

Boyd, Pete ORCID: <https://orcid.org/0000-0002-2234-3595> and Bloxham, Susan (2013) A situative metaphor for teacher learning: the case of university tutors learning to grade student coursework. *British Educational Research Journal*, 40 (2). pp. 337-352.

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A situative metaphor for teacher learning: understanding how university tutors learn academic standards

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This post print version of the paper was published in the British Educational Research Association Volume 40 Issue 2 2014

Abstract

In the continuing concern about academic standards in the higher education sector a great deal of emphasis has been placed on quality assurance procedures rather than on considering how university tutors learn to grade the quality of work produced by students. As part of a larger research project focused on how tutors grade student coursework this paper contributes by offering a new metaphor for such tutor learning based on a socio-cultural perspective. The research project used think aloud protocols recorded as university tutors graded student coursework and this was followed by semi-structured interviews. The voluntary participants consisted of twenty five lecturers in four contrasting domains, humanities, art & design, medicine and teacher education, in two teaching-led and one research intensive universities. Analysis of the interview data helped to develop and evaluate a metaphorical framework that helps to understand the work and learning of the lecturers. Grading, writing feedback, second marking and moderation are important situated professional learning opportunities for tutors to debate and reach agreement on the academic standard demonstrated by student coursework. The metaphor positions learning to grade student coursework as a complex interplay between the vertical domain of public knowledge and the horizontal domain of tutors' practical wisdom. The metaphor developed in this paper is proposed for critical consideration and wider use by academics, teachers, academic developers and teacher educators as an aid to better understanding of teacher' professional learning.

Keywords: metaphor; teacher; assessment; grading; professional learning

Introduction

This paper focuses on the professional workplace learning of university tutors as they establish and maintain academic standards through grading and moderating student coursework. There is a continuing climate of concern about academic standards where universities and public bodies have a desire to regulate standards in order to: maintain institutional reputations; to protect the value of academic qualifications; and more generally to be accountable to society at large (Sadler, 2011). There is considerable consensus that the term ‘academic standards’ refers to the ‘output’ of programmes, meaning the quality of student coursework and accomplishment in examinations and the award of academic credit (Harvey 2002; QAA 2010; Coates 2010; Alderman, 2009). Much of the quality assurance effort in the higher education sector focuses on teaching and assessment processes and yet in practice, the determination of academic standards remains firmly located in the act of grading and moderating students’ performance by programme teams of university tutors. This paper asks, how might we better understand how university teachers learn to grade student coursework and so maintain academic standards?

Understanding how professionals learn is a complex problem that is faced by a wide range of professional fields. Metaphors, linguistic representations, are frequently used in an attempt to capture the human experience of professional learning (Lakoff & Johnson 1980). The metaphors held by teachers and teacher educators have a powerful influence over their practice and workplace learning. In higher education in professional fields, including teacher education, a widely used metaphor is the ‘gap’ between theory and practice. The influence of the theory-practice gap metaphor is widespread in fields such as nursing education (Gallagher 2004).

The current paper is an attempt to construct from the workplace learning literature, including situated learning theory (Lave & Wenger 1991; Wenger 1998), an alternative metaphorical framework for understanding the professional knowledge and learning of academics in their

grading of student coursework. The metaphor is then tested as an analytical framework on data from our study of how university tutors grade student coursework. The metaphor merges professional knowledge, practice and identity as professional *knowing* and combines this with the concept of professional learning as interplay between vertical and horizontal knowledge domains. The paper argues that this situative metaphor provides a more useful framework for teachers, academic developers and teacher educators than the widely held theory-practice gap metaphor and the impracticable formal-informal typology for workplace learning.

How university teachers learn to grade has been theorised (Wolf 1995; Shay 2005; Jawitz 2009) but the amount of empirical research is fairly limited (Reimann *et al.* 2010; Orr 2007; Jawitz 2007 & 2009). These studies emphasise the significance of informal learning from others through moderation and debate, with colleagues as important in the process of learning about academic standards. They also identify the significance of power in relationships and the need for staff to develop confidence in their assessment knowledge if they are to challenge more senior or experienced staff in grading judgements. The development of the new metaphor for professional learning is based on our engagement with data analysis during a research project focused on how university tutors grade student coursework (Authors' journal publication 2011; Authors journal publication 2012). The research project asked tutors to grade pieces of student coursework whilst 'thinking aloud'. This activity was followed by a semi-structured interview. The qualitative analysis of think aloud protocols and the interview transcripts provided insight into strategies and wider influences on tutors' practice. The analysis of the 'think aloud' protocols found that the tutors generally made holistic rather than analytical judgements. Norm referencing was found to be an important element and most tutors did not refer to written criteria except in some cases as a post hoc check (Author journal publication 2011). The analysis of the interview data suggests that tutors believe there are established and shared academic standards in existence for their discipline and they endeavour to maintain them. There was no evidence of

