



CHAPTER 7:

Reflecting on four South African case studies of experiential learning in spatial planning to inform curriculum transformation in higher education

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Abstract

Reflections on the application of experiential learning cases in South African spatial planning programs remain rare in existing scholarship and warrant further research. Critical thinking and experiential learning are prerequisites

to accredit South African curricula of spatial planning education by its professional body, the South African Council for Planners. In African contexts, approaches to spatial planning education have been highly influenced by the logic, systems, and skills of colonial-era town planning. The main argument in this chapter is that students studying in the field of spatial planning may benefit from learning through experiences with real-life situations (case studies), as these generate context-specific forms of knowledge, providing possible strategies of action and intervention in conditions of high complexity, which invariably characterise urban development problems in Africa. The concept 'learning' in this chapter is viewed from a critical social constructivist perspective as it is a social epistemology that is important for the socio-cultural context of knowledge construction, especially evident in our country. This chapter follows a collaborative reflection methodology where four cases of experiential learning (2018-2020) in spatial planning education have been reflected upon during a reflective lecturer's retreat in August 2021. The reflection was conducted in four stages, namely clarification, exploration, focalisation and interpretation. The cases include four spatial planning modules from three different year levels, focussing on different socio-spatial South African higher education contexts. The main findings that have emerged from the collaborative reflection, include that the application of experiential learning in the education of students studying spatial planning is not only beneficial to the students, but also contribute immensely towards the development of the lecturers, planning the curriculum and eventually the practice of interpreting planning practice for the purposes of teaching and learning. The study illustrates the potential of experiential learning to promote a reflective approach to learning, while fostering skill development in complex problem-solving with contemporary relevance in the field of spatial planning.

Keywords: Case studies, curriculum transformation, experiential learning, spatial planning education, South African Higher Education.

Introduction and background

More than three decades later, Manuel Castell's provocative question in the 1990s to spatial planners about the ability of spatial planning (and thus spatial planning education) to change parallel to a changing global world

(Castells, 1992:73), is more relevant than ever. The spatial planning landscape in Africa is increasingly faced with interwoven complexity and accelerated change in the configuration of human settlements. Africa, as part of a changing, developing world, has experienced the highest urban growth rate during the past twenty (20) years (Adesina et al., 2016; Human Development Agency, 2012). Simultaneously, urban changes are transpiring in urban landscapes ravaged by poverty and unemployment, where governments are least equipped to provide urban infrastructure, and urban residents are least able to afford it (Marx et al., 2013:187; Watson, 2009:160). This complex set of problems that spatial planners are grappling with in Africa, some unique to the South African context, e.g. a legacy of colonialism and apartheid (Schensul & Heller, 2011), together with continuing endemic poverty, extreme economic inequality, and spatial division, have raised concerns whether graduate spatial planners in South Africa are sufficiently equipped to address this complexity and are capable to offer unique context-based spatial planning solutions. Muller and Gibbs (2011:1) caution that, although the current training for spatial planners is well established and understood, it is primarily designed for intervention in the formal city. This concern is echoed by Odendaal (2012:8) who refers to the limited application of skills, assessment techniques, practices and community engagement mechanisms that students are equipped with to understand and develop solutions for contemporary context-based complexities that they are faced with in their careers as professionals. Furthermore, questions have been raised about the content of curricula and the extent to which graduates are adequately prepared for the workplace (Frank, 2006; Hurley et al., 2016; Taşan-Kok & Oranje, 2017). According to Odendaal (2012), it is particularly necessary in Global South contexts, where outdated pedagogical practices often fail to equip spatial planners with context-based knowledge, skills and

intellectual flexibility to deal with highly dynamic urban processes, to explore alternative spatial planning approaches to educate planners.

The core problem relates to the fact that in many African contexts, approaches to spatial planning education and curricula have been highly influenced by thought patterns that emerged from colonial-era town planning (Diaw et al., 2002). According to Oldfield and Parnell (2014), the answer for spatial planning education in South Africa is to move beyond a problematic historic legacy to generate insights that have value in specific local contexts. Watson (2002) has long argued for this deeper interaction with practice in spatial planning education. Context-based 'practices of knowing' (Davoudi, 2015), that insist on the importance of the local (South African) in spatial planning education, have the ability to bridge gaps between theory and practice in socio-culturally distinct contexts. Denoon-Stevens et al. (2020) advise that for spatial planning students, in order to develop the necessary context-based knowledge, insights and skills, planning educators need to explore complex and adaptable approaches that bring practice and theory together, in both the conventional and technical universities, by treating theory and practice as an interdependent whole. Roakes and Norris-Tirrell (2000:102) illuminate some of the advantages of exposing students to real-life contexts where they engage with members of the community including the development of social responsibility, the complexity of thought processes, advanced moral reasoning and intercultural understanding. Further to their argument, these authors highlighted the relevancy of learning from real-life cases in spatial planning, because 'effective professional practice' requires 'an operational understanding' or a practical 'competence' (Roakes & Norris-Tirrell, 2000:102). Learning by experience (or doing), referred to as experiential learning, may well equip students to become professionals who are reflective, committed, and

capable of understanding, framing and responding to the realities of planning in the real world (Balassiano, 2011).

The main argument in this chapter is that spatial planning students may benefit from learning through experiences with real-life situations (case studies) as these generate context-based knowledge and insights in order to intervene in highly complex conditions that perpetually characterise urban development problems while addressing inequality. However, according to Duminy et al. (2014), the utilisation of 'live' cases (cases where participants, in this case students, are directly involved and that are practical) in spatial planning teaching in South Africa remains limited. The call for planning programmes in South African Higher Education to equip students with the necessary knowledge, insights, and skills needed for a rapidly changing and unique context, has crystallised in a guideline document that was released in 2014 by the South African Council for Planners (SACPLAN). The importance of experiential learning to equip spatial planning students with the necessary values, attitudes, knowledge, and skills required by the new African Planning Professional, is emphasised in this guideline document (SACPLAN, 2014:32-39). Experiential learning has the potential to promote a reflective approach in learning, and to foster skills in complex problem-solving with contemporary relevance (Baldwin & Rosier, 2017; Chen et al., 2020; Kotval, 2003; Pattacini, 2018). However, reflections on the application of experiential learning cases in South African spatial planning education remain rare and these have scope for further research.

