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Published online: 28 Apr 2020.

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Conceptual Freedom in Planning Education and Students' Methodological Learning

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ABSTRACT

We reflect on a master's seminar in Applied Geography and Planning, where students had great conceptual freedom in developing their empirical approaches towards group work. First, we assess the inductive, grounded learning design of the course. We then develop thoughts on the degree to which it was fruitful for the students' methodological learning to allow for a conceptual framework within a single university course. Inductive course designs can foster students' methodological learning, albeit at the expense of actual content. We close with considerations for designing future courses, putting the findings into the perspective of future challenges of the planning profession.

Introduction

This paper addresses an identified research gap in recent debates on planning education with a focus on trans-disciplinarity and university-community engagement. Rooij and Frank (2016, p. 483) conclude that those engaged in planning education will need more knowledge on 'how to effectively integrate different scientific paradigms and traditions in spatial planning curricula'. They thus question the sufficiency of methodology courses, which are currently designated as '[t]eaching about a variety of methods, their origins, values and limitations … ' (Rooij & Frank, p. 483). Of course, designated in-class methodology courses are necessary and useful elements of a university curriculum. These would for example include courses about regional statistics or interview design. They acquaint students with the various methods that a discipline offers and employs. Mono-paradigmatic natural science disciplines are mostly straight-forward about methodology. However, in social sciences and particularly in the interdisciplinary fields of geography and planning, a plurality of epistemological approaches and paradigms is evident, whether or not this is wished for. Under these circumstances, single methodology courses in a social science setting can merely serve as introductory courses; these may follow a deductive course design in-class. However, the methodological knowledge gained from such introductory courses solidifies when knowledge of several thus-oriented courses can be combined in consecutive applied/field-based courses that are designed inductively.

'How spaces are produced', was the title of such an inductive, field-based course. It was a project-type master's seminar within the master's curriculum of Applied Geography, Spatial Research and Spatial Planning at the University of Vienna in the summer semester of 2016. Pedagogically, the course was a mixture between a literature seminar and a studio experience, designed with an inductive teaching approach. Its pedagogical purpose reached beyond teaching the students about planning contexts and processes. It was concentrated on enhancing students' understanding of and competence regarding specific planning problems, in accordance with Gilliard and Thierstein's (2016) view of 'competence' on a gross-curricular scale. A local case study was set for the students, leaving it to them to formulate various research questions and find appropriate methods for answering those. This led to different conceptual frameworks in every student group. As such, the seminar resembles that which is understood as 'solidifying methodological knowledge' as we know it from in-class courses in an applied course environment.

The aim of this paper is twofold. First, we want to reflect on the master's seminar from a pedagogical viewpoint regarding its course design. Second, we want to discuss the various approaches of the independent student groups in conjunction with conceptual/methodological perspectives. The purpose of the paper is to share and reflect upon teaching experiences and to draw conclusions for future curricula and course designs. It is not the content or quality of the students' group work that is of interest in this reflective study but their conceptual and methodological approaches and learning processes. Therefore, the focus will be on methodological advancement and inductive learning processes, inspired by grounded theory, while content-related learning achievements are left aside.

For their future engagement in professional contexts, it was hoped that students would gain the insight that any single observable spatial problem/process is intrinsically socially constructed and manifold, depending on the perspective and context of the problem. Accordingly, there is no single planning problem and no single solution but many alternatives and many angles of approach. However, the chosen perspective already predefines the scope of analysis and interpretation of a spatial problem. From the three key competences to be attained through planning education, this seminar served the first suggested competence of 'an understanding of different knowledge creation approaches and scientific traditions', and particularly that of empirical field-research skills (Rooij & Frank, 2016, pp. 476–477). Furthermore, we distinguish between a macro scale of university education, i.e. curricula, and the micro scale, i.e. single courses. While the benefits of educating future planners in multi-conceptual and multi-methodological university curricula are beyond questioning (cf. Frank, 2006, p. 18; Geppert & Verhage, 2008), the research questions for this study are situated at the single course level.

