, where they learn basic notions and skills needed in subsequent studies.[13] After this, they find their own paths within the programme. A second inspiration from SUPD

was the implementation of multidisciplinarity in all courses and studios offered, and the thesis always being supervised by professors with different backgrounds (USP 27.4.2016). Professors Mari Vaattovaara and Matti Kortteinen had tested the same method in their field courses and the model seemed suitable to enrich traditional studio teaching typical in architecture education.

Another example examined was the Spatial Planning and Transportation Engineering (SPT) programme at Aalto University. It had been in preparation for 3 years, had its first admission completed, and was about to start in the autumn of 2016 (USP WG 27.4.2016). But as it was already in its implementation phase, restructuring its needs for the emerging USP was practically impossible.

From Aalto University, the Creative Sustainability (CS) programme was also investigated. CS is a joint multidisciplinary master's programme running in Aalto since 2010, involving three schools with separate target degrees in each of them (USP 27.4.2016). This provided a basis to suggest a programme structure that looked like an administrative nightmare – yet doable. An example of a programme that was shared between two universities was found from the joint master's programme in computer science. This existing collaboration between universities encouraged us to continue development without fear of an administrative mismatch. In addition, a benchmark study of 14 comparable Nordic and 43 international programmes was performed (Kekki 2017).

The shared understanding of siloed expertise in universities and professional practice had been one of the key topics during the Urban Academy collaboration in the initiation of USP (Eskelä et al. 2015). During our discussions, an additional worry was not only in the existing silos but also in the danger of creating new ones via transdisciplinary integration (USP 16.–17.8.2016). Additional support for a prepared frame for multiple degrees came from the demand of architectural education, which is controlled by an EU-level professional qualifications directive. It encouraged retaining professional identities in all fields rather than aiming for a unified degree structure. The uniqueness of the programme was to be achieved by spicing up all involved disciplines with the capability to discuss beyond their own disciplinary boundaries.

Thus, it was decided to stick with six separate degrees rather than aiming to create a unified planning discipline. The difficulty was to come up with a viable solution for merging varying degree needs in a single curriculum. The decision to establish multiple degrees was agreed upon

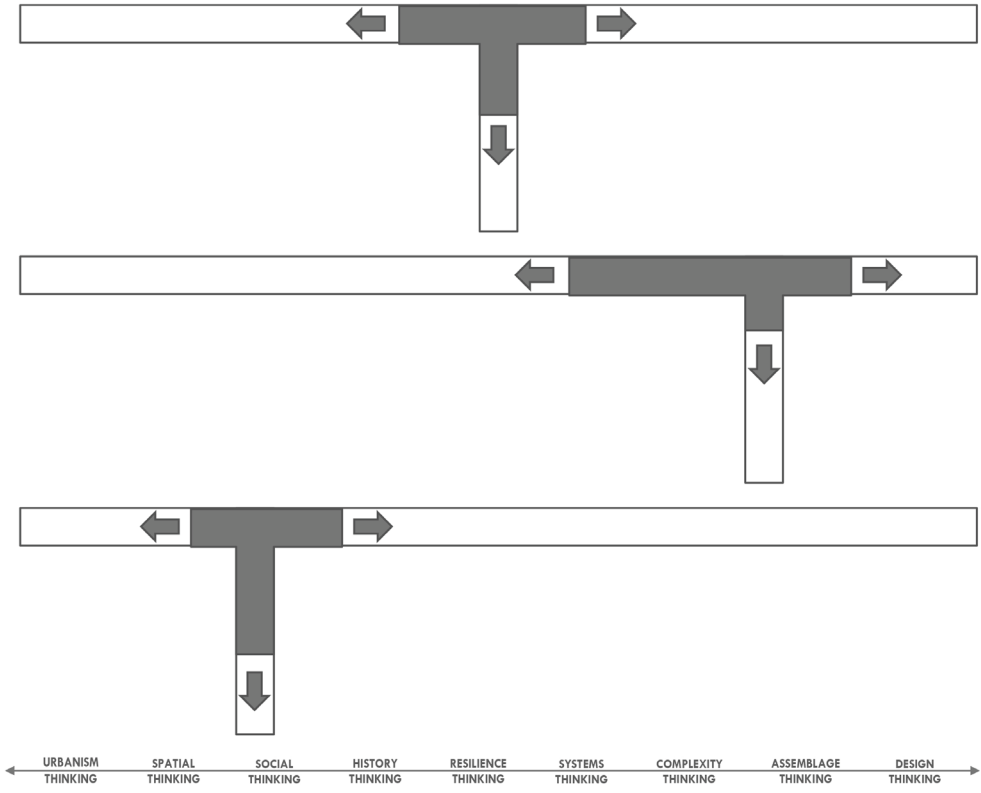

Fig. 3. An example of student-specific learning requirements expressed as a T-model for students from three different backgrounds.

in September 2016, when the degrees given by the USP programme were confirmed (HY 2016b).

A challenging task during the programme development was the contradicting demands of discipline-specific expertise and understanding shared skillsets between students from all degrees. A workable conceptual tool for further discussions was the so-called T-model introduced in the SUPD programme at KTH in Stockholm (USP WG 27.4.2016). It is not a solution in itself, but rather an approach to separate different types of expertise required in a complex environment. The T-model originates in knowledge management and aims to incorporate the simultaneous need of 'breadth' and 'depth' of expert knowledge (Hedlund 1994). The great

Fig. 4. Curriculum in the making. The first attempt to construct a joint curriculum for USP.

benefit of this approach is that it breaks the arbitrary division between 'generalist' and 'specialist' and stresses the importance of both dimensions in each discipline.

The dual challenge of the USP programme structure arises from the fact that students need to broaden their understanding of other disciplines (breadth, horizontal), to co-operate and deepen their understanding of their own discipline (depth, vertical), and to compete with colleagues in the same target degree (Fig. 3). This creates additional pressure in curriculum planning: How to balance course requirements that range from monodisciplinary basics to transdisciplinary practice with limited resources? The PBL approach introduces students to the broadness of expertise in urban studies and planning, and enables a student-led process to draw information from problems that are too wide to cover with a unified theory, too complex to digest without deeper understanding or too general to meet case-specific details.