From an educational perspective, the purpose of this chapter is to reflect on the educational value of four live case studies of experiential learning in the spatial planning curriculum at a South African university, and how the outcomes of the case studies could inform the transformation of curriculum planning and teaching and learning approaches. The case studies include four

different spatial contexts and scales including Marabastad (Kroonstad), Matlwangtlwang (Steynsrus), Mokwallo (Vredefort), and the Madibeng Municipality (Brits). These different spatial contexts have been utilised to inform four modules including Urban Design, Infrastructure Planning, Land Use Management, and Strategic and Participatory Planning that are taught across three different year levels in the BSc Urban and Regional Planning curriculum at the North-West University, South Africa. Using these four South African cases of experiential learning in spatial planning education as examples, a trio of aims have informed this chapter: to reflect on (i) the value of experiential learning for students and lecturers; (ii) the value of a case study approach for teaching spatial planning modules and (iii) the implications of reflections on the above-mentioned aims (i and ii) on the transformation of planning the curriculum.

Theoretical / Conceptual framework

Spatial planning: Paradigms and theory

Appropriate and suitable teaching and learning processes are crucial for educators and students in spatial planning at all levels of education (Terlević et al., 2015:106). The formal education system plays a decisive role in teaching the values of space, as it has a significant impact on the increased awareness of relevant topics and the appropriate transfer of spatial contents. The latter is strongly influenced by the relevant paradigm, i.e. the 'organising framework for theory and research' (Du Toit, 2015:62). Accordingly, paradigms describe the nature of reality (ontology) and the grounds of knowledge (epistemology).

Before continuing to focus on paradigms and contexts that are relevant to spatial planning, one needs to reflect on relevant paradigms in education.

Paradigms within education refer to a way of thinking about the goals of education, the significance of learning, and the roles of educators and students (Baker et al., 2019; Creswell, 2014:6). Paradigms of education impact on the specific education design and practice, including assessment practices that are underpinned by epistemological beliefs of educators that impact in return on their teaching and learning approaches. Awareness of paradigmatic details and differences can support integrated and aligned teaching and assessment styles. Numerous paradigms relevant to spatial planning education do exist, including: (i) cognitivism (structuring, organising, and sequencing information in the mind to facilitate optimal processing); (ii) behaviourism (producing observable and measurable outcomes); the student as a blank slate (teacher shapes behaviour through reinforcement); (iii) transformative paradigm (emphasising equity and social justice; learners are agents of change) and (iv) cognitive- and social constructivism (facilitating the use of problem-solving skills that allow learners to go beyond the information given; emphasising social relationships; learning through participation (activity) in social contexts (communities)). While presented separately here for clarity, these paradigms may overlap in practice.

In terms of this chapter's focus, cognitive- and social constructivism denotes that learners or individual students are 'constructors' of their own knowledge, produced whilst interacting with their socio-cultural environment (Piaget, 1971). Constructivist teaching and learning methodologies are, therefore, rooted in the conviction that learning occurs when learners are not merely passively receiving information (Sjøberg, 2007:12), but are actively involved (Gray, 1997:18) in a process of learning and 'knowledge construction'.

These educational paradigms, in turn, reflect on specific planning paradigms found in the teaching, as well as the practice of spatial planning. The most relevant paradigms in the latter science include:

- The *positivist* paradigm that nestles itself in the natural sciences and reflects on universal laws that enable spatial planning to predict and potentially control the reality;
- The *interpretive* paradigm that stands at the other end of the scale and endeavours to propose or describe social action that will enable us to understand social reality;
- The *critical social science* perspective that is concerned with how research and education may potentially lead to positive social change – however, that may be measured; and
- *Pragmatism* that aims to solve problems in reality and also improve the human condition. In contrast to critical social science, it accepts a multitude of social realities in its endeavour to solve a problem. Pragmatism is well-aligned with spatial planning education, and potential employment, as it encourages learners to explore, and formulate their own conception of the real-world problems (Baldwin & Rosier, 2017). From a teaching perspective, this paradigm aims to solve problems in the real world by combining different approaches or designs to improve a particular (mostly practical / applied) situation (Du Toit, 2015:65).

The spatial planning domain, relevant to this chapter, reflects mostly on the *critical social science* and *pragmatic paradigms*.

Closely linked to these paradigms encountered in spatial planning, is the concept of *planning theory*. Planning theory is concerned with how to understand the role of spatial planners and the nature of planning, rather than advocating guidelines for how to execute planning. It reflects on a

framework for thinking about planning and the interpretation of planning practice, aiming to raise students' awareness of their own values in the said field (Olesen, 2018:304). Planning theory calls on students to become reflective practitioners, instead of relying only on technical rationality. It aims to help students understand and interpret the complex nature of spatial planning by developing the necessary sensitivities to planning issues and values. For purposes of context in this chapter, planning theory is also described as theory of planning in an effort to distinguish it from theories in planning.

Theories of planning (e.g., incremental planning, transactive planning, advocacy planning and radical planning) are referred to by Friedmann (1995) as meta-theories that assist spatial planners (including planning students) to develop a nuanced understanding of how spatial planning functions in society. These theories are referred to as procedural and normative theories (Friedmann, 1995:157). On the other hand, theories *in* planning may be considered as practical and prescriptive theories. Accordingly, theories in planning refer to substantive theories within the sub-fields of planning, such as land use planning, transportation planning, public participation, urban design, etc. (Friedmann, 2003:7). These theories are concerned with prescribing methodologies for how to do planning, or how to go about it. Theories of planning address what is common to all these theories, that is, why planning exists and what it does (Olesen, 2018:304). In short, the case studies described in the following sections reflect specifically on various modules constructed within the *theory in planning*-concept, that forms part of the *pragmatic*- and *critical social science paradigms* as described above.

Students of Urban and Regional Planning (North-West University) are thoroughly educated in the above theories in their four years of study. Based on the said paradigms, focused *teaching and learning strategies* need to

prepare them for their two-year post-graduation ‘apprenticeship’ before they may register as professionals. Numerous teaching and learning strategies exist – the traditional form of teaching in higher education mostly involves lectures that are provided to students, accompanied by tutorials, and in some instances, independent study. However, there are several other modes of delivery that may be more effective, given the level of education, the size of the groups and the specific subjects relevant thereto (LLI, 2021). Examples include problem-based learning, flipped classroom, experiential learning, critical thinking, etc. For purposes of the students in spatial planning, it is deemed important to focus on *critical thinking* and *experiential learning* – the latter is also a prerequisite of the Urban and Regional Planning curriculum accreditation as required by its professional body, the South African Council for Planners (SACPLAN, 2014:32).

Experiential learning

Experiential learning was originally coined in an effort to link theory to actual practice within the educational sphere. This concept proposes learning as the process whereby knowledge is created through the transformation of relevant experience (Lewis & Williams, 1994). *Experiential- or work-based learning* is the process of learning through experience and then reflecting on the experience of doing. Numerous definitions and interpretations exist as such, but in principle, ‘*work-based learning is the term being used to describe a class of university programmes that bring together universities and work organizations to create new learning opportunities*’ (Lemanski et al., 2011:5). Urban and Regional Planning, as applied science, has been shown to especially benefit from an experiential learning approach (Baldwin & Rosier, 2017; Kotval, 2003). Accordingly, the approach described in the case studies (see section entitled ‘Contextualising the four cases reflected upon’) reflects on the formalisation and coordinated interaction between real-world

problems and challenges, with students in the more advanced stages of their studies.