The overall question is, *which course design would support students' methodological learning under grounded learning premises?* This abstract question is approached through two operational questions:

(A) Which pedagogical criteria would constitute a grounded learning course design and does the project seminar at hand fulfil those criteria?
(B) What was the degree of the students' learning success and what were their experiences during the course concerning the methodological aspect?

For approaching question A, we have built on 'grounded theory' (Glaser & Strauss, 1967) and subsequent work from a learning perspective. Question B is supported by Bateson's (1972)

learning theory. In the following sections, we will first lay down the theoretical foundation and then present the case – the curricular context and the course – in greater detail. The discussion section will relate the theoretical background with the empirical case, to answer the two operational questions. Finally, we conclude by returning to the main research question.

Theoretical Framework

The theoretical framework of this study must be able to capture two aggregation levels in accordance with the research questions. Question A requires a collective level of analysis, aiming at the university course as a whole. Question B targets the individual level of students taking part in the course. Consequently, we work with two theoretical building blocks: Glaserian grounded theory/learning and Batesonian learning theory.

Grounded Theory and Its Interpretation for (Planning) Education and Learning

When we are concerned with learning not only as a way of accumulating content but also as a way of developing skills and the ability to learn, inductive 'grounded learning' is a key concept within postmodern higher education theory (Doyle Corner *et al.*, 2006). Grounded learning has its foundation in Glaser and Strauss (1967) 'grounded theory'. Referring to Glaser and Strauss (1967), Mosca and Howard (1997, p. 91) summarize that a 'theory is considered grounded when it (a) fits with reality, (b) makes sense to both actors and observers, (c) provides intuitive generalization across similar circumstances, and (d) proposes some control over the subject phenomenon.' Thus far the original understanding of grounded theory. For the planning-related social science disciplines of business and management education at least, four elements of grounded learning have been derived from that (Mosca & Howard, 1997; Doyle Corner *et al.*, 2006): (a) creating a real-world experience, (b) optimizing learning transfer, (c) integrating theory and practice, and (d) shifting learning responsibility.

We can transfer those four premises for planning education purposes with reference to the agenda-setting works by Frank (2006), Geppert and Verhage (2008), and Rooij and Frank (2016), referred to above in the introduction. According to that interpretation, a course in planning education should offer the following four criteria in order to be considered a grounded learning exercise:

(a) Students go out of class and engage in field studies, in which they interact with a real-world problem and, in the course of their research, get in touch with members of society, such as residents, public and business actors, or others.
(b) Students gather experience for their later professional life – experiences which may unfold very differently according to the broad range of potential labour market options for geography and planning graduates – including e.g. the public or private sector, or academia.
(c) Through studying a practice case, students can combine and apply various content and methods learned in previous exercises and courses at university.
(d) Students are self-responsible for their learning success, while the lecturer rather facilitates and moderates the course – this is not to be understood auto-didactically but as an interactive, inter-peer learning process.

Batesonian Levels of Learning Change the Relationship between (Planning) Students and Teachers

Continuing from the latter point (d), the learning success of students, we introduce the learning theory of anthropologist Gregory Bateson, which has already been drawn upon in similar fields, for example in curricula of Social Work (Bilson, 1993). Bateson's (1972) learning theory presents a total of five levels, from zero to four. Level 0 describes a plain learning process that does not foster the student's understanding beyond the mere receiving of information. Learning I represents the classical type of trial-and-error learning, making step-by-step improvements through feedback on one's own case. Learning II takes place on the meta-level of how to do things better a next time. This includes pathways that alter the originally intended and chosen track of developing things, also inspired by other, comparable cases, thus dealing with learning about learning. Learning III also takes place on the meta-level. Schmidt-Thomé and Mäntysalo (2014, p. 121) describe the difficulties of attaining learning III as 'discordance between learning I and learning II' in terms of repeatedly staying within learning I, without improving on learning II. Learning IV goes even further and can already be considered a 'mystical' level of learning (Harlow & Cummings, 2002). Generally, when ascending along Bateson's levels of learning, the roles of and relationship between student and teacher change towards an increase in self-responsibility and the quest for a greater learning ability of the student – which is in line with elements of grounded learning. We can capture the students' learning success and experience under grounded learning premises, following Bateson (1972), as follows:

