

Learning to Become Researching Professionals: The Case of the Doctorate of Education

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This study investigates how learning to become a “researching professional” (Bourner, Bowden, & Laing, 2000) is understood by students undertaking a professional Doctorate of Education in one university in the United Kingdom (U.K.). This research is apposite given the present context for doctoral education both internationally and in the U.K. However, a literature review shows this is a relatively under-explored area. The study was designed within a phenomenological and descriptive/interpretive paradigm using case study methodology. Data was collected using semi-structured interviews with 12 students. The analysis was guided by research in other disciplines within higher education which has revealed qualitatively different conceptions of student learning. In this study, three ways of understanding learning to become a “researching professional” were identified: *conformity*, *capability*, and *becoming and being*. Each is characterized by an internal relationship between how the learning context, research, and professional identity are understood. Each of these ways of understanding is discussed in relation to the literature. The complexity of professional learning at the highest level for students who are “on the cusp” between the university, the work context, and the profession is highlighted. Although no generalizations are made from this study, it may be useful to others in similar contexts as it highlights implications for university tutors regarding student learning.

In line with an international shift in higher education over the last decade, universities in the U.K. have become part of the globalized knowledge market (Tennant, 2004; Usher, 2002). This has resulted in the fragmentation of knowledge and an increasing emphasis on context-specific and problem-oriented knowledge creation (Gibbons, Limoges, Notwotny, Schwartzman, Scott, & Trow, 1994). Outside universities, research has developed in both government and private enterprise, and, within universities, an increasing separation of research and teaching has emerged. Two separate central government funding streams for teaching and research have increased competition for research funding in the university sector, affecting the types of research undertaken and increasing pressure on individual academic researchers and institutions to improve doctoral research training. Also, there is an increase in expectations of universities for value for public money. The government has introduced audit mechanisms for teaching effectiveness and research quality, bringing increased accountability and the emergence of a new academic managerialism. Further, in a bid to secure labor skills required for an enhanced future national economy, higher education in the U.K. has been moved from an elite to a mass system from which students with transferable skills are required. In short, the expectations of fitness for purpose and cost effectiveness are challenging the autonomy and expertise traditionally enjoyed by universities, questioning and bringing diversity to their traditional functions as producers and teachers of expert knowledge. Such change brings pressure to universities to continually re-balance provision, to re-consider the

relevance of pedagogy and curriculum, and to develop relationships with a range of partners.

Doctoral education is set in the middle of this changing context for the university sector, and is subject to these wider imposed imperatives. Doctoral education is the highest level of university education in the U.K., seen most obviously in the traditional Ph.D. In recent years, however, as universities have had to reconsider their position in the market place, several new routes in doctoral education have emerged. These include practice-based doctorates, new route Ph.D.s, and doctorates by publication. Such diversity in doctoral education is to be encouraged, according to the UK Council for Graduate Education (UKCGE), because it extends the capacity to change and generates opportunities to see research issues from different perspectives. It also indicates an investment in the capacities and learning of more people and is enriching in terms of student diversity. Further, it has served to open up the traditional “binary” system of higher education in the U.K. as “older research-led” universities have become engaged in this new market (UKCGE, 2002).

Within this context, and stemming originally from America and Canada (Allen, Smyth, & Wahlstrom, M., 2002) early in the twentieth century, the professional doctorate has emerged rapidly over the last decade both in Australia and in the U.K. Professional doctorates are research degrees for practitioners which combine higher learning with research in the workplace. Research is undertaken by practitioners in a professional context with knowledge production arising from specific issues identified in the workplace. Such research seeks to

make a difference to the profession, as well as having a direct influence on the working lives of the professionals.

While seemingly at odds with the tradition in universities that knowledge is pursued for its own sake, universities in the U.K. have successfully diversified into this new area of professional doctoral education. Bourner, Bowden, and Laing (2001) note an approximate 20% increase in such degrees over a wide range of disciplines - especially education, engineering and business studies - with the Doctorate of Education (Ed.D.) having the largest market (UKCGE, 2002). Several reasons for this rapid development into professional doctorates can be identified. There has been an increase in growth in professional fields and a consequent increasing emphasis on professional training and continuing professional development, with many professions requiring advanced study as a pre-service qualification. Professional work has become increasingly complex, with a need for professionals to have the ability to identify and solve problems at a high level. Government priorities for improving the professions have led to an increasing need for an analytical approach to professional knowledge, work, and roles. Thus, professional doctorates have been given an increased emphasis, demonstrated, for example, by the U.K. Economic and Social Research Council (ESRC, 2005) which has recently published updated *Postgraduate Training Guidelines* (presently under review). In these guidelines, professional doctorates have been given enhanced prominence, including a requirement for consistency of standard in provision and quality with the traditional Ph.D.

