

Global Discipline Confusion in Management and Business Related Doctorate Programmes

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Abstract

Professional doctorate programmes have recently emerged around the globe as an alternative to the more traditional research based doctoral programmes and have expanded rapidly to the point where professional doctorates are now the dominant form of doctorate education. This paper aims to shed some light on the growth of professional doctorates and to make some comparisons of professional doctorate programmes with traditional research based doctorate programmes by reporting on research undertaken in Australia. The research demonstrates confusion in the discipline of doctorates globally.

The research includes a case study on a globally significant Doctor of Business Administration (DBA) programme to demonstrate how professional doctorates are impacting on what might be regarded as more traditional doctorate programmes and causing confusion in the market place. Issues and observations arising from the research are discussed. A conclusion reached is that it may be time for Australian universities to consider establishing a new advanced higher research degree that clearly differentiates university research of a very high standard from other research.

Keywords: *Professional doctorate, research doctorate, research higher degree, business, management*

JEL classification: I21, O32

Introduction

According to Verger (1999), the doctoral degree was first established in *medieval Europe* as a license to teach at a *medieval university* but its roots can be traced back to the *early church* when the term 'doctor' was used to refer to church authorities who taught and interpreted the Bible. The term *doctorate* comes from the *Latin 'docere'*, which means 'to teach'. It was shortened from the full Latin term '*licentia docendi*', which means 'teaching license'. The doctorate therefore was originally intended for teachers or academics, and over centuries became the core qualification for academic staff at universities, most notably in the form of the Doctor of Philosophy (PhD) programme.

In more recent times, doctoral programmes offered by Universities around the globe have become diverse in terms of their aims, curriculum and structure and

are no longer considered as solely teaching or research qualifications. For many decades, doctoral programmes have fallen under two broad approaches – **research doctorates** and more recently **professional doctorates**. While such a delineation of doctoral programmes is expedient and until recently has stood the test of time, when one investigates deeper into both categories, the division is not as simple as it might first appear and confusion arises around the discipline of doctorates.

The ‘Bologna Process’, a process whereby European countries are working together on higher educational systems, was established to stimulate discussion on degree structures and is driving reform within the signatory countries. The process seems likely to have a profound effect on the development of higher education systems globally, as observers from other countries are taking an interest in the Bologna reform process and considering how their own educational systems can be more closely aligned with possible ‘Bologna’ outcomes to establish global norms in education.

The three overarching objectives of the Bologna process are:

- the introduction of the three cycle system (bachelor/master/doctorate),
- establishing consistent quality assurance systems, and
- recognition of qualifications and periods of study.

In respect to the doctoral level of the three cycle system, the following comments were made concerning doctoral level study by a 2005 European Higher Education Area (EHEA) Communiqué:

To achieve these objectives, doctoral level qualifications need to be fully aligned with the EHEA overarching framework for qualifications using the outcomes-based approach. The core component of doctoral training is the advancement of knowledge through original research. Considering the need for structured doctoral programmes and the need for transparent supervision and assessment, we note that the normal workload of the third cycle in most countries would correspond to 3-4 years full time. We urge universities to ensure that their doctoral programmes promote interdisciplinary training and the development of transferable skills, thus meeting the needs of the wider employment market (EHEA, 2005, p.4).

Note the emphasis in the communiqué that doctoral programmes are expected to:

- consist of a core component that concerns the advancement of knowledge through original research,
- consist of interdisciplinary training and the development of transferable skills. That is, the programme should not exclusively be concerned with research, and should have some advanced taught component, and
- be of 3-4 years duration of full time study. The basic EHEA framework regards one academic year to correspond to 60 European Credit Transfer and Accumulation System (ECTS-credits) that are equivalent to 1,500-1,800 hours of study.

The aim of this paper is therefore to unravel some of the confusion in the discipline of doctoral education, compare Bologna principles with recent trends in

both research and professional doctorates and provide some data on outcomes from a research project undertaken in Australia that suggests there is confusion in the marketplace on doctoral education and that existing doctoral programmes may require close examination and change if they are to meet Bologna expectations.

The research doctorate

In a traditional research doctorate, candidates undertake a major and rigorous research project that culminates in the completion of a significant thesis, usually in excess of 60,000 words. Criteria for the award of research doctorates varies throughout the world, but typically requires the submission of a substantial body (thesis) of original research undertaken by the candidate that makes a new contribution to the body of knowledge. The traditional and most widely known research doctorate is the Doctor of Philosophy (PhD). However, even the structure of the PhD programme varies between countries. For example, there are two distinct types of PhD programmes, generally known as the British model and the American model.