- Level 0 learning is considered insufficient because it resembles learning experiences of mere memorizing or learning by heart, as is triggered by deductive plenary lectures in class.
- Level I learning is considered the classical type of applied learning, which allows for enhancing skills and knowledge by doing and trying things rather than only hearing or reading about them.
- Level II learning is considered an advanced reflection on learning I achievements, which require iterative processes and opportunities toward engaging beyond one's own particular case.
- Level III learning is considered to take place when students change the course design, or the course process, based on obstacles within learning level II.
- Level IV learning is not within the scope of what is to be attained within a university course design.

For this study, we will concentrate on learning levels I, II, and III. Level I will designate the students' ability to apply concepts and methods attained during their (various) university programmes and courses thus far. Level II will designate the students' reflective ability over the ties between conceptual approaches and methodological/empirical choices, including eventual consequences for the way in which a student group is to proceed. Level III will refer to a possibly altered course design on the basis of students' actions. Concerning the study purpose at hand, the *methodological* learning of the students will be the focus.

The Case Study

The Curriculum and the Seminar

The methodological backgrounds of master students in Spatial Research and Spatial Planning at the University of Vienna have become more diverse since the introduction of the stepwise Bologna system around 2008, as was the case for planning studies across Europe. This also holds true for the diversity of disciplines that these students are exposed to (Frank *et al.*, 2014). However, students of this school have always been educated rather broadly, at least within the basic courses on the bachelor's level of Geography. On the master's level, students can specialize in Physical or Human Geography, Cartography, or Spatial Research and Spatial Planning. The Bologna system brought about a more diverse mix in master students' backgrounds from bachelor's studies covering various disciplines. Spatial Research and Spatial Planning, designated as an own master's programme, now brings together bachelor graduates from many fields of social and environmental sciences, not only 'in-house' educated bachelors of Geography. Students that enrol for the master's programme of Spatial Research and Spatial Planning may have attained a bachelor's degree from other Geography programmes, or other social science programmes – for example from Political Science, Sociology, or Ethnology. Certain mechanisms were built into the curriculum to compensate for the divergence in students' knowledge and skills deriving from their previous bachelor's education. Nevertheless, a new cohort of master's students does not commence from the same starting point. This must be regarded as an asset for the master's student group as a collective. Their originally different research styles and content interest, stemming from their various bachelor's courses, may remain and develop, which can be of added value for their peers in the master's programme of Spatial Research and Spatial Planning. Additional to these various backgrounds, individual master's seminars of the programme are open to students from neighbouring Geography master's programmes, including Geography education.

The master's seminar at hand was composed accordingly: its participants displayed diverse study backgrounds. Coming from several different bachelor's programmes, half of the 16 students were enrolled in the core programme of Spatial Research and Spatial Planning, while the other half joined in from neighbouring Geography master's curricula. They teamed up into seven small groups. One professor, one lecturer, and one supporting senior student created a circa 5:1 student-tutor-ratio. The classroom seminar took place on two consecutive Wednesday afternoons per month, with an average of three weeks in-between for field work during the four months of March to June. After the end of the summer semester, the additional two months of July and August were allowed for writing a final group report in the form of a thesis. Between the Wednesday plenary classes, student groups went into the field independently and received small-group oriented tutorials by the lecturers whenever they were called for. In advance of the plenary sessions, each group uploaded some input onto an e-learning platform. Every group got assigned as discussants for the work of another group in order to stimulate peer discussion. A total of eight plenary sessions (i.e. four back-to-back sessions) took place.

