Differentiating Professional Doctorates

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Abstract

For more than a decade professional doctorates have continued to grow and diversify across a broadening array of disciplines. An empirical study of “The Doctoral Education Experience” in Australian universities included an examination of doctoral experiences in departments offering both PhD and professional doctorates. This paper discusses professional doctorates in education, management, law and the creative arts, remarking on similarities and differences found in PhD and professional doctorate programs. Three specific areas are discussed. The first is the recruitment and selection of students, student choice of professional doctorates and perceived career benefits. The second area is the structure and organisation of PhD and professional doctorate programs, including the identification of the research topic. The third area is the perceived status of professional doctorates vis a vis the PhD. The findings are discussed within the context of government policy on postgraduate education and the emerging literature on professional doctorates. The study and its findings are of relevance to all higher education stakeholders, raising questions about program purpose, recruitment and status.
Differentiating Professional Doctorates

Introduction
A relatively unnoticed development among the many changes in Australian higher education in the past decade is that of the introduction and expansion of professional doctorates. Introduced in 1990 with the abolition of the binary system of higher education and the introduction of the Unified National System (UNS), they were seen to have multiple purposes. Key among them were to provide opportunities for doctoral research in non-traditional disciplines and professional fields, and to create a fast track doctoral qualification for the projected shortfall of academic staff at that time (NBEET, 1989; NBEET, 1990). Within a decade the number of programs on offer has increased from one in 1990 to 48 in 1996 and over 100 in 2000 (Maxwell and Shanahan, 2000; Shanahan, 1996). They are currently available in disciplines such as education, health, law, psychology, management, the creative arts and science. Professional doctorates are seen by policy makers and advisers as a means of attracting fee income and adding ‘relevance’ to doctoral research training (Gallagher, 2000; Neumann, 2002a).

A similar development has been taking place in the UK, apparently also connected with the demise of the binary divide and government concern to meet the needs of careers outside of academia at doctoral level (UKCGE, 2002; OST, 1993). Since the early introduction of a part time doctorate in engineering (EngD / DEng) in 1992, they have proliferated from 109 in 1998 to 153 in 2000 and are concentrated in education, psychology, medicine, engineering and business administration (Bourner et al., 2000a; 2000b). It is argued that their development alongside the traditional PhD indicates that they are reaching a previously unsatisfied market (Bourner et al. 2000b).

Offered as research and also as coursework degrees, the proliferation of professional doctorates is beginning to attract the attention of researchers. A literature on appropriate structure and meaningful ways of connecting to the relevant profession is emerging (see for example: Brennan, 1998; Lee et al., 2000; McWilliam and Taylor, 2001; Morley and Priest, 2000, 1998; Reynolds, 1998). In the UK the Council for Graduate Education (UKCGE) (2002) has undertaken a study of the development and proliferation of professional doctorates with recommendations to ensure the quality and standards of the doctorate. Recently an
Australian study (McWilliam et al. 2002) investigated the development of professional
docorates, in particular the linkages to industry, in order to make recommendations to the
Commonwealth Department of Education, Science and Training on developments within
professional doctorate programs.

This paper discusses the findings on professional doctorates from an empirical study on
doctoral education in Australian universities, with specific reference to education, law,
management and the creative arts. The paper describes the provision and role of professional
doctorates across the disciplines and institutions in the study. Focusing on similarities and
differences found between PhD and professional doctorate programs, the paper then
concentrates on three specific areas. The first is the recruitment and selection of students,
student choice of doctoral program and potential career benefits. The second area concerns
the structure and organisation of doctoral programs, including any differences from traditional
PhDs in research topic and approach. The third area addresses perceptions of the status of
professional doctorates vis a vis the PhD. The major issue arising is the need to differentiate
the professional doctorate from the PhD on educational grounds.

The Study: ‘The Doctoral Education Experience’
The data and findings in this paper are based on a qualitative study which sought to gain a
deeper understanding of students’ perspectives on their doctoral education experiences in
their social and intellectual context. It considered the influences of type of doctorate (PhD or
professional doctorate), the mode of enrolment (full time or part time), and the stage of the
research process (early, middle, or late) on student experiences. These were contextualised for
both discipline and institution.