For these purposes, additional care was taken to include courses where learning is based on PBL-style initiatives to solve authentic, ill-structured[14] real-world problems (Hung 2011, 531). Site-specific tasks in particular required different skills than generalised studies. Simplified models or global goals, such as sustainability or social justice, do not provide direct rules to implement the differences of disciplinary backgrounds.

The primacy of a 'shared problem' as a method of PBL was recognised as an important part of integrated studies. However, due to considerable differences in student backgrounds (Fig. 6), the general aim for co-working or co-creation was insufficient. Courses that bridge disciplines that have more shared backgrounds would be designed as signature courses so as to provide a means for the communication of convoluted urban phenomena.

Students generally have three years of bachelor level studies, so it can be assumed that they already understand the basics of their field. This assumption did not, however, hold for every degree. For example, a degree in Real Estate Economics is structured like an ideal Bologna-Agreement-type master's programme. The applicants do not have any background knowledge from a unified bachelor's programme but benefit from competences in multiple bachelor's degrees. This naturally creates degree-specific needs to provide courses that build target-specific joint skills for the entire student intake that cannot be covered by programme-level joint studies. These strictly monodisciplinary courses need to be fitted into the curriculum as well.[15]

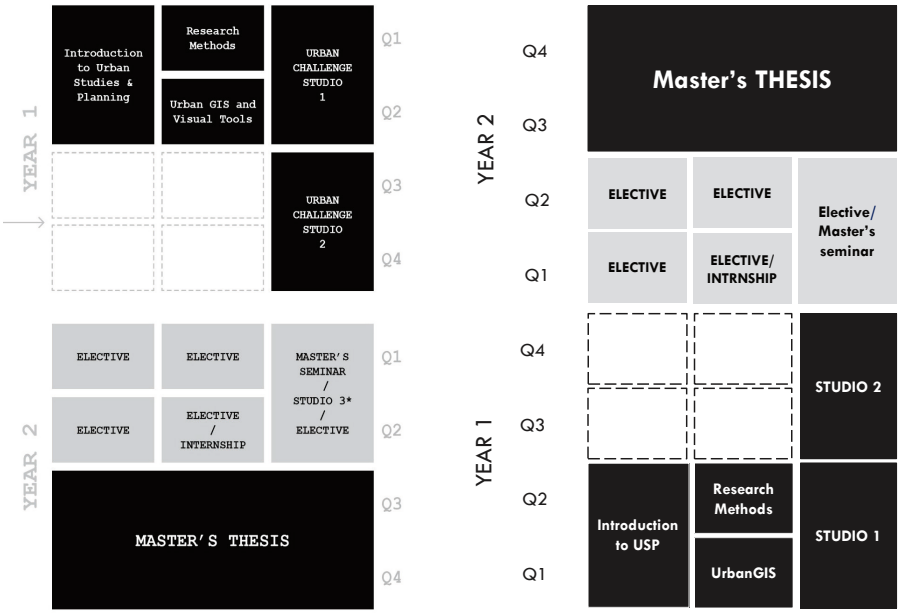

Fig. 5. In multidisciplinary collaboration, the difficulty in interpretation can be generated from nearly anywhere. A symptomatic example is how even the basic diagrams of a curriculum can be observed differently. If you come from a discipline comfortable with working with western text and tables, the presentation on the left seems natural. However, if you image a diagram as a visual representation, the scheme to the right gives you an understanding of how courses are built on top of each other.

The first unified curriculum structure contained elements from all the above-mentioned demands. USP signature elements can be divided into two: courses that enable students to start cross-disciplinary collaboration and courses that force students to obtain skills in specific multidisciplinary case studies. Courses to level up students include the joint introduction of all disciplines involved in the programme, and courses providing the means for analytical data acquisition. These courses are scheduled for the first semester. PBL-based elements were enclosed in two studio packages for the first and second semester and the possibility to continue into a third semester in the form of student-driven capstone projects.

For degree-level specialisation, the curriculum defined two types of courses. Courses provided in the spring of the first year, where those originating from study line packages,[16] contained a selection of 12 courses. More flexible, individually chosen elective studies are available in the third semester to support master's thesis work. The frame of the curriculum

was tested for all study line packages (USP 15.11.2016). A simplified illustration of the curriculum structure is shown in Fig. 5.

The student-centered approach, in which students learn about a subject by working in groups to solve open-ended problems, lies at the core of PBL pedagogy. PBL has been applied in fields where the problems consist of massive amounts of inconsistent information and are too complex and wide to be mastered simply by memorising. Typical university fields where PBL is used are those of medicine, law and engineering. In USP, teaching the continuous Urban Challenge Studio modules best serves the PBL teaching goals.

Once the rough frame of studies was decided upon, it was easy to start defining the course-specific learning outcomes that were implemented by each responsible teacher. *Introduction to Urban Studies & Planning* and *Research Methods* courses were led by University of Helsinki teachers (USP 1.2.2017). *Urban Challenge Studio* courses were influenced by the approach in the SUPD Studio at KTH and were developed to create a shared understanding of the nature of PBL in USP. Extra effort was put into understanding the nature of problems so as to avoid reducing planning to 'solutionism' and allocation of 'best practices' defined in some other context. Thus, problem-finding and proper argumentation plays a counter role in the institutionally dominated planning environment (USP 15.3.2017).

Since the initiation of the programme made was in collaboration with the Urban Academy, municipal partners played a distinct role in the teaching. In the *Introduction to USP* course, each discipline hosted a day around a publicly interesting 'hot topic', where both academics and professionals contributed. In PBL teaching, a challenge was initiated by municipal partners, while students and teachers would adjust and reformulate it for tasks suitable for the students' level of expertise (USP 15.3.2017).

WAS THIS WHAT WE WERE LOOKING FOR?