significant pressure or practice related to lowering of standards, and the study suggests that moderation has some power to secure standards within teams (Bloxham & Boyd 2012). Artefacts such as criteria, marking grids and feedback cover sheets, were an important aspect of the study and understanding the way that these tools capture or represent different kinds of knowledge provides some insight into the professional learning of the tutors. In analysing our data we became dissatisfied with the widely used but misleading metaphor of the theory-practice gap and developed an alternative. The new metaphor considers professional learning of the tutors to be ‘interplay between vertical, public knowledge and horizontal, practical wisdom, knowledge domains’.

Metaphors for Learning

Much of the existing work on teachers’ professional knowledge either explicitly, or often implicitly, uses the theory-practice metaphor to conceptualise the ‘gap’ between more abstract pedagogical ideas and the actual ways of working of teachers. This approach argues that teachers apply abstract theory to their classroom practice. This is a hopelessly inadequate metaphor because teaching situations are too complex for the simple application of a selected theory to be effective; teaching contexts vary hugely and also the teacher has to respond very rapidly to situations that arise. For example in grading relatively complex university student coursework the tutors in the current study have to make subtle judgements involving a large number of related variables and bodies of knowledge.

Metaphors are powerful and practicable tools by which teachers are able to conceive of learning and shape their teaching practice (Lakoff & Johnson 1980; Martinez, Saulea & Huber 2001; Hager 2012). Knowledge and learning are complex and it is helpful to use metaphors as part of our conceptual system. It is important however to acknowledge the risks of dominant metaphors

because they may be misleading (Hager, 2012). For example the ‘theory-practice gap’ is a metaphor that dominates and is arguably paradigmatic in teacher education (for example see Korthagen 2010) as well as in other professional fields such as nurse education (Gallagher 2004). As a metaphor it tends to create a false distinction between abstract knowledge and practical knowledge. In the current study a useful metaphor needs to capture the way that tutors’ practical, localised and apparently completely pragmatic approach to grading and writing feedback for students may reflect elements of underpinning theory, for example on ways of knowing within a specific subject discipline and on motivation, self-efficacy and assessment for learning.

The critique of acquisition and transmission metaphors for learning has been strongly developed within the workplace learning literature and alternatives proposed include ‘becoming’ and (re)construction (Boud & Hager, 2012). This approach rests on the situated learning perspective of a close link between practice and identity (Wenger, 1998). However the workplace learning literature perhaps tends to over-emphasise the significance of *informal* learning in the workplace (Fuller et al. 2005). This presents a false dichotomy between individual acquisition of abstract knowledge and socially situated development of ways of working and as a consequence may tend to reinforce the dominance of the theory-practice gap metaphor.

Metaphors for learning may therefore focus either on individualized or on socially situated learning, for example Sfard’s ‘acquisition’ and ‘participation’ metaphors for learning at university (1998). A perhaps more considered categorisation distinguishes between behaviourist, cognitive and situative (socio-historic) perspectives and this proved to be a feasible approach to classification in a study of metaphors identified by experienced and student teachers (Martinez, Saulea & Huber 2001). This study found a preponderance (57%) of behaviourist metaphors focused on acquisition and transmission of knowledge. A smaller proportion (38%) of the

teachers' metaphors were classified as constructivist focused on organization of knowledge by students through active learning and facilitation by the teacher. In the study only a very small proportion (5%) of the teachers' metaphors could be classified as situative, for example 'teaching is like a tourist guide who negotiates a route with the tourists' (Martinez et al. 2001: 972). These authors argue convincingly that teacher education programmes should explicitly work on surfacing and reflecting on metaphors for learning and teaching with student teachers. It seems important for teachers and teacher educators to review the metaphors they hold for professional learning because this will shape their conception of teacher knowledge and their pedagogy for teacher education and development.