Plenary sessions 1 and 2 were devoted to introducing the seminar topic, design, technical aspects, and not least to forming small groups among students in interactive settings. The gathering resulted in six student groups of two to three students each and one single student. During the next four weeks, student groups had to accomplish a project outline, which included suggestions for a research question and empirical work. Those outlines were presented and commented upon during plenary sessions 3 and 4. During the next four

weeks, the student groups were busy with re-arranging the project plans, finalizing their research questions and with the overall research design. At the end of this phase, the project work was launched. Interim findings of the groups could be shared and discussed during plenary sessions 5 and 6. Another three weeks were assigned for individual group work before presenting drafts of final results during the last plenary sessions, 7 and 8. After the repeated in-class and field phases, the student groups concluded the project seminar by composing written theses on their work during the last two months of the project.

The given local case study for the seminar dealt with the small region of *Tullnerfeld*, in the federal state of Lower Austria. The semi-peripheral, rural area of Tullnerfeld has undergone a significant spatial transformation during the previous years, which was received in different ways by the three municipalities concerned, those of Langenrohr, Judenau-Baumgarten, and Michelhausen. As part of the improvements to the European TEN-Corridor Rhine-Danube, a new high-speed railway (HSR) section to the west of Vienna was constructed, including an additional station *Bahnhof Tullnerfeld*, practically on the green field in-between a couple of rural municipalities. Despite this unconventional location of an HSR station, it dramatically improved the accessibility and development potential of Tullnerfeld, now offering a railway stop for international trains between Munich and Vienna and overcoming physical accessibility obstacles. Until recently, the Danube to the north, and the Vienna Woods – a UNESCO biosphere reserve – to the east have excluded Tullnerfeld from the greater suburbanization processes that otherwise were taking place in the Vienna metropolitan area (Helbich & Leitner, 2009). The HSR station opened a development opportunity for the municipalities that thus far have been – to use Kunzmann's (2010) terminology – small rural municipalities in the metropolitan periphery. They gained the possibility of developing into a regionally integrated suburban area. Despite the huge infrastructure project plans, the functional region was lacking an inter-municipal planning perspective of the three directly concerned municipalities. In response to the HSR station, the municipality of Langenrohr developed plans for using the yet undeveloped land to the north of the HSR station for industrial purposes. The municipality to the east, Judenau-Baumgarten, opted for not promoting additional building activities near the HSR station but trying to conserve the specific rural character of the site. Again differently, Michelhausen, located to the west and south of the HSR station, opted for population growth by initiating a large new residential area in close proximity to the HSR station (Humer *et al.*, 2019).

The Student Group Projects

The recent history of the location and its dynamic development potential suggested the seminar theme of 'how spaces are produced'. The seven groups used the overarching theme as their thematic orientation. Their key features are presented in Table 1. For the purpose of this paper, we are less interested in the thematic foci, content results, and conclusions of the group work. Instead, we concentrate on the various methods that the seven student groups opted for in their empirical work. Qualitative research methods dominated in five groups, while two groups relied largely on quantitative statistical work, involving primary and secondary data. Prior to the actual empirical work, short quantitative parts had been accomplished in almost all of the groups, however primarily for the reason of obtaining a descriptive overview over, for example, socio-demographic and economic attributes of the case study region.

Table 1. Features of the student group projects.

