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Reflective Practice as a Threshold Concept in the Development of Pedagogical Content Knowledge

Rebecca Turner & Lucy Spowart

The acquisition of Pedagogical Content Knowledge (PCK) necessarily requires an integration of knowledge about the content one is teaching with an understanding of appropriate underpinning pedagogic theories and good practice. Experienced colleagues in higher education (HE), who did not have the benefit of a taught course to develop their teaching practice, sometimes only encounter pedagogic literature when they are required to reflect on their practice and take an evidence-informed approach for the purposes of a formal professional recognition. Traditionally, many academics have prioritised the development of their subject expertise and engaged in CPD relevant to their discipline over the development of their teaching expertise (Parsons et al., 2012). Therefore, when they are required to engage with pedagogic literature it can at times prove challenging (Loads, 2013). For teaching practitioners working within HE, successful engagement in professional development relating to teaching, learning and assessment is a prerequisite of the UK Professional Standards Framework for teaching and supporting learning (UKPSF). The UKPSF is used by HE providers in the UK, and increasingly internationally, to benchmark their CPD offer, signal a commitment to teaching and learning, and recognise individuals contribution to student learning and teaching (Spowart et al., 2020). It also provides a common language and descriptions of dimensions of good practice for HE teaching and learning (Hibbert & Semler, 2016). The UKPSF is hosted by Advance HE[1] who accredit CPD provision against the standard, in the form of either taught courses such as Postgraduate Certificates, or institutional schemes that recognise experiential learning. Professional recognition achieved through either of these routes is in the form of an appropriate category of fellowship of the Higher Education Academy.

[1] Advance HE was formed in 2018 when the Higher Education Academy merged with the Leadership Foundation and the Equality Challenge Unit: https://www.advance-he.ac.uk

The expectation for lecturers to engage with professional recognition through the UKPSF is increasingly commonplace (Spowart et al., 2020). However, this has not always been the case. In the UK, like many other countries, the professional development of lecturers as educators was frequently overlooked (Parsons et al., 2012). The UKPSF was introduced in 2006, and the emphasis was, at this time, on supporting the development of new lecturers (Spowart, et al., 2016). Following the relaunch of the UKPSF in 2011, an avenue was created for established HE professionals to gain recognition for their sustained and on-going commitment to teaching and learning. Most importantly, the Higher Education Academy created the opportunity for institutions to develop their own schemes, accredited against the UKPSF, to recognise experienced staff via the achievement of a Fellowship award. This move placed a focus on the development of experienced HE professionals as well as those new to teaching.

The research outlined in this chapter draws on qualitative interviews with university staff members from across five Faculties within a single institution. Through the lens of threshold concepts (Meyer & Land, 2003) we will examine how the experienced academics engaged with reflective practice which underpins this form of CPD. Unlike Berliner's (1988) model of skill development in which an expert teacher reaches a stage of unconscious competence, we propose that the development of expertise in teaching requires the practitioner to question consciously all aspects of their practice in the quest for continual improvement. Reflective practice is widely recognised as underpinning many models of professional learning (Clegg et al., 2002). In framing this chapter it is worth heeding the words of King (2019) who presents the professional development for those recognised as 'expert' HE practitioners as a 'self-determined and purposeful process of evolution of teaching and learning approaches informed by evidence gathered from a range of activities'.

Threshold concepts and their application in educational development practice

Threshold concepts represent a crucial stage in the learning journey. As individuals are exposed to new concepts or ways of thinking, their existing preconceived ideas

may be challenged. As a result, whilst learners grapple with threshold concepts, they are enter an unstable liminal space (Perkins, 2006). This reflects the fact that engaging with threshold concepts can run counter to the habits, conviction and experiences individuals hold, and thus can lead to a new way of seeing the world. Given this, it is not surprising that Meyer & Land (2003) present threshold concepts as transformative but troublesome, as they shift learners subjectivity.

Threshold concepts have been widely applied in a number of undergraduate disciplines, e.g. health care education (Neve et al., 2017) and geography, earth and environmental sciences (King, 2009), to explore concepts that are challenging for students to learn but are transformative once grasped. Threshold concepts have also been applied to postgraduate research education (Kiley & Wisker, 2009) and in the educational development literature to frame the pedagogic development of new lecturers (Kilgour et al., 2019). In this latter work the lecturer is framed as a learner engaging in learning that is transformative, leading to the development of new ways of thinking about their practice. We build on this work to explore how experienced academics engage with reflective practice through an accredited CPD Scheme, and how it supporting their emerging PCK.

