

PROFESSIONAL DOCTORATES AND DOCTORAL EDUCATION

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ABSTRACT

In Australia, there are an increasing number of calls for doctoral education to become more industry focused. Recently, professional doctorate programs have been offered as a way to address this pressure for improvement of doctoral education in Australian universities. In contrast to PhDs, professional doctorates are reasonably new in Australia, having only first emerged in 1991. Whilst there has been a willingness on the part of universities to expand the number of professional doctorates offered to around 131 in 2001 (McWilliam & Taylor 2001) there is less evidence available to support claims that there has been an improvement in doctoral education through the pursuit of effective industry and university partnerships. The development of sustainable partnerships between industry and universities is crucial to the service and support of doctoral education.

INTRODUCTION

This is the time of the ‘entrepreneurial public university’ that requires a new relationship between academia, industry and the state (McWilliam & Taylor 2001). According to Etzkowitz & Leydesdorff (2000, p. 356) education, industry and government have both overlapping and interacting agendas; information and knowledge will play a crucial role in their future.

There is a growing understanding that a knowledge economy is both a catalyst for, and an outcome of, new modes of knowledge production. These new modes of knowledge production demand new relationships between knowledge workers, only some of who are located within university settings. This fact is a powerful incentive for governments, universities, and industry to re-examine current models of doctoral education, including ‘alternative’ models, in terms of their efficacy as training contexts.

Doctoral education is, at this point of time in Australia, relatively unconnected to industry or the professions in any formal or substantive way. If professional doctorates are understood as the most fertile location of university/industry/government partnerships in research training, then a significant amount has to be done to turn an ideal model into a reality. ‘PhD-driven’ models are both privileged in terms of government funding and yet are limited in terms of what they offer as ‘alternative’ models of doctoral education. The result is a dominant model of doctoral training that is university-focused and university-driven. Early tensions around ‘standards’ and ‘interdisciplinarity’ in relation to professional doctorates have generally been resolved through alignment with that dominant model.

Professional doctorates have been defined as: ‘a program of research and advanced study, which enables the candidate to make a significant contribution to knowledge and practice in their professional context, in which the candidate may also contribute more generally to

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scholarship within a discipline or field of study' (CADDGS 1998:1). The nature of many professions means that they very often draw upon a number of disciplines to create a basis of knowledge, rather than professional knowledge being contained within a single discipline. Professional doctorates need to be transdisciplinary in order to be of substantive value to the profession that it is attempting to serve. Professional doctorates must seek to extend or even transcend a number of fields (Green, Maxwell & Shanahan 2001).

The emergence of professional doctorates is a sign of change in the nature of doctoral research training. Professional doctorates exist as discrete programs, most often offered by a single school or faculty. The traditional PhD is a university award, administered by a university's Research Office. As evidenced by Pearson and Ford's (1997) study the PhD is not a single 'program', but rather caters for a wide range of variation. Professional doctorates are similar to other degree programs, in terms of having clear lines of responsibility for design and implementation. There is a particular set of expectations of professional doctorate participants, and the potential contributions that they will make to a specific professional field. It is the very targeted nature of professional doctorates that assists this specialisation whilst making the programs marketable. New possibilities in terms of design principles and relationship building emerge as a result of the linkage with a professional field. The specialised nature of professional doctorates requires that the staff who teach and administer them be significantly specialised. There is a gap between the specialist nature of professional doctorates and the generalist nature of traditional PhD programs. Supervisors of professional doctorates who have also graduated from a professional doctorate program are not evident in great numbers in Australia—they are very thin on the ground. This is the case, despite the fact that the Commonwealth Department of Education, Science and Technology classify nearly two-thirds of all professional doctorate programs as research programs (DEST 2001). The majority of current academics in Australia have undertaken their doctoral training in PhD programs. In addition, the PhD is familiar to industry and industry associations, but they are largely unaware of the existence or nature of professional doctorates, even though the latter might be targeted at their own professional field.