Experiential learning as a teaching strategy in this spatial planning curriculum practically plays out in various settings and environments; for example, in a 'workshop environment' or a 'field trip' facilitated by professional planners. Within the concept of experiential learning, more detailed approaches are relevant, e.g., Problem-Based Learning, which is a teaching method utilising complex real-world problems as the means to promote student learning (Duch et al., 2001:5). Another method used in this research relates to Project-Based Learning (working on a project over a prolonged period of time), as well as Technology-Enabled Learning (increased technology use in preparation for their working lives) (Blumenfeld et al., 1991:370; Kirkwood & Price, 2016). Accordingly, students are exposed, in relatively small groups, to the challenges spatial planning practitioners and stakeholders face on a daily basis. These workshops, excursions, etc. are preceded by supporting teaching and learning strategies in class, i.e. blended learning in order to induce critical thinking.

A critical thinking thought process entails collecting information and data, asking thoughtful questions, and analysing possible solutions - an analytical process where facts are analysed to develop a problem or topic thoroughly. In this type of thinking the lecturer not only promotes thinking, but also expects it in the various assessment approaches (Liljedahl, 2016:364). Critical thinking is encouraged and fostered during the blended learning approach followed, through (i) the type of assessments used and how they are used; (ii) the way in which assessments are given to students; (iii) how questions are answered when students compile assessments and (iv) by constructive feedback in an assessment to develop the assessment itself into an opportunity for learning.

In conclusion, the outcomes of the said spatial planning curriculum are mostly founded on a cognitive and social constructivism paradigm as applied to spatial planning (Creswell, 2014:6). The emphasis is also on advocacy planning within a postmodernist society, with a detailed focus on planning theory, i.e., land use planning and management. It is 'delivered' to the students by means of blended learning, critical thinking, and specifically experiential learning.

Methodology

For the purpose of this study, two groups of participants can be distinguished: (i) Primary participants including the lecturers themselves who have conducted critical reflections in a collaborative peer-group discussion of their own experiences and interpretation of the value of the cases of experiential learning as obtained from students' feedback; and (ii) students as secondary participants who have been enrolled for four spatial planning modules in a specific time period (2018-2020) and whose feedback (in multiple forms relevant for each of the four modules) has been analysed by each individual lecturer and discussed with peers.

This section contains a systematic presentation (Gray, 2014:731) of how the research has been conducted by including the approach, design, and method that were chosen as appropriate within a social constructivist framework (see Figure 7.1 below). Further to this, the establishment of trustworthiness and addressing of ethical aspects are dealt with in the concluding part of this section.

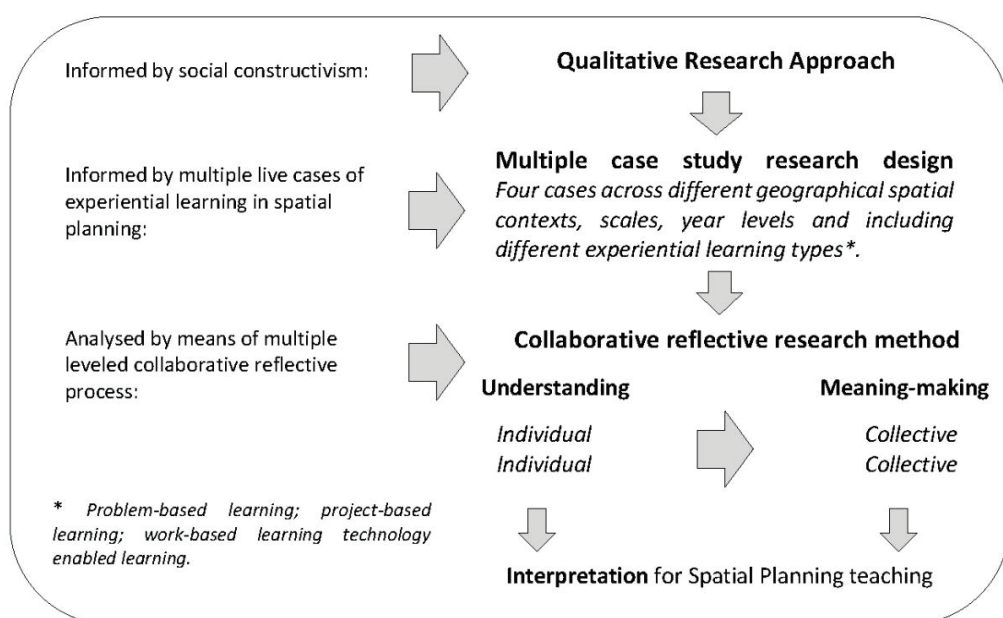


Figure 1: Methodological framework (Source: Own construction)

Research approach

In support of the *critical social science-* and *pragmatic paradigms* referred to above, a qualitative approach has informed the research, as qualitative investigations aim to develop in-depth contextualised and nuanced understandings of a phenomenon, rather than seeking numeric representativeness as required in quantitative research (Hennink et al., 2020:17). According to Duminy (2015:442), qualitative research in the South African spatial planning context warrants further investigation, as many researchers (and practitioners) still propagate survey-based methods and statistical techniques as the most important. The complexity of qualitative research as described by Creswell (2007:35) as '*an intricate fabric composed of minute threads, colours, textures and blends of material*' provides much of the flexibility and creativity that is needed to explore experiential learning application in spatial planning curricula in South African contexts. Further to

this advantage, a qualitative approach may well provide empirically supported findings with transferrable knowledge pertaining to students' learning process. In this chapter, students' learning through experiential learning was considered and reflected upon.

Research design

A case study research design was employed by building multiple 'live' case studies of experiential learning in four different modules (each module accommodating approximately thirty students) that are offered as part of a spatial planning curriculum (BSc Urban and Regional Planning) at the North-West University in South Africa. While case studies are well documented in spatial planning research (Du Toit, 2015; MacCallum et al., 2019), the need for more case study research in spatial planning is emphasised by authors such as Duminy (2015); Duminy et al. (2014); Flyvbjerg (2011); and Kotval (2003). The reason for propagating the inclusion of more case studies in the education of planning students revolves around their potential to generate an in-depth understanding of dynamic processes in different settings and can thus generate context-dependent knowledge – knowledge that is much needed in spatial planning in Africa, as explained in the introduction. MacCallum et al. (2019:44) warned that spatial planners lean towards an overemphasis on broad-scale data-driven research to generalise findings and sometimes fail to provide the detailed information and understanding that is needed to plan for complex interactions that make specific places unique. According to Flyvbjerg (2011:303), the use (or building, in this case) of good and well-presented case studies have the potential to evolve into a 'nuanced view of the realities spatial planners are faced with'. It is this latter advantage of case studies that initiated the generating of 'live' case studies as a learning platform for students to learn in an experiential manner about real-world planning scenarios. The use of live case studies was accordingly considered

as useful learning opportunities in a South African context. Duminy et al. (2014:440) motivate the value of these type of case studies in Africa to be: (i) the value that is offered to spatial planning students in terms of the development of insights into context-based dynamics and needs of communities; (ii) the possibility to develop skills and competencies required for planning in contemporary African contexts and (iii) to sensitise spatial planners to contextual realities. In summary, case studies provide the type of rigorous and exhaustive analyses that are necessary for spatial planning students regarding the attention to details of events and realities as they manifest in a specific natural setting.

