Doctoral learning that leads to organisational and individual change

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Abstract

There is a great deal of interest from managers in undertaking professional doctorates and many of these doctorates focus on their professional work. This study examines the learning that influenced personal and organisational change brought about by a professional doctorate that does not specialise in one particular subject discipline but is mainly concerned with generic work-based abilities. A research study using a grounded theory approach, suggests that the doctoral programme promotes personal credibility, capability and continuing development as well as specialist expertise. Issues relating to professional and academic approaches to knowledge are discussed particularly the autonomy and self direction that the university can allow to the candidate.

Keywords: Professional doctorates; Trandisciplinary, Learner autonomy, Work-based learning

Introduction

Senior managers rarely take significant time out for high level learning but when negotiated doctoral programmes are built round their professional experience and work they can be successfully completed. This has encouraged universities to make suitable provision, leading to an increase in the number and variety of professional doctorate schemes available (Malfroy and Yates, 2003; Tenant, 2004). Being directly related to their everyday responsibilities, these doctoral programmes have significant impact on participants'

personal effectiveness and work environment. Their perception of that impact form the basis of the issues and propositions explored here and raises questions about the content and organisation of such programmes (Usher, 2002; Gustavs and Clegg, 2005).

Current debates about changes in doctoral education have largely been about the balance of activity, focus and control between the academic and the professional environments. Scott *et al.'s* (2004) studies of twelve UK professional doctorates in the fields of Engineering, Business and Education, chart the shift in balance from university to the work-place, show varying modes of knowledge that have arisen as a consequence of this shift and explore implications for the university for their approaches to research methods, quality assurance, programme focus, programme impacts and final assessments. Maxwell (2003) demonstrates how professional doctorates have developed to become more involved with professional knowledge and how one curriculum model in Australia places mode two knowledge (Gibbons *et al.* 1994) at the centre of learning. Bourner *et al.* (2001), in a survey of English universities identify twenty distinctive features of professional doctorates and call for more research including further investigation of the students' experience of the courses.

This paper aims to analyse experiences, judgements and reflections of the participants themselves by presenting tentative propositions about the impact of one professional doctorate programme mainly derived from a research study of ten candidates who have completed their studies. The focus is on self-perceptions of the experience and impact of the programme and ideas about how their professional work has been changed by undertaking a doctorate. The emerging propositions are intended to be used to spur further debate with other researchers. The data were not intended for evaluation purposes – rigorous external evaluation takes place under quality assurance procedures – but to gain insights of the learning experience that will help inform propositions about the programme as a whole. The particular Doctorate in Professional Studies (DProf) around which this research is centred, approaches learning from a transdisciplinary perspective. Students,

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known as Candidates on the programme, have an average age of 43, hold a Master's degree and are usually in senior management positions from varied professions and backgrounds.

The research is part of a longer-term grounded theory study of a work-based learning programme that covers a wide range of higher education awards from Certificate to Doctorate level. The work-based learning approach adopted by this Doctorate requires learners themselves to define the scope and focus of their programmes in which they are able to make significant changes to the practice of their organisations or professional area. The structure of the programme was modelled on the university's existing work based learning Bachelor's and Master's programmes that holds a position relating to knowledge which is practice-based and draws on practitioner-led enquiry as a principle for research. It has not emerged from an existing academic department that had operated within a particular paradigm with an existing pedagogy. The DProf doctoral project was designed to be equal in level and rigor to a doctoral thesis (Thorne 2001) and develop the practice of people at work. It did not borrow from existing subject-based curricula within the university.

The doctorate was developed during a time when new programmes have had to subscribe to programme outcomes, level descriptors, in-built evaluation strategies, student progression and monitoring through modular frameworks, and quality control. Outcomes based programmes have received considerable criticism for their highly behaviourist and sometimes, shallow presumptions about learning development (Ecclestone 1998). This programme is designed to support a reflexive approach to learning which does not separate academic subjects from practice but construes the knowledge holistically (Costley and Stephenson 2008) and if anything, prioritises horizontally relevant knowledge produced from informal learning (Bernstein 1999). The programme supports the (UK) greater emphasis that doctoral learning is required to place on the immediate practical skills that better prepare students for and in work as can be seen in the 'Roberts Report' (2002), the QAA Code of Practice (Quality Assurance Agency 2004), the QAA Descriptor for qualifications at Doctoral level (Quality Assurance Agency 2004) and the Skills training requirements for research students: joint statement by the UK Research Councils (2001).