British model

Most doctorates granted by British universities are research doctorates in the sense that their main (and in most cases only) component is the submission of a thesis of original research, examined by an expert panel appointed by the university. Entry into this type of doctorate is usually on the basis that the candidate already has some research training and experience like an honours degree or a research masters qualification. There are no coursework or taught components to the curriculum. Note that in the purist sense, the British model does not meet the Bologna expectations of interdisciplinary training and the development of transferable skills.

American model

In the United States of America, there is usually a formal taught component of the doctorate program, typically consisting of advanced graduate level courses in the subject of the doctorate, as well as training in research methodology before the candidate proceeds to the research component of the degree. The research component is therefore typically of a smaller scale than those undertaken in the British model and the outcome sometimes referred to as a 'dissertation' rather than a 'thesis'. A dissertation usually being less than 40,000 words in length. Note that the American model meets all Bologna expectations of a core component of original research, interdisciplinary training and the development of transferable skills.

The distinctions between the research doctorates undertaken under the British and American models have existed for some decades, are well known and understood. Both models are accepted internationally as research degrees. However, more recently, traditional doctorate degree nomenclature like the generic PhD that

was once universally accepted as a research degree has been debased and less traditional PhD programmes are emerging that contain substantial course work in the degree structure, contain little if any original research and may no longer meet government criteria to be classified as a research degree. As demonstrated in the research to follow, in Australia for example, for a doctorate to be classified officially as a research award, it must contain at least a 66% research component. In reality therefore, PhD programmes with a minor or no research component are more like professional doctorates.

The professional doctorate

Professional doctorates mostly attempt to connect the doctoral experience with the demands of an industry. The degree structure enables this by making more explicit connections with professional workers and their work places and tailoring the structure and curriculum of the doctorate and outcomes to the particular needs of an industry. The candidates for most professional doctorates are not engaged primarily in scholarly or original research, but rather in a profession and advanced course work relevant to the industry or field of study often dominates the curriculum.

For example in many countries, numerous fields of study have professional doctorates, such as *law, education, medicine, dentistry, nursing, business, optometry, chiropractic, pharmacy, physical therapy, psychology, health science, public health.*

Dependent on the structure of the professional doctorate programme, the professional doctorate may or may not have course work that provides research training in research design and methodology. It may or may not have a research component that concludes with a dissertation or thesis. It may consist of purely advanced coursework. Professional doctorate programmes are also usually of less than 3 years full time duration of study and often can be completed in less than 2 years of full time study.

This paper examines in particular the emergence of professional doctorates in Australia, the perceived and actual differences and similarities between research and professional doctorates and the confusion created when attempting to compare research and professional doctorates across the globe. A Doctor of Business Administration (DBA) professional doctorate programme is examined as a case study to illustrate points.

History of professional doctorates in Australia

Pearson, Evans and Macauley (2008) provide a detailed review of growth in doctoral education programmes in Australian in recent decades. They report that professional doctorates emerged at the time of reforms (NBEET 1989, 1990) that aimed to create a unified national system of higher education.

A report from Green, Maxwell and Shanahan (2001) contains evidence that developments in Australia were similar to those in the United Kingdom with both countries have governments having similar agendas to make research training more industry relevant. Universities saw professional doctorates as means of raising revenue as the awards were expected to have a high degree of market appeal. In some discipline areas they were also seen as a way to quickly increase the number of staff with doctorates to address university staffing shortages.

While the number of individually named professional doctoral awards has increased overall, total enrolment numbers have remained relatively low. This lack of substantial growth in enrolments is contrasted with PhD enrolments over the same period that have continued to climb. Indeed Evans et al. (2005), using data from a bibliometric study, conclude that the PhD has become 'more flexible' and has produced a substantial number of graduates in the various professional areas that might be regarded as the obvious domain of professional doctorates.

According to Ellis and Anderson (2009), neither historical nor current data on professional doctorate programmes is easy to collect. These programmes are mostly fee-paying and not under government subsidy. As a result, there is also a degree of commercial competition between universities and therefore a reluctance to publish, or even release informally, the details of programmes. Unlike PhD programmes, the Australian government does not directly fund enrolments in most professional doctorate programmes, for which Universities charge students substantial fees. Entry requirements, fees and program structures are set by individual universities. The only government data collected for professional doctorates are completion statistics and only for those programme that have a two thirds (66%) or greater research component. Professional doctorate programmes that have a research component of 66% or more are formally classified by the Australian government Department of Education, Employment and Workplace Relations (DEEWR) as a doctoral research degree. Therefore, research based professional doctorate completion statistics are added to research based PhD completions and the total is used as a factor in calculating the overall level of research funding provided to each university by the Australian government.

Methodology

The empirical evidence collected for this paper derives from a research study that utilised a mixed methodology research design (Leech and Onwuegbuzie, 2009). A systematic content analysis of secondary data sources and a case study were used as the primary methodologies. Australian university websites were used as the primary source of data. Systematic searches of Australian university websites were conducted by state and territory.