Professional Knowing

A useful framework for understanding teachers' knowledge uses Aristotle's concepts of episteme and phronesis (Korthagen et al., 2001). **This is useful particularly because it includes the possibility of phronesis (practical wisdom of teachers) being captured and codified, for example as an element of institutional policy, so that it forms an element of more abstract knowledge or theory known as episteme. In this framework action research by teachers provides a possible approach to building episteme from phronesis.** By theorising this process the framework develops from merely setting out the domains of teacher knowledge towards an understanding of the process of teachers' professional learning, that is, one in which teachers draw on their practical experience to develop theoretical understanding. In the current study some tutors discuss their development of grading criteria and marking schemes which capture local practice but also more top down requirements of their university institution that may be more explicitly grounded in public knowledge.

In a recent further development of this framework (Lunenberg & Korthagen, 2009) a triangular relationship between practical wisdom, theory and experience is proposed. However the use of the term ‘theory’ is unfortunate in this case because that appears to deny the theoretical aspect of practical wisdom limiting it to be merely a sensitivity of the teacher towards teaching situations that arise so that they are able to quickly decide on suitable action. This tends to weaken the important idea that the practical wisdom of teachers is a knowledge domain that includes practical theorising that is implicitly informed by abstract theory. The practical wisdom of tutors within a departmental teaching team involved in grading student coursework may appear to be pragmatic, situated, socially held and built from a history of the ‘way we work here’, but it seems likely to include within it the influence of more abstract theoretical knowledge.

From a socio-cultural perspective Blackler (1995) argues that professional knowledge should be viewed not as something that individuals or organisations *have* but as something that they *do*.

He proposes a view of knowledge as ‘knowing’ and further considers that knowing to be:

- Mediated: through systems of language, technology, collaboration and control
- Situated: located in time and space and specific to particular contexts
- Provisional: constructed and constantly developing
- Pragmatic: purposive and object-oriented
- Contested: subject to debate and different perspectives

(Blackler, 1995: 1039)

Adopting this perspective on professional knowledge firmly locates our definition of professional learning as process rather than product. Beyond this our sociocultural perspective on professional knowing and learning also refuses to distinguish between doing and being.

Rather we consider professional learning as becoming and consider that practice and identity are intertwined (Wenger, 1998). In the current study tutors positioned themselves for example as a ‘fair marker’ and this reflects the negotiation between their practice and identity.

In negotiating their evolving identity academics are seen as pursuing multiple trajectories of identity formation (Wenger, 1998). Their identity as an academic within their subject discipline or professional field includes inter-related trajectories as a scholar or researcher and as a university teacher. Within this complexity they develop an 'assessment identity' that reflects their espoused approach to grading and 'standards frameworks' (Author publication 2012).

Knowledge Domains

In considering the domains of knowledge of an academic then subject discipline knowledge clearly appears to dominate, although the increasing emphasis on the quality of teaching, learning and assessment in universities means that pedagogy for higher education is an increasingly significant area of knowledge (Shay 2008). Of course these two domains overlap considerably because ways of knowing in the subject discipline strongly shape the pedagogy within that discipline. These two codified domains of knowledge (knowing) also overlap with the less formal procedural knowledge involving practice (doing) and identity (being). All of these domains exist for the academic within the wider context involving the institution, the higher education sector, the policy framework and the wider community and societal contexts. Attempts to map out school teachers' knowledge domains, especially with regard to subject content knowledge, have diagrammatically represented this overlap, for example between content knowledge and pedagogical knowledge (Leach & Moon, 2000). However they have also tended to represent subject content knowledge as a given, a kind of uncontested body of propositional knowledge. It is much more appropriate, even more so when considering university teachers, to position subject content knowledge as a dynamic, contested, situated and socially held domain (Ellis, 2007). Thus Blackler's (1995) perspective on professional knowing

applies equally to the subject content knowledge domain as much as to the pedagogical so that within a university department a subject discipline has a decidedly local flavour.