Group	Thematic focus	Empirical work	Outcome/result	Normative/practice conclusions on …
G1	Changes for the local inhabitants through the HSR station and new residential area	field questionnaire (quantitative)	Views of impacts on the daily life of locals	… the local community life between 'old' and 'new' residents
G2	Changes for local public finances through the new residential area	infrastructural cost-benefit analysis; alternative scenario building; GIS (quantitative)	Financial burden for the municipality according to housing types	… infrastructure costs related to housing types.
G3	Actors and interests behind establishing the HSR station	Stakeholder analysis (qualitative)	Review of power relations and decision-making processes	… the design of complex strategic planning processes
G4	'Nature' in the new residents' quality of living perception	semi-narrative interviews (qualitative)	Nature as socio-cultural construct with individual/ subjective meaning	… planning for pluralistic meanings of nature/rurality
G5	The HSR station as new 'social place' in the region	non-participatory observation; short interviews (qualitative)	Document and interpret social interactions at the HSR station area	… improvements of the viability of the HSR station through design and services
G6	The HSR station as trigger for densifying efforts in land use policy	document analysis, semi-structured stakeholder interviews (qualitative)	municipal viewpoints on local development and regional cooperation opportunities	… starting an inter-municipal strategic planning process
G7	strategic development of the region under sustainability primacies	on-site visits; mapping; SWOT analysis (qualitative)	basis for a normative strategic vision 'Tullnerfeld 2030' around the HSR station	… prioritizing ecological over social over economic sustainability

Source: own elaboration
Note: groups are listed randomly

In order to get a more comparable, abstract picture of the underlying theoretical-conceptual approaches of the seven groups, we refer them into the socio-spatial relational TPSN-framework (Jessop *et al.*, 2008). The TPSN-framework builds on four socio-spatial dimensions: T territory, P place, S scale, N network. It is a heuristic framework which brings different socio-spatial concepts into relation by identifying a 'structuring principle' out of TPSN (rows) and a 'field of operation' (column). The result is a 4×4 matrix. Thus, the TPSN framework is designed per se for capturing multi-dimensional concepts. Jessop *et al.* (2008, p. 395) and Jessop (2016, p. 24) provide several examples per cell of the matrix. For the purpose of this paper, the socio-spatial dimensions are associated as follows, by examples:

- T Territory stands for state units such as municipalities or federal state,
- P Place stands for a distinct locality such as the HSR station or the new residential area,
- S Scale stands for hierarchic relations of actors or organizations,
- N Network stands for cooperative, non-hierarchic relations of actors or organizations.

In Table 2, the seven group projects are placed into the TPSN-framework according to their underlying conceptual ideas. For example, Jessop *et al.* (2008, p. 395) exemplify the cell P→N with questions of 'urban governance and partnerships'. This is at the core of interest of student group G6, which investigated development plans of the three municipalities and their possible synergies/cooperation. Or, for S→P Jessop *et al.* (2008, p. 395) use the metaphor of 'Russian doll' relations, impacting on a certain place. In line with that, student group G1 reconstructed the various actors (national railway company, ministry, federal state …) and the hierarchical intricacies leading to the decision about the unusual location of the HSR station, which caught the local actors rather unprepared, or at least made them feel powerless. Similarly, all student groups from G1 to G7 can be accommodated within the TPSN framework.

Without over-interpreting this single picture in Table 2, we can say that the field-based character (and the given overall topic of 'how spaces are produced') steered the students' choices for conceptual approaches in as far as place P can be identified in the conceptual background of every group project. Half of the groups built a conceptual framework that draws on place P as structuring principle, whereas the other groups referred to place P as a field of operation. This is not surprising, since the whole course was field based, designed around a certain locality, or place P. Nevertheless, Table 2 confirms the high conceptual freedom, which resulted in a plurality of conceptual approaches within one seminar spanning across all four dimensions of the Jessopian TPSN-framework.

Table 2. Abstract positioning of conceptual orientation of the seven student group projects.

Structuring principle	Field of operation			
	Territory	Place	Scale	Network
Territory		G4		
Place	G3	G2	G7	G6
Scale		G1		
Network		G5		

Source: own elaboration, modified after Jessop et al. (2008)
Note: Conceptual features of the 7 group projects G1-G7 are documented in Table 1.