The Literature

A review of the international literature reflects the recent growth of professional doctorates in Australia and the U.K. In Australia, the focus seems to have been issues relating to the development of professional doctorates. Maxwell (2003) working from three case studies explored the development of "second generation" professional doctorates and the changes brought through this process. The changing environment for doctoral education has also been explored by Pearson (1999, who found that there were implications for management, improvement, and innovation. The key role of policy in encouraging diversity in doctoral education was explored by Neumann (2002) especially in relation to issues of cost, concentration, and relevance. The growing diversity in doctoral degrees has also been related to the knowledge economy and imperatives for universities (Usher, 2002) and also to knowledge workers (Tennant, 2004). McWilliam, Singh, and Taylor (2002) explored the issue of whether diversity in doctoral student

population brought more risk in the management of doctoral programs. The similarities and differences between Ph.D. and professional doctorates in education, management, law and creative arts have been investigated by Malfroy (2005) in relation to doctoral supervision, workplace research and pedagogic practices.

A number of studies have emerged in the U.K. context, usually exploring the purpose of professional doctorates. Thorne and Francis (2001) examined both Ph.D. and professional doctorates using an ethnomethodological approach and found that diversity of students' career positions was not taken into account and that a homogeneous, rather than heterogeneous, approach to doctoral study was taken in government recommendations. An underlying confusion about the aims and mission of professional doctorates was found by Lunt (2002). Heath's (2006) research with professional doctorates in education built on this notion of confusion by suggesting that considerable variation in the construction of doctorates in education relates to different values placed on knowledge which effect matters such as supervision. Another study has addressed the notion of the development of capability. Doncaster and Lester (2002) explored this with reference to a generic work-based professional doctorate, and emphasized the central role of experiential learning in developing high level capability and motivation. The continuing professional and career development of doctoral students including those on professional courses was explored by Leonard, Coate and Becker (2004). This study questioned the then current national proposals to 'improve' doctoral 'training' in the UK by enhancing students' employability suggesting that policy should be based on the employment and other life needs of postgraduate students.

Several studies have explored professional doctorates in relation to the traditional Ph.D. Tennant (2004) argued that professional (working) knowledge is seen by universities as additional to their more traditional Ph.D.; the effect of which can still be seen in the professional doctorate in a number of ways. For example, the professional doctorate still remains focused within a traditional disciplinary area and includes a traditional supervisor-student relationship.

Summative assessment by *viva voce* still dominates, even when formative portfolio assessments are included. The traditional Ph.D. concept of doctoral enterprise as the production of the "independent, autonomous scholars" as opposed to the "improved practitioner" still continues. Also, traditional funding mechanisms make it difficult to establish professional doctorates that focus on workplace problems. Tennant (2004) and Usher (2002) both argue that the dominance of the traditional Ph.D. route is not sustainable in a time

TABLE 1
Some Differences Between the Traditional Ph.D. and Professional Doctorates

Ph.D.	Professional Doctorate
Research training through apprenticeship model	Research training through taught program, with directed study, distance learning, summer schools, collaborative work
Dyads of student/supervisor	Teaching team /cohort of students
Supervision in university setting in relation to research thesis, and supervisor as expert in discipline or subject or area of research	Different mentors/supervisors for different elements of the program. Supervisors may be experts in professional area as opposed to particular discipline. Also the possibility of supervision in the professional context
Entry following first degree	Entry usually following Masters degree, and with required substantial professional experience and appropriate professional qualification
Narrow, specialist focus on Mode 1 knowledge (Gibbons, Limoges, Notwotny, Schwartzman, Scott, and Trow, 1994).	Broad focus on Mode 2 knowledge (Gibbons, Limoges, Notwotny, Schwartzman, Scott, and Trow, 1994).
Assessment by outcome product of thesis, examined by viva	Continuous assessment through course work, plus outcome product examined by viva
Requirement for transferable skills in training	Students already employed usually at a senior level in their profession.
Focus on research making a contribution to knowledge with wide dissemination	Focus on research affecting professional practice as well as making a contribution to knowledge, with focused dissemination
Ph.D. normally viewed as providing initial training for a career in academia.	The professional doctorate tends to be seen as higher study in terms of career change and development or the desire to consolidate their professional experiential learning -
Norm referenced. Research projects defined at outset and long term focus	Criteria referenced. Learning outcomes comprising professional skills and knowledge. Research projects are defined at a later stage in program (similar to Masters). Short term as well as long term strategic focus.

when the “new knowledge economy” is driving shifts in what constitutes an academic, what constitutes knowledge, and what constitutes knowledge contexts. They both argue the universities should instead be reviewing similarities between the Ph.D. and professional doctorates as a way of reviewing the essential question of what constitutes legitimate doctoral knowledge; both routes, for example, develop new knowledge that contributes to the development of the professions (Malfroy & Yates, 2003), and both assume a sense of creativity, innovation, and enterprise (Tennant, 2004).

