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RESEARCH ARTICLE

Facilitating reflective practice: developing built environment educators' capacity for teaching and learning

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Abstract

The international literature on higher education emphasises the importance for academics and professional staff to develop their disciplinary teaching and learning practice. Teaching staff in built environment degree programs tend to focus on 'what' subject content is taught and less on 'how to' improve and innovate teaching and learning contexts and students' skills development. To investigate these trends, this research reviewed the higher education literature and relevant international studies on strategies to enhance quality teaching and student learning. Findings highlight that reflective practice and engaging in a personal teaching philosophy and teaching profile provide an important link for individual professional development and basis for improving teaching and learning. The objective of this study was to apply findings from the literature in facilitating professional learning workshops, with a pedagogy for collaborative reflective practice and the development of a teaching philosophy. This research reports on the first stage of professional development for staff in built environment programs to establish a teaching profile through reflection on their personal and discipline specific pedagogies. Initial findings highlight the positive impact of reflection and collegial conversations about learning and teaching, as well as future opportunities for individual and discipline based capacity building for improving educational practice.

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Keywords

Built environment education, teaching philosophy, reflective practice, professional development, teaching innovation.

Introduction

HIGHER EDUCATION CONTEXT

Internationalisation and digitisation of higher education teaching and learning has created global employment opportunities and mobility for academics and students alike (Hattingh et al., 2015). The predominant career-long academic tenure at one or two institutions has given way to fixed term or short-term employment and contracts with specialisation of research, teaching and administrative roles (Bennion and Locke, 2010; Locke, 2014). The increasing complexity and fragmentation of the academic workforce is enhanced by the separation of management funding and academic rewards and recognition for individual and institutional research output as key drivers for reputation and career success (Fanghanel and Trowler, 2008). The current government funding and university reward systems are predominantly geared towards discipline-focused research outputs, rather than teaching innovation or educational publications (De La Harpe, Radloff and Wyber, 2000; Watty, 2003). In this context, it is becoming important to strengthen institutional connections from corporate strategy via faculty management to measurable student learning and skills outcomes in individual disciplines and courses (Borrego and Cutler, 2010; Mak et al., 2013). More recently, researchers' concerns about the barriers of alignment between skills assessment and students' acquisition of work-based professional and lifelong skills, also highlighted by industry and employers, have expanded the research in this field (Bunney, Sharplin and Howitt, 2015; Ruge, Tokede and Tivendale, 2019).

ASSURANCE OF QUALITY STUDENT LEARNING OUTCOMES

The critical role of graduate attributes in student learning is also reflected in their prominence in national quality assurance activities (Barrie, 2004; Oliver, 2013). In Australia, since 1998, quality assurance audits have been undertaken by the Australian government through the Tertiary Education Quality and Standards Agency (TEQSA). These reflect the international trend of governments setting standards, tightening funding and expecting universities to report and perform against national and global rankings (Bowden, 2000). As a result, quality assurance measures in higher education have now started to pervade many aspects of academics' teaching and research activities. Today's expectations of higher education providers include assurance of teaching quality and graduate learning outcomes for future student employability (Tam, 2014; Tomlinson, 2012). For more than a decade understanding the effectiveness of good teaching and learning at universities has been identified (Fitzmaurice and Coughlan, 2007; Prosser and Trigwell, 1999; Schönwetter et al., 2002). Traditionally teaching has been left to the individual lecturer based on disciplinary expertise without questioning the educational pedagogy or review of assessment and demonstrated student learning outcomes. Yet in the current international higher education context going forward at the current rate of change, the connectivity to good teaching and learning within higher education policy, processes and practices is at risk of being left behind. In this context of systemic and disruptive change academics are required to broaden their expertise in teaching

and learning, research and stakeholder engagement. For the employing institutions managing an international and mobile cohort of expert employees, questions of underlying beliefs, values and expected contribution are emerging as critical factors to ensure continuity and sustainability. To investigate these trends, this research reviewed the higher education literature and relevant international studies on increasing quality teaching and student learning.