Interview and document data from six different universities covering the broad mix of
disciplines were analysed. Participating institutions were selected to ensure diversity of
institutional research approach and different eras of establishment, student size and research
quantum allocation. Institutional location reflected urban and regional universities as well as
single and multi campus institutions. The prime data source comprised 134 semi-structured
interviews with doctoral students, academic managers and administrators with responsibility
for research and research students – experienced supervisors, heads of department, deans of
faculties, institutional Deans/Directors of Postgraduate Studies, senior postgraduate
administrators, and Deputy Vice-Chancellors (Research). The study focussed on four
disciplinary groups – hard pure (HP); hard applied (HA); soft pure (SP) and soft applied (SA)
fields\(^{ii}\). Hard pure fields are represented by the sciences, while engineering and similar
science-based professional fields comprise hard applied disciplines. The humanities and social sciences are included in soft pure fields; soft applied fields comprise the social science based professions. Almost two-thirds of the interviews were with doctoral students of whom 55 per cent were male. There was approximately equal representation from students in each of the four disciplinary groups. A more detailed discussion of the sample profile and research approach of the study is to be found in Neumann and Tansley (in press).

**Institutional provision**

Surveys by Maxwell and Shanahan (Maxwell and Shanahan, 2000; Shanahan, 1996) had highlighted the steady increase, of professional doctorates, while the policy paper by Gallagher (2000) was intended to attract further institutional attention to them as an alternative means of research training with the potential to charge fees. The two different research doctorates – the PhD and the newer professional doctorates – formed central elements in the study’s design. Accordingly, it sought to include faculties and departments that offered both a PhD and a professional doctorate in their field.

Professional doctorate programs from five of the six universities were included in the study. All were in the soft pure and soft applied fields and included the creative arts (Doctor of Creative Arts, DCA), education (Doctor of Education, EdD), management (Doctor of Business Administration, DBA) and law (Doctor of Juridicial Science/Studies, SJD). Some of the programs studied were introduced in the early 1990s, following the NBEET papers. The remainder were initiated in the mid to late 1990s. In the event it proved more difficult than expected to locate viable professional doctorate programs across the discipline groups in all institutions in the study. Within the education discipline, one of the first to establish professional doctorates in Australia, no viable program in terms of active student enrolments was identified. However, experienced supervisor and senior manager views from the education field were explored, and there were interesting exemplars in some disciplines and in some universities.

There were clear institutional differences in the provision of professional doctorates. One large research intensive university did not offer such programs as a matter of institutional policy. Two other universities had low numbers in their professional doctorates and were not currently enrolling students in them. Another large research intensive university in the study was expanding its professional doctorate offerings in the soft pure disciplines and also introducing them in the hard applied engineering fields. Prompted by successful programs in other areas of the university, it was hoped that a professional doctorate program would target
a different category of student and bring with it a closer connection to the profession as well as financial benefits. One faculty dean explained:

You know, servicing the corporate world, those people come to us sometimes from industry and would like to do a higher degree and the thought of an 80 000 word research project isn’t what they want at all. They do need some coursework, because they need to learn how to do research techniques and they do bring some industry experience which we normally wouldn’t recognise and they do want to do a project and often it’s an industry related project. So the arts, this faculty, has recognised that as a kind of potential client or student … I think that will be very successful because they’re a student that’s different to a pure research student who comes from a fourth year or a research background and wants to do something that they’re fascinated with but it doesn’t feed necessarily from an industry base. But there are people with industry interests and they could be advanced through this degree so I think we’re quite optimistic with that. It’s certainly been the case with [other fields in this faculty] so why not with arts. (Academic 12 SP)

In yet another university the marked success of one full fee-paying professional doctorate was prompting the development of further fee paying programs in carefully targeted fields, primarily as a means of increasing university revenue.