We made it. We developed the first profoundly multidisciplinary master's programme in Finland. From the very beginning, the group was enthusiastic about the new encounters, creating something new in the Finnish academic scene. Also, every scholar had understood through her/his work the growing interest towards urban issues beyond local interests (Vaattovaara & Joutsiniemi 2018). It increased national and international awareness, with the number of applicants increasing year by year.

Fig. 6. An illustration of the joint USP master's programme (MP) in the two-university structure. It is very unlikely to fit the unique needs of a handful of USP students for any alternatively suboptimised faculty and school administration practice. Any USP-dependent requirement appears as an outlier of the administration block: a potential source of inequity and resource

bargaining. If a multidisciplinary programme wants to strengthen the virtual community with a branded coffee mug, a budget controller imagines the pressure of financing the entire dining tableware for the whole faculty; if field trips require financial support for renting a bike, it is easier to suggest using public transport.

Early on, the USP programme went through a number of stages and can be crystallised in the following phases:

1. *Starting during university reform: towards the goal of problem-based, multidisciplinary research and practice relevance.*
2. *Working together to understand urban development: efforts of multiple scholars over several years, with new colleagues joining the programme work.*
3. *Encountering administrative issues: management of the programme difficult due to the varying principles of the faculties, escalating to under-resourcing, student complaints, teacher exhaustion and community disintegration.*
4. *Getting a formal, but uncommitted collaboration structure: the programme forced into an acceptable administrative framework, split between two universities.*

Even if the programme has in many ways been successful, there were several challenges. Drawing parallels to one of the major components of our programme – planning – we recognise that the creation of a study programme for planning is, in fact, a planning task in itself. Therefore, it is an exercise of its own topic. We identify ourselves as participants or stakeholders of the process described above. Teachers have been 'walking in another's shoes' for a number of years, just as in any participatory process (Umemoto 2001).

As indicated in the beginning, the subject matter of the content we are teaching – planning – has a long tradition in separating *problems-of-planning* almost entirely from *problems-in-planning* and therefore is incapable of recognising how the institutional structures are bootstrapped to the problems they claim to solve. The same holds in building any multidisciplinary programme where university administration increasingly tackled 'problems-of' while outsourcing context-related 'problems-in' issues to teachers and/or students. The *problems-of-multidisciplinarity* are completely different from *problems-in-multidisciplinarity*. However, although problem domains and personnel are separated, the outcome is highly convoluted.

Challenges remain related to the multidisciplinary nature of a programme and the fact that it does not fit, without friction, into the intellectual silos it is claiming to escape. In this sense, USP is not unique: the same has been reported in several other PBL-oriented teaching programmes. Shona Little (1997/1999) summarised some of the key difficulties in implementing PBL in university teaching and divided them into three categories: *Teachers' role change*, *Non-PBL colleagues' responses* and *Student's role conflict*. All of these aspects can be recognised in some phase of the USP

development and are partially emphasised in the ambiguity of the distributed administration.

Teachers' role change in PBL is associated with the profoundness of the change in teaching style and argumentation. It is reported that even for experienced teachers, a teaching mode change affects satisfaction and self-esteem (ibid.). During the development of USP, teachers had a history of collaboration, yet unforeseen and surprising events occurred. Naturally, this relates to the capability of individual teachers to reach a shared understanding of proper boundary objects in the wide scope of planning and its education. As we know, even basic concepts of discussion when setting up the programme (such as 'research' and 'planning') are understood differently by different scholars and disciplines. It is one of the most exciting yet challenging parts of the work, if one has the time and will for it. Administrative hurdles and small teaching shares[17] will not exactly help in these difficulties. The situation is especially uncomfortable for young teachers and those early in their tenure track path or with insecure and short-term contracts.

This challenge cannot fully be solved at the programme level and was the responsibility of the individual courses – especially those involved in the studio environment. Even though it is surprisingly easy to take an outsider's perspective on planning, it seems traumatic to realise that the aims and ideals do not find a point of contact in the multidisciplinary approach.

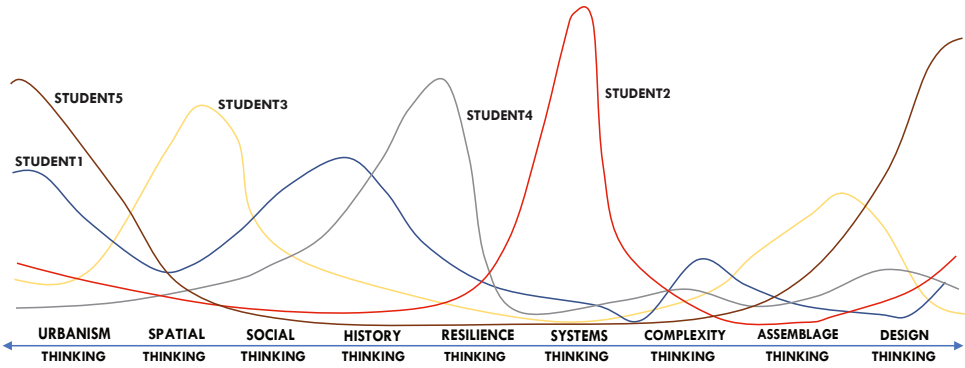

Figure 7. Illustration of the competence level of a set of students across the structure of USP. The top-right thumbnail image refers to Fig. 2 where principles of the USP curriculum are explained.

The expertise of one discipline might turn out to be completely obsolete when faced with a problem reformulated in a group of others. Equally, planning in a multidisciplinary field kills the expertise of a planner. Suddenly, traditional solutions and naïve assumptions or simplified ideals of planning traditions are torn down by the someone else's expertise. This said, we have to remember that what was discussed for T-model requirements also applies to teachers involved in the programme.