The programmed nature of the professional doctorates has opened new possibilities for the provision of doctoral education. The use of cohorts of students and course-work as a structured approach to the development of research capacities are significant additions to professional doctorates. As Green et al. (2001) have indicated, professional doctorates are a significant addition to the tertiary sector's research training curriculum, however, they are not the alternative PhD. Professional doctorates stand in marked contrast to the highly individualistic nature of most traditional PhD programs. Within a PhD program, students may commence at any time, engage in any approach to research that is supported by individual supervisors, and progress in ways that are negotiated within the supervision relationship. Maxwell and Shanahan (1997, p. 144) point to the limitations of the PhD mode of supervision. They state that 'The traditional "one-on-one" model of supervision used in PhD programs, predicated as it is on the idea that the candidature is serving out an academic apprenticeship, is clearly a limited model in terms of what it offers by way of parity of esteem to the knowledgeable professional. Alternative forms of supervision can be provided within professional doctorates, including the candidate working in a collegial team, a team which may or may not include a member from industry.' Not only is there the advantage of team supervision in professional doctorates, but there appear to be other factors, such as calls for increased relevance and broader focus, that are fuelling the growth in professional doctorate offerings in Australia.

Whilst recent changes in the context of PhD offerings, particularly those associated with Collaborative Research Centres (CRCs) and Australian Research Council (ARC)-Linkage schemes are acknowledged, the traditional model remains focused on the needs of academics and universities rather than on industry's needs and interests. However, whilst support for academic enterprise should be present, a more systematic engagement by industry, government and universities with professional doctorates as a means to a differentially rigorous and valuable form of doctoral education is also needed.

LINKAGES

The linkage between doctoral programs and professional and industry bodies for professional doctorate programs can be understood in terms of two broad typologies: surface and deep (Ramsden 1992; Biggs 1999).

According to McWilliam & Taylor (2001) professional doctorates with 'surface' levels of linkage to professional and industry bodies exhibit, to varying degrees, the following characteristics:

- A particular industry or group of industries is the source from which most clients come and to which they return;
- There is some attempt made to involve non-academic individuals from industry and/or a professional group in course delivery, supervision or assessment (this is likely to be limited and ad-hoc);
- Research and research activities are workplace-based; and
- Marketing materials stress the value of the program to targeted professions.

In comparison, McWilliam & Taylor (2001) note that programs with 'deep' levels of linkage with professional and industry bodies exhibit, to varying degrees, the following characteristics:

- Their establishment is driven by a particular industry or professional association (e.g. peak industry groups define the nature of the training to be undertaken and the skills/attributes that are to be developed);
- Industry and/or professions are partners in the delivery and supervision of programs, and this is built into the funding arrangements that exist between universities, participants and external bodies;
- Industry/professional bodies play a substantial role in the assessment and credentialing process;
- Research training outcomes are of a nature and in a form that is recognisable as beneficial to the industry/professional partner; and
- The community of learning built around the program includes both academic and non-academic participants.

The majority of Australian professional doctorate programs exhibit a surface level linkage with the professional bodies and/or industries with which they claim to engage (Neumann 2002). According to McWilliam & Taylor (2001) 'surface' engagement allows for continued alignment of the 'alternative' model with PhD-driven models, a position that is much easier to defend within internal university accreditation processes. Therefore, an emerging criticism is

that most Australian 'alternative' doctorates do not exhibit 'deep' links with industry partners. There is no evidence that programs evolve in ways that move them from 'surface' to 'deep' engagement. There is no evidence of attempts by universities to move from the current 'surface' approach to a 'deep' approach within the near future. As noted by Green, Maxwell & Shanahan (2000) there is apathy emanating from the professions and industry as to the value of professional doctorates that lack deep engagement without which the professional doctorate award remains dominated by universities. The lack of inter-institutional partnerships and inter-disciplinary partnerships within and across institutions is also perceived by the professions and industry as a serious inhibitor to realising 'deep' engagement and 'legitimacy' of professional doctorates.

Once a program is established and accredited, the pattern is very much set. The domination of the design and development of a program by university agendas and processes means that the program's ability to develop in a more industry/profession responsive direction, despite the efforts and intentions of particular stakeholders, will be severely limited (McWilliam & Taylor 2001). While such individuals can value-add to existing programs, they are limited in what they can do to generate 'deep' links out of 'surface' ones.