Senior manager views on professional doctorates in each of the universities were relatively open and at times noncommittal. While the PhD was seen by all to be flexible enough to accommodate a variety of structures across all disciplines, including non-traditional ones, they saw professional doctorates as applicable to professional areas with a social science base, such as education and management. The linkage was clearly with fields lacking a tradition of PhD research, since most senior managers, when asked, saw the PhD as most appropriate for high status, science-based professions such as engineering and medicine. It was evident that the initiation of new professional doctorate programs and their structure rested with the faculties, rather than with the relevant deputy vice-chancellor.

**Recruitment and selection**

Within universities, the selection of doctoral students rests at the faculty and departmental level. Here decisions on student selection are substantially based on past academic performance and on whether a student wishes to work in a research area of the department. Professional doctorates usually call for an additional selection criterion related to professional experience. In this study in the field of law, students needed to be legally qualified to be considered for entry — a requirement not exacted in the case of the PhD in law. One postgraduate co-ordinator explained:
The other thing I should say is the rules for the SJD only permits students who have a Law qualification whereas we will take students into the PhD program here who have any relevant prior degree. And so that is another distinction which is a little unusual. And so people come into the PhD who are not lawyers. We also have lawyers in the PhD. But to do the SJD, you have to be a lawyer and it has to be a continuation on after an LB degree and so that’s a formal difference. (Academic 10 SA)

Likewise, within education a teaching qualification and practical experience as a teacher or educational manager/administrator were important. Within management several years professional experience, often at a senior level was essential, while for the creative arts, potential candidates needed to have recognised success as a practising artist, demonstrated through publication, performances or productions. In some disciplines in some institutions, it was also observed that a professional doctorate entry route allowed faculties to take into account non-traditional paths from undergraduate study rather than rely on the undergraduate honours or research masters pre-requisite:

They don’t have to have a traditional research background and so let’s take teaching. They will have a four-year degree and they may have a coursework masters but they may have also added bits and pieces like they may have done training programs, they may have taught part time at the University. … They might have done conference presentations. They might have written a curriculum pack or something and so they come into the EdD in a slightly different way they come in a PhD. (Academic 109 SA)

Supervisors, however, do not see a distinction in the quality of doctoral student based on enrolment in a professional doctorate compared with a PhD. One experienced supervisor and Dean explained:

So people come into the PhD who are not lawyers, we also have lawyers in the PhD but to do the SJD, you have to be a lawyer and it has to be a continuation on after a LB degree and so that’s a formal difference. But the students- the differences I see are more personal to the students I think rather than reflect that distinction between the PhD and the SJD. Some students are very self-directed, don’t need a lot of support, are very competent and confident and get on with it. Other students have different needs and that is a more individual thing, I can’t predict that on the basis of which degree they are in. (Academic 10 SA)

Thus a major differentiation between professional doctorates and the PhD is the mode of entry, where a professional qualification and/or professional experience are essential criteria for entry into professional doctorates but not for the PhD. This practice contrasts with that found by Bourner et al. in the UK (2002b) where a closer integration between the Masters and
professional doctorate is noted through formal requirement of previous completion of a Masters degree.

Within this study three professional doctorate programs spanning the creative arts, law and management in three very different universities stood out as particularly successful in terms of continued attraction of students. These three programs had in common a carefully defined target clientele and faculties that were highly selective in accepting students. Students in turn were attracted by the high quality of the faculty’s academics - and potential supervisors – a fact carefully used in program marketing. Students also favoured the clearly structured and relevant coursework offered, a matter discussed in more detail in the next section, and the existence of student support networks.

One of the advantages claimed for professional doctorates – and a means of counteracting the “lone researcher syndrome” of the PhD - has been the scope allowed for cohort entry (Bourner et al., 2000b; Neumann and Goldstein, 2002; Neumann and Guthrie, 2001). The further possibility is offered of providing a more structured program with peer support and cross-fertilisation of ideas among professionals. In practice, however, the study found only one program with annual competitive entry to a fixed number of places. In this case the students formed a cohort for the duration of their candidature. In another program there was a loose notion of cohort throughout the coursework, with students at different doctoral stages - not unlike that in PhD programs in the same fields. One program was striking in its total lack of support for entering students. All those interviewed, professionals experienced in their fields, felt strongly about the isolation and lack of opportunity for intellectual exchange among students and with the academic staff.