These all boil down to the importance of group dynamics in a changing environment: it would be of major importance to keep emerging groups together to retain the learned and shared experiences within the group (Anderson 1997/1999). It would also be important to create routines and practices to consolidate the community. Uncertainty does not only arise from the teachers involved, but in international cases it is recognised, for example, as a lack of teachers' support and a reluctancy in adjusting bureaucratic practices. Organisational structures and institutions have also been reported adapting teaching styles alien to their traditional teaching (Little & Sauer 1997/1999). This sometimes even creates hostile attitudes towards new competing programmes (Little 1997/1999). In USP this creates a specific administrative challenge that originates from the networked structure. The USP master's programme, with two universities, six faculties/schools, six deans and several department heads, forms a distributed decision-making structure that has no possibilities to recognise and position encountered development needs. All the participants are highly involved in their organisational boundaries and are not allowed to reach beyond agreed duties and budget boundaries. It is even more unlikely, and certainly an exception, where 5–10 students are involved (Fig. 7).

The unavoidable consequences of these complex cross-administration challenges can be found throughout the management and university learning services as well as in teacher collaboration and student orientation. The networked structure of the programme cannot properly fit into a hierarchical administration and lacks several features that are automatically granted for programmes that are supported by the departments. Recognised problems cover a wide scope of issues unheard of in programmes fully integrated within departments. They range from the lack of ownership in upper leadership to the misfit roles in smooth processes, and from resource bargaining to a lack of group identity. All of these aspects are rooted and attached to university structures that have been developing over decades, if not centuries.[18] Every problem encountered is automatically at the level of the faculty and, if unsolvable, in discussions with vice rectors and the university's top-leadership.

During USP development, we had the support from the rectors of both universities (USP 10.1.2019), but certain issues still remained unsolvable. Some of the discrepancies are elementary: it is beyond any of these discussions that the spring semester is divided into two periods at the University of Helsinki and into three periods at Aalto University, which creates spillovers for most teachers involved in joint teaching in USP. It is also well-known that university computer systems form impenetrable structures and require students to master both (USP 9.1.2018). Like any good business, universities also have proper communication strategies and an attempt to make a shared web portal in association with Urban Academy was considered misleading.

Despite the goodwill for collaboration, universities are independent legal entities and, in fact, are unable or reluctant to make any binding agreements that would create additional constraints upon them. The aimed agreement for collaboration was scheduled to be completed by December 2016 (UA 7.11.2016). However, several attempts to complete it proved unsuccessful. As of 2022, the agreement for collaboration still remains among the goals of the administration. Technically speaking, the USP programme can now be seen as two separate programmes with their own administration and administrative principles and schedules. This means that half of the students are University of Helsinki students and half are Aalto University students, each abiding with the study regulations of the university they belong to.

The third challenge relates to teaching and understanding the nature of multidisciplinary problems from a student's perspective. If teachers of USP had come through challenging discussions when setting up the programme and finally got the sense of learning and de-learning their own discipline, it soon became clear that students were equally unprepared for the challenges of a multidisciplinary environment. Quite early on, students recognised that none of the existing student unions matched the high variance of USP student backgrounds and so they founded Mesta ry, an association for USP student needs.[19]

In 2019, the student association generated a complaint that required a number of cross-administration discussions and alignments in both universities. For immediate help, the Faculty of Science (University of Helsinki) provided funding to hire 3–4 students to work in programme development and to create a 'Student handbook' (USP 1.4.2019). Discussions also led to improvements in the formal structures and extra effort at the beginning of studies by improving the orientation week to level up

expectations and prepare students for uncertainty. Also, a 1.5-year process was started to adjust the governance process.

Problems of multidisciplinarity were also confronted by USP. Students are exposed to uncertainties in planning and multidisciplinary environments at a stage when they only have three years of expertise in their professional education. Thus, they are exceptionally prone to PBL difficulties that Little themed as a *role conflict* (Little 1997/1999, 146). Issues encountered in USP are textbook examples of how teaching methods are beyond the conventional teaching style students are used to. According to Little, it is especially difficult for students who are talented and competitive or those who come from an educational background different from PBL without any contact to professional life (ibid.). In USP, we were lucky to have both: talented students were chosen among international candidates and mainly to continue on directly after their bachelor's studies.

CONCLUSIONS

In the planning of a new master's programme, we encountered the same challenges that are typical of any planning task with participants of diverse backgrounds in the field for which we are developing the programme. Some of the recognised epistemological challenges are similar to ones outlined in Karen Umemoto's reading of participatory challenge[20] in her article 'Walking in Another's Shoes' (Umemoto 2001). Recognised content-related difficulties are those arising from the existence of multiple worldviews rooted in history and culture. In the discussion of multidisciplinary or inclusive thinking, it means a mismatch between values, diverse argumentation bases and asymmetrical power-relations. In the work presented here, it is important to recognise university faculties and disciplines as archetypes of siloed thinking – they are not only the homes of empowering knowledge, but also what breeds the siloed professionals.

Even though the teaching staff involved were able to recognise and tackle differences during the programme development, several of these aspects remained challenging for a cross-disciplinary programme, especially from one student cohort to the next. Additionally, due to the subject matter of the USP master programme, it is also grounded in pedagogical levels of collaborative learning and is thus present not only in the birth but also in the content requirement of the joint programme. It also very quickly became clear that the different rules and practices of the universi-

ties, faculties and schools created a great challenge that was not fully grasped by teachers and administrative staff.

As noted by several scholars in the fields of engineering and planning (Cleff & Rennings 1999, Rennings 2000, Ulrich & Eppinger 2016), innovation and organisational theories (Robertson 2015) and educational studies (Maritz et al. 2014), one of the main challenges in the development of new innovations or organisations relates to creating opportunities, excitement, new conclaves and the capacity of the existing organisational structures to change, adapt and enable the new. As already expressed here, this was also the case in our USP master's programme planning.

There is a long history of multidisciplinary and cross-organisational initiatives, starting from the funding of professors of urban studies, the creation of doctoral programmes, collaborative platforms such as Urban Academy, Living+, Urbaria and teaching initiatives from minor to master's programme. These initiatives have attracted a group of active urban scholars from various fields to work towards new multidisciplinary education. Together, more than 100 professors and lecturers, mayors and rectors, planners and city administrators were involved in the process as active participants. The need was understood and supported by everyone.