These issues are being extensively debated on a European platform (Bologna Seminar on Doctoral Programmes, 2006).

There is a new generation of professional doctorates that have a clear focus on practice–based professional knowledge (Bourner *et al.,* 2000) and refer control of content and methodology to the candidate within a generic framework of standards, regulations and support offered by the University. Some of the issues and problems that arise for a doctorate with this kind of rationalisation are considered.

Flexibility and support

An important aspect of Professional Doctorates is the learners' situatedness outside the academic sphere (Lave and Wenger, 1991). The generic form of the DProf has application to any field and is predicated on a form of transdisciplinarity. The diversity of specialisms within the different professions represented by the cohort of learners in the study, does not allow an imposition by academics based on pre-defined contexts or methodologies. Instead, it draws out and builds on the existing experience and expertise of each participant. For example, there are no special modules containing what academics believe to be important information about Psychology, Education or from whatever field the Candidate's doctoral project may be considered to belong. The candidate's cannot enter the programme if they are not in a position to introduce the possibility of appropriate change in their organisation or professional area. They already have sufficient authority and leadership in their work to undertake doctoral level research and development projects that can have a wide-ranging effect on their organisation, community or professional field producing innovations commensurate with a high level contribution to knowledge (Costley and Armsby, 2007).

Instead of the conventional supervisory team, support for Candidates is provided by an academic programme adviser who guides and works alongside the candidate throughout their programme, ensuring both academic standards and practical effectiveness. Expertise from across the university and from senior professionals outside the university provides for

subject-specific and real world consultancy to candidates. By this means, candidates are accommodated from a wide range of professional areas in the public, private and voluntary sectors.

Formal recognition of, and academic credit for critical reviews of the candidate's existing professional experience (Doncaster and Lester, 2002) and any achievements they may already have at doctoral level takes place before planning the next stage of their development (Doncaster and Thorne, 2000). There is also acceptance of a wide variety of final outcomes proposed by the candidates as the basis for final assessment, such as professional project reports, a book, policy documents, sets of guidelines and regulations describing programmes of action designed to achieve significant impact in the professional context. There is a critical commentary embracing candidates' professional achievements as a whole, the methodology and the specifics of the final outcomes that defines how candidates have played a unique role in implementing change, developing innovative approaches and creating sustainable solutions to complex issues (Lester, 2004).

The programme includes involvement of representatives of the candidates' professional fields in the university's decision to approve the proposed final projects for assessment. Assessment criteria provide generic descriptors rather than prescriptive outcomes and are applicable to contexts appropriate to the candidates' distinctive programmes. The learning outcomes and assessment criteria relate specifically to work-based practice.

Methodology

After six years of operating the DProf programme, a wide- ranging research study was initiated by a team of researchers to understand and articulate three areas of the participants' experiences: firstly the motivation of senior professionals to engage in mid-career doctoral level work; secondly their experience of the programme; and thirdly the changes that the doctoral work made on candidates and their professional activity. This article emerges from that work. A small team focused on the third area of the impact of the doctoral work on the Candidate's professional activity which is usually a project

undertaken within a particular organisation but can be a project that impacts upon the professional field.

The aim was to make informed contributions, based on research evidence, to gain an insight into what the candidates considered to be the most valuable aspects of the doctorate in order to make suggestions for the further development of doctoral level provision for senior professionals. We also considered that we would add to debates on the nature of different models of doctoral learning especially relating to further emphasis on the pedagogical aspects of doctorate level work-based learning and particularly in the context of reflective practice (Schon, 1983), the development of personal and professional capability (Stephenson and Yorke, 1998) and learner-centeredness and valuing learning that has arisen from previous experience (Boud and Solomon, 2001; Armsby *et al.,* 2006).