Others, however, maintain that the two routes are essentially different. The essential difference could be that the professional doctorate is aimed at those wanting to become “researching professionals” (Bourner, Katz & Watson, 2000) with the Ph.D. aimed at those wanting to become “professional researchers.” When the differences between the two routes are set out (see Table 1; Fink, 2006) this distinction can be seen clearly, identifying the professional doctorate as an alternative to the traditional and dominant Ph.D. route for advanced work and study within a professional setting. Thus, conceptually, at least, the Ph.D. and professional

doctorate routes appear not to be in competition but appear to be distinctive and alternative to each other.

However, while the notion of the “researching professional” can be deemed to be intrinsically worthwhile, it also indicates a number of complexities which present challenges for universities. Firstly, there is a complexity to the learning process brought by the distinctive nature of professional doctorate programs. They are dedicated to having a direct influence on the working lives of the students, who are motivated from the beginning of their course to improving their professional practice. New types of knowledge and new types of relationships brought by professional doctorates were investigated by Scott, Brown, Lunt, and Thorne (2004) across the three professional areas of business, education and engineering. They found that they require a distinct and wide ranging body of knowledge and skills concerned with continuing professional development, emphasizing the inherent reflexivity needed for those on professional doctorates.

Secondly, there is the complexity to the learning process as students are “on the cusp” of different cultures of learning – the university, the profession and the workplace (Malfroy & Yates, 2003). Such a position gives professional doctorate students multiple

positions, without one research culture into which they are to be inducted. Instead they work betwixt and between the different expectations and cultures of those who face entirely different institutional contexts. While challenges generate learning, there is a danger that any conflicting demands will result in student learning being fragmented rather than being seamless and that students will experience a dissonance between theory and practice, thought and action. Rosaen and Schram (1998), for instance, talk about universities wanting “transformative intellectuals” who will be agents of change, while there is evidence that communities of practice (Lave & Wenger, 1991) succeed if they have the ability to continue to reproduce themselves by passing on their own skills and knowledge to the next generation.

Thirdly, there is a complexity to the learning process because of the students themselves. Studies have shown that professional doctorate students are shaped by experiences, and consequent values, that are different than the traditional Ph.D. scholar (Miller & Brimicombe, 2004). They tend to be studying part-time, while in full-time employment. They have responsibilities in the workplace and as a student, coupled with family and consequent financial commitments. Professional doctorate students tend to be mature and self-funded individuals (UKCGE, 2002), who consequently have high expectations. On one hand, they tend to hold relatively senior positions in their own profession, being high-achieving and bringing with them extended expertise, experience, and professional qualifications; thus, they can be more expert than their supervisors in some aspects of professional knowledge. On the other hand, they can be deemed to be novices in research and higher level study. Dissonance could occur when competing demands of both “hands” unfold. Thus, these variables may affect how students construct the learning context and how they form their professional identity as a researching professional; both of which are central to their learning outcomes and an important consideration for university tutors.

The literature, therefore, shows there is a very real complexity to learning to become a researching professional at doctoral level. This complexity raises a number of questions for the following:

- *student learning*; What is learned? Why is such learning deemed to be important and by whom? Do students learn to research only in relation to their own particular professional context? Will students be able to transfer their research learning to other professional contexts?
- *universities*; What is the position and role of universities within professional doctorates?

Will research “training” rather than research “education” be emphasized? What is it that universities engage in when they are involved in professional doctoral education? Has there been a fundamental shift in the expectations of universities in which the differences brought by the professional doctorate are acknowledged and developed? Have universities fully recognized such diversity and responded appropriately?

- *the nature of the professional doctorate*; How is the professional research community understood? What is the nature and value of pedagogy? What is the relationship between those designated as “experts” in the professional context and those designated as “experts” in the university context?