The organisational structures, however much hoped and worked for, even with the window of opportunity created by the *Iso Pyörä* [Big Wheel] at the University of Helsinki, were not ready to support the initiative, needs and traditions from different disciplines. Currently, the programme is split between two universities, and has divided decision-making frameworks. As a result, the number of people attending meetings and the role of teachers in developing the shared courses has decreased. However, a third wave in the process has emerged in both universities. Additional professorships have been created or are in the process of nomination to teach also in USP. Furthermore, we have a pool of USP graduates to join, support and challenge the programme. After five years of existence, finally the first permanent lecturers for multidisciplinary USP teaching were hired in both universities.

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NOTES

1 During its first phase, from 1998 to 2003, the project was based on six professorships in urban studies. The activities were co-financed by the Ministry of Education, the University of Helsinki and the City of Helsinki. In 2003, the project contract was extended with three new professorships. The sponsors of the latter were Helsinki University of Technology and the cities of Espoo, Lahti and Vantaa (CoH 2007, 62). The professors and their fields were: Peter Ache (Metropolitan planning), Peter Clark (Urban history), Anne Haila (Urban studies), Jari Niemelä (Urban ecology), Matti Kortteinen (Urban sociology), Heikki Loikkanen (Urban economy), Heikki Setälä (Urban ecosystems), Antti Talvitie (Urban infrastructures) and Mari Vaattovaara (Urban geography).

2 Advisory Board members: Mike Batty (University College London), Simin Davoudi (Newcastle University), Thomas Elmqvist (Stockholms universitet), Charles Landry (Comedia), Sako Musterd (Universiteit van Amsterdam) and Tina Saaby (City of Gladsaxe).

3 Technically speaking, existing masters programmes are parallel structures of the new USP and could not be nested into a similar structure. The Department of Design at Aalto University was facing the institutional fact that they were in a process of cutting the number of master's programme and it was practically impossible to justify involvement in new programmes while reductions occurred elsewhere. Teaching collaboration continued with all of these parties for a number of years.

4 In the governance model of Aalto University, two decision-making bodies were defined: a Management/Programme Board and a Programme Committee. The latter has duties related to student intake and the curriculum, some of which overlapped with the University of Helsinki's management board. Technically, this meant that both Helsinki University and Aalto University had their own USP Boards but for 'practical' reasons it attempted to operate as a joint board. Officially, the joint USP Board meetings had two secretaries with set decisions and minutes (USP 1.2.2018).

5 Minutes of these meetings are later referred to as UA for Urban Academy and USP for the master's programme working group with their respective dates.

6 Aalto University representatives were replaced in the University of Helsinki USP Board on 13.1.2020 (HY 2020a).

7 Other members of the USP Board were: Anssi Joutsiniemi, Matti Kortteinen, Johan Kotze, Kimmo Lapintie, Ramia Mazé and Kauko Viitanen.

8 The idea to support organisational matrix arrangements and cross-faculty institutional structures was also active in Aalto University's policies. The founding of Living+ as a multidisciplinary collaboration platform for human-centered living environments occurred on 17.2.2016 (Aalto 2016). Development was parallel but not fully integrated with the grass-roots development of teaching. Aalto University's vice dean of research, Tuija Pulkkinen, made Living+ the coordinating unit of the Urban Academy collaboration, with a suggestion of restarting joint doctoral education one year later (USP 2.5.2017). The proposed structure would have been very similar to a strategic partnership between Aalto University and the University of Helsinki in the Helsinki Institute for Information Technology (HIIT).

9 The approval of faculty-level strategic discussions was given in March 2017. Vice President of Education, Eero Eloranta, nominated a preparation group for a governance model and confirmed learning outcomes for Aalto University's USP degrees on 13.4.2017 (Aalto 2017b). The USP programme preparation group at Aalto was: Pekka Heikkinen (chair), Mikko Jalas, Ramia Maze, Kauko Viitanen, Marketta Kyttä, Iiris Kauppila, Wille Leppämäki and Päivi Kauppinen.

10 This, however, remained unofficial at the University of Helsinki and appears never to have

been approved. Collaboration at the University of Helsinki was agreed upon by a contract between deans on 25.8.2021.

11 This was not exactly the same as the one nominated by the University of Helsinki, so technically there were two USP Boards, both containing members from both universities.

12 A considerable body of university pedagogical studies have challenged disciplinary-based knowledge creation and problem-based learning has generated its own recognised challenges. Problem-based learning (PBL) is described as 'learning that results from the process of working toward the understanding or resolution of a problem' (Barrows & Tamblyn 1980, 18). Problem-based learning is not a single mode of teaching but rather a family of student-driven teaching methods. Reported inconsistent findings of the success of PBL can be traced back in plurality of the referred PBL model and varying implementations under scrutiny (Hung 2011). PBL is sometimes mixed with *problem-oriented* (typical, for example, in geography) or *problem-solving* (typical in architecture) learning traditions (see Ross et al. 1985), which share similar components with 'pure' PBL. The differences and further classifications are however irrelevant from the USP description of curriculum development. For a detailed look at variation in PBL pedagogy, see Barrows (1986).

13 This structure of studies that was also implemented in USP is, in fact, the reverse of SPT and creates certain difficulties in programme-level collaboration.

14 Ill-structured problems are characterised as containing vaguely defined goal states, several unknown problem elements, multiple plausible solutions, and ambiguity about the concepts or principles needed to solve them, while well-structured problems possess well-defined goal states, prescriptive arrangement of concepts and principles used, and a single definite solution' (Hung 2011, p 531 after Jonassen 1997).

15 In fact, a similar situation is also recognised in other degrees, since the programme is international and there is great variation in basic degrees (globally) that seemingly look the same.

16 Study lines can be seen as a scaffold for structuring the programme construction and have also served in University of Helsinki admission processes. Curriculum-wise, the role of study lines has vanished during development. Discussions about removing study lines started in 2019 and a wider palette of courses was offered from neighbouring masters programmes (USP 4.3.2019). The suitability of each course for a student's degree structure is assessed as part of each student's personal study plans.