Of the professional doctorate programs in this study, only those in management charged fees. In the other fields, students claimed that the HECS-exempt scholarships, or in several cases the availability of government scholarships for full time study, were clear incentives to pursue their research interests.

Professional doctorate students – like their PhD counterparts - were primarily motivated by the prospect of undertaking research and having a specific problem they wished to investigate. In nearly all cases students had deliberately elected to enrol in a professional doctorate rather than a PhD, despite maintaining that they could have undertaken their research within a PhD program. Particularly appealing in the case of DBAs and DCAs was the closer affinity,
promoted in recruitment brochures, between research requirements and the profession. A typical view is reflected in this management student’s comments:

… it was a way that allowed me to blend together the practice and the research components in a way that isn’t necessarily available in the PhD program, because there are differences in emphasis between the DBA and PhD in the sense that clearly that it is applied research first and foremost in the DBA program and secondly, one of the criteria upon which you are assessed includes the contribution to professional practice and policy and again that was something that interested me. (Student 2 SA)

An interesting phenomenon was the cross-over from professional doctorates into the PhD and vice versa. Some students initially enrolled in a PhD later took the opportunity to change to the professional doctorate, purely because “it felt right” for them or because their topic had evolved in an unforeseen manner. Likewise, a number of the students who changed from professional doctorates to the PhD did so because of its perceived rigour and longer standing.

One of the reasons offered for choosing a professional doctorate was the apparently greater degree of structure it was perceived to embody. This was seen to assist in the research process, increase student self-confidence and help focus the research. In some fields the more extensive coursework resulted in a slightly shorter thesis requirement, so making the doctorate easier:

I didn’t choose a PhD because I thought 120,000 words by yourself is too hard. It’s too hard. Whereas the SJD’s been perfect … they’d basically hold your hand. [In unit one] you do a blueprint of what your thesis is going to be and then they help you with that. (Student 48 SA)

The underlying hint of a lack of self-confidence was echoed by other candidates in perceiving themselves not to “be worth a PhD” (student 33 SA).

Finally, it is striking that, with the exception of the creative arts, no students elected to undertake a professional doctorate for career advancement. Indeed, in fields such as management and law a doctorate, even a professional doctorate, could be more of a hindrance than an asset. In most instances having a doctoral qualification was seen to help ‘at the margins’ rather than to be instrumental in career progression.

**Program structure and organisation**

The study examined the structure and organisation of PhD and professional doctorate programs across the discipline groups and institutions in the study. A common perception has been that PhDs are entirely research focused, with the possibility of coursework dependent
either on practice within a particular discipline or department or undertaken on an individual needs basis. The main objective of the earlier NBEET Review (NBEET, 1989) was to raise discussion on the appropriateness of the existing doctoral course structure for future employment and career paths. It was already recognised at the time that many PhD graduates were finding employment in non-academic appointments, a trend which has continued. A recent investigation (ARC/GCCA, 1999) of doctoral graduate career paths from 1994-1998 found a doubling of employees with doctorates in the industry and commerce sector. The study also noted a decline in moving to academic positions from 47 per cent to 33 per cent. The NBEET Review did not propose a particular structure, but anticipated that professional doctorates would provide “professional training which will probably require substantial pieces of investigative work, projects and exercises, in addition to straight coursework” (NBEET, 1989: 28).

The present study did not mark any major distinction between PhD and professional doctorate programs. Nearly 50 per cent of the PhD programs across the four discipline groups had a formal coursework component. The remainder were research only, with the possibility for candidates to undertake coursework if necessary. In such instances individual candidates were expected to tailor make their coursework program from existing institutional courses to fill an identified gap in knowledge or skill.