In essence, then, the professional doctorate brings to the forefront complexities and issues about understanding student learning and, consequently, teaching. However, there is a gap in investigations into how learning and teaching in professional doctorates are understood and approached, especially from the student perspective.

Yet, research undertaken independently in different institutional contexts and countries in other disciplines within higher education has consistently revealed that qualitatively different conceptions of *learning* and *teaching* exist within a continuum (Prosser & Trigwell, 1999). Such research studies – stemming from phenomenographic studies in Australia – have identified a number of different ways in which students, usually undergraduates, experience learning (Prosser & Trigwell, 1999). These include increasing knowledge, memorizing and reproducing, applying, understanding, seeing something in a different way, and changing as a person. The last category is usually advocated as the ultimate aim of higher education. Researchers (e.g., Prosser & Trigwell, 1999) advocate that meaning is “constituted” through an internal relationship between the individual and the world, with learning not being imposed externally on them but being defined as experiencing the object of study in a different way. In such an approach for students, learning is related to a number of interacting factors. These factors include students’ approaches to learning (Marton & Saljo, 1997), students’ preconceptions (Gow & Kember, 1993), intended learning outcomes (Trigwell & Prosser, 1991), and perceptions of the situation (Ramsden, 1992). These factors will either be in the foreground or background of awareness for any individual within the learning context (Marton & Pang, 1999). For learning to occur, the learner must experience variation. Bowden and Marton (1998) suggest that new contexts can supply the variation.

The Problem

While studies into tertiary level learning have taken place across a range of subject disciplines, very few have been undertaken in the context of professional university programs, and none have been found that deal with this at the doctoral research level. This study was designed to contribute to this perceived gap in the literature by aiming to provide some conceptual understanding about how learning to become a researching professional is understood by students. It is guided by the theoretical framework of qualitative variation in understanding learning and teaching in higher education. Following this theoretical perspective, this exploratory, small-scale intrinsic study was designed to elicit and analyze the perceptions of the students and identify the consensus and variation among the group of participants in the underlying meaning of learning to become a researching professional at the doctoral level. Therefore, the study aimed to provide insight into this previously axiomatic situation and to provide results that would enable opportunities for the researcher and colleagues to reflect on present policy and practice for the program.

Methodology

Approach

Given the focus and purpose of the research, the study was designed to be phenomenological in nature and within a descriptive/interpretive paradigm. A case study methodology was considered appropriate. There are limitations to this approach as it is not possible to generalize to a larger population, but this was weighed against greater attention to the lived experience of participants within one particular context and the possibility of providing “fuzzy” generalizations (Basse, 1999, 2001) that those in other contexts may find relevant. Further, the literature on research methodology (Basse, 1999; Hammersley, Gomm, & Foster, 2000; Simons, 1996; Stake, 1995, 1998, 2000; Yin, 1994) has served gradually to give case study methodology a higher profile in educational research.

Research Context

The university in which the study was focused is a large older research-led university in the U.K., where at present the Ph.D. is the dominant doctoral route. The focus of this study – the Doctorate of Education – was governed by the procedures for the Ph.D. The program comprises a taught program of research methods taught in the university to a cohort of doctoral students, who are required to produce a doctoral level portfolio of

evidence demonstrating that they can undertake research in a professional setting and critically analyze the issues relating to their research.

Students also critically explore the wider issues related to their research area by undertaking an extended piece of research using the micro setting of their own work context. An empirical research thesis into a specialist area of their professional work which they have problematized is also completed. Both of these are “taught” in the traditional pedagogical student/supervisor mode rather than with workplace partners and are examined at *viva voce* by academics, not practitioners, with appropriate qualifications and expertise in the topic area. The doctoral student cohort also meets together for informal support meetings and on-line support is provided.

Most students tend to be part-timers with a maximum completion time of eight years with four years as a minimum. While the program is in education, senior managers, usually with at least 4 years experience, from a wide range of related professions are welcomed onto the course, which includes students from youth work, physiotherapy education, nurse education, management, health, social work, police, higher education, and local government.

The Participants

The study involved 12 students who were willing to be involved and who represented the range of experience within the wider student population in terms of gender, professional employment, length of time of program, and age (see Table 2). The number of participants may be considered low, but Trigwell (1994) cautions that more than 20 interviews provides too much data to handle, and the number was thought to allow sufficient but not over-extensive data to be collected.