Clearly there is a raft of challenges for those charged with leadership in government, industry and universities as Australia seeks to develop its position within a global knowledge economy. In order to address some of those challenges it is suggested by McWilliam & Taylor (2001), Green, Maxwell & Shanahan (2000), and Neumann (2002) that:

- Coordinators who are responsible for the introduction of new industry-focused doctoral programs seek to develop 'deep' links with industry partners, with the understanding that they may provide a number of advantages, including: leverage advantages in terms of gaining access to resources within and beyond the university; direct links to prospective participants, and significant enrichment of the curriculum. Active engagement of industry and professional bodies at the formulation stage of new doctoral programs is essential for the goal of developing 'deep' links to occur.
- Universities re-examine their doctoral programs with a view to moving programs with surface-level links toward the 'deep' link end of the continuum so that they optimise their engagement with industry and professional bodies. A significant step towards this goal would be to dispense with the flawed notion that PhDs are original research that add to scholarly knowledge and that the professional doctorate contributes principally to practice.

There are attempts being made to change the culture of doctoral education in Australia. It is likely that such change may be slow if the pressure exerted by greater scrutiny being exercised from within and outside universities in relation to market-focused outcomes is ignored. It is quite possible that universities may well seek to maintain the position of power they have built up over an extended period of time over doctoral education and the conferring of the doctoral award (Neumann 2002).

COLLABORATION AND ALLIANCES

'Industry' and the professions are ambivalent towards professional doctorates, or indeed any other form of doctoral study. This apparent lack of concern means that the surface nature of the links described above is not likely to be challenged by industry or the professions as

university 'partners'. There is a situation of universities not knowing how to create a relationship of true engagement. In addition, there appears to be little evidence of dialogue, rather, industry and the professions know little about the potential benefits of such partnerships, and very little about 'deep' partnerships. The position that appears to have been adopted implies a view that doctoral training is for those intending an academic career, and of little use to those 'in the field'. Universities appear to have done little to challenge that assumption in their approach to research training. A closer examination of the organisation of industry and/or professional associations/bodies in Australia may provide a possible explanation for the lack of industry-university dialogue. As indicated by Green, Maxwell & Shanahan (2000) the success of professional doctorates is likely to rest largely with the long-term advocacy and support of the professional associations representing the interests of a profession in Australia. These associations would need to adopt a high profile and a consistent position in relation to the need for specialised research training in order to spur changes in university research training.

In the post-White Paper (Kemp 1999) funding environment there appears to be efforts that are fostering the proliferation of 'surface' rather than 'deep' responses. The attraction of funding for research higher degrees may well be driving universities to enrol more students and develop and accredit more programs, rather than change the nature of research training so that it addresses industry and/or professional needs. This is in conflict with the declared intentions of the White Paper (Kemp 1999) to direct university research training towards industry partnerships. However, this response from universities may be understandable, given the time and commitment that industry partnerships take to develop and sustain.

Universities have not as yet developed genuine partnerships with industry in doctoral education, nor have they have developed many alliances and partnerships between themselves. Each university tends to make decisions regarding doctoral education in isolation from other institutions. The overall pattern of doctoral education remains highly individualistic at both the institutional and academic practice levels.

The result at this time is substantial growth of doctoral programs with each claiming a special niche in the doctoral education market. Universities do not appear to have considered the longer-term sustainability of the growth and fragmentation that is occurring within doctoral education in Australia. It is paradoxical that the higher education reforms instituted by John Dawkins¹ as part of the Hawke-Keating federal Labor government's broader macro and micro economic reforms were to get universities to adhere to a 'standard' definition of a doctorate (Dawkins 1988; 1989). However Dawkins' policy expectation has not been met as each university has created award structure of their own.

The sustainability of this approach for the individual institutions has to be questioned. In addition, such individualism provides industry with little indication of the overall priority of higher education in terms of specific industry-level partnership development. Collaboration between universities is likely to be essential to have sufficient depth of academic talent to become a useful partner to any industry sector or profession. The collaboration could benefit

¹ The higher education reforms instituted by John Dawkins (1988, 1989) had as one of their aims the conversion of a two tiered system of colleges of advanced education and universities to a unified national system of higher education. The reforms specifically involved major consolidation of institutions through amalgamations to form larger units. The amalgamations were to achieve efficiencies and reduce duplication. There were substantial increases in the provision of student places in return for the channeling of resources and effort into a limited range of areas of research focus rather than providing for a broad range of research.

the design and delivery of professional doctorate programs. It is important for universities to pursue collaboration by actively exploring ways to develop alliances for the delivery of programs with industry and/or professional bodies.