17 A typical teacher can devote 5-10% for teaching to USP and it is rare to find teachers who would have more than 20% to invest in multidisciplinary programmes.

18 Even though multidisciplinary learning is valued and plays an important role in university politics, it has significant challenges in implementation. Finland-wide information of the status of multidisciplinary teaching does not exist, but examples of a wider picture can be found at Aalto University. Aalto University is a relatively recent merger (operating officially since 1.1.2010) and is balancing multidisciplinarity at all levels. The topic was chosen to be one of the four corners in Teaching and Learning Evaluation Exercise – TEE 2020 (Aalto 2021). The mechanisms of implementation are unclear, and difficulties are sensed from both students and teachers alike. 'In the absence of formal/structured mechanisms, the responsibility for multidisciplinarity seems to be outsourced to students' (Aalto 2021, 16). 'Staff have met the significant challenge of creating multidisciplinary programmes and are overcoming the difficulties of finding a common language as they integrate topics' (Aalto 2021, 33).

19 See Mesta's Facebook community page for further information: https://fi-fi.facebook.com/uspmesta/

20 Umemoto's five remarks on epistemological challenges can be adjusted to the context

of the multidisciplinary programme development of USP. With minor modifications, the challenges participants of the programme development faced were: (1) traversing embedded interpretive frames; (2) confronting otherness in the articulation of values and identities; (3) understanding the multiple meanings of language; (4) respecting and navigating cultural protocols, and (5) understanding the role of decision-making power in the translation of diverse knowledge (Umemoto 2001).

REFERENCES

Anderson, A.S. (1997/1999). 'Siirtyminen ongelmalähtöiseen opetukseen 15 kuukaudessa'. In: Boud, D. & Feletti, G. (ed.). *Ongelmalähtöinen oppiminen*. (The Challenge of Problem-based Learning, 1997). Transl. Johanna Birstedt. Helsinki: Terra Cognita.

Baker, P.D. (2014). 'Moving beyond our silos', *Smart and Sustainable Built Environment,* Vol. 3:1. https://doi.org/10.1108/SASBE-03-2014-0025

Barrows, H.S. & Tamblyn, R.M. (1980). *Problem-Based Learning – An Approach to Medical Education*. New York: Springer Publishing Company.

Barrows, H.S. (1986). 'A taxonomy of problem-based learning methods', *Medical Education*. Vol. 20:6, 481–486. https://doi.org/10.1111/j.1365-2923.1986.tb01386.x

Boud, D. (ed.) (1985). *Problem-Based Learning in Education for the Professions*. Sydney: HERDSA.

Boud, D. & Feletti, G. (ed.) (1997/1999). *Ongelmalähtöinen oppiminen* (The Challenge of Problem-based Learning, 1997). Transl. Johanna Birstedt. Helsinki: Terra Cognita.

City of Helsinki (CoH) (2007). *Helsinki tutkii Helsingin kaupungin tutkimusohjelma 2007–2009*. Helsingin kaupungin tietokeskuksen muistioita 2007. Helsinki: City of Helsinki.

Cleff, T. & Rennings, K. (1999). 'Determinants of environmental product and process innovation', *European Environment*, Vol. 9:5, 191–201. https://doi.org/10.1002/(SICI)1099-0976(199909/10)9:5<191::AID-EET201>3.0.CO;2-M

Eskelä, E., Kulonpalo, J. & Niemelä, J. (2015). *Kaupunkiakatemia – Yhteistyöllä vastauksia pääkaupunkiseudun haasteisiin*. https://blogs.helsinki.fi/kaupunkiakatemia/files/2015/05/kaupunkiakatemia_policybrief_huhti15.pdf

Flyvbjerg, B. (1998). *Rationality and Power: Democracy in Practice*. Chicago: University of Chicago Press.

Forester, J. (1989). *Planning in the Face of Power*. Oakland, CA: University of California Press.

Friedmann, J. (1971). 'The Future of Comprehensive Urban Planning: A Critique', *Public Administration Review*. May-Jun. 1971, Vol. 31:3, 315–326.

Hall, P. (1980). *Great Planning Disasters*. Chicago: University of Chicago Press.

Healey, P. (1992). 'Planning through Debate: The Communicative Turn in Planning Theory', *The Town Planning Review* 62(2),143–162. https://doi.org/10.3828/tpr.63.2.422x602303814821

Hung, W. (2011). 'Theory to reality: A few issues in implementing problem-based learning', *Educational Technology Research and Development*, 59:4, 529–552. https://doi.org/10.1007/s11423-011-9198-1

Hautajärvi, H., Heikonen, J., Kummala, P. & Tuomi, T. (2021). *Kenen kaupunki? Helsingin kaupunkisuunnittelu ja kulttuuriympäristö törmäyskurssilla*. Helsinki: Docomomo Suomi Finland.

Hedlund, G. (1994). 'A Model of Knowledge Management and the n-Form Corporation', *Strategic Management Journal*, 15, 73–90. https://doi.org/10.1002/smj.4250151006

Heinonen, V. (2021). *Iso pyörä: missä mennään ja miksi?* https://yliopisto2020.fi/iso-pyora-missa-mennaan-ja-miksi/

HS (2014). 'Näppituntuma ei tee hyvää kaupunkia', 18.5.2014, *Helsingin Sanomat*.

Innes, J.E. (1996). 'Planning Through Consensus Building: A New View of the Comprehensive Planning Ideal', *Journal of the American Planning Association*, 62:4, 460–472. https://doi.org/10.1080/01944369608975712

Jokela, S. & Ala-Outinen, A. (2016). 'Uusi kaupunkitutkimuksen ja -suunnittelun maisteriohjelma Helsingin yliopistoon ja Aalto-yliopistoon', *Terra*, 128:2, 116–117.