Data Collection Methods

Semi-structured interviews were conducted using three questions to standardize and focus the interviews. These questions concerned what being a student in the program meant to them; what students thought learning to research meant to them; and what they thought helped them to learn to become a researching professional. Further questions were asked to enable students to elaborate, and clarification was sought to gain deeper insight into the underlying meaning. All interviews were recorded with participants' permission. Interviews took approximately an hour but lasted longer if necessary with “bracketing” (Bowden, 1994) used during the interviews and analysis. Confidentiality was maintained throughout the study.

TABLE 2
Composition of the Selected Group of Participants

Gender	Male	4
	Female	8
Age Range	25-34	6
	35-44	4
	45-54	2
Ethnicity	White	9
	Black British	2
	Asian	1
Professional Employment	School teaching	6
	Higher education teaching	2
	Local educational authority work	1
	Health	2
	Youth work	1
Length of Time of Program	1 year	2
	2 years	2
	3 years	5
	4 years	2
	5 years	1

Analysis

The interviews were transcribed and were analyzed as a complete data set through an iterative process using an open-coding framework developed through the constant comparative method to identify emerging categories and sub-categories. Clustering and re-clustering led to the emergence of different ways in which learning to become a researching professional was experienced by the participant group as a whole. Each way of understanding was given a key descriptor to summarize and show the differences in perspective. This key descriptor was used to label the three ways of understanding, namely *conformity*, *capability*, and *becoming and being*. The key aspects of each are described below with exemplification using extracts from the interview data.

Conformity

Here, students were interested in knowing how to research, with a focus on receiving information about research studies and practical knowledge of research techniques and methods. There is a preference for this to be presented by expert university tutors in an organized and structured way through lectures, use of

PowerPoint, and supported by directed reading and structured tasks. Students wanted coverage of existing research studies and their findings. They perceived they had gained in knowledge about research if the material presented was research undertaken by the university tutor who was teaching the session; if the material was related to their own area of research interest; or the research methodologies were akin to what they perceived they would be using (both usually stemming from their masters' research interest). Usually students held a positivist approach to research and found it difficult to accommodate alternative ontological and epistemological views. Students saw themselves as functioning discretely in the university and in their professional context. In the former they perceived of themselves as students and novices, while in their professional work setting they saw themselves as experts. Student A explained this idea:

For me it's about obtaining an objectivity. The more I'm told about research the more removed I become from my professional stance. I suppose it's because when I go into a classroom I know those 30 children as individuals – they mean something to me. I know what to do about them. But I become removed from that when I do research. I'm not

involved emotionally so it's easy to separate the two ...when I'm here [at the university] I see myself as a different person but not so certain of what to do!

As novices in the university context, students felt vulnerable when they presented work to university staff. This sometimes led to conflict when they felt supervisors wanted them to be autonomous and when students wanted to receive clear instructions and expert knowledge. Work load was perceived as heavy, and students found it difficult to keep up with their research work and professional obligations. Although they managed the difficulty by keeping the two aspects separate. Reading of the literature and research data gathered for assignments would be used for this purpose without necessarily informing or impacting on professional practice. They felt they were "still the same person as they had been at the start of the course" (Student D), but they now knew more about research. The doctoral qualification in its own right was an important outcome of being in the program. This would enhance their esteem with work colleagues and lead to promotion/career development in the same or another professional setting.

Capability

In terms of *capability*, students talked about being motivated by the program and wanted to "try out" different research techniques. Students were interested in engaging in research in their professional setting and felt that they were developing competence in a variety of methods through application of expert knowledge. Students liked receiving "solid" information about research studies and methods, but they also identified with other methods of teaching. Both presentation of their research work and peer discussion were useful to them as vehicles in which they could articulate their research area to themselves and others while sharing these ideas with other professionals. Students welcomed newly acquired alternatives to their own epistemological and ontological views; although they often held these in balance, opting for one approach but appreciating other approaches. Student C stated, "I can listen to different views and engage in them. I understand them, but I need always to return to them." Connections were made between the university program and their work in the professional context, both conceptually and in reality. They saw themselves both as experts in knowledge and experience of their own professional context and as learners in research, but they understood that the weighting given to these identities would be balanced in favor of where they found themselves physically: the university or professional setting. Student E said:

It was a challenge at first after 20 odd years in the workplace. Getting back into studying was hard, but the more I continued with it the more sense it made to me in school. So I struggled, but I could use it in school, finding out things to help me do better in the classroom.

And student C stated:

The pure theoretical stuff for a lot of us who have been in the workplace for a considerable time and have a day job wasn't that useful...the applied stuff is far more relevant to me, and if I read subject journals that relate to the day job I see the point more. It's a thought process I need to develop. It's not a workplace qualification, but it's challenging to make the connections between theory and practice.