The researchers wished to begin the process by engaging directly with candidates' perceptions of the programme. Secondly, some of the research team were involved as programme managers and wished to distance themselves as much as possible from their own perceptions, particularly in the initial data gathering and analyses phases. For this reason we decided to adopt a grounded theory approach (Glaser and Strauss, 1967; Strauss and Corbin, 1997). Ten graduates of the doctoral scheme were interviewed by an independent, experienced researcher. They articulated their 'reflections on their personal learning histories' covering their times before, during and after the programme. Analyses based on multi-level coding of data from open-ended interview transcripts, were used to allow tentative issues and agenda to emerge from the experience itself. Emerging issues were then checked for fit with the complete data gathered. The themes relevant to the emerging issues were identified for exposure to the wider field to encourage debate on their wider applicability.

All graduates of the programme (forty-three at this time) were invited to participate in the interview process and thirty-two demonstrated a willingness to be involved in the research. One is known to be deceased and three are known to have moved away. The researcher agreed to travel to the graduate at a mutually convenient time and venue and this was set up on an opportunity basis of availability. Ten graduates were finally chosen who represented

a range of professional backgrounds, were at differing stages in their careers, came from different parts of the UK and were able to offer an interview within a discreet phase of time. Lengthy open-ended interviews were conducted by the independent researcher who had not previously been involved in any way with the cases. Respondents were encouraged to talk freely within a chronological sequence covering the period before they applied, their experience of the programme and the period after graduation. This autobiographical quasi-structure allowed respondents to make their own connections and construct a personally coherent account of the experience as a whole. All interviews were recorded and professionally transcribed, with the final text approved by the respondents. The respondents and their fields have been described here accurately but in a limited way to preserve a reasonable amount of anonymity and this was agreed during each interview.

All texts were disaggregated into numbered bite-sized components. Initial coding was based on the loose interview structure, i.e. why they joined the programme (motivation), what happened on the programme (process) and what happened afterwards (impact). Coding was checked with the small team of co-researchers consisting of staff who teach on the doctorate, visiting academics and other staff in the university who were considering instituting a similar doctoral programme. They checked for appropriateness and consistency and the text components were sorted accordingly.

Different members of the research team then focused on one of the three themes. Subsequent levels of coding and sorting were carried out within each of these initial coding areas derived by the lead researcher from experience of this type of approach. Second and third level coding broke down each of these areas into issues specifically raised by the subjects. Final coding and sorting at levels four and five were used to synthesise generic issues arising from the details. Finally, general propositions about the candidates' experiences of the DProf arising from the analyses were checked by others for consistency with the original transcripts as a whole.

The open-ended interviews, allowed coherent accounts emphasising personal themes common to their motivation, experience of the programme and post-programme change to self and organisation. For the purposes of this paper we give particular attention to the change factors on both the candidates and their work situation brought about by the doctoral project. Factors relating to the process can be found in Stephenson *et al.* (2006).

Profile of the cases

All ten graduates were senior managers in positions of responsibility with an ongoing or emerging real-time work project capable of development into a doctorate programme. The generic nature of the programme is illustrated by the specialisms of the sample: a senior internment manager for a major city, head teacher, administrative head of a national religious group, an architect / lawyer, physiotherapist, vocational qualification consultant, psychotherapist, senior researcher for national assessments of school pupils, government advisor on special care services, and university quality assurance manager. Two were close to the end of their careers, the rest were in mid-career.

Unsurprisingly all ten graduates were attracted by the relevance of the programme to their work and the extent to which they could fit it around their personal and working time frames. Seven of the ten had explicitly rejected the idea of pursuing a conventional PhD as being inappropriate to their needs, in favour of the DProf's work-based framework, which provided the opportunity to gain recognition and accreditation for learning already achieved and the opportunity to take responsibility for their own development.

The final areas where impact was achieved by the 10 candidates are as follows in table 1.

Table 1

1	The development of a new professional service in the legal profession
2	Distinctive and innovative educational curriculum in a new primary school
3	A new approach to the educational development of physiotherapists
4	The codification of professional practice in a major national organisation
5	Models of national audit in a major area of government policy
6	National policies for the education and assessment of pupils

7	Rationalisation of interment practice and policy in a major metropolitan area
8	Development of a framework of recognition for professional practice in an emerging field
9	Developing and operating quality assurance procedures in a rapidly changing environment
10	Establishing opportunities for practicing psychotherapists to gain doctorate status

Individual and organisational change arising from the programme

In all cases the DProf experience had caused self-perceived changes in the candidates themselves and their work. This is expressed in four dimensions that incorporate the important perceptions that the candidates had of themselves and their work, and also tangible, observable outcomes of their doctoral work.