RESEARCH WITH AN INDUSTRY FOCUS

Traditional research training has focussed on employment in academic contexts. The development of academic disciplinary knowledge has been a key focus of research training. The traditional PhD pathway, with its well-developed procedures for mentoring progress and achieving rigorous outcomes, has a specific function to fulfil in Australian higher education. Within Australia there appears to be increasing interest in the achievement of different outcomes in terms of both the focus and nature of the research within doctoral training (Neumann 2002).

Broader approaches to research training are catering for a greater range of employment opportunities, including research activities that can be undertaken within the candidates' existing workplaces. However, the rewards of undertaking a professional doctorate tend to be intrinsic, fuelled by a desire to improve professional practice and organisational performance in combination with personal job enhancement and satisfaction (Green et al. 2001). Professional doctorates are dependent on substantial links with industry in order to achieve the same level of recognition of rigour conferred to PhDs. There tends to not be agreement about the precise nature of the research that ought to be engaged with during deeply industry-focused doctoral training, and on the capacities that such training should nurture. Both Edwards (2000) and Maxwell & Vine (1998) indicate that this is not surprising, given that Australian universities have, throughout recent times, exercised responsibility for research training, and this responsibility has been essentially discharged through PhD programs. McWilliam & Taylor (2001) assert that academics see them as an essential feature of the higher education and research training landscape and disciplinary focused academic research remains the touchstone of academic achievement. The increase in the scale and importance of post-graduate research programs is a recent phenomenon, and academics are only now coming to develop and document 'good practice' in this area. It would be quite irresponsible to do otherwise.

Many Australian universities offer 'generic' programs in research skill development; however, such efforts remain at the surface level of engagement with the industry/profession agenda. Yet, as discussed previously, and confirmed by McWilliam & Taylor (2001) what is needed is deep engagement with industry requirements that will lead to the recognition and development of training programs targeted to quite context-specific research capacities. The necessary collaboration within the higher education sector to achieve such deep engagements is essentially absent in the Australian setting. As indicated by Nowotny et al. (2001, p. 35) 'Universities must change, and [they] are compelled now to be more outward-looking, more socially engaged and economically sensitive. Research must of necessity become an economy to be managed both within the university and within the sector as a whole, in its complex interrelationship with the policy and economic environment'. Universities, industries, and professions need to develop well-integrated collaborative research as a means of promoting deep partnerships between industry and higher education. Those responsible within universities for the formulation and administration of doctoral programs must promote the use of research methodologies consistent with deep linkage development within doctoral training programs through the use of case studies, industry placements, and other focussed

methodologies that will interest and engage the professions and industry and provide benefit to a range of workplaces.

THE RANGE OF EXPECTATIONS OF 'RESEARCH'

There is a common understanding in universities, government and industry that the term 'research' in relation to doctoral programs applies only to Doctor of Philosophy or Masters by research programs. The professional doctorate is misunderstood as being, either entirely, or in major part, a coursework degree. Such notions are out of step with the focus on the development of 'knowledge economies'. In fact, according to Maxwell and Shanahan (2001) 61 per cent of professional doctorates in Australia are classified by their institutions as 'research degrees'. The very term 'research training' implies some form of formal instruction, that is, coursework. The now dated binary system of coursework/research is becoming increasingly irrelevant in an environment that values knowledge, regardless of how it is produced. Professional doctorates tend not to be understood as research degrees, even though the majority are. McWilliam & Taylor (2001) indicate that tension exists between the purposes of doctoral training as 'professional development', 'knowledge creation', and 'research capacity' development. Many academics tend to be suspicious of industry involvement as being motivated by a desire for 'quick fix, market-driven solutions', rather than being interested in 'blue skies research' which incorporates the element of serendipity and not predetermined results. Industry may, in general, value the development of 'research capacities', but it is not being engaged in the debate over the purpose of doctoral education in any systematic way. Full advantage of this interest needs to be taken by universities and government.

Industry, government and universities need to revise their assumptions about research training in higher degrees, in order to acknowledge and take advantage of the different contributions and outcomes of all doctoral programs and their participants. The categories used by the universities and government for reporting and monitoring research training need to be adjusted to acknowledge professional doctorates as different doctorates that are just as rigorous as PhDs. Doctoral program coordinators need to ensure that the coursework and research components are closely integrated to provide a cohesive and relevant package to both the candidate, their workplace, and the relevant professional body.