In spite of the senior positions students held in their workplace, they felt positioned as novice students in the relationship with their expert supervisors. For students in this category, this presented a dilemma of inequality and role conflict, as they saw themselves as experts in the professional field with comparable, if different, skills to the academics. However, tutorials with university teachers, perceived as experts in research, helped to develop students' research ideas and methods. Students acknowledged the transactional nature of the program, understanding that it was helping them as individuals to "do things better" in their professional setting, to reflect on their individual practice, and to try out alternatives. Students felt that they made their own connections between what they learned at the university about research and their individual professional work. Usually sharing their research ideas and work was kept to a minimum with professional colleagues in their own work setting. Although students felt that their identity in the workplace was changing in the eyes of professional colleagues, with some feeling more confident in the work setting and others feeling a sense of "moving beyond" their professional colleagues.

Becoming and Being

With *becoming and being*, students thought and acted critically about the principles and practice of research. They made connections with the program and the research they undertook in their workplace. They spoke of finding "the journey of learning to research" (Student K) not easy, often going backwards, often a struggle, but they were motivated to continue because it made them exhilarated and excited to work on a problem and find a way through it. It helped them to contextualize a specific professional problem within a political, managerial, and financial context which they

had not perceived previously. Student E described the contextualization as follows:

Where I work recently they wanted to bring in some changes in the structure. They brought out these different ideas they wanted to hang these changes on and I was able to identify some of the theories and ask them what is it they wanted to achieve from [these changes], and what effect they would have on staff. So I was able to challenge them about it. I couldn't have done, wouldn't have, done that before [beginning the Doctorate of Education]... They are starting from one reality, and I have a different reality now.

They wanted to think critically about generic professional practices and also about generic research methods. However, students here felt that the research they undertook raised further questions and that there was "never an end." That is, doing research in their professional setting identified further areas to research. As student D said, "Suddenly everything becomes a problem."

As they became more expert in research and as researchers, they became enhanced learners in and about their profession. In this way they felt there was room for personal growth as well as professional growth and growth in the profession. They engaged actively in their own learning through setting and influencing the implementation of their own professional research agendas. Students spoke about generating knowledge to find solutions to problems in their professional context through critical engagement with research literature, working with university staff, and collaborating with professional colleagues, often senior managers. Students also felt a collaborative relationship with their university supervisor. In this way they were able to focus in a holistic way on their learning, making connections between the university and workplace. Thus, they felt able to collaborate in the development of their "community of practice" (Lave & Wenger, 1991) by combining a diverse range of views. Student J articulated this feeling:

I can read an article now and say OK. Then, they're coming from this perspective and say, "That's interesting I never thought about it in that way before." I ask now why they think that, and I'll discuss it with [name of university tutor] and some colleagues at school.

Students in this category spoke about having increased confidence in their own thoughts and decisions, and of being able to understand the alternative viewpoints of others. They spoke of taking

initiative in both professional and university settings and being able to work in different ways with different people, thus establishing for themselves a new identity. Students could envisage that they were changing as a person in both the university and professional settings, albeit with different matters fore-grounded when in either place.

Conclusions

Three different ways of understanding – *conformity*, *capability*, and *becoming and being* – were identified. Each is characterized by an internal relationship between how *research*, the *learning context*, and *professional identity* are understood. *Conformity* focuses on students knowing about research, with them viewing this within the traditional apprenticeship model of doctoral education; that is, a transmission approach with the passing on by university experts to novices of technical expertise, with an emphasis on personal and individual research competence, demonstrated through thesis and award. The aim appears to be to generate knowledge for its own sake and to develop individual students' practical and professional experience and achievement of personal theory of practice. With regard to the doctoral work, there is an irreducibility of learning in the professional workplace in favor of learning in the university. Learning is seen as an intellectual, personal pursuit with a separation of student identity and role as expert/learner. In this category, the professional doctorate appears as a specialist form of the Ph.D. program aimed at advancing new knowledge in the field and is seen as distinguished from the Ph.D. only in structural elements, for example, the research methods program taught to cohorts which students found supportive. Supervision is viewed in its traditional form. The site of learning about research is the university, which is perceived as where students receive expert theory and the professional setting is perceived as where they implement and demonstrate the application of this. A linear approach involving a one-way relationship between research and practice is evident. Students work as researchers on a practice situation rather than as part of the situation: they perceive themselves as researchers who are outside the research and its context, even when they are undertaking research in their own professional context, bringing a new dimension to the concept of outsider/insider research. This suggests a separation of the learning experience and that learning to become researching professionals is not conceptualized as a whole. While this may underline traditional divisions between (a) universities and the professions, (b) theory and practice, (c) thought and action, and (d) research

and practice, such dichotomies are not necessarily characteristics of researching professionals or of professional doctorates.