Reflective Practice and its role in CPD Schemes

Reflective practice is integral to the development of all educators, regardless of the sector in which they teach (Clegg et al., 2002), and is widely used to frame professional learning in practice-based disciplines. There are a number of models of reflective practice that have been developed to guide individuals engagement in reflective practice, with the works of Schön (1983), Kolb (1984), Brookfield (1995) and Gibbs (1988) all used to underpin reflective practice undertaken by HE professionals. Reflective practice is a core aspect of the UKPSF. To gain recognition as an experienced HE professional, individuals are required to reflect on both the effectiveness of their practice *and* the impacts it has on others, drawing on scholarly literature to support the reflective analysis of their practice (Lea & Purcell, 2015). These reflections can be presented in the form of a written application (the most commonly used method) or via professional dialogue (Asghar & Pilkington,

2018). At the study institution applicants are required to submit four written case studies and undertake a peer review of practice.

The challenges of the use of reflective practice to underpin professional development have been widely acknowledged, and are worth considering due the potential impacts they could have on the development of PCK. For example, Macfarlane & Gourlay (2009) questioned whether reflective practice is engaged in a meaningful, developmental way when it is tied to an accredited CPD offer where certain criteria have to be demonstrated. They were concerned whether the emphasis is on demonstrating the relevant criteria, rather than stimulating professional development. Similarly Van der Sluis et al (2017) suggested the retrospective nature of reflection associated with CPD Schemes left little room to consider future innovation or development.

Study context

We present data captured through a longitudinal evaluation study instigated following the introduction of an university CPD Scheme in 2012 accredited by the then Higher Education Academy to award fellowships in all four categories (Associate Fellowship; Fellowship; Senior Fellowship and Principal Fellowship). The study institution is a large, publicly funded teaching-focused university in southern England. It was an early advocate of teaching-related CPD, though traditionally this centred on new lecturers. The relaunch of the UKPSF in 2011, created the opportunity for the institution to focus on the CPD, and recognition, of established lecturers. Though there was no institutional mandate to engage with the Scheme, the requirement for institutions to declare to the Higher Education Statistics Agency the number of qualified teaching staff, meant that there was a clear university steer to encourage participation and for staff to gain Fellowship in one of the four categories.

Data collection

All participants enrolled in the CPD Scheme during its first two years (2012-14) completed an online survey to capture their initial reflections on their experiences

(n=146). A purposeful sample were invited to participate in an in-depth interview. 30 staff were interviewed. All participants had been teaching for at least three years (a prerequisite for access to the scheme), but did not hold a teaching qualification. Job roles varied from associate lecturers, senior lecturers through to senior managers. Whilst some admitted to only a superficial level of engagement with the process (18), others found that it facilitated professional development in a myriad of ways. 12 expressed a significant change in the ways they conceived of, and enacted, their teaching roles. The results from this evaluation were published (Spowart et al., 2016) and represented the first empirical study of an institutional CPD Scheme accredited by the Higher Education Academy.

The 12 transcripts in which participants expressed significant change, were re-scrutinised in 2019 through the lens of threshold concepts to identify the challenging or 'sticky' moments that resulted in participants entering the liminal space that simulates learning and development.

Findings

Three themes emerged from our analysis, two of which, as we go on to explore, represented major conceptual challenges for academics who do not have an educational background. These themes provide a nuanced picture of reflective practice and the role it plays in the development of effective PCK:

1. Reflection through dialogue
2. Reflection through writing
3. Reflection through pedagogic literature

Reflection through dialogue

In developing an application all participants engaged in dialogue around teaching, learning, student support and the impacts of their practice with a number of people from across the university. Although applicants to the CPD Scheme submitted written applications, there were a number of formal and informal opportunities to engage in a reflective dialogue. Initially, all participants were invited to a workshop where the process was explained. Here participants engaged in conversations about

teaching and learning with peers. Secondly, all applicants were required to complete a peer review of their teaching. Finally, following the submission of a draft application, the Scheme manager provided verbal feedback via a one-to-one meeting.

