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BUILDING THE FOUNDATIONS OF PROFESSIONAL EXPERTISE: CREATING A DIALECTIC BETWEEN WORK AND FORMAL LEARNING

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ABSTRACT

Recent critiques of management and teacher education curricula and teaching pay particular attention to the disconnection between the de-contextualised, formal knowledge and analytical techniques conveyed in university programs and the messy, ill-structured nature of practice. At the same time research into professional expertise suggests that its development requires bringing together different forms of knowledge and the integration of formal and non-formal learning with the development of cognitive flexibility. Such complex learning outcomes are unlikely to be achieved through a 'knowledge transmission' approach to curriculum design. In this article we argue that in many ways current higher education practices create barriers to developing ways of knowing which can underpin the formation of expertise. Using examples from two practice-focused distance learning courses, we explore the role of distance learning in enabling a dialogue between academic and workplace learning and the use of 'practice dialogues' among course participants to enable integration of learning experiences. Finally, we argue that we need to find ways in higher education of enabling students to engage in relevant communities of expertise, rather than drawing them principally into a community of academic discourse which is not well aligned with practice.

Keywords: expertise, professional, distance-learning, practice-based learning

INTRODUCTION

Let us start with a student. The following quotation comes from a recent (online) conversation with an MBA student who had been engaged in a group activity to reflect on learning from a project in his workplace:

> *I've struggled at times to see direct links between our discussions and theory. … I've sometimes felt as though there's a tendency to make theory fit the good management discussions that we've been having (almost 'after the event'), rather than theory providing the insight that supports sound management discussion. …* [This] *mirrors the exact issue I struggle with, in the real world; how to bring* [university] *theory and my working environment together? I find this a particular challenge, not least because many colleagues will not respond favourably to what they perceive as 'academic management theory'*

Similarly, student-teachers often find it difficult to see the relevance of the university study to classroom practice, teacher educators often find it difficult to talk about university ideas to student-teachers in practice settings and workplace mentors can be dismissive of university ideas (Hutchinson, 2008).

If you teach a vocationally relevant subject, it is likely that you have had similar conversations with students who struggle to make use of what they learn in an academic setting, in their workplace context. As a teacher you might also have found difficulty expressing university-based ideas in practice settings or heard university-based ideas being dismissed as 'unreal'. We are going to argue that this struggle should be placed at the heart of learning in universities if students are to learn in ways that support the formation of professional expertise

If we are to educate professionals it makes sense to start with an understanding of the nature of professional expertise. Does this mean that we claim that higher education should be concerned with producing experts? That would be a foolish claim; developing expertise takes significant time and considerable engagement in real practice in the domain of expertise. Our goal is more modest. We wish to explore pedagogic approaches which lead to the kind of learning that can establish a good foundation for building expertise and that help our students to think about workplace and university practices in new ways. Our, perhaps more controversial, claim is that much higher education practice in fact brings about learning which is likely to impede the acquisition of expertise, a point developed with respect to assessment practices by Boud and Falchikov (2007: 787). To make these arguments we draw on our experiences running courses which integrate academic and workplace learning and on systematic evaluations of those courses (Ofsted, 2008, Hutchinson, 2008, and Fenton-O'Creevy, Knight and Margolis, 2006). Our sources of data thus include participant observation as teachers in HE, systematic external review of the courses we describe, and (in the case of the Professional Diploma in Management) systematic review of the collaborative work carried out by students in online forums.

THE NATURE OF PROFESSIONAL EXPERTISE

We first review some of the key findings on the nature of professional expertise before moving on to consider their implications for effective professional formation and the role which may be played by distance modes of learning in supporting learning which is rooted in professional practice.

To put it simply, there are two major strands of work on expertise. The first considers expertise as an important human capacity for adaptation (Ericsson, 2006). Just as, when high in the mountains, our bodies adapt, producing more red blood cells to process oxygen more efficiently, so too, when faced with novel environments, our cognitive processes and capacities are capable of quite radical adaptation to cope with the demands we face. This

strand of research pays much attention to the cognitive strategies and adaptations we develop over time to bypass our cognitive limitations. Key insights from this strand of research concern the role of formal study, sustained deliberate practice (typically up to ten years); the domain specificity of expertise and the role of perception and the organization of long term memory in expert performance.

A second strand of work considers all expertise as socially embedded and as an emergent product of social systems (eg Hakkarainen, Palonen, Paavola, & Lehtinen, 2004). In this perspective, all thinking is taken to be a social activity. Even sitting thinking in isolation, I am engaged in a deeply social process. The categories, I use to think in, the words I use, the theories and 'facts' I draw on have been produced by others. In this view, it makes little sense to talk about 'an expert'. Instead the focus turns to networks of expertise and communities of practice. Expertise arises out of membership in a community of expertise and access to its resources; only some of which are individual internal mental representations of domain relevant knowledge.