Seminar Progress and Learning Opportunities

Students started from the same given empirical case study (Tullnerfeld). Their guideline was to get a step closer to understanding 'how spaces are produced'. For this, the students developed research questions that differed vastly from one another, demanding different sets of empirical knowledge and methods of data gathering about and from a particular region. The two following interwoven aspects became evident: Empirical research needs a conceptual framework, which predefines the methodological approach. In other words, decisions over the conceptual approach predefine what methods are appropriate. Consequently, the chosen methods predefine the type of data one can gather and employ.

In between the plenary meetings, students were continuously offered individual tutorials. The development process of group projects was different in timing but overall – particularly after empirical work phases –, there were visible methodological improvements in all groups in every phase between interim reporting – this for example included extra efforts in data gathering or additional steps of analysis. The individual groups engaged with the others' methodological approaches through their being cross-assigned as discussants. The tutors lay emphasis on supporting the improvement of individual group work during the semester, while stimulating critical feedback and reflection of peer students during presentations.

Results and Discussion

We will now reflect on the above description of the seminar and the students' learning by answering the two operational research questions A and B one after another. The discussion section is backed by 28 documents from the three report stages (project outline, interim report, final report) and the tutors' evaluation sheets. Additionally, notes on tutor debriefings, individual student consultations and feedbacks have been considered as far as they were available and accessible.

(A) *Which pedagogical criteria would constitute a grounded learning course design and does the project seminar at hand fulfil those criteria?*

We answered the first part of question A in the theoretical section above in points a to d, which transfer the original grounded theory of Glaser and Strauss (1967) for planning education purposes. These four points will now guide our answer to the second part of question A, i.e. to assess whether the course at hand can be fully considered a grounded learning exercise.

(a) Students go out of class and engage in field studies, in which they interact with a real-world problem and, in course of their research, get in touch with members of society, such as residents, public and business actors, or others.

All seven student groups at least partly indeed did draw from field work, be it mapping, interviewing or observing. Experiences from the field could be shared during the interim reporting in class between the groups.

(b) Students gather experience for their later professional life – experiences which may unfold very differently according to the broad range of potential labour market options for geography and planning graduates – including e.g. the public or private sector, or academia.

The course documentation and the information available about the students participating at the time do not allow for a definite confirmation of point b. What we can conclude is that, at least by course design, students were given the opportunity of engaging with the practical, potential future labour market. A (classical) example of such an opportunity would be the fact that students studied local planning documents and questioned the

planning process and implementation behind it. The degree to which each student finally capitalised on the opportunity towards interaction with the world of practice cannot be reconstructed. All students did however exit the seminar with new insight into planning practice.

> (c) Through studying a practice case, students can combine and apply various content and methods learned in previous exercises and courses at university.

Within their projects, each of the groups applied at least one empirical method that has been taught in their respective bachelor's programmes and/or other method modules of the master's programme. Some groups explicitly reported that they are using the opportunity provided by this project seminar to try out one method they have only learned of in class or from textbooks so far – for example, the method of non-participatory observation (group G5).

> (d) Students are self-responsible for their learning success, while the lecturer rather facilitates and moderates the course – not to be understood auto-didactically but as interactive, inter-peer learning process.

Generally, tutors' guidance during the semester addressed the group entities, not the individual student. The expected progress of the course was proposed by the lecturers but it allowed for alterations within the individual groups, for example concerning their requests for tutorials. Some student groups made frequent use of consulting the tutors, while others worked largely independently during the semester. The student groups also organised their field research autonomously. There were no pre-contacts or pre-visits made by the teachers. Therefore, we can conclude that students were self-responsible regarding the teamwork within the groups and that they had to establish work modes for themselves. Ultimately, the teachers marked all seven final reports – which made up the lion's share of the overall individual mark – collectively per group.

To answer question A, we summarise that the course at hand carried all necessary features to be considered a grounded learning exercise, as defined through the points a to d. Only point b cannot be firmly answered, which lies in the fact that at this stage we cannot foresee the future professional work of today's students.

We now turn our attention to the learning experiences of students in the course, by approaching operational research question B. Our elaboration on Bateson's (1972) learning theory – particularly the learning levels I, II, and III – in the above section guides the way.