QUALITY ISSUES IN RELATION TO TIME-LIMITED PROGRAMS

Universities have clearly given much attention to issues associated with formal accreditation of alternative doctoral programs, and to the marketing of those programs once accredited. The issue of progression and completion was previously left to individual universities who implemented the programs. Recent changes in government funding to universities have seen a greater portion of funding attached to completion rates. Universities are now compelled to pay greater attention to these issues in order to optimise program sustainability. Rigorous internal accreditation procedures, on their own, are not a sufficient condition to ensure success. The standards of coursework, supervision, and resources all need to be addressed in an ongoing way, as does progression and completion more generally (Neumann 2002).

Universities need to ensure that they have members of the academic community in sufficient numbers and with appropriate training to teach, supervise and examine in ways which are sensitive to, and supportive of, professional doctorates. Industry-focused programs will

benefit significantly from associating them with high status individuals, either as recipients of the award, or as key contributors to the implementation of the program. The number of doctoral program and specialisations within them has grown rapidly. Many of those programs lack a critical mass of students and are at risk in terms of sustainability. Greater collaboration between universities to share resources and reduce unnecessary duplication could reduce this risk. There are also inevitable tensions between delivering on heavily marketed promises and the waste of university resources associated with doctoral candidates' non-completion of their programs.

The focus on rapid completions, encouraged by Dawkins higher education reforms (1988; 1989) defining a doctorate as an award of three years full time duration post Masters degree, has prompted the question of quality. This expectation is acting to marginalise non-traditional part-time, mid-career participants, individuals who are well placed to take advantage of the research capacities they might develop through participation in a doctoral program. If universities focus on funding at the expense of quality and diversity in their doctoral programs then these non-traditional doctoral candidates are unlikely to fulfil their desire to improve professional practice and organisational performance in combination with personal job enhancement and satisfaction (Green et al. 2001). Universities will need to be mindful not to close the door on the very people that the changes to higher education policy in 1988/1989 by Dawkins and later in 1999 by Kemp were meant to advantage by providing many avenues to a university education and creating a much closer link between education and training and higher education. Both federal Ministers of Education, Dawkins and then Kemp, emphasised the perceived link between knowledge creation and economic strength and prosperity. They saw universities and their partnership with industry as being the most effective way to add value to the knowledge system and hence to knowledge acquisition and development. Learning how to learn or meta-learning, rather than learning content, was the expectation of the expansion of approaches to doctoral education and training. According to McWilliam & Taylor (2001) new knowledge and innovation comes from reflexive learning: learning that has an explicit meta-cognitive/meta-linguistic character, turning back up on itself, generating novelty as well as creativity, imagination and flair.

CONCLUSIONS

There are two issues that have been highlighted in this discussion of professional doctorates. The professional doctorate candidate is motivated to improve professional practice and organisational performance, and thus personal job enhancement and satisfaction, and the prime beneficiary is the workplace and the profession. The rewards being pursued are inclined towards the intrinsic end of the continuum. Those undertaking a professional doctorate are in the workforce and wish to enhance their worklife, not pursue an academic career. Putting together work and part-time study postgraduate study for an extended period of time is not an easy task for most professional doctorate candidates, though many are highly motivated to do so.

The primary granting body of doctorates is normally a university. These institutions have designed and implemented professional doctorates as an alternative to the traditional PhD in the absence of deep engagement with the parties for which professional doctorates are intended. The needs of professional doctorate candidates, professional bodies and industry are not fully taken into account, and catered for, in any of the current offerings of professional doctorates in Australia. This fact alone could explain the apathy and reluctance of industry

and professional bodies to more fully support professional doctorates and their staff who undertake them. Universities' failure to fully understand that a professional doctorate should be addressing a different but related market niche than that of the PhD is also a contributing factor to a lack of understanding of professional doctorates in the marketplace and poor completion rates. Changes to higher education policy by successive federal governments in Australia to address poor completion rates in postgraduate research degrees have included time limits for completion, quality audits, efficiency and effectiveness measures, and monetary rewards based on completion rates rather than enrolment numbers. To date these changes have not had an effect on completion rates of postgraduate research degrees in Australia, nor are they expected to in the absence of a culture change in universities. A culture that clings to the ideal of a traditional PhD and makes adjustments to develop *alternative* rather than *different* doctorates will never bridge the gap between the desired professional doctorate and that offered currently.

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The author would like to acknowledge the feedback of Professor Ronel Erwee and Dr George Hay, and the anonymous reviewers for the *International Journal of Organisational Behaviour*.