Research method

The method utilised for the purpose of this discussion is a collaborative reflection (Clarà et al., 2019) on the 'live' case studies, based on students' feedback in the form of reflective essays, questionnaires, and reflective focus group discussions. Reflection lies at the very core of education programs (Buschor & Kamm, 2015; Jarvis et al., 2014; Korthagen, 2001; Postholm, 2008) and is a learning process, not only for students but also for those who teach (Lin & Lucey, 2010:51). In this particular case, the various datasets that were generated within the cases, were individually analysed by the lecturers as a point of departure for the critical reflection on which this chapter is based. The data generated by students within the particular cases are, however, not reported on in this chapter. This is due to the focus not being on the datasets themselves, but rather on the lecturers' collaborative reflection about the learning outcomes of the experiential learning cases.

To make sense of the experiential learning experience, the value and implications thereof were reflected upon (Cambridge, 2021). The method that was employed in this instance is what Rodgers (2002:845) refers to as

‘reflection on reflection’, where the educators (lecturers) conducted a small group reflective retreat in 2021 about the students’ feedback on their learning process in participating in - and the educators’ experience of employing - case studies as part of experiential learning. The reflective retreat was structured around four phases of reflection suggested by Clarà et al. (2019) including: (i) clarification, (ii) exploration, (iii) focalisation, and (iv) interpretation and have been applied as illustrated in Table 1.

Table 1: Stages and application for a reflective collaborative retreat of students’ learning

Phase:	Purpose:	Application:	Outcome:
	To obtain understanding and insights about how experiential learning was integrated with the live case studies.	Open-ended non-structured individual presentations (discussions) about each lecturer’s experience of using an experiential learning case study in his/her module was delivered for this first part of the collaborative reflection process. These presentations included: (i) the spatial planning problem(s) addressed by the respective case studies; (ii) the aims of the experiential learning live case studies; (iii) the methods, tools and techniques employed by the students to generate data within the cases; (iv) the procedure that was followed within the module, and (v) what the outcome of the experiential learning exercise was (e.g. drawing a plan, building a scale model etc.). The presentations were followed by a focus group discussion, i.e. individual questions and answers from the group for clarification purposes.	Individual understanding of the case studies that were employed in the teaching and learning of the various modules and how experiential learning was employed;
Exploration:	To critically reflect on the various types / levels of learning that took place during the live case studies.	Structured facilitation by one of the lecturers to allow for a collective discussion about students’ learning process, based on students’ feedback on their participation in the live case studies. Feedback from students included a combination of reflective essays, questionnaires that were completed and reflective focus group discussions that were facilitated by the lecturer(s). During this stage, discussions moved from individual presentation (analysis) to collective synthesis using students’ feedback as the main points of reference.	Collective understanding (synthesis) of the value of experiential learning that emerged from the four live case studies of experiential learning across year levels and modules.

Phase:	Purpose:	Application:	Outcome:
Focalisation:	To evaluate the usefulness of experiential learning in teaching and learning in spatial planning education within this specific planning curricula.	This phase included a structured discussion to evaluate the value of the case studies for students by extracting key focuses (themes) of learning that took place across the four different modules. What was critical in this phase was the ability to weave meaning among the threads of experiences of students.	Individual meaning-making by reflecting on core focuses of learning that emerged from experiential learning in case studies.
Interpretation:	To contemplate how students' learning can be utilised to transform these specific modules that are part of the spatial planning curriculum.	The practical implications of curriculum transformation within and across the four different modules were discussed to consider how the value of experiential learning may be maximised.	Collective meaning making by reflecting on practical implications of learning that emerged from experiential learning in case studies and interpretation of these for the purpose of spatial planning teaching and curriculum transformation

Source: Own construction based on Clarà, Mauri, Colomina, and Onrubia (2019)

The ideas resulting from the collaborative reflection were converged (Cambridge, 2021) for a broader understanding of the value of experiential learning and utilising case studies in teaching and learning and their implications for curriculum transformation in spatial planning education. Reflection in this case entailed an integrated and reciprocal process during which thinking, and processing of information shifted between individual and collective understanding, meaning-making and contemplating about how experiential learning can be utilised as a platform for curriculum transformation.

Trustworthiness

Qualitative research should not be judged through a quantitative lens, as this may well lead to the application of procedures that are inappropriate to qualitative research, with the potential danger of the discarding of good quality research, or the acceptance of research that lacks the real depth, good qualitative research is supposed to illustrate (Welch & Piekkari, 2017:717-718). Trustworthiness was established by employing a five-tier strategy. Firstly, by being transparent in acknowledging that all data were interpreted based on the knowledge and experiences of the lecturers. Transparency is a way of establishing trustworthiness in research (Watt, 2007:85) that adds to the sincerity of the research – a criterion that in itself adds to the trustworthiness of qualitative research (Tracy & Hinrichs, 2017:3). Secondly, credibility in this research was established through triangulation and crystallization as suggested by Ellingson (2014) and Tracy and Hinrichs (2017). Triangulation was employed by collecting multiple forms of feedback from the students about their experiences of experiential learning in the different cases e.g. open-ended questionnaires, reflective essays and class discussions – these were all considered during the lecturer’s peer reflective discussions in order to allow for multiple points of view of the datasets to converge. Supplementary to triangulation, crystallization was applied. Just as crystals have several facets that comprise their overall shape, analyses about research cases can gain credibility by including multiple researchers (different lecturers in this instance) that represent different ways of understanding the world. A third way that allowed for trustworthiness was through transferability. Similar to credibility that is applied in quantitative studies to confirm trustworthiness, transferability in this study (the ability of the outcomes of a study to be replicated) was possible due to the opportunity to consider multiple interpretations of the students’ feedback from five different lecturers including four different cases of experiential learning

across different year levels as experienced in different socio-spatial contexts. Fourthly, reflective interpretive memos were generated continuously during the interaction with the data to build an audit trail to document ideas, thought processes and interpretations of how students have experienced and perceived the experiential learning cases (Chun Tie et al., 2019). A fifth way that allowed for trustworthiness was through meaningful coherence (Tracy & Hinrichs, 2017:9) by employing methods and procedures that fit the goals of the study (to reflect on experiential learning case studies) and the interconnection of relevant literature, interpretations, and findings.