These individual and social approaches to understanding expertise each generally employ different approaches to understanding learning. Sfard (1998) distinguishes between the acquisition metaphor and the participation metaphor in learning theory: the first mostly focuses on learning as the acquisition of knowledge and conceptual frameworks, the second on learning as participation in the social construction of ideas, culture and identity. She argues that both approaches are necessary to a full account of learning. We note the prevalence of the acquisition metaphor in accounts of individual expertise and the participation metaphor in social accounts. Although these individual and social perspectives are to some extent in tension, we take them (like acquisition and participation) to be broadly complementary and we draw on both for insight.

The individual approach

A constant finding, from research on expertise, is that human experts are remarkably effective in using and processing available relevant information, despite what we know about human limitations on memory and information processing capacity. As Stewart, Roebber and Bosart (1997) note, in many fields of expert judgment, performance is near the limit imposed by environmental uncertainty.

There is now a great deal of evidence that much expert performance rests on complex and situation-specific representations, or schemata, held in long-term memory (Gobet & Simon, 1996). While experts suffer the same limits on short-term memory as novices, the units they retrieve and hold in mind are signifiers for schemata of much greater cognitive complexity, and many more representations are available to them. The features of task and environment and other cues which experts are able to identify carry a freight of much more complex meaning than do those of novices. This interplay, of task, situation, long-term memory and meaning, allows the expert to deal in highly complex representations of task and situations within the more-or-less fixed limits of working memory. Thus, in this view, expertise involves the acquisition of complex cognitive schemata which can be applied flexibly in new situations.

Experts can also appraise complex situations rapidly. While the novice may identify isolated features of a situation and gradually, through analysis, converge on a diagnosis; for the expert, recognition is often very rapid and holistic. The Dreyfus brothers note that that gaining this sort of expertise is not a process of proceeding, via experience, from the particular to mental models of greater and greater generality (Dreyfus & Dreyfus, 2005). On the contrary, what distinguishes the expert from the novice or 'merely competent' is the expert's more extensive repertoire of situational discriminations (Dreyfus & Dreyfus, 2005: 787): theory-driven action is more characteristic of the novice than of the expert.

This ability of experts to rapidly characterize a problem or situation in ways which imply repertoires of action is seen in fields as diverse as chess, medical diagnosis; reading x-rays, weather forecasting, trading in financial markets and soccer. Such situation recognition may be static, as in a single instance of medical diagnosis (Norman, Kevin Eva, & Hamstra, 2006), or it may be ongoing and dynamic as in the sophisticated situational awareness needed by a fighter pilot (Stokes, Kemper, & Kite, 1997), or by an experienced fire-fighter (Klein, Calderwood, & Clinton Cirocco, 1986). What is clear is that expert knowledge does not, in general, inhere in highly abstract or strongly generalisable monolithic knowledge structures. Rather, expert knowledge rests on a foundation of very many situational experiences, is strongly domain-specific and requires extensive participation in practice (Ericsson, Krampe, & Tesch-Roemer, 1993).

Expert performance involves a degree of automaticity that frees the expert to devote deliberative resources to a strategic approach to task selection and performance. Automaticity is, though, by no means the whole story. First, in many performance domains a large proportion of performers plateau at modest levels of skill as they develop a degree of automaticity. Those who push past the performance plateau combine development of automaticity with critical control of practice and continually challenge themselves to seek new levels of performance. The importance of deliberate practice that combines persistent effort over time with critical examination of performance against clear goals is one of the constant findings of expertise research (Ericsson, 2006).

In many situations the expert performer not only sees what needs to be achieved but also what needs to be done to achieve it. In many cases perception and action are inseparable. For example, the expert driver, perceives a hazard, begins to brake, shifts gear, and changes speed and direction without conscious analysis. The whole process may even be carried out in tandem with some other demanding process such as conducting a conversation with a passenger. This, though, is not essentially an analytical response process. It is increasingly clear from recent neuroscience discoveries (Barrett, Mesquita,

Ochsner, & Gross, 2007; Phelps, 2006) and from naturalistic studies of expert decision-making (e.g. Fenton-O'Creevy, Nicholson, Soane, & Willman, 2005: Ch.7) that such automatic decision-making has a significant emotional component. There is an initial emotional response to a situation which triggers a package of perceptions, goals, expectancies and courses of action. This rapid response set may be modified by more deliberative processes as cognition catches up, but more often will happen below the threshold of conscious thought.

The social perspective

Thus far we have reviewed research which treats expert performance as an individual accomplishment. However, as was noted earlier, a complementary perspective treats expert performance as a social accomplishment. In this view, expertise is a property of social groups (e.g. Hakkarainen, Palonen, Paavola, & Lehtinen, 2004).