Literature review

RE-VALUING TEACHING AND LEARNING

Detailed insights into the personal contexts and motivations of teaching academics who have experienced these institutional changes were undertaken in the late 1990s (Hill, 2000; Mcinnis, 2000; Winter and Sarros, 2002). A number of studies reported on such implementations and found that academics and teachers do not respond well to teaching and learning initiatives imposed by the institution or faculty if they are lacking clarity in the implementation (De La Harpe, Radloff and Wyber, 2000; Sumsion and Goodfellow, 2004; Watty, 2003). Findings also showed a decrease in, or lack of, institutional support for teaching at lecturer levels, where increased workloads had a negative effect on work motivation and performance. Winter and Sarros (2002) elaborate that *'academics in teaching only roles and teaching and research roles reported significantly lower levels of organisational commitment compared to academics in more senior administrative roles'* (p.248). This confirmed previous work by Boyer, who had already pointed out that academics with teaching focused roles and responsibilities were provided fewer opportunities to gain institutional recognition and rewards (Boyer, 1990). This gap has been addressed since the 1990s through educational support and development of staff, with initiatives focused on reintegration of scholarship of teaching and learning (SoTL) in North America, Teaching Quality Standards in Australia (TEQSA) and the Higher Education Academy (HEA) in the UK (Chalmers, 2011).

A review of three frameworks used to evaluate success of teaching and learning strategies identified that acknowledging the different perspectives of stakeholders involved, such as students, staff and institutions, is critical when supporting quality teaching and student learning (Mackintosh, Beard and Macedo, 2017). The frameworks reviewed were the Online Learning Consortium (Lorenzo and Moore, 2002), Australasian Council on Open, Distance and e-learning (Australasian Council on Open Distance and e-learning, 2014), and the Standards of Online Education (Parsell, 2014). Whilst these frameworks focus on online learning, the pedagogical, organisational and learning issues addressed apply also to the face-to-face and multi-modal learning experiences typical to built environment education. These frameworks used different indicators to measure the success of the strategies employed in higher education in meeting the different needs of the student, staff and institutions. Common evaluation tools, predominantly quantitative or statistical measures such as student and staff surveys, learning analytics, graduate outcomes and financial performance, had limited ability to address or support the process for teaching and learning quality. It was identified that alternative methods of supporting quality teaching and student learning in built environment education could involve staff as active partners rather than a passive workforce. The key benefits of involving staff in this way leads to staff better understanding their own pedagogical approach; reflecting on their beliefs and values, or basis of their teaching philosophy and, over time, improving their discipline specific teaching and learning expertise.

Over the last two decades the field of scholarship of teaching and learning has been growing through national educational organisations, university teaching and learning awards and enhanced recognition of individual academic and discipline teams (Fanghanel and Trowler, 2008; Huber, 2004; Young, 2006). More recently the development of a personal teaching philosophy as well as scholarly research and reflective practice for continuing personal and professional development has occurred (Schonell et al., 2016). The professional development for educators and collaborative reflective engagement in their personal teaching philosophy was identified as opportunity to document changes in individual practices, recognise advancement and innovation (Chism, 1998; Coppola, 2002; Schönwetter et al., 2002).

TEACHING PHILOSOPHY FOR PROFESSIONAL DEVELOPMENT AND EDUCATIONAL PRACTICE

The starting points for the development of a teaching philosophy were shaped by the seminal works of Van Note Chism, Goodyear and Allchin, as well as Atkinson and Schönwetter (Atkinson, 2000; Chism, 1998; Goodyear and Allchin, 1998; Schönwetter et al., 2002). Prior to the publication of frameworks for a teaching philosophy statement developed by these scholars, the literature lacked 'conceptual models that also offered operational dimensions and a process for generating and evaluating teaching philosophy statements' (Schönwetter et al., 2002, p. 83). Since then, Teaching Philosophy Statements (TPS) have been widely adopted for employment, promotion and institutional purposes. Indeed, TPS have been described by some authors as 'central to how practising academics teach' (Fitzmaurice and Coughlan, 2007, p. 39) because they provide a 'cornerstone' (Coppola, 2002, p. 448) for individuals' reflective and scholarly teaching practice.