These opportunities to engage in a dialogue about teaching were regarded as hugely valuable. One talked of it as providing '*cerebral stimulation'* (CPD019), and another welcomed the opportunity to *'hear other peoples ideas'* (CPD018). Interestingly, these conversations represented an unanticipated but significant, and potentially transformative moment within the process. They created reflective spaces for participants to engage in meaningful conversations about teaching and learning with peers. These conversations seemed particularly powerful when they brought people from different schools or disciplines together, exposing teachers to different perspectives or teaching practices:

> *[XXXX] did mine and because we've got different subjects it made her come and see my subject and likewise, I've gone to PBL and watched her do hers. It gave her an understanding of [XXXX] teaching and since then they've been a real ally.* (CPD019)

The conversations allowed an interest in teaching to be shared, and potentially celebrated. Indeed, because of the forum through which they were meeting, there was a sense it legitimised a conversation around teaching and learning practices, rather than on the administration of teaching:

> *That process of having to get teaching evaluations and stuff, […] I think it's quite good so the more of a sort of culture of continual reflection […] linking it up with a bit more of a process of development I think is useful. That's the sort of thing that I would probably like to continue even if it wasn't through any sort of particularly prescribed route, just having a bit more feedback.* (CPD05)

As these extracts demonstrate, this was not a troublesome part of the process, but it was transformative, in that it indicated value in dedicating time to talk about their practice, an activity that had not previously been prioritised.

Similarly, engaging in peer review was highly valued, despite some initial reservations. Some regarded it as a mechanistic part of the process: *'a hoop to*

jump through'. However, throughout the interviews, the developmental nature of the activity was highlighted. Several talked of it in emotive terms, experiencing anxiety beforehand but afterward valuing the conversation and the process. For example:

> *I'm very positive about it, I actually hated doing it at the time. But the teaching review was really useful because like a colleague of mine came and watched my plenary and to be honest it made me really think about the teaching components, the interactivity, the pacing, the timing, you know I use a bit of video clips in there and so it really helped me focus.* (CPD019)

> *It can be quite intimidating, but it was somebody I know very well […] you almost take for granted that you know what you're going to go and do, but when you've actually got to focus because you think ooh somebody's going to be watching me do this, then I think that's a good thing.* (CPD008)

> *It did feel at times that why have I got to do this… but I was with the colleague I share an office with; We decided to go for it together and that was really helpful. We did our observations together, we could discuss the applications together, we supported each other by giving each other feedback so that worked really well for me.* (CPD009)

Engaging in the CPD Scheme opened up spaces to talk critically with colleagues about teaching and learning. These spaces were sometimes formal, such as after the peer review of teaching or during the workshops, or, as the last quotation demonstrated, sometimes informal, with an office mate who was also going through the process. These quotations also illustrate the frequently 'uncomfortable' nature of the process with participants expressing negative emotions such as intimidation or anxiety. Yet despite this, participants recognised the value of focusing on individual practice, rather than talking about teaching from an administrative, quality assurance or student perspective, as was frequently the case.

Our research revealed that the space to talk about individual practice was previously over-looked by participants, and the requirement to do this through the CPD Scheme prioritised such conversations. The peer review in particular was transformative for some participants who were able to move out of a liminal space where motivation was lacking, to a position where they were receptive to feedback from others. This resonates with the work of Senge (1998), who proposed the idea of a 'learningful conversation' as signifying a conversation that engages in the process of reflection, which he identified as a pre-requisite for professional learning.

Reflection through writing

Examining participants approach to, engagement with, and experiences of reflective writing through the lens of threshold concepts, demonstrates what a challenging and troublesome process this was. Since participants did not hold a prior teaching qualification, they had not engaged with pedagogic literature before and many, particularly from science subjects, had not engaged in reflective writing. Consequently, it was an unfamiliar way of writing and presenting oneself:

> *Um I think I found it, it's quite an unusual writing style, it's not something that we normally adopt […] I found once I got to grips with the idea it's ok to say how you feel, that was fine.* (CPD015)

> *Because one of the odd things about doing something like this is the way that you write it, you talk in first person which in science you never do, it's like a complete and utter no-no! So you have to rethink how you're going to put something together.* (CPD008)

The unfamiliarity of writing about teaching has been explored by others (e.g. Lea & Stierer, 2000) who articulate value in the process, in that is helps individuals to codify practice. However, the value of writing about practice for professional recognition is more widely contested (e.g. Leigh, 2016). This partly reflects the need to demonstrate key aspects of a so-called high-order genre of writing that involves invoking specific ways of writing, academic conventions and engagement with a potentially new body of literature in order to achieve recognition (Heron & Corradini, 2020). Botham (2018) also identified a lack of familiarity with reflective writing, and reflective practice, as a barrier to engagement with the CPD Scheme she was evaluating.