Much of the work on expertise as a social accomplishment comes out of a sociological tradition, which is often under-represented in analyses of pedagogy and curriculum, but psychology has also begun to grapple with this perspective though the notions of situated and distributed cognition. See, for example, Hutchins work on airline cockpit crew and ship navigation (Hutchins, 1990, 1995; Hutchins & Klausen, 1996). The idea of distributed cognition treats thinking as an activity that is located in social groups and their tools, not in individuals. This emphasis on the centrality of tools and activity is also a core feature of the work of activity theorists such as Vygotsky and more recently Engeström (Engeström, 1999; Vygotsky, 1930). We constantly use tools, and ideas created by others, for thinking. Imagine a surgeon working in an operating theatre: she does not work alone but in constant communication with a team of nurses, anaesthetist, and most likely another surgeon. She uses equipment which embodies knowledge about approaches to treatment. As the operation proceeds, then the understanding of the patient's condition and appropriate action evolves dynamically and across the team and the technologies they employ.

Or consider a scholar sitting at a computer, writing a paper. He is apparently alone, but much of his thinking is 'contracted out'. He refers to an email from a co-author, or a review from a journal. He re-reads a theory paper and some previous research published on the same topic. He conducts a search on Google Scholar. He employs a diagram or conceptual framework devised by someone else. All these activities tie him into a web of cognitive activity. He is not a thinker alone, but part of a thinking system. His identity as a scholar, membership in a community and facility with scholarly discourse provide him access to tools, routines, ideas and knowledge which cannot so easily be accessed by others outside or at the edge of his community of practice. From this perspective, the scholar is not so much an expert because of his internal organization of knowledge structures. Rather his expertise lies in his ability to access and engage with the intellectual resources of a community of which he is part. These resources include the internal mental representations of peers, but also their externalized embodiments such as books, diagrams, tools, software and so on. Similarly, a computer systems engineer draws on not only the knowledge of his peers but also on the knowledge embodied in his books, tools and equipment. From this perspective expertise involves learning to be part of a community of expertise and is concerned less with acquiring knowledge than with engaging with a culture and developing an identity within this community.

Expertise can, therefore, be seen as a social as well as a cognitive accomplishment, with experts defined by their ability to bring together different domains of knowledge in new ways to create new ways of perceiving and addressing problems. We see this as a critical role for higher education; how does HE provide students/workers with the critical capacity to rethink their work and how does HE draw on experiences in the workplace to rethink academic theory? We argue that this notion of 'expanded' expertise should be at the core of professional learning.

The ill-structured nature of professional work

A key characteristic of professional work is the need to engage with ill-structured phenomena. Ill-structured phenomena are those where:

> *"[B]ecause of a combination of the breadth, complexity and irregularity of a content domain, formulating knowledge in that domain to explicitly prescribe its full range of uses is impossible" (*Spiro, Visipoel, Schmitz, & Samarapungavan, 1987:177*)*

With ill-structured phenomena it is seldom the case that prior knowledge is already organized to fit the situation. Spiro and colleagues argue that in such cases, success in applying knowledge does not depend on well-organized and monolithic knowledge structures but, rather, on the flexible application of knowledge structures with multiple interconnections to prior cases and that allow for the messiness and complexity of the domain. Expertise, then, does not just concern a body of knowledge but the capacity to continually translate prior knowledge into new contexts (Spiro et al., 1987).

Traditional higher education approaches are often antithetical to the development of this flexibility and ability to grapple with complexity. As Spiro et al (ibid:182), note :

> *"Simplification of complex subject matter makes it easier for teachers to teach, for students to take notes and prepare for their tests, for test givers to construct and grade tests, and for authors to write texts."*

They go on to identify a *"massive conspiracy of convenience"* in higher education and call for an approach to teaching and learning in which rigid monolithic pre-packaged knowledge representations are replaced by more flexible representations which favour the application of knowledge in novel contexts

The social and informal nature of professional learning

Much professional learning outside higher education is both informal and highly social. A survey of over 700 professionals across six different professional fields (Cheetham &

Chivers, 2005) found professional practitioners to rate 'on the job learning', 'working with experienced colleagues' and 'working as part of a team' as their most important learning experiences in becoming competent (see also Eraut, 2004). Pre-entry experience including higher education was lowest rated (out of ten methods of learning). Qualitative research from the same study also highlighted the importance of learning from complex or multi-faceted problems and the role of (individual and group) reflection in improving performance (Cheetham & Chivers, 2005: 184-201).

Other work also highlights the informal and social nature of professional learning. For example, Knight collected survey data from some 2600 part-time university faculty members. Data were complemented by interviews. His strongest finding was that the part-time teachers who responded (a 32% response rate) said that non-formal and social learning practices had dominated their professional formation. Formal educational development provision had been much less significant (Fenton-O'Creevy, Knight and Margolis, 2006). Interestingly, this is consistent with interview data collected from UK high school teachers learning to implement a new national curriculum in the mid-1990s (McCulloch, Helsby and Knight, 2000). Although there was no shortage of formal provision to help them adopt the new curriculum, they said the most important learning was local, often unplanned, sometimes in the pub, sometimes through hallway conversations.