The coursework programs incorporated in PhDs comprised one of three types. The first, found almost exclusively in soft applied fields, incorporated formal research methods courses. The second type of coursework, found in soft applied and soft pure fields, focused on how to undertake, develop and structure a PhD thesis. The third, essentially a broadening of content and factual disciplinary knowledge, was found in the hard applied and hard pure fields.

The timing of coursework also varied, being related to its purpose. Thus programs with research methods courses generally provided them at the beginning of the PhD program, while courses designed to inculcate students into the PhD process generally occurred over the first half of the candidature. Programs that required a broadening of content knowledge of the field could be undertaken by students at any stage of their candidature.

While a coursework component was expected in professional doctorates, not all had a compulsory coursework program: one was by research only. In the soft applied and soft pure fields, the coursework structures in professional doctorates were the same as those found in
the corresponding PhD programs, namely courses on research methods and on how to undertake a thesis. Some programs also had a small number of content broadening courses.

In one university the professional doctorates on offer tended to follow a portfolio model which required students to produce not a thesis but four peer reviewed published works over the duration of their doctorate. The model, it was explained,

developed [from the] EdD and this became the model for the Doctor of Nursing, the Doctor of Business Administration. The Doctor of Creative Arts is a little bit different. … [The] model … is meant to be for a person in a profession with a contribution to the profession; … They are required to do one or two research projects and what they do is they work through a series of experiences which lead to the development of a portfolio. So the portfolio includes- here’s the major things- at this stage and it may be a bit tough, it includes four refereed journal articles at least, at least four refereed journal articles. (Academic 109 SA)

The recognition that the publication requirement was onerous, in some disciplines even problematic, suggested the need for a reappraisal. Indeed, professional doctorates were described as “under review” or “on hold” in two universities. Experienced supervisors pointed to arduous workload requirements as an issue.

An important consideration in the structure of professional doctorate programs is the nature of the research topic for investigation. In the initial NBEET policy, it was envisaged that in professional doctorates research would be applied, profession- or practice-oriented and not necessarily based within the university:

An alternative doctoral degree to provide extended and advanced training in certain professional fields where projects and investigations are applied in nature, oriented to practice in the professions and where, in some cases, the setting might be industry-based rather than campus-based. (NBEET, 1989:28)

A theme of much recent discussion (see e.g. Brennan, 1998; Lee et al. 2000; Gallagher, 2000) on professional doctorates emphasises the importance of the practice connection through the research topic. The closer integration between university and profession, the continued encouragement of university-industry partnerships and awareness of the opening up of knowledge production within a knowledge economy have also influenced views on the nature of research and research topics within professional doctorates. The development of more diversified research investigations - for example through portfolios and the adoption of a more reflective, practitioner-oriented mode of research education (Morley and Priest, 1998) - are developments reflecting these views.
Within the professional doctorate programs in this study, however, the research thesis dominated. As with the PhD, the success of a student’s doctorate rested on it. In terms of substantive issues such as types of research topic or research method, it was claimed that there was no difference between the PhD and the professional doctorate. All students within the latter maintained that their research could be accommodated in a PhD and that even in areas such as the creative arts there was scope for ‘non traditional exploration’ (Student 112 SP) within PhDs. As has already been mentioned, there were cases of transfer between the two doctorates. In transferring into a PhD from, for example, a DBA or a DCA, ‘the thrust of the key nature of my research’ could be maintained (student 128 SA). Similarly in moving from a PhD to a professional doctorate, the nature and scope of the research topic remained unaltered:

I like the idea of being in the DCA rather than a straight PhD, which seemed to be much more based on studying other people’s work. I wanted to do that but I also wanted to look at my own writing as well. (Student 112 SP)

Within the management discipline in particular, students had selected a DBA because they liked the notion of undertaking research of direct relevance to their workplace. However, especially in the case of later transfers into a PhD, such research was equally possible within a traditional program. Thus, aside from personal student preference for enrolling in a professional doctorate as compared with a PhD program, the nature, scope and manner of research do not appear to be differentiating aspects.