Ethical considerations

In this particular research, reflexivity was conducted as an ongoing sensitising notion to enable ethical practice to occur throughout the complexity and richness of the research process (Guillemin & Gillam, 2004, p. 277-278). Being reflexive in an ethical sense means acknowledging and being sensitised to the micro-ethical dimensions of research practice and thus being alerted and prepared to deal with the ethical tensions that arise. Further to the reflexive principle that has been maintained throughout the reflection phase of the research (as reported in this chapter), ethics have also been addressed in the live case studies by means of informed consent forms (as suggested by Brinkmann and Kvale, 2005:266–269) that were completed by all students and community members who participated in the ‘live’ case studies. The voluntary nature of participation (without remuneration), anonymity and transparency about the research as well as the future use of data were included in the consent forms. It should be noted that some of the case studies each went through ethical scrutiny at the relevant Ethics- and Gate-keeping committees of the Higher Education Institution (HEI), and were cleared as such.

The process of understanding, meaning-making, and interpretation as illustrated in Table 1 were constructed in the context of students' learning and the reflection upon the learning that took place. The context of their learning, namely 'live' case studies in different spatial study areas, are sketched in the subsequent section.

Contextualising the four cases reflected upon

The methods, context, and experiential learning experiences of the four modules that were collaboratively reflected upon are presented in Figures 2-5 to contextualise these four case studies. Each case utilised experiential learning to enhance the teaching and learning experience of students from their second year of study to their fourth year. The students were exposed, on different occasions, to a variety of human settlement typologies and engaged with, and learned from, various role-players within the spatial planning process. Further to this, they practically experienced a variety of skills and theoretical constructs required for African Planning Professionals (SACPLAN, 2014:32-39). Knowledge was, therefore, constructed by the students themselves whilst interacting with a variety of socio-cultural environments.



Figure 2: Problem-based experiential learning

Figure 2 presents problem-based experiential learning within the NWU Urban and Regional Planning module, Urban Design, where students have visited Marabastad (Kroonstad) twice during their semester and implemented participatory methods to constructively learn about *place-making*. This experience was gained parallel to engaging with theory, allowing for co-learning and theoretically exploring observations that have not originally been part of the curriculum.

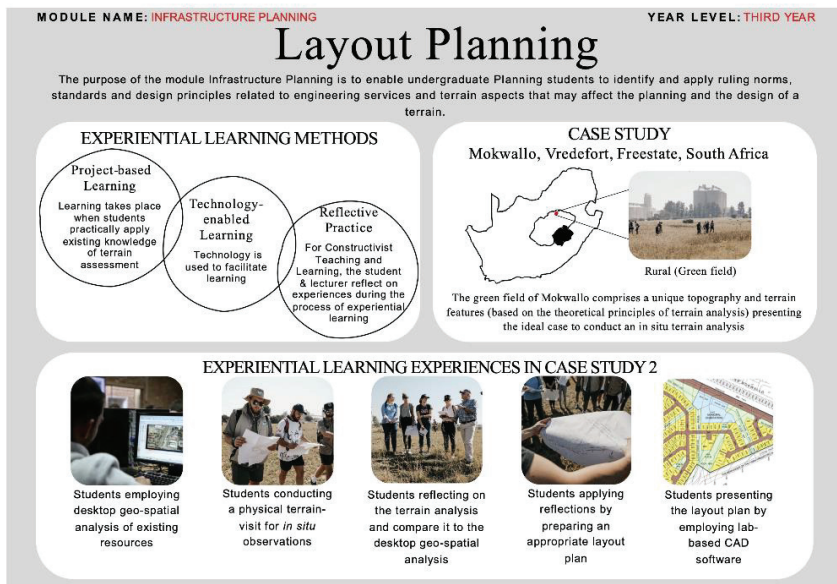


Figure 3: Layout planning

The experience of learning *layout planning* is presented in Figure 3 where dichotomous experiential learning was applied for students to experience the role of both digital tools (technology-enabled learning) and a physical terrain visit (project-based learning). The ruling norms, standards, and design principles related to engineering services and terrain aspects were theoretically taught, after which students explored these within the case of Vredefort.



Figure 4: Land use management

Figure 4 presents the case of students experiencing the formal working environment (work-integrated learning) to broaden their understanding of, and actualise the legal principles of *land use management*. The students firstly learnt the theoretical component of land use management and then attended, in groups of six, a week-long visit to a professional planning practice in Brits.

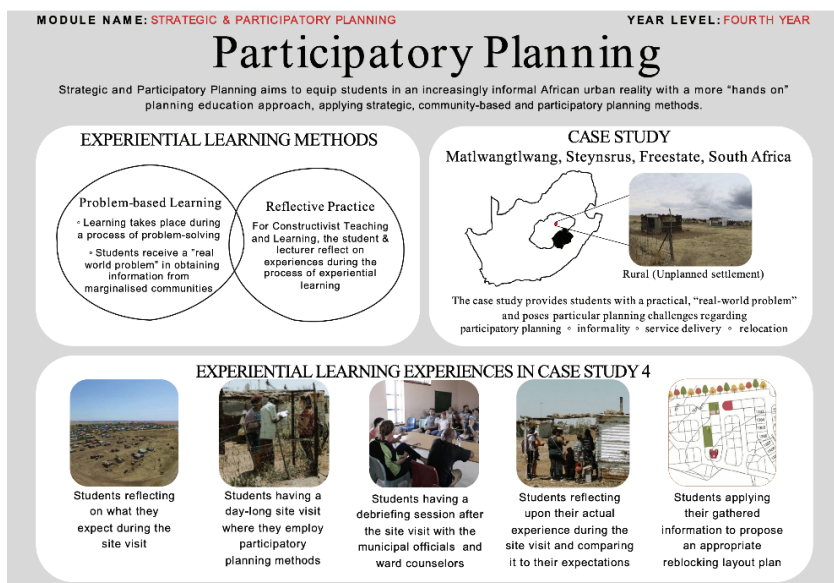


Figure 5: Participatory planning

In learning *participatory planning*, refer to Figure 5, students obtained a theoretical framework of community-based and participatory planning, reflected on their stance regarding this theory, and then practically experienced the implementation of participatory planning methods during a day-long site visit to Steynsrus.

Furthermore, in each of these cases, students were expected to reflect on their learning experience to ensure conscious learning and an integration of their theoretical knowledge and practical experience.