Other research into student-teacher learning in school (Hutchinson, 2008) draws attention to the difficulties that HE tutors and student-teachers have in expressing more formal, university-based, ideas in practice conversations. A content analysis of eight conversations between four sets of mentor, HE tutor and student-teachers indicated a strong focus in discussions about 'what works' and 'what will work' drawing on a repertoire of teaching ideas developed over a career. Participants in this research expressed ideas from personal perspectives with student-teachers socialised into teaching as a form of bricolage and with their success as beginning teachers determined by their ability to respond quickly and positively to advice and, in one case, to survive as she is 'thrown in at the deep end'.

To give an example from another professional domain, Fenton-O'Creevy et al. (2005) in an extensive study of the learning of traders in investment banks found that while it was clear that a good level of analytical skill was a basic requirement to trade effectively, it was neither sufficient nor a differentiator in traders' performance. Typically new traders had a highly numerate background (PhDs in engineering or theoretical physics were common) and engaged in formal classes on markets and financial economics as part of their initial training. However, formal academic learning was not sufficient to trade well or even competently. For example:

> *"We have two people on the desk at the moment, both of whom started at the same time, from relatively similar backgrounds and one of them has just hit the ground running and he's gone right up the curve, … The other trader has actually failed miserably and is miserable in himself. He is really struggling with the whole issue of what the market means to him. Yet academically they are very similar." (p.149)*

Traders spent a great deal of time learning by doing. A manager and a trader describe the process:-

> *"New traders need a clear understanding [of their role]. So they sit on the desk, learn and repeat what they are hearing. We ask a lot of challenging questions. Most will have come through training with a broad understanding of trading. We challenge them to understand what they are looking at while they still have formal lectures etc. Finally, we let them make mistakes and give them a certain amount of freedom."*
> (p.162-163)

> *"First, you watch what other people are doing, follow and react. …. Secondly, you understand what is going on, you can predict the price action, you begin to realize that you predict it right more than you predict it wrong but you haven't yet discovered the appetite of putting money at risk … It is only the transition into the third phase where you put money at risk that really determines in my mind whether that [learning]*

curve develops. This can take three months, three years or never happen for some

people.” (p.155)

To acquire competence, traders go through an apprenticeship process and it is through

something akin to 'legitimate peripheral participation' in communities of practice (Wenger,

1998) that novices begin to construct their identity as traders and engage in the use and

construction of 'work the world theories'. It is through engagement with peers and mentors in

a community of practice that they gain expertise (Fenton-O'Creevy et al., 2005).

IMPLICATIONS FOR UNIVERSITY LEVEL PROFESSIONAL EDUCATION

None of the above should be taken to imply that professionals do not need to draw on a

sound base of declarative knowledge and theory. However, it is clear that such formally

acquired knowledge needs to be learned in such a way as to ensure it is readily translatable

into multiple, messy, complex contexts of practice; as Griffiths and Guile note, the practices

of education and the practices of work need to be 'connected' (Griffiths and Guile, 2004) in

order to facilitate the recontextualisation of learning (Evans, Guile and Harris, 2009). Or, as

Cheetham and Chivers conclude from a large scale multi-method research on professional

learning, the core challenge of professional practice can be seen as *“Technically grounded*

extemporization” (2005: 140-1)

 Effective educational experiences that build the capacity to translate existing knowledge into

novel contexts, and develop an understanding of 'learning as becoming within a transitional

process of boundary crossing' (Hager and Hodkinson, 2009 p.635) will thus include the use

of real world cases and high fidelity simulations and will require students to approach the

same case from the perspective of multiple knowledge domains. They will also require the

application of the same knowledge in many and varied cases. These effective educational

experiences will also focus on the development of professional identity; explicitly drawing on

workplace knowledge and understanding in the construction of learning experiences.

Distance learning modes offer the opportunity to bring the workplace and university study into closer juxtaposition. Whether by supporting students on placements through distance learning, or providing work-related study by distance learning to students in full-time employment, the workplace and academic study can be brought together in a genuinely integrated learning experience. Further, collaborative work between students in different workplace contexts provides the opportunity to learn by using ideas and frameworks productively in multiple contexts. Indeed in this context, 'distance-learning' may be a misnomer, since what is at issue is not distance from the academy but the workplace. Perhaps we should reframe this approach as 'closeness learning' to describe closeness to the world of practice. Perhaps it is those students who are taken from their workplace to distant face to face sessions who are experiencing 'distance' education?