The aim was to identify and catalogue information on the types of doctorates offered by each university. General details on PhD offerings (research, coursework and 'named' or 'tagged' doctorates where the specialty is designated on testamurs) were also collected. Clarification of details concerning admission

criteria, research versus coursework components and other contextual information was obtained by a combination of email, phone and face-to-face interviews.

The data was entered into an SPSS statistical package for analysis. Descriptive statistics were extracted and analysed. In addition to the quantitative data collected, a single in-depth case study was undertaken on a nationally significant Doctor of Business Administration (DBA) program.

Results and discussion

Table 1 summarises the data with the number of named professional doctorates grouped into major disciplines, listed for each university.

**Professional doctorate offered by Australian universities
and major discipline areas**

Table 1

University	Arts	Social Sc /Law	Education	Business	Health Sc /Medicine	Science/IT	Total
Western Australia	3	2	1	1	7	5	19
Latrobe		3	1		12	1	17
Royal Melbourne Institute of Technology	2	2		3	1	4	12
Curtin	5		1	1	2	2	11
Sydney	2	3	1	1	2	2	11
South Australia			1	1	7	1	10
Melbourne	1	1	3		4		9
Victoria			1	1	6	1	9
New England		1	1	1	3	2	8
Queensland University of Technology	1	3	1	1	2		8
Ballarat	1		1	1	3	2	8
Wollongong	6		1		1		8
James Cook			1		5	1	7
Monash		1		1	5		7
Griffith	1	1	1		3		6
University of Technology Sydney	1	1	1	1	2		6
Flinders	1	1	1		1	1	5
Charles Sturt	1	1	1		1	1	5
Swinburne				1	2	1	4
Queensland					4		4
Edith Cowan	1			1	1	1	4

University	Arts	Social Sc /Law	Education	Business	Health Sc /Medicine	Science/IT	Total
Notre Dame				1	3		4
Adelaide			1	1	2		4
Deakin				1	3		4
Macquarie	2		1	1			4
Murdoch			1	2			3
Canberra	1			1		1	3
Charles Darwin			1		1	1	3
Newcastle				1	2		3
Southern Queensland			1	1		1	3
New South Wales	1		1		1		3
Australian National University	1	1			1		3
Sunshine Coast	1			1			2
Australian Catholic	2						2
Central Queensland			1	1			2
Southern Cross			1	1			2
Tasmania			2				2
Western Sydney	1						1
Bond		1					1
Total	35	22	28	27	87	28	227
Percentage	15.5	10	12	12	38.5	12	100

Source: Ellis and Anderson, 2009

As can be seen from Table 1, all universities offered at least one professional doctorate. For those with multiple offerings there is no common pattern. For example, those universities offering eight different professional doctorates may concentrate them in three different discipline areas or spread them across four or five discipline areas. Only two universities (University of Sydney and University of Western Australia) offer at least one professional doctorate in all six disciplines, while another eight universities offer professional doctorates in five of the six areas. The majority of universities are selective and offer professional doctorates in three or fewer major disciplines.

In each of the major disciplines there is a range of professional doctorate titles as shown in Table 2. These titles indicate the diverse foci of the programmes. Also, nomenclature is not consistent across universities. In some universities named or tagged PhDs were present which appear to be more like professional doctorates. These occur in several discipline areas.

Major discipline areas, professional doctorate titles and tagged PhD's

Table 2

Major discipline (total no. of offerings)	Professional Doctorates titles (with tagged PhD's noted)
Health Science/ Medicine (87)	Doctor of Midwifery, Doctor of Nursing, Doctor of Psychology, Doctor of Psychology (Clinical and Clinical Neuropsychology), Doctor of Surgery, Doctor of Psychology (Forensic).
Arts (35)	Doctor of Creative Arts, Doctor of Visual and Performing Arts, Doctor of Music, Doctor of Music Arts and variations that cater for Theatre and Dance under the broader title of performing arts. Theology (Doctor of Ministry). Tagged PhD, that is Doctor of Philosophy (Creative Arts) and variations available at some universities.
Science/IT (28)	Doctor of Information Technology, Professional Doctorate in Science (Agriculture), Professional Doctorate in Science (Computer Science), Professional Doctorate in Science (Science).
Business (27)	Doctor of Business Administration (DBA), Doctor of Commerce, Doctor of Economics. Tagged PhD, for example Doctor of Philosophy (Economics) and variations available at some universities.
Education (26)	Education Doctorate (EdD) and Doctor of Education, tagged PhD, for example. Doctor of Philosophy (Education) available at some universities.
Social Science/ Law (22)	Social Sciences, Law and Politics. Tagged PhD, for example Doctor of Philosophy (Social Work) and variations available at some universities.