Another notable feature was the lack of close involvement with industry or profession. In none of the professional doctorate programs was there evidence of contribution by the relevant professional body in the development of the doctorate as there is in many undergraduate programs. This omission was noted in earlier work by Evans (1997) and stands in contrast to some of the UK developments (UKCGE, 2002). In the Australian McWilliam et al study (2002) this lack was still evident. Work by Brennan (1998) and Lee et al. (2000) argues the importance of “hybridising” the curriculum within professional doctorates to enable a fusion between the university, profession and workplace. Scope for this may be particularly pertinent for those professional doctorates, such as management / business administration and the creative arts, that are defined in terms of areas of work rather than a profession which requires a degree for entry, such as law. Although most students’ research topics derived from their professional interest and experience, none of them were undertaking work- or industry-based research, as might be expected from the rationale for professional


doctorates. A small number of students were in fact testing their research in their workplace. In these cases they held senior positions which enabled them to explore the applicability of their research in practice and provided them with a budget to do so. They described their employers as being aware of their research but passively rather than actively interested. Holding such senior positions did not prevent students from being retrenched by their employers in the course of their candidature. This may be a feature primarily of the soft applied fields since similar situations were found in industry-funded PhDs (Neumann and Tansley, in press). It may be that in science-based professions the industry partnership will be more direct, as envisaged by this dean in engineering:

[We think] there is reasonably good demand for professional doctorates … it would be on some problem that the company was interested in so it would be very applied research, specific to the company, whereas here we can do research on anything … the difference is that for a PhD you can do it on anything your heart desires, whereas with a professional doctorate, hopefully the people will have been doing research that will benefit the company on a problem that the company has. (Academic 9 HA)

In reflecting on the portfolio model, academics raised the matter of clarity of expectations and distinctiveness of tasks. It was argued that within this structure the nature of the research requirements were liable to give rise to confusion and ambiguity – for students and potentially for examiners. One experienced supervisor explained:

You think of the joke, you walk on one side of the road, you walk on the other side of the road, you walk down the middle and you’re going to get killed, right. I think that’s what’s going on with some of the DBA programs. They haven’t got it clear in their own mind. They’re certainly not clear when they’re communicating to students as to what these things are all about and consequently people are wandering all over the highway here and somebody’s going to get hurt. That’s where it's going … I think the thing is that there is no clean, clear distinction between a DBA and a PhD between universities. (Academic 129 SA)

**Perceptions of status**

In discussing professional doctorates and PhD programs within their departments and faculties, academics described the two as essentially the same. While the entry routes might be different, the standard and expectation of the research was argued to be equivalent. The original intention of NBEET policy was that professional doctorates should be an alternative to the PhD and be seen as “complementary to the PhD in some fields such as engineering and education” (NBEET, 1989:28).
Nevertheless, among professional doctorate students it was generally thought that a professional doctorate “is a second rate doctorate” (student 33 SA) and that “it’s not quite got the standing of a PhD” (student 121 SP). Others questioned the rigour and standards of many professional doctorate programs:

… the DBA here is the only genuine PhD equivalent. … I believe that the rigour side of the equation has been maintained at this program and is examined against the same criteria as the PhD. … I think that a lot of the so called professional doctorates are bogus. When you look at the entry standards, the time required to complete and the content of what the student has to produce, and what the professional doctorates are, as far as I’m concerned they are glorified masters programs and as much as anything, they are just becoming money making ventures. I mean there are a lot of masters and masters honours programs that are as rigorous and more rigorous than some of the so called professional doctorates … I’m just very sceptical about it … (Student 2 SA)

The parity of quality and standards was a key issue in an earlier study on the DBA (Neumann and Goldstein, 2002) and is reinforced by the very differing time requirements for completion (Sarros et al. 2002). All interviewees - senior managers, experienced supervisors and students - asserted the importance of the PhD’s international standing and with it the portability of an internationally recognised qualification. This was a clear strength that the professional doctorate was not seen to have. There were strong views that the PhD worked well and had sufficient scope and flexibility to incorporate non-traditional fields and modes of research. Off the record comments by otherwise strong advocates of professional doctorates acknowledged that promoting professional doctorates encouraged a ‘creeping credentialism’.