Jonassen, D.H. (1997). 'Instructional Design Models for Well-Structured and Ill-Structured Problem-Solving Learning Outcomes', *Educational Technology Research and Development,* Vol, 45:1, 65–94. https://link.springer.com/content/pdf/10.1007/BF02299613.pdf

Knieling, J. & Othengrafen, F. (2009). *Planning Cultures in Europe: Decoding cultural phenomena in urban and regional planning*. London: Routledge.

Korvenmaa, P. (1992). *Arkkitehdin työ*. Helsinki: Suomen Arkkitehtiliitto.

Little, S. (1997/1999). 'Korkeakouluopettajien johdattaminen ongelmalähtöiseen opetukseen'. In Boud, D. & Feletti, G. (ed.). *Ongelmalähtöinen oppiminen*. (The Challenge of Problem-based Learning, 1997). Transl. Johanna Birstedt. Helsinki: Terra Cognita, 141–148.

Little, S.E. & Sauer, C. (1997/1999). 'Organisaation ja instituutioympäristö ongelmalähtöisen oppimisen esteenä'. In Boud, D. & Feletti, G. (ed.). *Ongelmalähtöinen*

oppiminen. (The Challenge of Problem-based Learning, 1997). Transl. Johanna Birstedt. Helsinki: Terra Cognita, 104–112.

Maritz, A., de Waal, A., Buse, S., Herstatt, C., Lassen, A., & Maclachlan, R. (2014). 'Innovation education programs: toward a conceptual framework', *European Journal of Innovation Management*, Vol. 17:2, 166–182.

Puustinen, S. (2006). *Suomalainen kaavoittajaprofessio ja suunnittelun kommunikatiivinen käänne: vuorovaikutukseen liittyvät ongelmat ja mahdollisuudet suurten kaupunkien kaavoittajien näkökulmasta*. Yhdyskuntasuunnittelun tutkimus- ja koulutuskeskuksen julkaisuja, A 34.

Rantala, H. (2017). 'Iso pyörä pyörii', *Ylioppilaslehti* 5/2017. https://ylioppilaslehti.fi/2017/05/iso-pyora-pyorii/

Rennings, K. (2000). 'Redefining innovation — eco-innovation research and the contribution from ecological economics', *Ecological Economics* 32, 319–332

Robertson, B.J. (2015). *Holacracy: The New Management System for a Rapidly Changing World*. London: Penguin Books.

Rode, P. (2019). 'Urban planning and transport policy integration: The role of governance hierarchies and networks in London and Berlin', *Journal of Urban Affairs,* Vol. 41:1, 39–63. https://doi.org/10.1080/07352166.2016.1271663

Ross, B. Abel, D., Margetson, D. & Sauer, C. (1985). 'Designing academic programs with a problem orientation'. In: Boud, D. (ed.). *Problem-Based Learning in Education for the Professions*. Sydney: HERDSA, 69–79.

Ulrich, K.T. & Eppinger, S.D. (2016). *Product Design and Development*. 6th Edition. New York: McGraw-Hill Education.

Umemoto, K. (2001). 'Epistemological Challenges in Participatory Planning: Walking in Another's Shoes', *Journal of Planning Education and Research* 21, 17–31.

University of Helsinki (UoH) (2023). *Master's Programme in Urban Studies and Planning*. https://www.helsinki.fi/en/degree-programmes/urban-studies-and-planning-masters-programme

Urban Academy (UA) (2023). *Urban Academy*. https://urbanacademy.fi/in-english/

Vaattovaara, M. & Joutsiniemi, A. (2018). 'Kohti monimuotoistuvan kaupungin ymmärrystä ja kehityksen ohjaamista'. *Tieteessä tapahtuu* 6/2018, 19–23. https://journal.fi/tt/article/view/76487/37764

Unpublished administrative documents

Aalto (2016). Aalto Platforms - monitieteellisten yhteistoiminta-alustojen käynnistäminen / setting up multidisciplinary collaboration platforms. Vararehtorin päätös 17.2.2016, Aalto-yliopisto. (D/144/00.01.07.00/2016)

Aalto (2017a). Valmisteluryhmän asettaminen: Vararehtorin päätös 13.4.2017, Aalto-yliopisto. (D/285/02.05.00/2017)

Aalto (2017b). Ohjelman perustaminen: Rehtorin päätös 9.11.2017, Aalto-yliopisto. (D/681/02.01.00.01/2017)

Aalto (2020). USP-koulutusohjelman hallintomallin vahvistaminen: Rehtorin päätös 16.10.2020, Aalto-yliopisto. (D/734/02.01.00.01/2020)

Aalto (2021). Teaching and Learning Evaluation Exercise – TEE 2020 International review, Evaluation report. 7.1.2021. 53 pages.

Eskelä, Elina (2015). Kaupunkiakatemian edistyminen vuoden 2015 aikana. Memo, 7. 2015.

HY (2016a). Ylempään korkeakoulututkintoon johtavat koulutusohjelmat Helsingin yliopistossa 1.8.2017 lähtien. Rehtorin päätös 56/2016 12.5.2016, Helsingin yliopisto.

HY (2016b). Muutos rehtorin päätökseen 56/2016: Kaupunkitutkimuksen ja suunnittelun maisteriohjelmasta myönnettävät tutkinnot. Rehtorin päätös 98/2016 12.9.2016, Helsingin yliopisto.

HY (2016c). Koulutusohjelman johtajan ja johtoryhmän tehtävät ja valintaprosessi sekä johtoryhmän kokoonpano. Rehtorin päätös 102/2016 20.9.2016, Helsingin Yliopisto.

HY (2016d). Matemaattis-luonnontieteellisen tiedekunnan vastuulla olevien kandi- ja maisteriohjelmien johtajien ja johtoryhmien nimeäminen kaudelle 2017–2020. Dekaanin päätös 5.12.2016. Helsingin yliopisto.

HY (2017). Kestävyystieteen instituutin perustaminen. Rehtorin päätös 12.6.2017. Helsingin yliopisto.

HY (2020a). Muutoksia matemaattis-luonnontieteellisen tiedekunnan kandi- ja maisteriohjelmien johtoryhmien kokoonpanoon. Dekaanin päätös 13.1.2020. Helsingin yliopisto.