Two courses that try to achieve just this juxtaposition at the Open University are the Professional Diploma in Management and the programme in initial teacher education, the PGCE. Evaluations of both these courses suggest they are highly successful in achieving their goals (see Fenton-O'Creevy, Knight, & Margolis, 2006, for the Professional Diploma in Management and OfSTED, 2008 for the PGCE). For example, compared to a predecessor course the Professional Diploma in Management achieved significant improvements in student satisfaction, student ratings of their ability to apply learning in a work context, and development of critical analysis, independent learning and reflective learning. Overall student ratings have been very high (98.8% fairly or very satisfied, 55.3% very satisfied). An internal evaluation of the Diploma tracked the activities of 150 program participants in the online conferences over a period of six weeks (a period which spanned activity on two assignments); examining both the patterns of participation and the content of discourse in the conferences. Participants were typically highly engaged in the online activities; creating substantive and highly articulate discussions of the issues in hand. In reviewing participant postings evaluators were struck by the thoughtful and reflective quality of the postings and the challenging nature of the questions participants posed each other. Tutor intervention was

useful in the early stages to motivate discussion and provide structure. However, many participants quickly became adept at weaving together others' contributions, building on them and providing summaries of the discussion so far. Thus they began quickly to structure their own online conversations and learning (Fenton-O'Creevy, Knight, & Margolis, 2006). The Diploma was also the first academic programme to achieve certification by the European Foundation for Management Development's certification of technology enhanced learning (CEL) scheme.

To illustrate how a practice-centred pedagogy might be approached we first elements of these courses and the way in which the program learning design revolves around a series of dialogues or dialectics: between different disciplinary perspectives; between theory and practice; and between participants different experiences of the world.

A dialectical approach

The ideas of both reflective and 'connective' practice lie at the heart of our curriculum. Reflective/connective practice encourages the connection and integration of formal, tacit and self-regulative forms of expert knowledge. It also requires several forms of dialogue: between formal frameworks and theories and the participant's own work practice and experience; between participants, in order to expose similarities and differences in practice and to conceptualize those differences and similarities in terms of program frameworks; between the participant and members of their own community of practice in the workplace and elsewhere. It also requires participants to work with the tensions between different disciplinary and functional perspectives on practice problems. Much of this reflection is structured through assignments and through online collaborative work. Dialogue with faculty also has a role here, although it is important to note that in an open and distance model the tutor role is more that of a facilitator than an instructor.

The curriculum of the Professional Diploma in Management is strongly integrative in design, and is designed to mesh with students' working lives and to create a dialogue between their

formal learning and practice. In a significant proportion of the curriculum, study is organized around themes which bring multiple disciplines together. For example, one section of the curriculum brings together multiple disciplines to consider the themes of understanding and improving performance in organizations.

Students study though distance learning alongside full-time employment. The course takes an explicitly holistic approach to the study of management. The four component modules are not organized by discipline or management function but rather by cross-cutting theme. Students encounter learning materials which come from a specific discipline such as marketing, organizational behaviour or finance, but these are presented as different takes on a single problem. The first module is organized around the theme of understanding firm performance. Different takes on the theme are encountered and students are encouraged, through structured activities, to consider the links and tensions between these perspectives. For example, they engage in an activity to surface the different assumptions about human motivation and behaviour implicit in a range of financial control systems and a commitment focused approach to human resource management; and an activity to examine the implications of different marketing value propositions for how operations performance should be understood. The intention here is to build multiple links between these knowledge elements to enable them to be reused in combination in novel contexts.

Case studies are deliberately complex and messy and require multiple perspectives to be brought to bear; for instance, an interactive multimedia case study of performance improvement on the New York subway, engages students with video of contemporaneous interviews and archival data on attempts to bring about performance improvement in this complex organization, over several years. There is no clear definition of performance in the case and no clear judgment about the success of outcomes. Students are required to grapple with both problem definition and diagnosis using multiple perspectives (e.g. people management, customer service; logistics; financial, political, technical etc).

At the same time students are encouraged to discuss, online, aspects of the case which seem to relate to their own organizations and work experiences. This multiple application of ideas to the case, their own organization and the contexts described by other students encourages them to develop highly and multiply contextualized understandings of the course frameworks. This style of learning accustoms them to working with course ideas flexibly in different contexts and to modify and adapt those ideas as needed.

The Open University's course in initial teacher education is a programme that integrates academic, distance education, with periods of school experience in partnership schools. This is a flexible programme with multiple start and finish points in each year, with students guided through individual programmes of study based on individual learning needs that are identified through a web-based needs analysis process.