Although all senior managers argued that there was a place for professional doctorates – even if in a few cases it was not in their own institution – they did not see professional doctorates as appropriate for high status professions such as medicine or engineering. Among some academics and senior managers from hard pure disciplines, the view was that the PhD was itself the appropriate form of professional doctorate in these fields. Such views stand in contrast to the imminent embarkment into a professional doctorate in engineering of one of the universities in the study and the growth of such professional doctorates in the UK.

**Issues for consideration**

Professional doctorates were a deliberate inclusion in the study of the doctoral education experience. That study has provided insights into the development of doctoral education by highlighting similarities and differences between professional doctorate and PhD programs. It is evident from the findings that doctoral education in Australian universities is by no means
static. While the distinctions between professional doctorates and PhDs are not necessarily clear, the obvious successes in some disciplines in some universities and the openness to new ideas among many interviewees underscore signs of change. Nevertheless, there are several areas for debate, discussion, and clarification.

Key among these is the question of whether it is important to differentiate professional doctorates from PhDs. The comparison of the types of doctorate and the structure of their programs in particular highlights the educational similarities between the two. The major difference between them lies in the entry route. Financial differentiation through the charging of fees, at least in some disciplines and in some institutions, is another contrasting feature. However, it is important in discussions on alternatives to the PhD to distinguish between discipline-driven (pure) and social- or practice-driven (applied) research. In professional disciplines the link between theory and practice is by definition inextricably close (Becher, 1989; Neumann, 2002b). Given this intertwining it could be argued that a doctorate in these fields should be a professional doctorate rather than a PhD. Conversely, distinctions between pure and applied, theory and practice appear neat and clear-cut for discussion purposes, but in actuality overlap and blur (Neumann, 1993, 1992; Rip, 2000). Further, senior academics and managers in this study argued that the PhD was the professional doctorate for the sciences, and that in the hard applied science-based professional fields, the PhD was the more appropriate award – not withstanding the imminent venture by one faculty into professional doctorates.

These apparent contradictions are underscored by the fact that the two doctorates are really interchangeable. All professional doctorate students maintained that their research topic could equally be undertaken either in a PhD or in the professional doctorate program. The fairly ready movement between the two degrees during candidature stood out.

Further, insofar as there was a direct link between profession or workplace and research, it was created by individual student interest. In general the lack of close, if any, involvement in industry, workplace or profession was striking. This tenuous research and practice connection is further underscored by student perceptions that the link between a professional doctorate and career advancement is negative in some cases and at best marginal in others. This perception runs counter to the aims printed in faculty recruiting brochures, the recent literature on doctoral education and the initial NBEET policy: the link between doctorate and career would accordingly be interesting to explore. For more than a decade increasing numbers of PhD graduates have found employment outside the university. Graduate careers
data, moreover, indicate that higher levels of study are related to continued high employment levels.

Yet another apparent contradiction is the contrast in academic and student views on workload. Students were attracted to what they saw as an easier framework and shorter thesis, despite a basic structure identical to that of the PhD. The maximum PhD thesis word length was in most instances around 20,000 words more than that for the professional doctorate, and in both doctorates only the thesis counted for examination purposes. In the few professional doctorates that differed from the coursework-thesis structure, as well as in some of the less successful programs modelled on the PhD, the concern of experienced supervisors was that the workload was too high and the program purposes vague and ambiguous.

Perhaps of greatest concern is the fairly strong student view that a professional doctorate lacks the international currency and status of the PhD and is of a lesser quality and standard. Such views reinforce private academic concerns of ‘creeping credentialism’ in fields where a doctorate has not been traditional. These issues and apparent contradictions warrant further study and open, dispasionate discussion.
References


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\(^2\) For detailed discussion of these disciplinary group classifications see Neumann (2001) and Neumann (2002a).