HY (2021). Tiedekuntien sopimus yhteistyöstä ja työnjaosta yhteisessä koulutusohjelmassa. 25.8.2021.

Kekki, Heini (2017). Helsinki Institute of Urban and Regional Studies & USP-Master's programme – International benchmark study. PowerPoint presen-

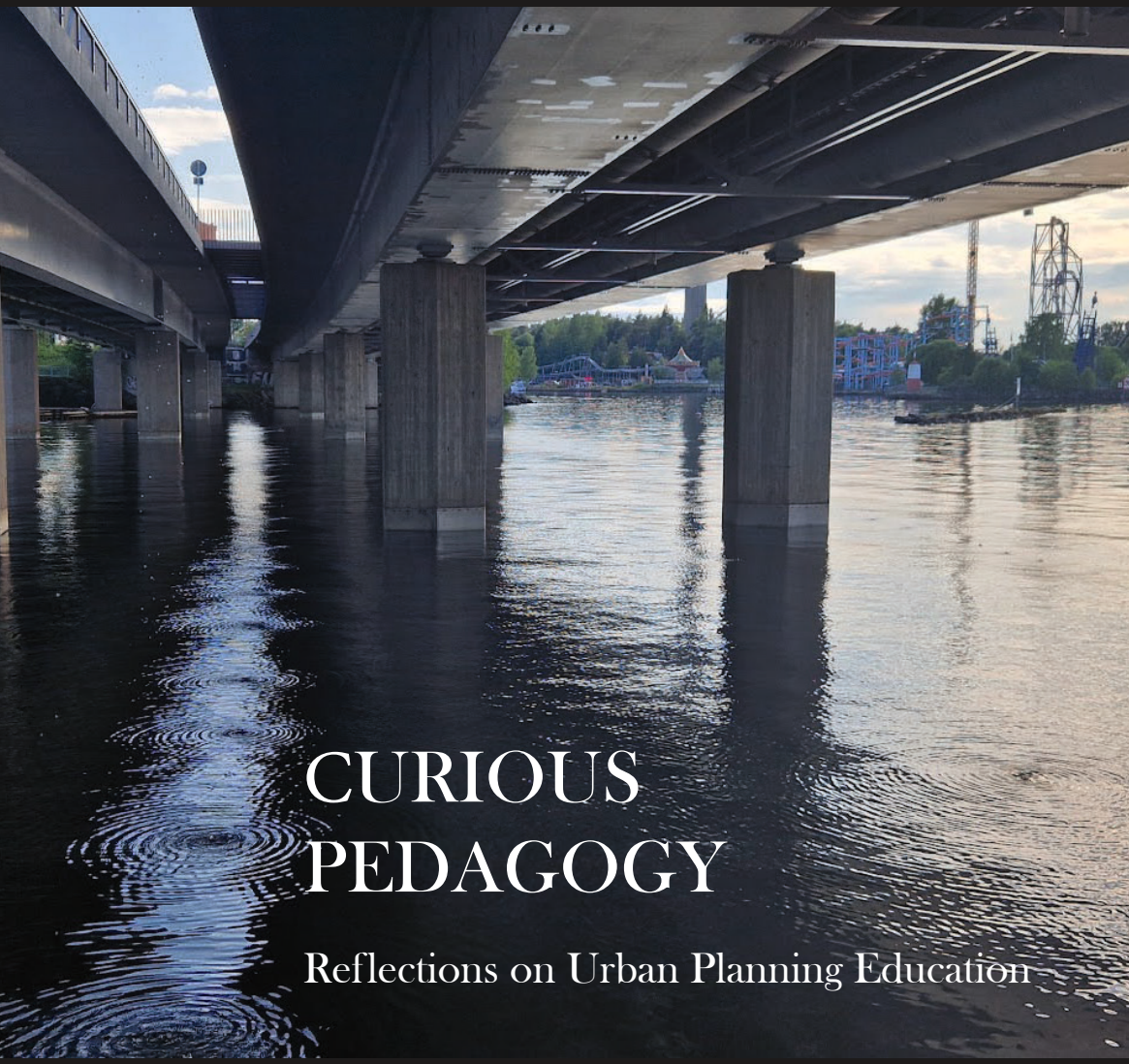
tation summary dated 20.12.2017.

Kortteinen, Matti; Lapintie, Kimmo & Maze, Ramia (2016). Master's Programme of Urban Studies and Planning: A Collection of Pieces made into a Draft. Memo dated 18.5.2016.

Master's programme (USP) preparatory group minutes on dates: 27.4.2016, 19.5.2016, 30.5.2016, 14.6.2016, 17.8.2016, 7.9.2016, 3.10.2016, 4.11.2016, 7.11.2016, 15.11.2016, 10.1.2017, 1.2.2017, 15.3.2017, 08.02.2019.

Master's programme (USP) Board minutes on dates: 1.2.2017, 15.3.2017, 2.5.2017, 2.5.2017, 7.6.2017, 14.6.2017, 9.8.2017, 16.8.2017, 27.10.2017, 9.1.2018, 1.2.2018, 1.3.2018, 14.3.2018, 15.5.2018, 7.6.2018, 14.8.2018, 4.9.2018, 2.10.2018, 6.11.2018, 4.12.2018, 10.1.2019, 4.2.2019, 4.3.2019, 1.4.2019, 6.5.2019, 21.8.2019, 24.9.2019, 17–18.10.2019, 19–20.11.2019, 16.12.2019, 28.1.2020, 5.3.2020, 19.3.2020, 5.5.2020, 4.6.2020, 25.6.2020, 18.8.2020, 16.9.2020, 12.10.2020, 19.11.2020, 15.12.2020.

Urban Academy (UA) steering group meeting minutes on dates: 15.3.2016, 8.4.2016, 9.6.2016, 10.10.2016, 23.11.2016, 24.1.2017, 31.3.2017, 21.6.2017, 7.11.2017.



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