The university, their institution as a workplace, provides a pedagogical framework for the professional learning of academics (Billett, 2004). The individual academic may be viewed as a learner within that framework although it is important to note that they are also able to contribute and help to shape the workplace culture and that much of their knowledge is socially held within their workplace teams. The learning architecture of the workplace may be analysed using the notion of formal and informal learning (Eraut, 2004) but this framework is really more about the format of educational provision rather than a useful dimension of workplace learning (Billet, 2002, 2004). Informal learning may be unintentional, as a side effect of work activity or more deliberative but still largely informal, for example through mentoring or practice to develop work skills (Eraut, 2004; Tynjala, 2008). The formal - informal divide appears to be too simplistic to be useful in analysing empirical data and understanding workplace learning because informal learning may occur within the 'interstices' of formal learning activity (Eraut, 2000: 33), for example a tutor completing a course may be prompted to learn from reflection on their practice in the workplace. Equally it is possible for formal learning to occur within apparently informal collaborative workplace activity, for example a tutor may learn new subject discipline content through co-planning a module with a colleague or through observing a taught session.

The workplace learning literature considers formal and informal learning to be intertwined (Tynjala, 2008; Colley et al., 2002) and focusing on the interplay between formal and informal learning appears to be a more fruitful way of investigating how academics learn to grade student work (Reiman et al., 2010). However this does not resolve the problematic weakness of the formal-informal typology and a closely related but alternative framework to help understand and

analyse the professional workplace is the notion of horizontal and vertical knowledge and a focus on the interplay between these domains. In considering how students learn through work experience Guile & Griffiths (2001) distinguish between vertical and horizontally integrated approaches to professional learning. In common with Reiman et al. (2010) there is a tentative suggestion in Bolt's approach which signals the need to move on from the formal – informal typology and the aim of the current paper is to make that step decisively.

Horizontal knowledge and learning, which we will refer to as horizontal professional *knowing* (after Blackler, 1995), centres around context dependent discourse (Bernstein, 1999). It consists of the practical wisdom of practitioners and the level of shared local theorising will vary depending on levels of interaction and the strength of the community of practice (Lave & Wenger, 1991). This area of knowing is located in particular workplaces, it emphasises 'ways of working' and 'what works here' and is generally held within social groups. Change in horizontal knowing comes about through informal social processes and it is dynamic, contested and pragmatic. Much of this knowledge may be tacit and individual practitioners may find it difficult to explain aspects of what they do and why it works in the particular workplace context. In the case of academics grading student coursework the horizontal knowing includes strategies for grading and writing feedback, procedures for allocating, negotiating and agreeing grades, and unwritten rules about the maintenance of academic standards.

In contrast vertical knowing centres on coherent, hierarchical, systematically principled discourse and is about specialised 'symbolic structures of explicit knowledge.' (Bernstein, 1999: 161). Vertical knowledge is hierarchical and has formalised ways of deciding what counts as knowledge. For example bodies of subject discipline knowledge are structured through processes of peer review and publication. Change in vertical knowing comes about through more formalised processes and it is generally held in published texts. As Bernstein points out

‘Contrasts, variations and relationships in the form taken by different knowledges are related to the social contexts of their production, transmission, acquisition and change.’ (Bernstein, 1999: 170). In the case of academics grading student coursework the vertical knowing includes subject discipline content, pedagogical knowledge and perhaps also knowledge of higher education quality assurance systems.

Grading includes engagement with the vertical domains of pedagogy and the subject discipline but also involves the horizontal domain of practical wisdom formed within the social workplace context of the lecturer (Bloxham et al., 2011; Bloxham & Boyd, 2012). In this way, grading involves the academic literacies of the lecturer as well as of the student, and to some extent the style of writing required for publication in a high status journal within the subject discipline provides a guide to the student writing that will be most highly valued (Lillis & Scott, 2007). Subject disciplines have distinct ways of *knowing* and these will be valued when found in student work and in professional fields there may be considerable complexity, centred on notions of ‘reflective writing’, about what kinds of student writing are required (Rai, 2006).

In summary this study of lecturers considers academics in the role of university *teachers* who are grading student coursework. Our analytical framework uses Blackler’s sociocultural perspective of their professional knowledge and learning as ‘knowing’ that is mediated, situated, provisional, pragmatic and contested. It adopts a metaphor for professional knowing as including vertical (public knowledge) and horizontal (practical wisdom) domains and considers abstract theory to be distributed across these domains but explicitly foregrounded in the public knowledge domain and implicit in the practical wisdom domain. The vertical knowing in our study of academics grading student coursework includes subject discipline intertwined with pedagogy for higher education. The horizontal knowing includes local procedures for developing assessment guidance, marking, negotiating grades during moderation and mediating

the quality assurance process. In applying and evaluating this framework within our data analysis we are focusing on the 'interplay' between vertical and horizontal knowing within the workplace setting of the lecturers. In the metaphor 'interplay' includes the mediating role of artefacts, these include concepts such as 'critical analysis' as well as written criteria and marking schemes.