1. Direct changes to an organisation or professional area

Direct impact on the candidates' organisation or professional area came from work activity contained within their specific projects that made a real change to professional situations (see table 1). They also varied widely in subject area, for example, sustainable development, healthcare, franchising, curriculum innovation, burial and cremation. One candidate reported being repeatedly asked for copies of the project - an innovation in the field - and commented that, as a consequence, a joint article with a well-known academic and practitioner in the field had been undertaken.

It is not just the final project that enables Candidates in their development, as one who had written a book as the outcome of her final project said "I kept on wanting to say to people "That wasn't just it you know. It was a whole host of other stuff that isn't in this book".

Each of the project outcomes on which the candidates were assessed, advanced the professional fields in which they were engaged. However, this research suggests that the impact of the programme went beyond making a difference through the actual project

implementation and significantly enhanced personal attributes and skills in ways that made a further contribution to each candidate's professional effectiveness as shown in the following three sections.

2. Enhanced credibility

Candidates recorded a perceived greater status with clients and colleagues and recognition from professional groups for the doctorate level of their achievements and significantly increased self-confidence in themselves as individuals and as professionals. One stated, "It's nice to know that you are, you're considered the sort of expert, in this particular territory of the profession".

In some cases enhanced credibility could be seen for the candidates' professional community as well as for them personally. One said of the professional community,

> "They also felt that the [professional community] deserved it and that it was probably going to enhance some sort of standing in terms of the various negotiations we continue to have in terms of finding our place in the world of academic courses".

Another commented;

> "People take more notice of you- Papers that had been written before getting the doctorate now have more impact when you have the 'Dr' attached to it; they prompt even more response".

The DProf however does demand that candidates have a certain positionality before they are allowed on the programme in terms of experience and status within their organisations or professional area, i.e., they have to be in a position to be able to impact on change. One Candidate observed that

> *"we have an experience which younger people simply could not have and*
> *that's where the action-reflection element…….. people in their twenties*
> *simply could not do that, because you wouldn't have reached the level of*
> *your professional life that would give you the contacts and the standing".*

There was significant impact from the DProf experience relating to the Candidates' enhanced credibility (real or perceived) in the eyes of others in their field who engaged more readily with their work once they had achieved doctoral status. Here again we have noted that it is the change in the Candidates themselves that has provided the impact of the Doctorate. Some of the impact, as one candidate stated, engenders "….the confidence I feel in all sorts of areas …….because of the way its changed me it gives you that extra bit of metal in the new field". Another stated that; "there is absolutely no way that I would be doing what I am doing now unless I had done this programme".

The candidates had variously achieved greater status for themselves and their organisations from the perspective of their peers and within themselves regarding their self esteem. The credibility from their work context appeared as important or more important to them than that from academic achievement.

3. Capability

Enhanced personal capability was expressed mainly in terms of proven high-level intellectual skills, usually involving skills of synthesis, better judgement of levels of achievement and 'seeing the broader picture'. Their ability to act as self-motivated learners was also confirmed.

Candidates acknowledged the difficulties and self-drive necessary to develop themselves to doctorate level, based on generic work-based criteria. One stated;

> "I know I have worked at that level (doctorates) and have the ability to
> co-ordinate, to analyze material at that Level and reflect on it and affect
> the big picture in a whole world of concerns".

Capabilities such as synthesising, reflecting, focus on actual work were seen as important impacts on self provided by the programme. One stated;

> "The ability to see connections between different pieces of work and draw lessons over and above that are greater than the sum of the parts. The programme enabled me to focus on the work I was actually doing".

Because of their position as managers in their organisations, Candidates are working within complex and sensitive social and political environments that often have constraints and tight schedules that require the use of a rare combination of skills, knowledge, personal qualities and concern for values. One commented that the programme was about, "...how to pull together the threads to make something new… and it's the thread that stayed with me…" demonstrating how she realised that she had developed a new capability that enabled her to synthesise a whole range of contextual issues.

The Candidates in our sample expressed their new found capabilities and attributed them to the autonomy they had on the programme to use a range of higher education approaches in the context of their actual work.

