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Who owns pedagogy? (Re)Locating pedagogy and pedagogical content knowledge

Abstract

This paper draws upon a study in Victoria, Australia which investigated pedagogical understandings and practices specific to three domains: Science, Thinking and ICT. Teachers working in these three domains and key stakeholders from the profession participated in focus group and individual interviews. This study explored the pedagogical knowledge particular to each of these three domains, and common pedagogical knowledges across the domains. Participants in each domain claimed the distinctive nature of their domain and therefore the distinctive nature of their pedagogical content knowledge (PCK). A final common thread was the identification of teacher strategies as a substantial part of pedagogy. The key issues arising from this study are the implications of ascribing pedagogy to particular disciplines and the future possibilities for a curriculum reform agenda within a regressive pedagogical climate.

Reconsidering Pedagogy

The essence of this paper is underpinned by 'Foucault's maxim that nothing is innocent and everything is dangerous' and 'that just because something is dangerous does not mean that it cannot be useful' (Lather, 2006, p47). We resist our inclination to recoil in the face of neo-liberal discourses and deliberately set out to 'unsettle' our 'own assumptions and presuppositions' (Atkinson, 2003, p36). Luke (2006, p3) calls for pedagogy to be under 'continual *reconsideration* and *reinterpretation* by teachers and teacher educators, policy makers and researchers alike' (our emphasis). In this paper we reconsider pedagogy in terms of both its ownership and its location. Drawing upon the discourse of commodification we ask: Who owns pedagogy? This concern is precipitated by increasingly vocal bipartisan political calls in Australia for systemic attention to curriculum change and reformation, coupled with the recent decision to exclude direct teacher representation on a national curriculum reference group. The initial emphasis in this study was on pedagogical content knowledge and not on pedagogy. As pedagogues we are confronted by 'discipline'. We sought pedagogy inside, behind, next to, or even in the distant background to pedagogical content knowledge. We call into question the distinctions of pedagogy and pedagogical content knowledge; and we argue that pedagogy is (dis)located (Senior and Dixon, 2005; Dixon, 2004). In this paper the spatial binaries constructed by the study, which have dominated in a spatially stable modernist perspective, are problematised – home and homeless, insider and outsider, familiar and unfamiliar, location and dislocation (Dixon, 2004). Usher uses the locality of cyberspace to examine constructions of identity from positions of being neither 'here' nor 'there' yet

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also of being 'here' and there' (Usher, 2002, p50). Edwards and Usher (1997) drew on Laclau's term 'dislocation':

> Laclau (1990) used the term 'dislocation' to characterize a contemporary society with a plurality of centres, engendering a condition of decentredness where no fixed, essential identities can be produced (Edwards and Usher, 1997, p255).

For Edwards and Usher (1997) (dis)location is a preferable term, 'where the bracket signifies that location and dislocation are simultaneous moments always found together, a positioning with simultaneously one and many positions' (1997, p255). The dynamics of (dis)locating both refuses a privileging of particular locations and voices and accepts the inherent power / knowledge dynamics of all pedagogic situations. The study came out of a position which located and packaged pedagogical content knowledge and apparently overlooked pedagogy. In what appears to be shaping into a revisionist curriculum debate in Australia, pedagogy is the forgotten discourse and this paper calls for its remembering.

Study Context and Method

A comprehensive reform agenda initiative for the Victorian government school system, 'The Blueprint for Government Schools' (http://www.sofweb.vic.edu.au/blueprint/fs), is driven by a significant emphasis on professional articulation of pedagogical understandings. This is concurrent with the roll out of a new curriculum initiative the Victorian Essential Learning Standards (VELS). In 2006 the Victorian Department of Education and Training commissioned a study to investigate pedagogical practices

specific to three domains within the VELS - Science, Thinking and ICT. The brief was to investigate the literature on pedagogical content knowledge, the pedagogical practices of the three domains, and to make recommendations to build capacity in the domains. The investigation examined pedagogical content knowledge through the intersections of recent research literature and understandings articulated by current Victorian professionals working in the relevant domains. Careful attention was paid to the analysis process so that the data from all participants was upper most providing immediate access to the pedagogical articulations of the profession.

As a small-n research with a selected group (n=45) both individual and focus group interviews were conducted to collect raw data. Individual interviews involved twenty one participants and the remaining twenty four participants were involved in three separate focus groups. The participants were teachers; primary, middle years and secondary, curriculum leaders, department personnel, university-based teacher educators and professional association representatives within each of the three domains identified within the research questions. One focus group interview of teachers was conducted for each domain. Each focus group consisted of eight to ten participants selected for their expertise in the domain and drawn from across the stages of learning. Each focus group interview was approximately one hour in length. Individual consultations with subject associations, university lecturers teaching in the domains, curriculum officers and principals were also conducted. All interviews were audio-taped and transcribed. The interview data was analyzed for emergent themes.