The Study

The study reported here is part of a larger project that used 'think aloud' protocols which were audio recorded as university lecturers graded student coursework and wrote feedback. The project involved twenty five volunteer lecturers in four contrasting subject domains (humanities, art & design, medicine, and teacher education) in three universities (one research intensive and two more teaching-led). The tutors were volunteers, recruited through open advertisement in the relevant departments. In researching academic practice the subject discipline of tutors is likely to be significant, but for the purposes of this study a sample including tutors from a range of disciplines was considered to be important. Following the think aloud activity semi-structured interviews were used to explore the perspectives of the lecturers in relation to grading, academic standards, use of supporting documents and how they developed their knowledge and practice in assessment. The interviews explored espoused rather than actual practices in grading (Orrell, 2003) but as it usually followed directly from the think aloud activity and referred to those specific examples of grading and of student coursework it was hoped that the interview responses would be more grounded in actual practice. Tutors were not specifically asked about learning to grade, rather the analysis identified the themes regarding professional learning that emerged during discussion about their sense of standards and their approach to marking. The interviews were recorded, transcribed and analysed using a qualitative thematic approach (Ritchie & Lewis, 2003) which drew on the framework for professional knowing developed

from our engagement with the literature. Interview scripts were read and re-read by the two co-researchers and coded using an open approach that allowed themes to emerge but with an interpretation shaped by our theoretical framework. Discussion of professional learning was interpreted in relation to vertical and horizontal dimensions of knowledge and the emerging category of 'power' was interpreted as an aspect of the 'interplay' between these domains that lies at the heart of professional learning.

The project gained ethical clearance through the formal procedures of two of the universities involved. Potential impact on student grades was minimised by only involving the grading of year one coursework, formative coursework or non-graded pass/fail assignments and by asking the tutors to include these scripts in second marking samples. The potential impact on tutors involved was controlled by confidentiality, allowing them to check transcripts and early analysis, voluntary participation and establishing a right for individuals to withdraw their data at any time.

Findings

In this analysis section the key category of 'tutor learning' is considered in relation to the interplay between vertical and horizontal domains of knowing and illustrated with indicative quotes from lecturer interviews. In addition the emergent category of 'power' is outlined and illustrated with quotes as a key characteristic of this interplay between knowledge domains. The indicative quotes have been selected to give voice to the tutor participants and to illustrate the dimensions of the two main categories of 'tutor learning' and 'power'.

Tutor learning

Academics emphasise the significance of practical wisdom when reflecting on learning to grade student coursework. Their idea of grading as holistic and instinctive implies that you can only really learn to grade accurately through experience, through engaging with and developing practical wisdom:

...you can also know even before you've taken it apart, you go 2:1 to 2:2 to 3rd and then you take it apart and look at all the separate elements of the criteria for assessment and it duly comes out as a 3rd because your instinctive reaction to it was pretty accurate...that comes through many years of experience. I have to say I think it's difficult for tutors who haven't been teaching very long. (Tutor 16 Graphic Design University Y with 15 years experience in HE Female)

The tutors directly connect this learning from experience to social learning experiences with colleagues:

...over the years, I mean, we've done moderation bits, you know, where we've sat together as a team, there's three of us usually...we do a lot of moderations...where you're kind of feeling for it and you're articulating together and that's quite nice isn't it? Interesting. (Tutor 9 Teacher Education University Z with 5 years experience in HE Male)

New or less experienced colleagues are seen as needing support from an old hand when it comes to grading. Alongside this emphasis on practical wisdom comes an apparent dismissal of formal training but this may be seen as a rejection of a style of learning and not necessarily a rejection of engagement with vertical domains of knowing. There is some element of dismissal of 'formal' training such as on a postgraduate course but a suggestion for time to be set aside for

second marking and good quality conversations that would help to establish a shared framework for academic standards:

I think that we should, as a team, do some work and training on marking...I mean every work team should do that kind of thing. I've done two PGCE's [postgraduate courses in teaching] and none of them have actually helped me mark...evaluation's a natural skill...But it would be nice for that, for us to have...just some time in the academic year to maybe do some second marking together. Just to chat and have a nice, interesting...an away day...where we can say 'will you stop giving everybody 62?' (Tutor 2 Business Studies University Y 10 years experience in HE Female)