4. Continuing development

Impact on continuing development shows itself in the continuation of the Candidates' doctorate projects as real-time ongoing activities at work, positive yet unforeseen effects on colleagues and clients, renewed interest in further learning, and productive engagement in debates relevant to the professional wider field. One stated that

> *"Doing advanced work in the second half of one's professional life, that's very good, because the idea of continually learning in an academically credited context is very good for people in their fifties".*

Another said,

> "Once you finish the programme, it's meant to be only the start of the next phase or the next series of projects". Other comments were, "The programme has finished but it's not left me" and "In every sphere of activity it's been a real help" and "Things continue to come out of the research project".

The practitioner-led doctoral projects often have a timeliness for impact and one Candidate noted that, "since the project was done… things have really changed very, very dramatically".

The following extracts touch on all four dimensions of impact:

> "I matured greatly, my thinking and my approach and it has actually influenced my style of management at work. I give a great deal more thought and planning to what I'm doing and it's widened my focus really. I take much more of a wider view now than I did before. It does actually seem to raise people's expectations of you though and it hasn't done me any harm. It clearly has (pause) it achieved what I wanted it to achieve and it did actually raise debate and awareness of the subject matter I'd studied and I think its one that's going to keep popping up.

> (Other) things are coming out of it. You see in my approach I decided that the way … XX of this size are managed needs far greater care and long term planning than has been applied in the past. And that came out of my thinking for the doctoral programme … and … I have realized, as a result of my work that this place needs the benefits of specialists in certain fields…".

Their enhanced capability and the renewed trajectory to continue to develop the self were probably the two most enduring findings in terms of significant and lasting influence that

the DProf provides for professional learning. These facets suggest the outcome of the DProf for the Candidates themselves led to an enhanced practice which as eight of them said was still unfolding and emergent.

Emerging propositions and implications

Many managers enter the programme to develop themselves in new ways of thinking that extend "beyond the candidate's current community of practice" (Doncaster and Lester, 2002: 450). They are already experts within their own professional sphere and know how to access familiar, paradigmatic professional and subject based knowledge. The DProf provides the opportunity to develop learning in ways that have been differently described as transdisciplinary learning (Gibbons *et al.*, 1994; Barnett, 2000), horizontal learning (Bernstein, 1999), inter-connectivity (Antonacopoulou *et al.*, 2005) generic, multidimensional and interprofessional learning. Certain features of learning and of context such as learner autonomy; individual development; and work as the main context for learning are shown to contribute significantly to achievements on the programme, over and above that which is gained from the specialist activities of the candidates' research projects. This concurs with Malfroy and Yates (2003) who found that context, supervision and pedagogy, and knowledge production were the three key aspects that link doctoral education to the workplace.

Antonacopoulou (2004) in a tribute to the work of Argyris focuses his research on scholarship and reflection at work and concludes that ultimately scholarship is personal and at its core entails a journey of self discovery. Antonacopoulou (2004) finds that some people take learning very seriously and not only as a phenomenon to be studied, but as a way of living. Antonacopoulou *et al.* (2005) later expanded on this to show that learning becomes a part of working life and that working and learning are both integral parts of life's journey. This thinking is seen in the way the DProf projects, because they are located in real time working situations and take place in organisations or professional communities, are able to impact positively and be meaningful to the candidates.

De Fillippi (2001) sets out four perspectives on, what he terms 'project–based learning', and these are then defined by different authors in a set of papers in a special edition of this journal. The DProf provides a further perspective, adding different insights from an epistemologic approach that has its roots in independent learning, social science and experiential learning. De Fillippi (2001) discusses Raelin's (1997) Presentation on designing action projects for work-based learning and recognises the "growing body of evidence that projects may prove immensely beneficial to the long term success of companies".

Criticisms of project-based learning can be made in relation to its use of practitioner- based enquiry that "…is rooted in nature/nurture and macro/micro debates in social and behavioural science and in arguments about the nature of knowledge" (Murray and Lawrence, 2000: 18). Gathering data as an insider needs careful attention especially concerning ethical considerations, questions about insider bias and validity. This doctorate approaches the learning of doctoral candidates and the epistemologies that are followed from the perspective of bringing about original contributions to practice that are informed by underpinning knowledge. The purpose of the projects, to make actual change either during or at the end of the research practice, provides particular constraints to researchers because they are working within systems where there are limits to research practice and change. Their experience and situatedness within their area of professional expertise is a necessary pre-requisite for this kind of doctoral study. They need to access particular insider information, inform and bring about significant changes to practice. Their situation is important because there is usually a right time and place for innovation to be introduced. Successful projects may be in some part due to the practitioner-researchers' ability to negotiate around normative constraints i.e. how they balance systemic norms with their creativity and ingenuity.