> (B) What was the degree of the students' learning success and what were their experiences during the course concerning the methodological aspect?

- Level I learning is considered the classical type of applied learning, which allows for fostering skills and knowledge by doing and trying things rather than only hearing or reading about them.

Without judging the quality of the students' work, level I learning certainly was attained from a methodological perspective. The curriculum design foresees a number of in-class, plenary lectures and exercises to learn about empirical methods. All group projects were based on (different) parts of that earlier knowledge and involved practical experience with real, mostly primary data. Generally, student groups also improved their methodological skills in the course of the semester, which could be observed from one to the next interim report. Especially when students came back from the field with solidified knowledge and new insights, it made them reconsider their perspective on the chosen research topic. For example, almost all groups re-formulated the title and research question between the first outline and the final delivery, which is regarded a progressive step in inductively based research.

- Level II learning is considered an advanced reflection on learning I achievements, which require iterative processes and opportunities toward engaging beyond one's own particular case.

Although the students did exchange some contextual information on their fieldwork – that however was not the focus of this study – methodological inter-learning did not crystallise in terms of adopting peer-group approaches to alter the own approach. The research questions of the individual groups possibly were too diverse as to allow that to happen. At least, students were assigned to give feedback and to comment on another group presentation, including questioning the formulation of the research question, selection of methods, and design of the empirical work. During the course of the semester, some groups enhanced or expanded their empirical efforts, for which the peer environment may have had inspirational effects, when, for instance, witnessing the gains of other groups through doing expert interviews, gathering additional data, or using other methods. Within the student groups, learning level II effects thus took shape, whereas they remained limited on the inter-group level.

- Level III learning is considered to take place when students change the course design, or the course process, based on obstacles within learning level II.

Because learning level II was not fully attained, learning III did not materialise either in terms of altering the procedure of the course by the students, but it rather caused student groups to remain at the learning successes of levels I and II within their small groups. The seminar developed during the semester and concluded as it was pre-designed by the teachers.

In principle, students' learning successes remained mostly within a Batesonian learning I, which represents the very idea of a field based, applied seminar. This level was widely attained by the participating students. Methodological learning arrived at its limits on learning level II and, if so, took place rather within the separate student groups than across groups. A learning III experience could not be witnessed.

Interpretation

The case analysis of a multi-methodological master's seminar, attended by students of various curricular backgrounds, ultimately reveals that planning education can capitalise

on different previous education experiences of students within one course. The student groups were able to add to one overarching research problem and one particular locality as case study field through various sub-questions and empirical research designs, while developing their original approach and selection of methods. Centring the project seminar around one case study field – called 'place' in Jessopian TPSN-framework terms – allowed for a variety of methods in the quantitative-to-qualitative spectrum. In the master's seminar under consideration, the original purpose of the course and the actual teaching centred around solving a particular research problem through different empirical approaches. However, attaining pro-active mutual learning between student groups with different methodological approaches was no pre-defined purpose. Thus, this paper has revisited the course from an originally unintended angle.

We now conclude by recalling the main research question behind that study: *Which course design supports the students' methodological learning under grounded learning premises?*

Continuing from the reflections on learning II, the teachers clearly did not make extra efforts to create such a learning environment. They rather concentrated on instructing, commenting, and supporting the individual process of each student group. This included their methodological and empirical progress, which mainly represents learning level I. One should keep in mind that the main educational mission of this master's seminar was to guide the students from a start through the enhancement to the successful completion of their own group work. If methodological inter-learning took place, then it happened already during the first phase of plenary meetings when students could form work groups according to shared research interests. This early grouping could be a reason for the limited later reception of the methodological designs of other groups.