The focus of this paper springs from the study design. The brief to the research team specified pedagogical content knowledge as the central issue. However, when tendering for the study the team successfully argued for the design to take account of the inter-relationship between pedagogy and pedagogical content knowledge. The significant contribution this study makes to pedagogy arises from engagement with the nature of that connection and the reclamation of pedagogy itself.

It is almost within a Derridian structure of pairs that pedagogy and pedagogical content knowledge are binaries. In some ways 'pedagogy' is an empty set. Pedagogy is understood or distinguished as the antithesis of practice. Pedagogy is the 'domain' of the academic whereas practice is the domain of the teacher. Usher challenges the notion of binaries and instead argues for 'terms to be regarded as continuities' (1996, p130) that dissolve the 'gap between theory and practice' in education. This gap produces truth, knowledge, reality and self. In this binary, theory is polarised from action; action is focused on teacher strategies and content knowledge. The link between theoretical underpinnings of strategies and theories is resisted. The theoretical domain is seen as empty of practice- of action, and pedagogical content knowledge claims the ownership of practice.

Locating Pedagogy and PCK in the Literature

Considered foundational, Lee Shulman's work (1986, 1987) continues to guide the research, policies, programs, and practices of local, national and international work on pedagogy. In a provocative 1986(a) paper, he argued that the study of subject matter content and its interaction with pedagogy was the 'missing paradigm' in research on teaching. In 1987 he proposed the following categories of knowledge:

- Content knowledge

- General pedagogical knowledge (GPK)

- Curriculum knowledge

- Pedagogical Content Knowledge (PCK)

- Knowledge of learners and their characteristics

- Knowledge of educational contexts

- Knowledge of educational ends, purposes and values (Shulman, 1987).

He described PCK as 'the most useful forms of [content] representation…, the most powerful analogies, illustrations, examples, explanations, and demonstrations – in a word, the ways of representing and formulating the subject that makes it comprehensible for others' (1986b, p9). PCK also includes an understanding of what makes the learning of specific topics easy or difficult; the conceptions and preconceptions that students of different ages and backgrounds bring with them to the learning of topics and lessons (p10).

Shulman's construct of PCK remains widely used as the basis for discussions on pedagogy. Described as 'knowledge needed to teach effectively in a discipline, as opposed to knowledge of the discipline itself' (Shulman, 1986; Shulman, 1987; Hassard, 2005), PCK entails, among other things: (a) knowledge of how to structure and represent academic content for direct teaching to students; (b) knowledge of the common conceptions, misconceptions, and difficulties that students encounter when learning particular content; and (c) knowledge of the specific teaching strategies that can be used to address students' learning needs in particular classroom circumstances. It is here that we note the shift in the theoretical location of pedagogy to 'the disciplines' with their interest in topic specificity.

Over the years, scholars have explored the interaction of content and pedagogy generally and in specific subjects (see Brophy, 1991; Grossman, 1990). In the process, these scholars have elaborated on and extended Shulman's model of pedagogical content knowledge, which is seen as accessible, practical, robust and adaptable across specialist subject fields (Magnusson, Krajcik & Borko, 1999). The idea of the dynamic development of knowledge, implied in the integration of knowledge components, is central in Cochran, DeRuiter and King's (1993) concept of pedagogical content knowing (PCKg), a renaming of PCK. They define PCKg as 'a teacher's integrated understanding of these components of pedagogy, subject matter content, student characteristics, and the environmental context of learning' (Cochran et al, 1993, p266). Similarly, PCK, in the conceptualisation by Fernandez-Balboa and Stieh (1995), consists of subject matter, the students, instructional strategies, the teaching context and one's teaching purposes.

Pardham and Wheeler (1998) emphasise knowledge of the 'horizontal' as well as the 'vertical' curriculum; that is knowledge of the curriculum for teaching a particular class level, and knowledge of what students had studied about the topic in the past and what they are likely to encounter in future studies.