Gibbons *et al.'s* (1994) distinction between Mode One and Mode Two knowledge, Scott *et al.* (2004) argue, is limited. Much more important, they argue, is "the way universities understand and in the process construct relationships between academic and professional knowledge" (p42). On the evidence gathered from this study, the relationships between the

professional context and the university are forged by candidates themselves within a planning framework established by the university to assure the level of the final academic award. The candidates are able to build such a relationship because they have to justify and agree their individual programme to both the university and their organisation or professional group. Gustavs and Clegg (2005) demonstrate that on a very similar programme the three way partnership between candidate, university and organisation can become problematic and that much of individual and organisational learning is concerned with the appearance of having particular capabilities. Returning to the points made by Antonacopoulou (2004) regarding scholarship it appears that the DProf places more emphasis given to the individual's role in planning their own scholarship, albeit within a setting that is not an academic one, but with some degree of freedom to decide what is considered appropriate learning for their work. Of the five modes of knowledge presented by Scott *et al.* (2004) the contribution to knowledge made by the DProf would appear to be through the dispositional and trans-disciplinary model in that it is 'essentially concerned with the individual and their own practice' (p51). The DProf programme resists 'methodological imperialism' (p48) in that each programme is distinctive in field and method (p48). There appears to be a difference in the way candidates theorise their work as they call upon both professional and academic sources. As with Scott *et al.* (2004), credibility in the DProf model comes from recognition amongst professional colleagues as much as academe.

Reflection upon current practice, evaluation of previous experience against doctorate level criteria and the adoption of a reflexive approach to their work are crucial aspects of the DProf. Self development requires candidates to understand their professional selves in relation to personal self-understanding. Tennant (2004) suggests that the conception of the 'autonomous student' is becoming more like the 'enterprising self' in contemporary doctoral education and the study shows some support for this assertion. Having to build effective working relationships between themselves, their professional area and the University and justify their work, achievements and intentions to critical audiences in work and academe, promotes greater self-belief, wider acceptance amongst peers, intellectual skills and a commitment to continuing self development in the context of their work. The self-management of the programme itself is a prime means of inducing self–managed

learning. Debate about the learning process itself is of particular importance because of the growing awareness of the role of high-level personal or 'soft' skills and qualities in professional work (Eraut , 2004).

The pivotal role of learner control could be an additional aspect in Scott *et al.'s* dispositional model because a clear benefit for the candidate derives from the exercise of the candidate's sense of agency within critical environments and this comes primarily from the structure of the programme that supports and tests the exercise and outcomes of that agency. Eraut *et al*. (2004) found the importance of having confidence for mid-career learners and that confidence arose from meeting challenges at work, while the confidence to take on challenges depended on the support that was received. In the case of this research those challenges are set in the demanding context of having to justify achievement and progress to critical partners in the wider profession and the less familiar world of academe. Boud and Lee (2005), in relation to the PhD, question what explicit pedagogy provides the opportunity for peer learning and they construct 'becoming peer' as meaning, becoming an academic. For the DProf, 'becoming peer' means becoming regarded as an active and acknowledged contributor to the development of the professional area. The support framework provided for doctoral learning is therefore of great importance.

A transdisciplinary approach can attract criticism for this kind of academic programme. PhDs and most Professional Doctorates are centred around a subject specialism and this is in keeping with conventional structures of universities. The transdisciplinary DProf is based on generic assessment criteria that do not require in-depth knowledge of a particular subject or body of knowledge that is necessarily held in a discipline. The abilities of the DProf Candidates are judged upon broad, generic criteria that are directly related to practical, real world outcomes. This approach is not embedded in university practices, university staff have not had an education in this way of learning and how to assess across disciplines and across professional roles (Boud and Tenant, 2006). There is no stock of external examiners that can be called upon to judge the outcomes of such programmes and there is little specific theoretical background in this area to conceptualise the field of study. Many academics are sceptical about transdisciplinarity and cannot find the depth of substantive knowledge to satisfy their expectation of a thesis that makes a contribution to

knowledge. The complexities of knowledge in practice underpinned by theory that are claimed in this paper as being the essence of a doctoral project are not always understood as having an equivalence to the thesis that can be judged by experts from the disciplines.