This is typical of the emphasis placed by the tutors on the horizontal domain for professional learning about grading but on the other hand grading student coursework across subject disciplines, such as may occur on a more formal programme or workshop, is not completely dismissed by all of the tutors:

Yeah we did have a kind of away day... where we got together with other people in the faculty and we looked at essays from other subject...it was notable that there may be differences between different disciplines. (Tutor 5 History University Z 20 experience in HE Male)

Here the learning across subject disciplines may be viewed as building practical wisdom within the horizontal domain but the link made to subject discipline knowledge begins to recognise interplay with elements of the vertical domain. When academics discuss 'informal' learning they may be considering negotiation between vertical and horizontal domains of knowing, for example by working collaboratively on assessment guidance and marking grids. Assessment artefacts such as marking grids are not intended by some of the academics to be permanent, they are seen as to be requiring constant modification:

...we try to not have documentation and ways of interpreting things that are too fixed...you can do...grading descriptors and you just leave them for years and years

whereas we constantly tweak them because we know they can't be permanent... (Tutor 18 Graphic Design University Y 30 years experience in HE Male)

There is recognition by the academics of the process of situated and social learning involved in 'tweaking' the marking grids and assessment guidance, but they are also engaging with the vertical domain in terms of the policy and professional guidance supporting the current paradigm within higher education assessment that emphasises learning outcomes, transparency for students and criteria based assessment.

Tutors see second marking and moderation as professional learning activities:

Well sometimes we agree on everything which is...very helpful, sort of reinforcement. If you disagree then...sometimes you can learn about things, sometimes I might have missed an important point and they might have missed an important point so that can be helpful... (Tutor 22 Medicine University X 14 years experience in HE Male)

But a problem is that despite the requirements for second marking and moderation much grading is done in isolation and there is only limited time for good quality debate of the grade assigned to individual pieces of work:

I think the problem with it is that people can mark very much in isolation, away from each other so there's an awful lot of thinking you know, what everybody else does in order to arrive at their decisions...and some of this is putting on an act in a sense...do you want to ensure it seems just as astute?...I think it's helped by people being more open with each other and sharing more often what they do...

(Tutor 8 Teacher Educator University Z 3 years in HE Male)

This reported issue of feeling isolated introduces the importance of sharing practical wisdom and building trust within teaching teams.

The subject discipline remains significant and teaching teams may develop shared artefacts that represent how subject discipline knowledge influences their judgment; in this case a design team uses four dimensions to assess assignments:

So when I'm looking at a piece of work I'm looking often at the four dimensions of it...we've described the design process as a process of discovery, definition, development and delivery. So there's four elements to it and irrespective of learning outcomes and particular levels there will be an expectation that students have visited those four areas... (Tutor 15 Product Design University Z 5 years experience in HE Male)

Judgments centred primarily on the subject discipline may have dominated in the past but there is now more reference to pedagogy or at least to quality assurance discourse:

...in the time that I've been marking in the past 12 or 13 years, I think it's fair to say most academics in the art and design sphere, we have become more and more aware of quality control so initially we might have had quite a subjective view with little support and you know when I first started teaching you used to hear statements like 'well this isn't worth a 2:1, it's you know it's just not sending the right signals out, it's not professional enough' whereas now the conversation would be much more about learning outcomes, assessment matrices and that sort of thing...(Tutor 19 Product Design University Z 14 years experience in HE Male)

Capturing or distilling elements of horizontal knowing in the creation or modification of artefacts such as assessment guidance or marking grids might be considered to be codifying of practical wisdom. However these artefacts also include elements of vertical knowing in terms of subject discipline and pedagogy and the creation or modification might equally be viewed as mediation of public knowledge. Within our focus on the engagement of tutors with vertical and

horizontal knowledge domains the creation and modification of these assessment artefacts may be characterised as interplay.