Following a comparison of the various conceptualisations of PCK found in the literature, Driel et al. (1998, p 677) concluded: 'there is no universally accepted conceptualization of PCK. Between scholars differences occur with respect to the elements they include or integrate in PCK, and to specific labels or descriptions of these elements'. This apparent conceptual confusion notwithstanding, Driel et al note that all scholars agree on Shulman's two key elements – knowledge of representations of subject matter and understanding of specific learning difficulties and student conceptions. Driel et al also point out that there is agreement on the nature of PCK in the following respects: PCK refers to the teaching of particular topics, and is developed through an integrative process rooted in classroom practice.

There has been a long history of research and action by school systems to identify teaching practices that will improve students' learning. However, what constitutes 'appropriate', 'effective' or 'quality' pedagogy continues to be morphed by theoretical orientations and competing epistemological viewpoints. Policy makers and practitioners across school sectors continue to debate and assert the respective intellectual market share of GPK and PCK. The dichotomous position continues to simmer and the struggle to create genuine intellectual activity and concerns for equity and diversity are viewed as

irreconcilable. Hashweh (2005) argues that Schulman offered PCK as that special amalgam of subject matter and pedagogy and since then scholars and researchers have engaged/constructed PCK as a 'category of teacher knowledge that curiously seemed to encompass all other categories of teacher knowledge and beliefs….additionally PCK seemed to have lost one of its most important characteristics, its topic specificity' (p274).

It is little wonder that PCK has found ascendancy. However, binaries serve as much to exclude as they include. Pedagogy and the pedagogue are excluded in this polarizing debate - what would Dewey have made of Shulman's distinction:

> Pedagogical content knowledge is the category most likely to
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> distinguish the understanding of the content specialist from that
>
> of the pedagogue (Shulman, 1987, p8).

One of the attractions of PCK is its focus on topic specificity. Topics are largely bounded and stable; whereas students, the relationship between the teacher and the student, the sociological aspects of teaching are largely amorphous and unstable. Dewey's fading ghost beckons us to:

> Abandon the notion of subject matter as something fixed and
>
> ready-made in itself, outside the child's experience; cease
>
> thinking of the child's experience as something hard and fast;

see [the relationship] as something fluent, embryonic, vital…

(Dewey, 1964, p344)

Revisiting Pedagogical Content Knowledge

When asked to describe pedagogical content knowledge the participants in this study were eager to articulate the many attributes particular to their domain. There were common threads apparent in all domains and the one argued most strongly was the link between the content and nature of the domain and the pedagogy. Participants in each domain claimed the distinctive nature of their domain and therefore the distinctive nature of their pedagogical content knowledge: identification of teacher strategies was a substantial part of the domain pedagogy.

The participants from Science asserted that the nature of their discipline constructs the pedagogical content knowledge. They saw the science domain as a perspective on imagination and social responsibility which is contextualized. Within this domain teacher's pedagogy must be concerned with assisting students to understand knowledge. They argued that science pedagogy, the art of teaching science, should have a constructivist frame as the students explore the world through real and hands on experimentation. They expressed fears that few teachers are able to do this; and yet transmission could be heard as they talked of teachers needing to 'impart' knowledge.

The participants from the ICT domain asserted that their pedagogical content knowledge was related to the technology and teacher knowledge of technology. Further, this domain engaged students and teachers in multi-modal/multi-literacy approaches to teaching and learning. There was concern that a computer-dominant classroom can "distort your pedagogy".

The participants from the Thinking domain argued a pedagogy of social constructivism which comes from the nature of their domain with its emphasis on discussion and the role of group work. The domain also seeks autonomy in student thinking and this too shapes the pedagogical practices of the teacher. As Thinking is "process orientated than a content type" then the pedagogy must be process oriented. For teachers in the Thinking domain there is a need to acknowledge students ability to engage in deep thinking across the stages of learning and a recognition that learning in this area needed time for long term engagement. They also asserted the need for changes in the understandings and positioning of the Thinking domain.

There were other threads taken up across the domains. The participants from both ICT and Science maintained the importance of teacher knowledge of student prior knowledge, teacher content knowledge, classroom design and availability of resources. Participants from both Science and Thinking asserted the importance of critical thinking, lateral thinking and interpretation in their pedagogy. Those from Thinking and ICT suggested the pedagogical implications of the place of their domain as a distinct domain or 'subject', as well as being embedded in all domains.

(Re)locating Pedagogy

We sought out curriculum leaders, education department personnel, academics, and professional association representations for individual interviews on pedagogy and pedagogical content knowledge. The question to participants seeking understandings of pedagogy elicited short responses. There was even reticence in offering a definition at all; there were long silences and pauses: "teaching practices is not quite right…" and, "it's probably not just the teaching strategies…" Some respondents were "not entirely sure" and sought reassurance from the interviewer: "is that right?" There were repeated offerings of pedagogy as the "why", "how and why" and "the way" of teaching. Pedagogy as "teaching strategies" was repeatedly acknowledged; "strategies you employ", "tools and strategies in teaching curriculum". No one, however, offered these as a stand alone definition.