Teaching philosophy statements can be defined in various ways but, put simply, they are written statements of why teachers do what they do—their beliefs and theories about teaching, about students and about learning, all of which underpin what and how they teach (Fitzmaurice, 2007, p. 39).

The literature has highlighted the importance for educators in their TPS development to engage, reflect and describe their personal values and identity, which is a complex process and indeed a lifelong journey, crossing roles, emotions, passions and courage (Akkerman and Meijer, 2011; Kennelly et al., 2013; McCormack and Kennelly, 2011). One technique outlined in several sources and successfully applied in Australia and internationally has been the tailored design and delivery of professional development workshops based on facilitated collaborative reflective practice for learning and teaching (Kennelly and McCormack, 2015; Schonell et al., 2016). Consistent across the literature noted above is the importance of reflective process and practice for the individual teacher or learner, the discipline group as well as the institution (Biggs, 2001; Day, 1999; Schön, 1987).

Reflective practice approach

The seminal work by Schön described reflection and reflective practice as a critical element of professional activity and learning design (Schön, 1987). He developed an alternate theory of the professional beyond technical knowledge expert and proposed the reflective practitioner. Schön differentiated amongst three types of reflection: reflection-in-action, reflection-on-action and reflection on-practice. Since then the research and application of reflection in higher education has expanded to learning through questioning and investigation to lead

to deeper understanding of oneself and others (Adams, Turns and Atman, 2003; Day, 1999; Loughran, 2002). Furthermore, there has been a recognition that reflection is important in sustaining one's professional health and competence and that the ability to exercise professional judgment is in fact informed through reflection on-practice (Brookfield, 1995; Day, 1999). Reflection can occur in conversation with ourselves and be extended and enhanced through conversations with others. Brookfield (1995, p. 140) suggests that the full realisation of the value of reflections 'occurs only when others are involved'. Within a collaborative reflective context or community, as provided through the facilitated workshops in this research project, participants make important personal discoveries about their sense of self as a teacher and professional discoveries about their teaching and learning practices (Kennelly et al., 2013; Palmer, 2017).

Qualitative research methodology

This research utilises a qualitative methodology with a case study design which employs facilitated professional development workshops to examine teaching and learning experiences. The literature reviewed highlighted that the current challenges faced by academics and teaching staff related predominately to their teaching experiences rather than discipline knowledge. For example, increased expectations and reduced opportunity for personal and professional development limit the development and improvement of teaching and learning skills and capabilities (De La Harpe, Radloff and Wyber, 2000; Sumsion and Goodfellow, 2004; Winter and Sarros, 2002). Therefore a qualitative research methodology has been identified as best suited to investigate 'how' built environment educators engage with their learning and teaching experiences (Rolfe, 2006, Sinkovics & Ghauri, 2008).

Case studies provide the opportunity to explore the application of educational theory in practice, to undertake inductive research through theory testing, describe the specific situations and the context of programs, and assess the learning outcomes resulting from a certain experience or teaching approach (Baxter and Jack, 2008; Gibbert, Ruigrok and Wicki, 2008). This research utilises the case study method to demonstrate how the findings from the literature review could be implemented, with the two professional development workshops designed and delivered to built environment educators considered here as case studies. The objective of this study was to transfer and test the findings reported in the international literature for the development and facilitation of a professional learning workshops for built environment educators to engage in collaborative reflective practice and the development of their own personal teaching philosophy (Kennelly and McCormack, 2015; Ruge et al., 2019). The development process, from learning objectives to pedagogy of facilitated reflective practice learning, was made explicit before, during and after the individual exercises. The purposeful explanation of this development process, and the process itself, are important methodological elements in terms of the research credibility, dependability and confirmability (McGrath & Brinberg, 1983; Miles & Huberman, 1984; Seale, 1999; Sinkovics & Alfoldi, 2012; Sykes, 1990). In addition, workshops as case studies can be used to build emergent theory through an iterative process of observation, analysis and theory generation (Andrade, 2009; Charmaz, 2008; Cho and Lee, 2014).