Capability focuses on students' individual activity, experience, skills and techniques; in other words, on "doing" research. Research is part of the self-management of students' own personal practice context and is undertaken for the specific purpose of understanding and improving students' own professional practice. Research is seen as an intervention, with a view to improving practice in one's own personal context. Thus, doctoral work assists in articulating previously tacit knowledge, although high level thinking and action is developed around the chosen area of research. There is a familiarity with local issues and an interest in pursuing research around a local problem in order to improve practice. Knowledge is created and used by practitioners in the contexts of their own personal professional practice. In this way knowledge is viewed as contextual. The site of learning is both the university and the workplace, but there is a balancing of student identity according to the physical location of student.

This is in contrast to *becoming and being* where learning to become a researching professional is viewed as a holistic experience in which there is a variety of learning contexts which provide the student with variation to develop conceptually and change themselves. Personal research capability is secondary to the ability it gives to creating development and change in a generic sense. This way of understanding is characterized by engagement in a process of critical enquiry, generating ideas, with knowledge shared and generated so that principle and practice, individuals and groups, and contexts can change. Doctoral work is seen as aiming to develop theory, in which the research process and practitioner is central but which is of value beyond students' own organization and community. Research and practice co-exist in a spiral relationship, so that practitioners can move beyond taken for granted assumptions. Research is seen as systematic questioning of specific and general problems. The university is seen as part of this spiral. This suggests a deep approach to learning in which students "constitute" meaning through an internal relationship between the individual and the world, and, thus, experience researching professional contexts in a different way. Students generally adopt an active and reflective role in their own learning. *Becoming and being* is based on a deeper reflection that brings about the development of personal identity for the student and change in professional practice in the wider sense as the practitioner leads high level development and change on an institutional basis. In this way dilemmas and contradictions of professional practice are held in tension moving beyond this to create solutions. This

suggests student empowerment, potential, and emancipation.

Implications

No attempt is made to generalize from this study, which must be treated with some caution due to its exploratory and small-scale nature. However, given this, several implications emerge that may be relevant to universities working with professional doctorates in a changing context for higher education. One implication is that the findings of this study link with existing literature on student epistemology. Perry (1970) indicated that students in an undergraduate liberal arts program developed progressively more intricate epistemological beliefs as they progressed through their program. Perry described these as dualism, multiplism, relativism and commitment. In addition to Perry, Baxter Magolda (2001) suggested different ways of knowing, termed absolute, transitional, independent and contextual, and identified a gender difference within these different ways of knowing.

The possible continuum of different theoretical awareness of learning to become a researching professional identified in this study is also similar to previous research in higher education (Prosser & Trigwell, 1999) which has identified levels of understanding learning in a variety of discipline areas in higher education. It is possible that there may be a vertical relationship between the three different ways of understanding identified in this present study, progressing from a simplistic to a more complex understanding of learning to become a researching professional. This study suggests students range from being passive recipients of knowledge about research methods and research studies, engaging in the process of research, and becoming and being active agents in creating their own research agenda to develop their own professional and personal learning. Supervisors/tutors are viewed differently, ranging from the expert possessing research knowledge and skills and transmitting this to students, supervisors/tutors providing experiences which support students in undertaking their own research in the professional setting, and supervisors/teachers acting as facilitators of the process of student learning to become researching professionals. The impact varies from one in which the student benefits, to the particular micro work setting benefiting, to potentially impacting on the macro workplace and even the wider profession of the student. It is contended here that professional doctorates should seek, not to reduce learning to a set of knowledge and skills (*conformity*: level 1) or to a focus on practice (*capability*: level 2), but to promote learning which moves beyond these to "know, act and be" (Barnacle,

2004): a way of understanding learning that touches upon all aspects of a person's life – a critical way of being. This is identified in this study as *becoming and being* (level 3). Assuming, then, that this way of understanding (level) is the one to be aimed for, it is suggested that professional doctorates should bring about a way of moving students to this more complete level by enabling them to understand their own development as researching professionals. Thus, it may be incumbent for those responsible for professional research training to help students enhance this approach.

Several suggestions about how this can be achieved are identified briefly here. First, the teaching and the teaching context will need to be organized to enable students to become aware of the demands of the program and to take a deep, as opposed to a surface, approach to learning to become a researching professional. This has implications for the structure and content of the program, the teaching methods, the research supervision arrangements, and the *viva voce* examination.