It was the teachers in the focus groups who engaged in taking the pedagogical conversation further. Although they included strategies in their responses, they also engaged in larger understandings of pedagogy in their discussion. They used metaphorical engagements with pedagogy which drew on wider and deeper understanding of the teaching and learning nexus: "the language to explain teaching"; "the science and art of teaching"; and "the craft of teaching". The teachers identified the significance of addressing the balance of attention to the teaching and attention to the learning: "I think the focus should be more on learning rather than teaching and the two have been confused in the past…Teaching is not the same as learning. But the heart of

pedagogy is getting students to learn something rather than getting teachers better at teaching". Teachers identified the importance of student agency in pedagogy: "I think one of the things that we want children to do more importantly now than we ever did is that I would like to have kids become autonomous in their thinking". They also identified the need to problematize the pragmatics of pedagogy: "People are grabbing on to recipes which I think they're particularly shallow and not very useful and that's why I was talking about critical thinking rather than a bunch of recipes and tools and thinking 'okay we've got the map here, this must be the territory' and that is of concern to me."

In the tradition of Shulman (1986, 1987) and Hassard (2005) pedagogical content knowledge is constructed by the participants as the links between content knowledge and teaching strategies. The strength of this tradition may be operative in the participants' reticence to articulate understandings of pedagogy. This is not to say that they do not have understandings of pedagogy. Rather, the participants, when asked to give understanding of pedagogy, often used examples of strategies. This focuses articulation on a strategy based pedagogical positioning. The pedagogical understandings are implicit rather than directly/overtly stated.

Understandings of pedagogy are heard in response to requests of participants to provide stories of best practice. Here the emphasis was on student action. Learning was seen in the transferal of knowledge and skills from one situation to another. The teachers recognized the significant role of learner identity – individually and socially constructed (Luke, 1999).

This class was used to working from a textbook. The students were working on circuits when I arrived to take them. They were reading the book and following the instructions such as from step A through to E. I didn't know a lot about electricity as my specialization was in Biology. So, I "fessed up" to them and went on the further acknowledge that the dry boring notes reminded me of why I had shied away from this activity at school. I then asked the class "How are we going to do this?" This prompted a shared problem-solving approach. Some students have fathers who were electricians, who had done this or that. So I asked them to see what they could learn to bring back to class. So that's where we took the focus from. I said "See if you can talk to your dads about circuits and let us know next lesson how we are going to construct these circuits using all this equipment. You can tell us how it fits together". So there it was, the teacher was no longer the repository of all the answers and the students were able to take responsibility for guiding the learning in the classroom (Dixon et al, 2006, p185)

However, the conversations regarding best practice within the domains elicited profound understandings of 'pedagogy'. These pedagogical understandings were not those

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articulated as 'pedagogical content knowledge' but are those found in the literature of general pedagogy. These attributes were not incidental or implied in the stories but were given as the justification by the teachers for their inclusion as best practice. They were offered as contextualized pedagogy. The pedagogical understandings were expressed in and responsive to the particular domain contexts.

The attributes of best practice which are general pedagogical articulations included:

- Authentic learning (Science)

- Exploration and discovery learning (Science)

- An emphasis on social construction (Science and Thinking)

- Using student prior knowledge and experience (ICT)

- Using student interest and linking to life outside school for meaningful learning (all domains)

- Negotiated learning (Science and Thinking)

- Reflective teacher practice (Thinking)

- Recognition of student learning styles (Thinking and ICT)

- Learning across the domains (Thinking and ICT)

- Critical thinking (Thinking and ICT)

Remembering Pedagogy

Our research design and data analysis, which (re)located the domains from bounded stable discourses to a continuous, dependent and interconnected discourse of pedagogy,

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revealed fraudulent claims to ownership. The reductionist focus on content, topic specificity and specialization in pedagogical content knowledge marginalizes the pedagogy which it claims and the teacher as pedagogue. Each discipline can not claim pedagogy as constructed from their knowledge, rather, pedagogy is (dis)located; it is here and not there and there and not here. Pedagogy is not a subset of pedagogical content knowledge and therefore not *owned* by the disciplines. We reclaim pedagogy and (re)locate it as the distinctive professional knowledge of teaching.

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