The literature highlighted that there are a number of trigger points or guiding questions to engage academics in reflective practice and the construction of a personal philosophy statement (Goodyear and Allchin, 1998; Schonell et al., 2016; Schönwetter et al., 2002). From this research the following questions were incorporated in the workshop learning experience for this research project to stimulate reflective thinking and collaborative conversations:

- Why is being a teacher important to you?
- What personal experience(s) inform/motivate your teaching today?
- What do you believe about teaching, and why?
- What do you believe about learning, and why?
- How are these beliefs played out in your teaching and learning context?

Bounded by findings from the extant literature, the methodological focus is on the structure and pedagogy of the professional development workshop provided to initiate collaborative reflective practice within and amongst the participants. The detailed case study lens is used across the small sample of two workshops facilitated by the researchers for 22 and 26 participants respectively. The focus of this study is on small group or paired conversations undertaken in facilitated collaborative and reflective conversations about learning and teaching. These conversations were informed by a detailed learning program including carefully scaffolded activities aligned with a workshop presentation referencing scholarly examples and providing theoretical grounding. The observations of these workshops can be used to build emergent theory through an iterative process of evidence collection, analysis and theory generation (Andrade, 2009; Charmaz, 2008; Cho and Lee, 2014). The contextual nature of unforeseen events occurring in the field can be captured, and when extended can be used as an evaluation tool, and support development of new theoretical insights (Mackintosh, 2018; Patton and Appelbaum, 2003).

Workshop presentation and learning activities

The authors developed and facilitated two workshops for the School of Design and Built Environment (DBE) at Curtin University in Perth, Western Australia, held in August and October 2018. The DBE School comprises 7 disciplines – design, architecture, interior architecture, urban planning, geography, construction management and project management. These disciplines are taught in discrete programs at both undergraduate and postgraduate levels. While each program requires targeted and specific content delivery, there are some common approaches to the teaching and learning within the diversity of programs. As such, the DBE School is focused on improving the student experience in design-focused and project-based courses. The impact of current teaching approaches on these student experiences must be understood in order to support academics to improve and innovate in the dynamic institutional landscape. Typically, teaching within the School is delivered by discipline experts, and while their professional and research experience is reflected in many of the staff profiles, teaching approaches and practices are usually not. The development of staff teaching profiles is seen as a tangible way of prompting the reflection on the 'how' and 'why' of individual and discipline specific teaching practice. The skills and language developed in such reflective practices in turn can establish new ways of communicating learning experiences to students and evaluating success of teaching through analysis of assessments and student experience feedback.

These workshops were developed in line with the University's professional development program. The content and learning outcomes were submitted and reviewed about alignment with University standards and strategic plans. Funding was provided by the Curtin University Learning and Teaching Centre and the West Australian Network for Dissemination (WAND). In addition, these workshops were championed by the Schools Learning and Teaching representatives, who worked with both authors, facilitators with experience in designing and delivering teaching philosophy workshops. The professional development

workshops encouraged participants to reflect on their teaching practices and develop their teaching philosophies. Within this process participants investigated opportunities for educational improvements and tested ideas and innovative approaches including collection of evidence of the teaching and learning experiences, demonstrating the underlying educational strategy informed by a teaching philosophy and basis for continued reflective practice and improvement.

In order to apply, review, reflect, learn and improve from this research in action, the pedagogy for the workshop learning outcomes was developed based on current literature and practice for teaching philosophy development (Ruge et al., 2019; Schonell et al., 2016). The two hour workshop was set out in three distinct learning segments, which each included active engagement in reflective practice conversations, facilitated peer feedback in small groups and time for individual reflective writing for each participant to distill current thinking about their own teaching and learning pedagogy and practice.