Some professional learning may relate strongly to vertical knowing, such as an interdisciplinary workshop on assessment by an academic developer or a quality assurance briefing by a departmental colleague. This will foreground public knowledge but seems likely to be easily dismissed by academics unless it is situated through interplay in relation to their practical wisdom. Other professional learning may relate strongly to horizontal knowing and mentoring by an experienced peer is a good example mentioned by respondents. This is likely to foreground practical wisdom but it may lead to some rather quirky assessment practice unless it is tempered to some extent through interplay with public knowledge. Learning to grade is positioned by the tutors as being about socialisation to a norm within the teaching team or department. However they show awareness of power in their interview responses and the next section considers and illustrates how power is expressed within interplay.

Power

The tutors perceive risks and comment on the need for openness in dealing with disagreements over grades:

...I think there is and should be a level of professionalism about us that if there is disparity in marking we can be completely open with each other and say you've given this 75, everybody else would have given 65 so we're going to have to bring this mark down or you're not marking like with everyone else... (Tutor 4 Film Studies University Z 15 years experience in HE Male)

This acknowledges the contested nature of professional knowing (Blackler 1995) in relation to grading student work and within the proposed metaphor the term 'interplay' is intended to capture this sense of dynamic debate at the heart of professional learning.

Individuals will develop an assessment identity partly reinforced through comparison with others during blind second marking. In some cases the identity adopted is one of being a tough or harsh marker and in this sense at face value it appears to be adopting a powerful stance in relation to other tutors. However a more interpretive analysis might argue that in some cases tutors claiming to be 'tough' may actually be feeling vulnerable and adopting a defensive stance, whilst a more confident academic may prefer to position themselves as a 'fair' marker or even be willing to be seen as 'generous':

...I mean how do I know for example that I'm a harsh marker? So over the years it's been relative to, in this module in particular and in other modules where I've marked, in fact I don't think I've ever marked where there hasn't been double-marking, where you come together with somebody at the end and you each agree a mark. And so I have sense of myself in relation to other people as a marker. (Tutor 24 Medicine University X 10 years in HE Female)

This expression of her assessment identity as a 'harsh marker' is established within the horizontal domain of practical wisdom but suggests an interplay with the power held within the vertical knowledge domain in the sense that this tutor is positioning herself as a 'defender of academic standards' in relation to subject discipline and pedagogy. The power in the vertical domain is partly based on peer reviewed publication within the subject discipline and this is strongly linked to grading student work and maintaining academic standards.

Blind second marking is seen as a diagnostic tool but power differentials may interfere, in this case reference to a colleague who 'knows their stuff' does not distinguish between their perceived status in terms of public knowledge or practical wisdom:

Otherwise you're led by the nose a little bit too much, particularly if it's a colleague who you think they're very good at this, they know their stuff...in the rare occasions I

discovered myself more generous than a colleague you think oh that's ... you know what does that tell me about what I value within a piece of work? Tutor 8 Teacher Educator University Z 3 years in HE Male

As teachers we all carry our own previous experience of being learners and this may continue to have a powerful influence on us. In this case it takes the external examiner, in a position of power, to challenge and begin to change the practice of the tutor:

The external examiner has told me in the past that I need to mark higher...not throughout the whole grades but I tend to stop at 74 and I need to take my marks up to 85 and so I'm starting to do that. That was a barrier to me...that was the way I interpreted the marking scheme...

Tutor 2 Business Studies University Y with 10 years experience in HE Female

In this case the external examiner is seen as an expert in the vertical domains of public knowledge, for example knowing about technical aspects of assessment, and is able to exercise that power to influence the practice of the academic. In vertical domains of knowing power appears to be distributed according to hierarchical structures and processes. In the vertical subject discipline domain this means that the grade awarded by a professor or highly published academic is likely to hold sway over that awarded by an academic of 'lower status' perhaps even if they have expertise in pedagogy and assessment. In the vertical pedagogical area of knowing this means that comments by an external examiner, who perhaps naively may be seen as an expert in assessment, are likely to provoke action in response.

The responses of the academics included examples of developing practical wisdom with local practices very much in the foreground and any relation to public knowledge seeming to be obscure. These practices were influenced by colleagues with strong positions within the horizontal domain, for example as a senior academic or as mentor to relatively recently

appointed academics. Some rather unconventional local approaches to grading were reported by respondents that had been introduced to them by mentors. In one example the tutor begins the grading of a set of student coursework assignments by predicting a B grade student, from their personal knowledge of the student group, and grading their work first. Not surprisingly they often find that their prediction is accurate and this sets the standard for grading the rest of the coursework. This approach was passed on to them by a mentor:

...I then start off with the student who I've followed through the coursework so far who I know is going to be a good submission...I would go to their work first and I think now this is going to be a good B...usually I'm about right...