It would be pedagogically possible and fruitful to attain a better Batesonian learning II experience for students if teachers would prioritise the methodological aspects of such a seminar. In that case, students should try to reformulate their particular questions or to adjust their methods according to that which they gain from the interim results of their peers. They should then also actively re-discuss methodological choices in class and try out alternatives in the field. However, if the overall workload remained the same, the seminar would again become more of an academic exercise – in terms of 'testing methods'. This would happen at the expense of applied, content-relevant aspects, which sets a practical limit to multi-paradigmatic, multi-methodological freedom within a single course. Thus, in curricular and course designs, the pedagogical weight that is to be placed on content or method should be clarified in advance.

Supplying a field-based seminar design in advance is yet different from prescribing a peculiar field of empirical action. Reflecting on this, a shared local case study has proven fruitful and did not additionally limit the methodological freedom, compared to a more open seminar design in which students could choose their case studies themselves. A commonly shared case study could much rather be viewed as an enabler for methodological exchange because of sharing the general context around one case study.

A hint for teachers could be to coordinate student groups' fieldwork, or better, to allow for the methodological inter-coordination of groups. This could be achieved through creating opportunities for student groups to join efforts in, for instance, collecting primary data through shared questionnaires or stakeholder interviews with several sets of questions. Better incentives for students in self-coordination may result in learning III

opportunities, meaning that students actively alter the progress of the course. Even better: if the curriculum allowed for it, a seminar could be extended over two teaching semesters and the very design of the course could be given into the students' hands in the second semester. During such an additional seminar period, student groups could go further into exploiting their various methodological entry points in terms of mixed-methods approaches and triangulation (Flick, 2011, pp. 186–191).

Outlook

Notwithstanding, a sound and critical methodological education for future planning practitioners should not be less important than content-related issues. Or, to put it differently, it is important for future planners to be educated towards looking beyond eventual conflicting or controversial data and content. Who collected the data, and how did they do it? Which questions are posed in the study? In what way do conceptual study designs predetermine results? How are results presented and visualized? All of these questions refer to and depend on the chosen empirical methodology.

To give a few examples: data on the development of regional labour forces can be framed very diversely, depending, for instance, whether one relates it to data concerning social inclusion or the economic attractiveness of a city. Similarly, an assessment of the usability of a local public transport network will also produce different results, depending on whether quantitative commuter statistics (of certain time slots) are employed, or whether in-depth interviews are conducted. These interviews may in turn be held with selected commuters or with stakeholders from different areas of interest, again resulting in diverging assessments. Furthermore, a study of the demographic development in regions with shrinking populations can report the development as an ultimate threat, or reveal potential for consolidating a region – co-depending on the research question and given purpose of the study. These were only a few selected examples. The point is that the assessment of one and the same issue will lead to partly different results and thus potentially to different planning decisions, depending on the conceptual and methodological approach.

The planning profession has an increasing amount of data and studies available from an increasing number of databases, actors, and lobbyists. Planning departments also have budgets available to commission academic or consultant studies. These many data sets do not necessarily make the planner's job easier. Yet, data in whatever form is needed to inform planning processes and decisions. However, we should educate future planners to question the methodological approaches of secondary data and studies critically. They should also carefully consider which arguments they choose to apply and what they (purposely or not) choose to conceal. Planning students of today will also work in private consultancy businesses that are specialized in conducting such data processing and studies. Ethical and methodologically correct job fulfilment is what we can teach the future good planner, whose work will increasingly take place between 'big data' and 'post-truth'. Accordingly, it will be worth reserving sufficient instruction time for methodological learning in applied seminars, apart from content.

A last reflective note aside – beyond the research questions of this study – is designated to future planning education research itself. Teachers should feel encouraged to document not only the content, procedural progress, and assessment of their

students, but increasingly pay attention to documenting the various learning experiences, including peer-learning efforts, in time. Such documentation can serve two purposes. First, a teacher could share and discuss it with students as personal feedback. Second, such documentation of course experiences forms a solid foundation for sharing teaching experiences within the international academic community of planning education research and thus lastingly may inspire higher education among planning schools.

Acknowledgements

Disclosure statement

Funding

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