Workshop segment 1, titled 'Reflect on your practice' provided some background knowledge and research literature on the types of reflective practice and their application in the annual cycle of review, reflection, improvement, implementation and analysis for subsequent review (Biggs, 2014; Kane, Sandretto and Heath, 2004; McCormack and Kennelly, 2011; Schön, 1987). Here participants reviewed their current practice and processes for review, reflection, improvement and innovation. In small group conversations experiences and ideas were shared and distilled by the facilitators in the context of discipline specific and more general higher education trends.

Workshop segment 2, titled 'Developing your Teaching Profile' focused on the 'nuts and bolts' process and development stages for the individual teaching philosophy. This included introduction and examples of existing frameworks and strategies for participants to identify as most suited for their current teaching and learning values and practices (Chism, 1998; Goodyear and Allchin, 1998; Schönwetter et al., 2002). Participants were provided with guiding questions to facilitate the individual reflective writing periods, allowing time to distill the first draft towards a teaching profile or philosophy. This included considerations for further professional development and ideas for improvement, innovation and encouraging longer term evidence and data collection for scholarly engagement and discipline based collaboration. At the end of this segment participants again engaged in reflective practice conversations, peer feedback and developed their confidence to make their beliefs, values and ideas explicit in their conversations with colleagues and their draft teaching philosophy.

Workshop segment 3, titled 'Data collection for research and practice' provided specific examples from built environment researchers on developing scholarly practice that is aligned and enhances the development of initiatives for student learning and innovation in pedagogy and practice (Ruge and McCormack, 2017). The workshop concluded with a whole group reflection on the positive learning experiences and identification of teaching philosophy and reflective practice for individual as well as discipline wide opportunity to enhance collaboration, research and innovation for student learning.

The targeted workshop outcomes achieved were for each participant through the reflective practice and by using collaborative groupwork to draft their personal teaching profiles, which could be further developed over time into a full teaching philosophy. The facilitators' emphasis on collaborative and continuing reflective practice highlighted the opportunities for collegial support, scholarly research and opportunities for improvement and innovation.

Observations and key themes

Workshop participants voluntarily provided feedback on the areas of workshop expectations, workshop learning experiences and identified areas for future learning. The responses to the questions in each of these three areas were examined. In relation to the initial participants' learning expectations for the workshops on developing their teaching profile, the thematic analysis of the responses identified four key themes.

- Theme 1) Reflecting on their current teaching philosophy and teaching practice,
- Theme 2) Constructing a personal teaching profile,
- Theme 3) Acknowledging current skills and enhancing teaching and learning strategies and
- Theme 4) No specific workshop expectations.

The participants responses indicated that institutional support is necessary to provide the skills, information and capacity needed for reflective practice. The value of reflective practice and the importance to "develop a Teaching Profile for promotion" was acknowledged. When asked about their expectations, the opportunity to "gain new tools and language", to "develop an awareness that learning occurs", and "the need to set personal paths and goals to future T+L skill development" were noted as some of the strategies that could enhance teaching and learning. However, it is evident in the comments that there is a need to "improve articulation of (teaching philosophy)", to "obtain information to help develop my TP", and that the workshop provided a "starting point to create a TP".

At the conclusion of the workshop, participants captured their key learning experiences and provided feedback on the 'most valuable' aspects of the workshop. Here the key themes relate to and reflect the participants' initial expectations. More importantly, the participants' comments demonstrated their engagement in the learning process allowed to better understand their own their skills and practice and apply educational tools and strategies to capture and enhance these. A further area of finding focuses on participants' positive experience around small group discussions, peer feedback and personal reflection.

The three key themes around most valuable learning experience were identified as,

- Theme 1) Skills and practice to develop a teaching profile and teaching philosophy,
- Theme 2) Application of relevant educational tools and strategies and
- Theme 3) Learning from group discussions and engaging in collaborative reflective practice.