Tutor 13 Product Design University Z 10 years experience in HE Female

In a second example the influence of a mentor is made more powerful because she has positioned herself as a 'tough' marker:

...I had probably the toughest mentor we've got [in relation to grading] when I arrived who sort of taught me the ropes...so I picked up a lot from her...

Interviewer: What do you mean? When she taught you the ropes, was it moderating? Not just moderating, the system, how we mark, how we attack this. Plan of attack for it. So my plan of attack is similar to hers...she talks about it as painting stair rods...so you mark one bit of one and then you mark the same bit of everybody else's and then you go back to the start.

(Tutor 8 Teacher Educator University Z 3 years experience in HE Male)

This method of grading, passed on by a mentor, is sometimes used in marking structured exam questions but is rather unconventional and arguably a rather fragmented approach to grading complex student coursework assignments.

These examples illustrate how power is distributed within horizontal domains of knowing, the practical wisdom of tutors, according to situated tradition and ways of working (rules) in the department or team and there is weaker reference to external, more formal, measures of seniority related to vertical knowledge domains. Within the proposed metaphor the use of the term 'interplay' aims to capture both the use and abuse of power and the role of artefacts at the heart of tutors' professional learning.

Discussion

Learning to grade student coursework, when viewed as interplay between horizontal practical wisdom and vertical public knowledge domains of knowing, involves mediation of subject discipline and pedagogical knowing and codification of practical wisdom through collaborative negotiation of assessment guidance, marking grids and moderated grades. Power is expressed in the interplay between vertical and horizontal knowing by the different kinds of professional status claimed by individuals and roles.

The perspective of the academics in this study challenges the way that quality assurance approaches within the higher education sector have focused on transparency; the explicit publication and application of learning outcomes and assessment criteria, as a key strategy for maintaining and monitoring academic standards within and between institutions. The analysis suggests that tutors do not learn their standards from this explicit information but that working with, indeed creating such artefacts, provides an important site of co-construction of standards and shared learning. Likewise, external examiners and colleagues involved in second-marking and moderation, make a contribution to the co-construction of standards through discussion and

evaluative feedback. The process of this shared professional learning may be usefully viewed as a complex 'interplay'.

Whilst the collaborative activities identified by the respondents demonstrate the ways by which shared assessment frameworks are developed, they also strengthen the centrality of the local context for co-creation of academic standards (Orr, 2007). Such an analysis recognises the part that quality assurance procedures may play in providing systematic opportunities for interplay between vertical and horizontal knowledge regarding grading and standards. The difficulty for the sector at large is the localised nature of this learning and the difficulty that it has, in theory at least, in delivering a consensus in standards within or across universities. The external examiner is the tenuous link that might reach beyond the local environment but in a context where the power of external examiners to deliver consistent standards across institutions is challenged (QAA 2007), the learning of 'national standards' in any subject discipline must consequently be limited.

Greater cross institution sharing of assessment standards by shared marking and discussion of examples of student coursework may be more effective than the current reliance on external examiners or attempts to codify academic standards through written guidance. Those who influence the workplace culture of lecturers, including external examiners, need to nurture protected collaborative spaces that allow graders to be vulnerable and genuinely share their judgements of student work. Powerful influences in terms of external scrutiny and internal hierarchy and personalities are likely to distort judgements and be unhelpful to the establishment of shared frameworks for academic standards.

Through its development and application as an analytical framework in an empirical study this paper illustrates and offers a new metaphor for professional learning:

‘Professional learning is the interplay between horizontal practical wisdom and vertical public knowledge’.

This metaphor provides a potentially useful alternative lens by which to study professional knowledge and learning in place of the theory-practice metaphor and the formal-informal learning typology. The new metaphor finds a balance between cognitive and situative theoretical perspectives. It recognises the value to professional learning of both practical wisdom and public knowledge but also the need to be critical of each of them. Using the term ‘interplay’ captures the complexity and power relations within professional learning and allows for the role of artefacts within it. The metaphor deserves further development and application to data sets that might include observation of practice and student voice as well as the perspectives of academics. The metaphor is proposed for critical consideration by teacher educators and other professional educators as an alternative to the paradigmatic metaphors that are currently used in our everyday work with both experienced and student practitioners.

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