As alluded to earlier, these case studies were collaboratively reflected upon from the lecturers' experience of presenting these modules and based on the feedback from the students, in the respective ways in which feedback was provided about their experiences of the experiential learning in the different modules. This collaborative reflection process (refer to Table 1) was conducted during a lecturer's retreat in August 2021, subsequent to applying

the experiential learning in the modules from 2018 to 2020. The findings generated from the collaborative reflections are presented in the following section.

Discussion of the findings

Findings, resulting from the collaborative reflection on experiential learning applied in spatial planning education as presented in the sections, may essentially be congregated into four main themes; (i) the value for students, i.e. student development, (ii) the value for lecturers, i.e. lecturer development, (iii) the implications for curriculum development, and (iv) implications for spatial planning practice. These themes eventually culminate in recommendations for curriculum transformation and for the planning practice, correspondingly discussed in the ensuing section.

Student development

Reflections based on feedback received from the students in the various modules as outlined in Figures 2 – 5, revealed that the application of experiential learning in all of the case studies, may have resulted in student development on two levels: i) Planning discipline related knowledge and insight, and ii) Soft skills development.

Planning discipline related knowledge and insight

- **Linking Theory and Practice:** Problem-based, project-based, and work-based learning made planning theory relevant, practically applicable, and relatable to students.
- **Professional experience:** Employing experiential / work-based learning provided students, as candidate planners, with the required work-based experience and the necessary practice exposure prior to professional registration.

- **Interdisciplinary understanding:** Exposing students to an interdisciplinary work environment through the application of experiential learning, has opened their eyes to the challenges in practice of working in a project team composed of professionals from diverse disciplines and has provided them with an improved understanding of how these disciplines are related.
- **Broadened perspective:** The exposure of students to the entire planning process through work-based, problem-based and technology-enabled learning, has not only broadened their perspective on spatial planning practice, but assisted them in their selection of themes for their final-year research projects.
- **Context-based learning:** Introducing students through experiential learning to a variety of diverse case studies, has cultivated in them an understanding of the unique and varying contexts in which they will work and that each context requires tailor-made solutions.
- **Negotiation skills:** Students learned invaluable community engagement- and negotiation skills as they have been actively part of negotiations with municipalities, ward councillors, and community members as students indeed conducted post-survey meetings with both municipal officials, ward councillors and selected community members in disseminating collected data with these city actors.

Soft skills development

- **Critical thinking:** Continuous application of reflective practice as an integral part of all the experiential learning case studies, has dramatically enhanced the students' critical thinking skills as they had to continuously evaluate their own learning and thinking processes through written reflections.
- **Problem-solving:** Problem-based learning and reflective practice have enabled students to develop problem-solving skills,

continuously elevating their level of reasoning, whilst simultaneously linking theory and practice.

- **Cultural sensitivity and social responsibility:** During the community engagement processes and a variety of site visits, students had to adapt and learn the necessary values, attitudes, knowledge and skills required by new, young planning professionals, sensitising them towards the cultural diversity in various South African contexts and their social responsibility towards the communities in which they work.
- **Project management:** The employment of project-based learning, where the case studies have been structured as simulated urban planning projects, enabled students to develop soft skills in project management as students had to work in project management groups / teams with a professional focus and company name, as they would in practice.
- **Communication:** Students have developed robust interpersonal communication skills in the application of experiential learning, as they were constantly confronted with different role-players from diverse groups in practice and had to make adjustments in their communication accordingly e.g. to avoid ‘technical jargon’ whilst communicating with community members.
- **Conflict management:** Working in groups has had the added bonus of students learning relevant remedies in handling and resolving typical conflicts to the benefit of the entire project team.

Lecturer development

Collaborative reflection during the reflective lecturers’ retreat, has revealed that the application of experiential learning also resulted in the development

of the respective lecturers on two levels: i) Planning discipline related knowledge and insight, and ii) Soft skills development.

Planning discipline related knowledge and insight

- **Broadened theoretical knowledge:** The application of experiential learning necessitated constant renewal of the study material in the respective case studies and has consistently compelled the lecturers to identify gaps in their own theoretical knowledge e.g. participatory planning theory. In some cases, the students have also contributed new sources to the existing study material that supported lecturers in broadening their theoretical knowledge e.g. articles on participatory planning.
- **Work-Integrated Learning (WIL):** Renewed and continuous exposure to planning practice through work-integrated learning, has resulted in the transfer of more current and applicable knowledge as well as the constant improvement of lecturers' insight into practice matters due to input received from practitioners and students, e.g. students completing a brief elective in a consultant practice.
- **Research outputs:** Employing experiential learning through the Scholarship of Teaching and Learning (SoTL) projects by the various lecturers, has provided an essential connection between research, education and community involvement, narrowing the gap between teaching, learning, research, and practice. This has provided lecturers with the opportunity to produce relevant research outputs (e.g. journal articles, book chapters, best case practices, etc.) through teaching and learning, converging the energy that lecturers usually have to devote separately into both aspects.
- **Relevance and social responsibility:** Continuous involvement in planning practice and in community engagement through experiential learning, has supported lecturers in the effort to remain

relevant in the transfer of knowledge and has created an awareness of the reality wherein spatial planning practice functions. It has also provided lecturers with the opportunity to stay involved in their neighbouring communities and sensitised them to their continuous social responsibility towards the public.

- **Indigenous student knowledge:** The practice of experiential learning has indicated latent potential towards enhancing teaching and learning methods, continuously learning from the students' experiences and co-producing solutions with their knowledge and inputs, to improve current education methods.

Soft skills development

- **Creative and critical thinking:** The application of continuous individual critical reflection by lecturers on the employment of experiential learning, has resulted in the development of new creative solutions and personal skills development in the transfer of knowledge.
- **Problem-solving:** Problem-based learning and reflective practice have also enabled lecturers to develop problem-solving skills, especially concerning the application of novel methods in the transfer of knowledge and in developing the most suitable assessments of module outcomes.
- **Teamwork and communication:** The shared paradigm of cognitive and social constructivism, as well as the collaborative reflection on experiential learning between lecturers in the subject group, have conducted improved teamwork and communication amongst lecturers. It has also resulted in the co-production of new knowledge and workable methods in teaching and learning, and consequently, the development of the curriculum.