The second suggestion is that teaching and the teaching context will need to be based on a rationale that focuses on students' learning about themselves (Prosser & Trigwell, 1999): beliefs about themselves as learners and how they may relate to and act on factors which may affect their progress. Helping students to see learning to become a researching professional in a different way may help them to make more informed and considered decisions about the learning context, research, and their own professional identity. Helping students problematize and search for personal meaning by adopting a critical approach may help them to see matters in a different way and to develop coping strategies to overcome any perceived barriers and problems while on the course.

This also raises the issue of differences between students' understanding and that of universities, their tutors, and how these are presented in course aims and teaching. Thus, thirdly, this places a special responsibility on those in universities who are engaged in professional doctorates to look again at the way we work. Consequently, how we understand and approach teaching on professional doctoral programs is an important consideration. Some work is developing in this area. For example, the *Carnegie Project on the Education Doctorate* (Golde & Walker, 2006) is looking at the purpose of doctoral education in the preparation of students to become "stewards of the discipline."

While this study did not look at university tutors, recent studies (Prosser & Trigwell, 1999) in other university discipline areas have indicated an empirical relationship between university tutors' views of

teaching and students' approaches to learning. It is suggested that university tutors will need to consider and confront their own perceptions of what learning to become a researching professional means to them and what they understand by the learning context, by research, and by professional identity. Indeed, for them to take a deep approach to these matters which may, as a consequence, lead to changing themselves as they strive proactively to manage student learning.

Fourth, such an approach challenges us to think about the purpose of professional doctorates. What this study suggests is that professional doctorates are valued by students for their transformative, as well as transactional, capacity to change individuals as well as to do things better so that thinking and doing are treated as inseparable, each informing and improving the other. This implies professional doctorates are values-based, and are about students acquiring a set of attitudes, such as altruism, to the professional community in which they work and the wider profession beyond. Thus, there may be an ethical purpose to professional doctorates based on personal development and change in *becoming and being* a researching professional.

Lastly, then, this has consequences for the relationship between universities and professionals. Both have complementary, if different, knowledge, expertise, and authority; this study highlights the tension between practitioner relevance and academic rigor in a professional research degree. This has implications for how students and university tutors work together and how they can collaboratively contribute to knowledge development. In this way, universities form part of the catalyst in the development of the knowledge base for professional practice with knowledge and practice interacting through research. Thus, in this way this study challenges the traditional dichotomy between research and practice; theory and action; and suggests the need to review university expectations for professional doctorates with respect to the development of the relationship between the university and the professional context. In short, this highlights a number of questions, beyond the scope of this paper, concerning the role of the university in fostering this way of working. What is the learning and teaching community involved in professional doctoral programs? What is the relationship between those deemed to be experts and learners in the university and professional contexts? Should professional doctoral programs be developed in partnership? Should supervisors visit students' professional contexts to engage in joint research? Should there be professional supervisors? What is the relationship between universities and professional bodies?

Further Work

Further work is necessary to see whether the three ways of understanding learning to become a researching professional identified in this study will stand up if more extensive work – with a larger group of participants and/or in other contexts – is undertaken. Further work could also be conducted into whether these “levels” are connected to students’ stage in their career life-cycle and/or stage on the professional doctorate, and whether individuals achieve a stable point on the continuum or move between these points depending on context. With these adjustments the findings may emerge differently.

Summary

This study was premised on the notion that, in contrast to other disciplines in higher education, there has been little research into the notion of how learning to become a researching professional at doctoral level is understood by students. The findings of this study highlight that learning to become a researching professional at the doctoral level is understood in three different ways, underlining that the process of professional doctorate learning is a complex intellectual and critical educational undertaking with unresolved tensions. The findings suggest that central to student experience of learning to become a researching professional is the student and how students situate themselves within the complex learning context in which they find themselves: how they make sense of being betwixt and between the university and the workplace and how they make sense of their own professional development and change process. The results of this study serve to highlight some pertinent issues about how universities really engage with the complexities of teaching and learning and the complexities of the location, context, and situatedness of the learner. Thus, there is a need for university tutors to critically consider the pedagogical aspects of learning and teaching within professional doctoral education. This study has made a small start to acknowledging the complexity of professional learning at the highest level and implicitly presents some challenges to the notion of learning, teaching, and the creation of new knowledge. This study may be useful to others in similar contexts, and, through this, may contribute to wider academic and professional debate.

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