The needs analysis process presents a protocol for the reflection of professional identity and a tool for mapping out an individual's route to the attainment of professional competence represented in the Standards for Qualified Teacher Status (TDA, 2007). The OU PGCE course identifies professional competence along three continua: the demonstration of the standards; personal subject knowledge for teaching; and an understanding of the key issues underpinning successful teaching reflected in the university modules. When students begin the course, supported with a local specialist tutor, they complete a series of on-line audits positioning themselves on each of these continua and describing the evidence that supports these assertions. Over a four-month period the students refine the audits, complete a 2-week long period of school experience and a portfolio

The approach we describe above has at its heart the notion of learning as a dialectical process. The notion of a dialectical approach to learning goes back at least to Socrates: learning advances through questioning and dialogue, Although our use of the idea of dialectic is perhaps closer to the Hegelian notion of dialectic as a process of dialogue which proceeds through making contradictions and polarities explicit and resolving them through

synthesis. In the dialectical approach, learning happens as a consequence of experienced dissonance. The learner is challenged to re-conceptualize the world as they encounter tensions between their existing mental models and the evidence and ideas presented to them. The aim is not simply to use the dialogue as a vehicle for more effective knowledge acquisition, but rather to support course participants in developing the habits and skills of critical enquiry and to develop their capacity to make abstract ideas productive in particular contexts.

In the following sections we describe how the structure of the program creates several forms of dialectical exchange: between disciplinary perspectives; between theory and practice and between the different learning histories of the participants. We unpack each of these elements in turn below.

Setting up a dialectic between disciplinary perspectives

To explore more closely what we mean by a dialectic between disciplinary perspectives we first look more closely at a learning episode from the Professional Diploma.

Early in the course participants study materials on 'Understanding Performance' .The first study session starts by problematising the notion of performance. (Each study session is designed to contain about 2 ½ hours of study with a further 1 to 1 ½ hours of activities which make links to other sessions and often involve gathering information in participants own organizations or online discussions with other participants.) Participants are invited to consider a local school that they know well. They approach the question 'what is good performance for this school?' by reflecting on and debating the answers that might be given respectively by a parents, a pupil, a teacher, a local shopkeeper, a business employing school leavers, a university accepting entrants from the school and so on. The principal aim here is to help participants to take a wide perspective and grapple with some of the complexity of performance in a real world setting. The course material does not suggest any 'right' answers but does encourage participants to think as widely as possible about the

question and to grasp that there are many possible understandings of what constitutes 'good performance'.

A series of study sessions then introduce the participant to a series of disciplinary perspectives on performance in organizations. A session on 'The Market-Led Organization' provides one set of frameworks for thinking about performance from a marketing perspective. Next, two study sessions 'Understanding Operations' and 'Managing Operations Performance' approach performance from an operations perspective, followed by sessions which take a human resources perspective, 'Managing Performance through People', and then an accounting perspective, 'Accounting in an Age of 'Empowerment'. Substantial linking material between sessions asks participants to engage in activities that consider the tensions and relationships between perspectives.

The programs we have discussed are organized around themes rather than disciplinary perspectives. The PGCE focuses modules on student learning, assessment, teaching, the wider professional role, rather than on the traditional subject-based disciplines of psychology, sociology, philosophy, and so on. In the Business School programme, although participants encounter study materials within a single disciplinary perspective at the level of the study session (about 2 ½ hours work), much of the learning is in the activities and materials that link these sessions. These activities and materials are designed to help participants explore the tensions between perspectives and the implications each perspective may have for the other.

For example, students study two sessions in sequence. They study a session on financial control systems and their role in managing, monitoring and constraining the behaviour of employees through, for example, annual budgets. Next they study a session on approaches to human resource management designed to develop employee commitment to an organisation and its' goals. A detailed activity supports them through the process of analysing the assumptions about human behaviour and motivation embodied in each

approach. They are asked to consider the implications for organisations of the tensions between these perspectives and to reflect on how they are managed in their own organisation.

Other examples include:

- An activity to examine the implications of different (marketing) value propositions for how operational performance should be understood.

- Using the order management cycle and balanced scorecard as examples of narrative devices to frame links and tensions between different perspectives on performance. (The balanced scorecard was originated by Drs. Robert Kaplan (Harvard Business School) and David Norton as a performance measurement framework that added strategic non-financial performance measures to traditional financial metrics to give managers and executives a more 'balanced' view of organizational performance.)

- Using a case study of a premium hotel to examine tensions and relationships between different aspects of business performance such as reputation, customer service, cost and operational efficiency.

- An extended case study of the use of the balanced scorecard in a banking organization and the debates it caused about the 'primacy' of financial performance.

- Activities which encourage participants to surface and share the tensions and connections between different performance perspectives in their own organizations.

A dialectic between theory and workplace practice

Just as von Clauswitz observed that '*no plan survives the first encounter with the enemy'*, no management theory or theory of education survives unscathed from an encounter with the messy realities of workplace practice. There is an inevitable tension between academic

generalisation and workplace practice, between the search for general theories and for specific answers about what to do next.