There was also clear evidence of participants oscillating between pre-liminal, liminal and post-liminal states, where they experimented and explored reflective practice until they gained mastery:

> *I was talking almost quite abstractly about approaches rather than actually saying I did this and this is how it worked and this is what I thought about it [...] Once I got to that stage and identifying these areas of what I thought*

were my sort of strengths then going back and restructuring it […] again useful but is very unfamiliar to me. (CPD005)

However, and potentially more concerning, was that entering a state of liminality placed participants in an 'unsafe' space. Participants commented on experiencing stress. For some there was a sense of discomfort and potentially trauma reported, which almost lead to disengagement:

There were a few moments while I was trying to do the exercise in which I felt no I'm not going to make it, I'm not going to do it because oh golly I need to find the right references etc. Why do I bother? (CPD012)

Even thinking about it now, it was stressful because you know, it's like going through an exam basically, and an exam where I hadn't been working in that field […] (CPD008)

These quotations run counter to the developmental objectives of engaging in a CPD Scheme, a process designed to reward and recognise expertise. Whilst learning can be disruptive, troublesome and transformative, indeed these are the core characteristics of threshold concepts, the impact on experienced academics future engagement in teaching related CPD, and the value they place on it, may be undermined by the experience of developing a Fellowship application if it is not carefully supported. Related work has raised concerns that engaging in a CPD Scheme risks of being time consuming and tokenistic unless appropriately framed (Peat, 2015). Some have reported time spent on a Fellowship application as impinging upon limited research time (Spowart et al., 2016). If the process of reflective writing is remembered as traumatic, it could undermine any developmental gains for the individual.

Repeatedly mastery only came with the support from the Educational Developer facilitating the CPD Scheme, and the support from this individual was cited as integral to success:

I think [Scheme Manager] managed pretty well in the sense that they were very sympathetic, they understood I think in my case how I felt and how I felt as let's say as a senior academic and used the right language and the right approach towards facilitating this process… I'm used to writing, I'm ok at writing papers and things like that in my discipline and so on, but I'm not used to dealing with pedagogic writing. (CPD018)

Heron & Corradini (2020) comment on the private and confidential nature of the reflective writing that individuals engage with through the fellowship process. Yin (2016) highlights the gatekeeping role of the awarding body. Both these factors can serve to mystify the process of reflective writing for the professional recognition of teachers in HE, though this has been identified as being mediated by local support. Heron & Corradini (2020) identified local support as crucial, and talked of those providing such support as taking on the role of a 'literacy broker,' as well as other sources of support (e.g. mentors, writing retreats), in facilitating the development of applications for the CPD scheme that was the focus of their work.

Reflection through the literature

Writing reflectively, and engaging with pedagogic literature, was not challenging for all participants. However, in analysing their discussion of engagement with literature some participants evidenced mimicry rather than mastery of reflective writing. Mimicry is associated with learners occupying a liminal space, adopted due to a sense of loss, exposure or uncertainty (Land & Meyer, 2010). This position was indicated by the functional or mechanistic approach several participants recounted in their approach taken to engaging with pedagogic literature. Rather than using it to stimulate critical reflection, it was used in a limited sense to confirm practice:

> *I had some feedback from [Scheme Manager], asking for the case studies to be put more into the pedagogic context. Once she told me that, for me it's straightforward, that's something I can do very simply. As I often tell students, if you present a piece of what you call research to me and I think I can do that in two hours sitting in front of my PC, to me it's not research, it's just a simple exercise and in fairness this to me is a simple exercise.* (CPD018)

> *So why should I read pedagogic literature there? I'm not sure there's an easy or clear-cut answer to that because my experience is, again it sounds totally big-headed but it's useful in confirming that what you're doing is grounded.* (CPD015)

> *I expected it to be more of a learning experience and less of a documentation experience. You were supposed to reflect on this and I did but it sort of felt more like ok I'm just writing down evidence here, I'm not trying to learn from this activity. (CPD007)*

Mimicry can also be adopted before learners gain the conceptual understanding associated with ontological and epistomological shifts (Land & Meyer, 2010). The

following extract was part of an email communicated to the Scheme Manager prior to submission of a complete draft. It clearly illustrates the challenges this process of critical reflection, underpinned by the pedagogic literature, presented.