There is some evidence however that in PhD study, it is not substantive knowledge that is later prized. For example Pole (2000) demonstrates that "the esoteric nature of the substantive knowledge gained was seen to be of limited use after the completion of the doctorate. In such cases the substantive knowledge gained from the doctorate was seen as less important or valuable than other forms of knowledge and skills" (Pole 2000). Conventional PhD students' work is likely to be theoretically positioned within a disciplinary framework. Professional doctorates develop theory that arises from practice rather than being theory-led. However, the PhD is changing and there are now several kinds of PhD which are professionally focused and contain some of the elements of professional doctorates.

A limitation of the study was the size of the sample, which although representative was quite small. The emerging propositions will now need to be tested and this will be a focus of future research using larger and different samples.

A wider implication of this study is the role of the university as knowledge producer (Barnett and Griffin, 1997; Boud and Solomon, 2001), reasserting it through reliance on critical thinking leading to critical action and critical self-reflection (Barnett 1997). Universities are changing their role, repositioning and restructuring to meet the needs of the age of "supercomplexity" (Barnett, 2000) and need to address some of the pedagogical issues that we have raised. The benefits to the field of doctoral learning come from greater self confidence, intellectual development and commitment to further self-development as well as significant 'new' professional learning where direct positive change was made in their organisation confirming Scott *et al.'s* claim that 'co-production of knowledge has the potential to enrich the workplace' (p158).

Conclusions

There were four elements to change that the candidates were able to make having completed the doctoral programme. They were able to make changes in their organisations. They then continued to make an impact because they had gained doctoral level abilities, were perceived by colleagues as more credible and were more self-assured in their abilities to work at a high level. It appears that the candidates were able to have such influence because they were in control of the process within a demanding and relevant environment. Successful candidates from this doctorate are prepared to work independently, be self-critical and put themselves into their professional work whilst addressing the academic work needed for the doctorate. The candidate is the primary agent of control and the exercise of this agency within critical academic and professional environments is the basis of the impacts that the doctorate has upon both the individual and their work place or professional area. The 'Project of Self' is therefore seen as a necessary undertaking for candidates and the success of that project takes place in a localised setting which is visible and tangible and where Candidates have a certain positionality.

The programme is characterised by a number of features such as gaining self- knowledge, and working collaboratively with others in an intricate and dynamic community of practice to create new learning and thus increase the essential resources of that community. We have seen engagement with abstract, human-related, previously undervalued knowledge. The knowledge created by synthesising diverse information has led to outcomes of real-time projects with tangible results that have a useful purpose within a responsible set of values and ethical considerations. Such diverse and critical thinking, group knowledge building and open-ended processes where everything that will happen cannot be planned, has resulted in profound, high-value learning.

The research demonstrates some of the contributions that higher education can make to knowledge debates about higher level learning at work and the development of key professionals. The DProf programme was found to have the facility to offer enhanced opportunity and development to professional people and their organisations and/or professional fields by utilising the valuable resources that Higher Education has to offer to engage fruitfully with practitioners in every field. Undertaking the programme helps them

to innovate and become creators and critical users of knowledge and thus to bring about change and make positive impact on professional practice. This is done by locating the focus of the programme within the context of work, external to the university whilst recognising and linking the critical thinking, research expertise and other hall-marks of academia with real-world issues confronting communities and professional areas.

The focus that was found on this new 'impacting self' adds a particular slant to current debates about professional doctorates. The doctorate work involves processes that develop the practitioner, enhancing their abilities to manage and produce projects that can have potential impact on their organisation. Added to this, the Candidates' doctoral work including their projects involves not just seeking to find out what works in what circumstances, but how to develop themselves as practitioners. This involves successful substantiation of capacity at doctorate level in both academic ability and professional expertise. Scholarship based on one's self achievements, work engagement and own continuing development may owe much more to the process itself and these elements of learning are an important part of the doctoral outcome.

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