We certainly don't mean to reject management and education theories as valueless; they provide important conceptual scaffolding on which expertise can be built. Rather we suggest, first, that using them productively in a critical and reflective fashion is non-trivial and needs to be an important concern for any management or teacher education program. Second, no less important than this conceptual scaffolding, is the body of experiences (one's own and others') which allows participants to expand their ability to recognize, discriminate between and respond to different situations.

Thus an important element in the programs we describe is the continual dialectic between academic ideas and the practice of management and the practice of teaching. The programs invite participants to make use of their own experience and the experience of fellow participants in a critique of program ideas, to draw on program ideas and to connect them reflectively with their own practice. Structured activities, often requiring an element of workplace enquiry, and dialogue with tutors and peers support this cycle.

For example, in the Professional Diploma, as students do the work on understanding performance which is described above they also engage in an extended assignment, which requires collaboration with peers. Each participant first writes around 600 words explaining how performance is understood in their own organization (or their part of it if it is a large organization). Each posts this contribution to an online asynchronous conference shared with four or five other participants. Using these initial contributions as a starting point, they engage in an extended online discussion (over two to three weeks) and reflect on similarities and differences while trying to understand what may lie behind them. Each participant then pairs with another in order to exchange information in more detail and write an assignment. The assignment requires participants to compare different understandings of performance in their two organizations and reflect on how this understanding might be usefully enriched.

Each part of the assignment, including contribution to the online discussion, is assessed to signal the importance of engagement with the task.

In the PGCE, by engaging in the audit process we describe above, student-teachers begin the process of articulating their practice identities that have been forged through workplace and sometimes more formal learning opportunities. It draws attention to the inter-relationship between university and school-based learning and the contribution that both make to the development of the identity of a competent professional. The inter-relationship between university study and practice can also be seen in the way that module study draws on prior experience to encourage an initial response, which is then followed through in school-based activities and which is further followed up by subsequent module study and assessment activities. Take, for example, a Level 1 module that considers a rationale for teaching a specific subject in school – say Science. An on-line module, at the start of the course, asks the student to think about their own reasons for wanting to become a teacher and to compare these with the views and policies articulated in their partner school and by other members of staff. Student-teachers are asked to discuss Science with a group of school students in school and to relate the practice they observe with the data that they have gathered. At the end of Level 1 student-teachers are asked to complete an assessed activity where they develop a presentation that outlines their rationale for teaching and where they are encouraged to contrast this with the other perspectives they have gathered during Level 1 study.

By engaging in a cycle of theorizing practice and particularizing theory, participants in both courses are encouraged to develop their capacity to generalize about their own experiences and to translate ideas and learning into their own situation and into novel situations. The process is designed to encourage the development of cognitive flexibility and the skills of translating ideas into new contexts.

The role in the curriculum of participants' own practice and that of their peers is reflected in the assessment. For example in the Business School programme, their study guide tells them that:

> *"Through the tasks in the study guide, you will build up a body of knowledge about the practice of management in your own organization and those of other participants You will be asked to draw on this work to answer both [assignments] and exam questions."*

As the program proceeds participants engage in a series of activities that involve gathering information in their own organizations and constructing their own 'case' to which they are invited to apply program ideas and to reflect on their learning from the process. Where, as is usual, program ideas and practice do not come together neatly participants are invited to critique the ideas. For example, in engaging with the balanced scorecard metaphor, participants are invited to consider how Kaplan and Norton's framework might need to be modified to be relevant to their own context; to account, for example, for a wider range of stakeholders.

A dialectic between different experiences of the world

We have emphasized the importance to learning of the experienced dissonance that arises out of a dialectical approach to teaching. However, personal cognitive schema are often robust and participants are able to employ a range of strategies to preserve existing world views.

With a program cohort typically in their mid-thirties, Business School students, with a significant level of management experience and who are actively engaged in the practice of management, can often find it difficult to change existing assumptions and ideas. This is also true for beginning teachers, whose capacity to learn new ideas is often shaped by their own experiences as learners in classrooms.

Critical reflection does, though, happen more readily in peer-to-peer relationships. In the learning episode described above in the management course, some of the most profound learning happens in the on-line conference as participants encounter each other's very different understandings of performance and how it is managed in their different cultures, sectors and organizations. Such reflection may take a while to establish and happens most readily with peer support. Nor is the tutor absent from this process. Critique and challenge are often uncomfortable and students require support and structure to engage in this active critique and questioning of each other's world views.