> *This thing is proving very demanding and fairly time-consuming as all things which do not 'naturally' come together… I am now attaching a draft which does not have any literature references yet (and still have few ideas about where to find them). Literature apart, I am not even sure the case studies work and are of any interest. I do not talk the 'pedagogues' talk, and despite being rather convinced that I have done a lot of good teaching, with passion and a good spirit, and can design and carry out effective teaching, I am aware this might not look like even remotely good enough.* (CPD018)

Conclusions and implications for the development of experienced teachers

In this research we sought to understand whether there were particular concepts academics grappled with whilst they were working towards professional recognition of their teaching via an in-house CPD scheme that meet the characteristics of threshold concepts (Meyer & Land, 2003). This research suggests that examining teaching through reflective writing and the pedagogic literature represents two major conceptual challenges for academics who do not have an educational background. This is particularly the case for academics from STEM subjects for whom reflective writing is 'not how they usually work'.

Highlighting forms of reflective writing as troublesome is not new or unexpected. Clegg et al. (2002) questioned whether reflective writing was diverting attention away from the *act* of reflecting and learning *through* reflection. In such instances, reflecting through literature may seem removed from reflecting *in*, *on* or *through* practice, as advocated by models of reflective practice such as Schön (1983). This echoes the challenges some PhD students experience in articulating the relevance or significance of their research (Kiley & Whisker, 2009). In this case, PhD students only overcame these challenges when they began developing connections with extant work and finding their voice. Perhaps the same could be said of experienced teachers who are new to reflective writing and pedagogic literature, and have PCK that is bounded by their prior lack of engagement with teaching-related CPD (Vereijken & van der Rijst, 2021). If teachers acquire a more sophisticated

understanding of the purpose of such practices, they are more likely to fully ‘buy-in’ to the process and become insightful teachers with well-established PCK.

Interestingly the third approach to reflection, professional dialogue, emerged as relatively unproblematic and, if undertaken with key individuals (e.g. scheme managers, peers) could provide support. Several educational developers have explored the role of dialogue and discussion in supporting the professional development of new lecturers. Spiller (2002) highlighted conversations as creating safe spaces for new lecturers to explore their role. Brockbank & McGill (1998) engaged in a reflective conversation to support a curriculum redesign, and this facilitated exploration of new approaches. Therefore, it is unsurprising that conversation emerged here as a significant part of the process. However, with more explicit structuring, or foregrounding in the process, dialogue could promote innovative development rather than retrospective confirmation. Educational developers supporting CPD Schemes could explore the potential of a variety of methods to structure conversations to stimulate learning such as storytelling or guided conversations (Haigh, 2005).

The participants in this study were required to engage in a range of reflective practices in order to gain Fellowship via an in-house CPD scheme. In other words, they were ‘forced’ to step outside of their comfort zones. This placed experienced academics in, at times, challenging or uncomfortable spaces. Having effective support structures in place is therefore vital. Effective mentoring to introduce and foster reflective practice is key. Likewise engaging in reflective practice with colleagues from an individual’s home department could extend the value and impact of the reflective process.

For most of the participants, engaging with the CPD scheme represented the first time they considered the scholarship underpinning their pedagogic practice; previously their focus was upon disciplinary scholarship and associated signature pedagogies (ref). Developing PCK provides lecturers with a foundation on which to

build their practice (Shulman, 1986). Having a wider conception of teaching and student learning, allows lecturers to respond to the many challenging situations they frequently face. Studies have highlighted that working in the absence of PCK can leave lecturers practice bounded, unable to innovate or to examine their practice critically (Fraser, 2016; Vereijken & van der Rijst, 2021). This study highlights how teaching practices, or ways of thinking, transformed, as they became HE professionals engaged with PCK through the processes associated with reflective practice.

For the developmental potential of reflective practice to be realised it is important opportunities are created for individuals to engage with approaches that suit their learning needs (e.g. through dialogue, writing and/or literature), to ensure that the practice of reflection does not become a barrier to teacher expertise being realised.

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