The opportunity to "develop my teaching profile statement" and the "focus on T+L" was valued because "we don't do enough simulated activities within the school around these key aspects of our teaching". This workshop activity increased the relevance of the profiles, and highlighted the ability to transfer the language to other tasks, such as awards and promotion applications. The workshop decreased the "personal aspect of writing a narrative", as approaches and data collection methods were shared. Participants were prompted to consider new activities for their own class, once the structure and elements of a teaching profile were explained and examples of frameworks and SOTL were provided. The diversity of the disciplines and experiences of the participants provided different perspectives and new insights.

Participants were also asked to provide suggestions for future workshops to further enhance their professional development as educators. Responses here aligned around three key themes.

- Theme 1) Continued learning attitude
- Theme 2) Skills development with specific learning and teaching actions and

Theme 3) Developing discipline group as learning communities through educational practice.

Participants requested “more workshops concerning how to best articulate the teaching portfolio”, and “information about philosophy and literature on the topic (pedagogical practices)”. This request extended to how these approaches could be applied in their own teaching practices and classrooms to increase awareness of learning by both staff and student. There was also support for “building capacity in T+L as a discipline group” and “building learning communities for the built environment could be useful”.

Findings and discussion

TEACHING AND LEARNING IN BUILT ENVIRONMENT DEGREE PROGRAMS

Participants at the workshops held for the School of Design and Built Environment at Curtin University welcomed the opportunity to share, for many for the first time, their area of teaching and learning expertise and practice with colleagues from other disciplines in the school. Feedback indicated that “group discussions [allowed us to] gain insights from others in different fields”. This confirms findings from the research of the importance of collaborative learning practices (Kennelly and McCormack, 2015). The DBE workshop participants’ feedback acknowledged the need to expand their skills and language to describe, discuss and improve their learning and teaching practices. Participants noted that the workshop made them aware of how to utilise language to articulate their learning and teaching strategies.

These workshop experiences highlighted the importance of critical thinking and reflection to support the development of a shift in teaching approach, and the ability to respond to and adapt to change. According to Mälkki (2010, p.46), ‘reflection refers to becoming aware of and assessing the taken-for-granted assumptions’. Critical self-reflection, the assessment of assumptions, can create tension in educators when they reflect on their teaching practices as part of their professional development. Overcoming these challenges engages the educator in the long term, as they continue their reflective practices and strengthen their resilience when responding to changing situations (Beltman, Mansfield and Price, 2011; Gu and Day, 2007).

The findings from the literature identified themes which relate to the constraints and potential opportunities for educators striving to develop and position themselves in their discipline and institution. Schönwetter (2002) identified that a TPS serves the individual academic in clarifying what good teaching is; providing a rationale for teaching; promoting personal and professional development and encouraging the dissemination of effective teaching (p.85). An alternative way of supporting this is the development of teaching and learning workshops focused around and supporting staff to work together in developing a teaching profile and their philosophy in order to build the case studies to be used in the future (Schonell et al., 2016). The aim of such workshops is to create the peer groups and networks that support a collaborative learning environment for staff (Kennelly et al., 2013).

As an initial step to apply the research findings, the facilitation of the two teaching and learning workshops discussed here enabled built environment staff to develop their TPS and teaching profile. These workshops encouraged cross disciplinary learning and collaboration as part of the annual professional development program for academics and contract staff. The participants of the DBE workshops valued the opportunity to “draft a teaching statement” and

“write a narrative on my own philosophy”, prompting acknowledgment of the “importance of reflection”.

The initial findings from the workshops make a new contribution to the literature in relation to built environment educators development of their reflective practice through their teaching philosophy development. The following actions are proposed as key elements of future opportunities for individual and discipline based capacity building for improving educational practice.