For example, in one online tutor group forum, there was some tension in early weeks between a factory manager and a police inspector. Each was rather dismissive of the other's (respectively) 'authoritarian'/ 'naive' views on performance management. As discussions progressed over several weeks with support and questioning from peers and tutor, a mutual enquiry developed into the different assumptions about the nature of performance held by each organisation, and into the different environments and challenges they faced. While at times in this dialogue course ideas and materials were referenced, it was clear that the most profound element of this discussion was the unlearning of some quite basic assumptions. As the factory manager expressed this "*There is just all this stuff you kind of take for granted and then it is a bit of a shock to find out how different it all seems somewhere else… it makes you look at what you are doing again and ask yourself some quite difficult questions.*"

This process of critical social reflection on practice is vital. What is learned from past experiences can be distorted, self-fulfilling, unexamined and constraining. As Brookfield notes:

> *"there are very real dangers in relying on one's autobiography as a guide to action. So much of our experience is irredeemably context-bound; what are thought to be well-grounded insights culled from reflective analysis of experiences in one context can be rendered wholly invalid in another context …experience without critical*

analysis can be little more than anecdotal reminiscence; interesting but unconnected, experiential travellers' tales from the front line of practice."(Brookfield, 2001 :75)

DEVELOPING THE SOCIAL PERSPECTIVE ON PROFESSIONAL LEARNING

What then of the implications of the social perspective? If expertise involves effective participation in communities of expertise and the ability to make connections between them then perhaps education too should be concerned with enabling participation and connectivity. In some senses conventional courses in higher education are designed to do just this – students acquire an entrée to academic discourses and become peripheral participants in a community of academic expertise. The business course described above goes some way to generate a student practitioner community in which mutual learning can take place. However, this perhaps misses the point. In this course we may be helping students to join the wrong community of practice. To return to the quote from the Business School student we started with; he like many others complains that the academic knowledge we have equipped him with does not provide entry to a community of expertise in his workplace, rather too much use of 'academic management theory' risks alienating his colleagues. As he went on to say later in the discussion:

> *"I have learnt a way to communicate within the* [university] *grouping (based on academic protocols, etc) and a different way to communicate within my work grouping (a very strong practice focus, and in the context of my organisation's culture). Yet that message content (i.e., management thinking, analysis, etc) should be the same in each grouping. This helps me to understand why I so often feel like the 'one in the middle', with a responsibility to translate 'university-speak' into practice for my organisation … there seem to be such strong pressures within each grouping to retain the status quo. I'm always amazed at how touchy (a) some tutors can be when referencing an article incorrectly (or how many marks can be awarded for simply following academic protocols), and (b) some work colleagues can be when I*

suggest we might benefit from reflecting on current practice using some models that I've learnt. Second, [this course] *aside, I've received little training (formal or informal on-the-job) from the university or my organization on how to apply learning in the context of working with others. Although I've applied countless models to my work through different modules, I've done so mostly in isolation from my work colleagues. Whilst this increases my understanding of my organization, it hasn't taught me how to apply things in the context of working with others."*

On the other hand, the PGCE course, with its extensive periods of school experience and problematic relationship between university ideas and practice provides an opportunity for student-teachers to engage in a school or department community of practice, but we have to question the extent to which university learning and school-based learning are seen by student-teachers as separate and unlinked or integrated. In both cases, of the business education course and the PGCE, we question whether or not the dialogue between the university and practice is as effective as it might be.

Perhaps the challenge we now face is how to engage students like this with a discourse which links to their practice setting rather than alienates them from it; which draws attention to the dissonances between connected perspectives and offers ways of rethinking their work and their academic study. We are suggesting here, that programs focus on developing 'expanded' expertise; providing a conceptual framework that encourages students/workers/university lecturers to make new connections between perspectives and to develop new insights into their own practice.

Engeström's (2001) notion of 'expansive learning', offering a coherent view of systemic learning is closely aligned to this approach. Learning programmes should seek to identify contradictions within and between practices, and students should be encouraged to identify the provenance of these ideas. Students should be encouraged to focus on perspectives

that are inexpressible in the work setting or in the academic setting, and by reflecting on the connections between perspectives they may come to rethink their work and their study.

An important implication of our arguments is that, if we are interested in developing the foundations for professional expertise, part-time study alongside work should be seen as the 'gold-standard' rather than as inferior to full-time study. In particular, learning technologies increasingly offer the opportunity to bring learning alongside work and to use work as a resource for learning. Perhaps the time has come to re-badge 'distance learning' as 'closeness learning'. After all, we might ask ourselves, which matters more, the distance from a physical campus or the distance from a context of application?

Such a model is not without its problems. A refusal to put academic practice and workplace practice in a hierarchical relationship and an insistence that neither subsumes the other, implies a new role for Higher Education, and for university lecturers; one of learning partners with the student and with the practice setting. Once the social dimension to 'expanded' expertise is taken seriously it implies a new approach to assessment as HE focuses on the process of learning, rather than its product. Most significantly, however, this model underlines the importance of an individuated approach to practice-based education; one that draws the messiness and complexity of practice and student identity into the curriculum and where difference, disagreement and contradiction are actively pursued as learning assets.

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