Implications for Curriculum development

The dualistic development of students and lecturers through the application of experiential learning, has inevitably led to implications for curriculum development, subsequently discussed:

- **Linking research, teaching and learning, and practice:** Employing experiential learning through the Scholarship of Teaching and Learning (SoTL) projects by the various lecturers, directly resulted in narrowing the gap between research, teaching and learning, and practice. Applying work-integrated learning in bridging this divide, is also a requirement of SACPLAN (the South African Council for Planners) and, therefore, has contributed towards their accrediting the NWU Urban and Regional Planning curriculum by the appointed SACPLAN accreditation board during 2021.
- **Module adjustments across year levels:** Continuous application of experiential learning across different year levels as indicated in the respective case studies, has culminated in the renewal of existing modules and the creation of new relevant modules (e.g Participatory planning module, Planning practice, Layout planning site analysis, etc.). This instigated an improved liaison between modules on the various year levels and the holistic development of the planning curriculum as it is prescribed in the core competencies and standards for curriculum development by SACPLAN.
- **Social constructivism and reflective practice:** The collective paradigm of social constructivism and the continuous application of reflective practice by lecturers in the subject group, have resulted in the co-production of new knowledge and workable methods in teaching and learning, and consequently, the development of the curriculum.

- **Application of novel technologies:** As a function of the application of technology-enabled learning, students have received training in the use and application of the latest technologies and methods in Planning (e.g. drone technology), subsequently keeping the planning curriculum and the education of students relevant, whilst keeping pace with the latest technology available.
- **Adapted assessment methods:** The application of new teaching and learning methods in experiential learning has correspondingly compelled the development of new, relevant and suitable assessment methods. These include, for example, portfolio evaluation, day-long (8 hour) practical examinations, case-study based assessment questions and the inclusion of written critical reflections as part of assessment procedures.

Implications for practice

It is axiomatic that improved education of students and the development of the spatial planning curriculum through the application of experiential learning would, evidently, result in positive implications for the planning practice. The most significant implications may be summarised as follows:

- **Professional qualification and Continuous Professional Development (CPD):** The unique nature of the degree as a professional qualification in Urban Planning as well as the core competencies and standards for curriculum development required by SACPLAN, has necessitated the application of experiential learning. Further to this, the CPD requirements of SACPLAN, to which practitioners must adhere, have created the ideal vehicle for a continued link with practice and, subsequently, the application of

experiential learning. It also provides a sustainable platform for the future implementation of similar case studies.

- **Linking Theory and Practice:** Enhanced interaction with planning practitioners through experiential learning, has resulted in an increasing transfer of knowledge from theory to practice and vice versa through feedback received from planning practitioners during work-integrated learning electives and student elective reports. In this way, practitioners gain exposure to the latest planning literature and research methods that they may decide to use in drafting applications and policies. This cross-pollination thus bridges the current gap between theory and practice.
- **Improved networking and collaboration:** The employment of experiential learning necessitates continuous feedback to municipalities, political role players and planning practitioners, having the positive consequence that it significantly expands the current network of the university and promotes collaboration with key role-players.
- **Creating awareness about the Planning Profession:** Improved networking and collaboration have the added advantage that these create awareness about the planning profession amongst important role-players and subsequently could contribute towards the safeguarding of the profession.
- **Well-rounded planning students:** Continuous practice exposure of students in planning through experiential learning, perceivably contributed towards better adjusted and well-rounded candidate planners, more aptly prepared for the working environment.

Discussion

South African spatial planning schools have inherited a planning paradigm and educational framework based on colonial practices from the previous century. Being a unique region, South Africa reflects a noteworthy formal, developed character, while maintaining informalities parallel to the formal character. The spatial planning curriculum in general also reflects on this through a biased application of a disparate spatial planning approach. Although some form of experiential learning has been applied in numerous spatial planning curricula, the educational emphasis was mostly on behaviourism and cognitivism. This chapter has set out to analyse the role and application of experiential learning practices within the cognitive and social constructivism paradigm in an existing and accredited spatial planning higher education programme. Four unique 'live' case studies, based on the content of existing learning modules, have been facilitated and implemented over a period of three years with different year groups. The students had to reflect on their experiences afterwards in an effort to support conscious learning and provide feedback to the lecturers. The response and findings of the said case studies have subsequently been synthesised by means of a collaborative reflection workshop by the relevant lecturers.

It was clear from the reflective collaborative retreat that knowledge was certainly constructed during these 'live' case studies by the students while interacting with a variety of spatial- and socio-cultural environments. The findings of the above case studies and research exercises were related back to student-, lecturer- and curriculum development implications, as well as inferences on the practice of implementing spatial planning. The results reflect that the experiential learning exercises possibly provided the students with an improved vision of the link between theory and practice, as well as a better understanding of spatial context. Their soft skills may well have

improved with the application of problem-solving and critical-thinking encounters, as well as a possible improved awareness of cultural sensitivity and social responsibility, amongst others were gained.

The students were not the only beneficiaries of said experiential learning exercises. Increased exposure to spatial planning practice has improved the lecturers' awareness of insight and knowledge in their respective fields, while increased social responsibility and a more acute awareness of relevant spatial contexts have been emphasised. The lecturers' collaborative efforts have also resulted in teamwork that is more productive and have led to increased research outputs. The latter research outputs have not been the only formal results or implications, as the above findings were also articulated into the curriculum through improved module content adjustments across the four-year programme. The chronology of case studies is now in support of one another, while new technologies and adapted assessment methods have formally been implemented.

The benefits of the above experiential learning exercises also reflect on the implementation of planning practice. In South Africa, registered practitioners are expected to further their professional development initiatives annually – the above interaction with students and a higher education institution is recognised, and supports this platform. There is also increased networking between these two sectors, as well as an increased awareness of the planning profession in general. In summary, it is evident from the findings above that the approach followed through these 'live' case studies has returned exceptional results in terms of the scientific discipline. Not only has the curriculum been transformed, but the above experiential learning initiatives may well have resulted in lecturers that are better equipped and students that enter the job market as more well-rounded professionals. This is due mainly as a result of exposure to real-life situations and a scope of knowledge

and skills that have expanded according to the reflections of students, taking into consideration the lecturer's collaborative reflections. However, the success of these perceived practical benefits needs to be assessed in follow-up research.

Recommendations

Although recommending exhaustively on experiential learning as applied in the respective case studies is formidable, and further publications should be anticipated, this chapter concludes by offering recommendations deemed essential to meet the main argument of this chapter (outlined in the introduction). The recommendations are presented under three themes in accordance with the findings of the preceding section i.e., student development, lecturer development, and recommendations for curriculum transformation.

Student development

- **Earlier introduction of experiential learning:** While the notion is seemingly and often prevalent to introduce students to experiential learning at more advanced year levels of the spatial planning curriculum, this chapter argues for a much earlier advent, especially as the curriculum has at its crux the delivery of well-prepared candidate planners to the industry, meeting the core competencies of the professional body.
- **Liaison between modules and year levels through experiential learning case studies:** Mere incorporation of experiential learning in the spatial planning curriculum should preferably not be the aim, but rather the selection of specific and applicable real-world (Thorne, 2016:14,27) case studies, over a broad spectrum, thereby also

recommending trans-module and cross-year level experiences, instead of ring-fencing learning experiences per module or year level.