DEVELOPMENT OF TEACHING PROFILE AND EDUCATIONAL AWARENESS

Supportive strategies and active involvement in reflective communities can assist the educator in recognising and overcoming concerns and tension. Reflective practices are often strengthened by communities of like-minded peers coming together to share experiences and review each others' practices, (Kennelly et al., 2013) leading to transformation of values (Atkin, 1999, 15), or a change of practice (Kitchenham, 2008; Mezirow, 1997). The meaningful communication and collaboration with others that can occur within communities of reflective practice can result in a shared benefit for all involved and mitigate the challenges often felt by individuals working alone (McCormack and Kennelly, 2011).

The DBE workshops raised the educational awareness for pedagogy and reflective practice and facilitated the preparation of personal teaching profiles. These workshops also provided new connections between ‘discipline language’ and ‘educational language’ and become part of the school’s professional learning program for academic staff. The format and content was tailored to the discipline specific needs and initial skills development of individuals as they learn to reflect on their personal teaching philosophies and practices. Sharing the insights of these reflections exposed individuals to other points of views and approaches. As staff worked collaboratively to address common problems and share successes, the foundation of a longer term teaching and learning community of reflective practice was developed. Making the peer review discussions and collegial feedback a positive experience, as exemplified in the workshops, sets up important linkages to continuing improvement, capacity to reflect and confidence to initiate change and innovation.

ENGAGING FACULTY MANAGEMENT TO SUPPORT A COMMUNITY OF RESEARCH PRACTICE (CORP)

Providing peer support and educational training for staff to support students’ technical and skills learning outcomes reflects the faculty and institutional goals and assure quality student learning outcomes. Discipline focused teaching academics are prompted to contextualising their critical reflection when qualitative methods are used to examine case studies in which the theory is applied to teaching practices. The teaching profiles developed by staff as an outcome of these workshops will increase the visibility of SoTL and educational practice within the schools. The observations and reflections recorded not only contributes to the evidence required for future institutional reward and recognition programs. The reflection on practice re-focuses the academic analysis from the preparation of learning content to the reflective practice of teaching and learning. The case studies developed through a community of research practice will provide valuable background to theory and practice with potential inter-disciplinary and cross-institutional impact and research opportunities.

Strategies to implement and sustain professional development

The authors propose an innovative and strategic approach to address and align the professional development for teaching staff in built environment programs. This includes: embedding the value of teaching and learning practice into employment, workload and performance reviews; peer support and educational training to support students' technical and skills learning outcomes reflecting faculty and institutional goals; rewarding quality teaching and learning as valuable practice and basis for research and scholarship. This approach encourages capacity building across teaching teams, institutional engagement in the degree program and educational outcomes for future building professionals.

Conclusion and further research

This research identified current trends in the higher education context and the emerging teaching and learning skills gap of academics and discipline staff to improve institutional and student learning expectations and outcomes. In particular Built Environment degree programs in Australia have maintained a technical content and teaching focused approach, due to the lack of targeted professional development for learning focused educational skills and pedagogies. In international educational practice and research, the value of developing a teaching philosophy and teaching profile are well established. This research identified and applied through tailored educational workshops the strategic opportunity for staff to better understand their own practice through the review and reflection, collaborative conversations and utilising educational tools to start writing and developing a personal teaching profile.

The case study method employed here to understand enabled the researchers to explore the application of educational theory in practice in the workshops. Feedback from the workshops identified the development of a community of reflective practice for built environment educators was as integral part of a continuing professional development program. As part of the University professional learning program a future series of educational workshops can now be developed for teaching staff in built environment programs, in order to achieve the following key outcomes.

- To embed the value of teaching and learning practice into faculty employment, workload and performance reviews.
- To support educational training for staff on how to support students' skills and learning outcomes reflecting faculty and institutional goals.
- To reward quality teaching and learning as valuable practice and basis for research and the scholarship of teaching and learning within the schools.

This proposed approach encourages skills and capacity building across teaching teams, institutional engagement in the degree program and evidence based data collection and research for the longer term improved educational outcomes. The identified educational context for built environment degree programs in Australia has highlighted the particular challenges and therefore tailored response needed to support educational development in learning and teaching.

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