- **Improve research relevancy and practical application:** It is recommended that the students are encouraged to select research themes based on experiential and work-integrated learning activities, strengthening these activities as inherent to the spatial planning curriculum. This recommendation appreciates Farthing's (2016:182) lamentation that too much spatial planning research fails to meet the needs of practitioners and should provide evidence to policy and practice.
- **Context-specific induction and cultural sensitisation:** Operating in the unique spatial planning landscape requires a certain level of sensitisation of students depending on the context of the specific endeavoured case study. Thorough induction and awareness relating to target groups (where community involvement is perceived in a case study) are strongly recommended prior to the undertaking of experiential learning exercises. Induction in this instance ought to be context-specific, relating to the diversity of the South African society.
- **Multidisciplinary attitudes and comprehension of the entire spatial planning process:** Working in the multidisciplinary environment is intrinsic to the dynamic planning landscape, involving specialists over an exceedingly broad spectrum. Work-integrated learning may well offer pertinent opportunities to expose students to the multidisciplinary environment and the selection of real-world case studies should purposefully explore this reality. Work-integrated learning is additionally recommended to expose students to the 'entire planning process', inclining from the planner in isolation towards the planner as an important link in the kaleidoscope of the entire planning process.

- **Reflective practice as a tool for developing critical thinking:** The employment of reflective practice (i) prior to and (ii) following a selected case study by students, is perceived as an essential and inherent practice and (iii) its further inclusion as part of the assessment processes, is recommended for all experiential and work-based learning-activities. The enhancing value thereof towards the own learning, development of critical thinking skills, and thinking processes amongst students, should not be underestimated, reinforcing its inclusion as an indispensable component of learning experiences.

Lecturer development

- **Dissemination of knowledge on innovative educational methods:** Exposure to the dynamics of experiential learning has induced renewal of the learning curves of lecturers. It is, therefore, recommended that lecturers proactively make use of already existing support structures e.g., the Centre for Teaching and Learning (CTL) and the Scholarship of Teaching and Learning (SoTL) to encourage exposure to new and innovative teaching methods, that they may not currently be familiar with. Recommendations towards experiencing new and innovative methods, appropriate for the diversity in the South African society, are ardently endorsed.
- **Social constructivism as a tool for creating new knowledge:** In sustaining continual upward learning curves, the co-construction of knowledge is strongly advocated. It is recommended that the contributions of both students (based on their reflections) and the involvement of planners in the industry (comprehending and applying workable solutions and community involvement) are permitted as it

is, in addition, deemed conducive to the entire planning and education process.

- **Collaborative reflection as a tool for the development of planning education methods:** Promoted reflective practices in the preceding section, are similarly recommended amongst lecturers in so far as their lessons learned, best case practices, and proposed improvements on experiential learning, and other educational methods are concerned. In this regard, the mutual sharing of experiences arising from experiential learning on a regular basis, is also recommended and is regarded as underwriting a continuously improving planning curriculum.
- **Integrating research outputs and teaching and learning:** Research outputs amongst lecturing, often burden lecturers and these activities are also viewed as separate outputs, irrespective of their extreme distinct time appetites. It is recommended that experiential learning during SoTL projects may well, through its integrating attributes between teaching, learning, research, and practice attributes, offer inimitable research opportunities resulting from teaching and learning, as opposed to considering the entities unrelated to each other.

Recommendations for curriculum transformation

- **Incorporation of experiential learning in the spatial planning curriculum:** The selected case studies, findings and recommendations in the preceding sections accentuate the benefits of incorporating experiential learning in the spatial planning curriculum. It is recommended that the knowledge accumulated through the conducted case studies are purposefully employed in:
 - Adapting relevant modules,

- Preparing new modules,
 - Considering alignment between modules,
 - Investigating hybrid modules with correlating disciplines,
 - Improving fluid teaching by the confluence of more than one lecture in a module or modules,
 - Seeking cross-year alignment.
- **Relinquishing the ring-fenced module approach:** Most significantly, a combination of experiential learning approaches traversing year levels and modules are the preferred recommended response to anticipated curriculum transformation, especially as megatrends emphasise the need for disembarking from the pursuit of a predictable single future or outcome (Retief et al., 2016:56). The broad and multidisciplinary nature and encounters confronting planners in the 'real' planning environment are simply unable to longer afford a ring-fenced or silo module approach, as is often the case in spatial planning higher education in South Africa.
 - **Experiential learning and real-world case studies in planning education:** The students' positive experiences and perceived benefits of experiential learning, as found during the collaborative reflection process, were applied through the use of the case studies discussed in this chapter, have emphasised the relevance and diversity of experiential learning in planning education. The importance and implementation of diverse context-based methods (e.g., project-based, problem-based, work-based and technology-enabled learning) of experiential learning by lecturers in planning education are, therefore, fervently recommended. This, of course, to ensure the preparation of planners for the industry, keeping pace with real-world and contemporary approaches that are often obtained only through

work-integrated learning activities and resultant 'grey literature' (Bonato, 2018:49).

- **Budgeting for continuous experiential learning:** Although SoTL project funding may still contribute towards research and anticipated revisions in the planning curriculum, sole dependency thereupon may be unsustainable. Departing from a silo approach to an integrative and traversing approach to teaching and learning by, inter alia, intensively pioneering experiential learning, is perceived as cost-intensive to an extent not necessarily predicted in current budgets. Active budgeting and re-budgeting, despite apparent difficulties in a cost-cutting milieu, will be the exciting charge forward.

Conclusion, limitations and the way forward

When compared to a generic programme, it is clear that a professional programme at a Higher Education Institution (HEI) has different outcomes and expectations from the governing professional body, as well as the requirements of professional practitioners who potentially employ them. This presents the Programme Managers with tremendous challenges to meet the requirements of an HEI in terms of programme content and outcomes, as well as preparing the learners for a lengthy practical apprenticeship that follows this four-year training.

This study indicates how extensively and diversely experiential learning may be applied, in different forms and applications, within spatial planning education in order to train students across different year levels and in diverse practice-based contexts. It is evident that our approach and application of experiential learning offer the potential to significantly improve the link between theory and practice, and that its sustained application may fundamentally contribute to the development of spatial planning education

at an HEI, as well as planning practice. One limitation of the research presented in this chapter where lecturers have reflected on the value of experiential learning in their teaching of spatial planning, is that although students did provide feedback (whether in the form of critical reflections or questionnaires), it is difficult to report thereon in this chapter format. Also, the value of student development that emerged from this study has not yet been evaluated in terms of students' performance in the workplace. This type of member-checking with former students, who are now employed as spatial planners, would add significant value to this study. Accordingly, the medium to long-term effectiveness and impact of experiential learning that are reflected upon in this chapter, and how these 'live' case studies have changed students who are now alumni, should form the focus of future research initiatives.

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