Source: Ellis and Anderson, 2009

As can be seen from Table 2, professional doctorates are not evenly distributed across the major disciplines. Notably, almost half of current offerings are in health sciences and medicine area. Some offerings are unique to a single university.

Although the highest number of professional doctorates was in the health sciences and medical discipline it is interesting to note that ten out of the 35 universities do not offer professional doctorates in this area. The lowest discipline group of offerings was in social science and law (22 or 10%). Interestingly 21 universities currently have no offerings.

Data on professional doctorates in specific discipline areas was also examined on a state-by-state and territory basis. The only real anomaly in the range of provision was the relatively high number of health science and medical professional doctorates in the State of Victoria.

The internal structure of professional doctorates

Studies in the 1990s revealed that one of the main differences between professional doctorates at different universities and in different disciplines was the

relative proportion of research work and coursework (Maxwell & Shanahan 1996). While these differences still exist, the publically available information on professional doctorates does not always make clear how much original research or coursework applies in a specific program (and what options the potential candidate might have). In general the majority of professional doctorates for which detailed course information could be obtained would be classified by the Australian government as research degrees. That is, at least two thirds (66%) of the work to be completely was to be research culminating in a thesis. Most had coursework components, usually scheduled early in the programme.

Admission requirements are often not clearly or fully set out in online sources. It is a matter of locating and consulting current university rules (or phoning the local contact person) and even then a number contain discretionary clauses meaning the process may not be black and white. Course rules vary within and across universities.

Most universities surveyed specify a minimum of two years full-time (or equivalent) study and a maximum of four years full-time (or equivalent) study to complete a professional doctorate. Such time provisions means that these professional doctorates do not meet the Bologna principles that require doctoral degrees to be a minimum of three years full time study.

The emergence of the Doctor of Business Administration (DBA) as a professional doctorate

This section investigates a nationally significant Doctor of Business Administration (DBA) programme as an example of a professional doctorate. DBAs emerged in America in the 1970s and 1980s and then in the United Kingdom from the early 1990s. According to Sarros, Willis and Hardie (2004), the first university to offer the DBA in Australia was Victoria University of Technology in 1993. Presently, the universities in Australia listed in Table 3 offer a DBA programme.

Universities in Australia that offer DBA programmes

Table 3

Canberra University
Central Queensland University
Charles Darwin University
Charles Sturt University
Curtin University of Technology
Deakin University
Gibran Business School South Australia
Macquarie University
Monash University
Murdoch University
University of Newcastle
Royal Melbourne Institute of Technology

Southern Cross University Swinburne University of Technology University of Western Australia Victoria University University of South Australia University of Southern Queensland University of Wollongong

Comparisons between DBA programmes are difficult as DBA programmes offered by Australian Universities are diverse in terms of both curriculum and structure. Most Australian DBA programmes are not classified by the Australian government to be research degrees due to high coursework components. It is worth mentioning again that Australian government regulations require the research component of the doctoral degree to be in excess of 66% of the program in order for a degree to be officially classified as a 'research' degree.

Entry requirements for DBA programmes

Erwee (2004) reviewed the entry requirements for DBA programmes across Australia and found that generally, the entry requirement consisted of an MBA or equivalent professional business qualification with a satisfactory grade point average. Little has changed for entry requirements over the years but generally, in addition to qualifications, most universities require the applicant to have some years of experience as a manager or professional to ensure that only experienced individuals are admitted to the program.

Differences between the DBA and PhD

Since the inception of DBA programmes globally, much has been written to distinguish the DBA from the traditional PhD that might be undertaken in the business or management discipline. However, such comparisons are problematic as PhD programmes, like DBA programmes, are different across the globe and subject to wide variations in their nature and structure as was raised earlier in this paper.

There is also a recent trend where PhDs are moving away from a generalist degree (and the generalist nomenclature of PhD). Many universities are awarding PhDs that include specific nomenclature. For example, the University of Canberra has a Doctor of Philosophy in Applied Science and a Doctor of Philosophy in Commerce. Table 4 shows that Harvard University (2009) attempts to find a difference in the DBA and PhD.

Apparent contrast between DBA and PhD at Harvard

Table 4

DBA: Power in Practice
Combining academic rigor and managerial relevance, the DBA program provides students with the flexibility to apply a broad range of disciplines and research methods to their chosen area of study. In addition, students benefit from the wide range of faculty expertise in management fields, such as accounting and marketing, and multiple opportunities to actively pursue field-based research.
PhD: Disciplinary and Management Expertise
The PhD programmes are offered jointly by the Graduate School of Arts and Sciences (GSAS) and Harvard Business School. They combine the disciplinary expertise of a GSAS department (e.g. Economics, Psychology) with the management expertise of HBS. As a result, students build a strong foundation in a particular discipline and then apply those methods and approaches to their research on relevant managerial problems.

Source: Harvard web site

While the headings for the descriptions of the two awards endeavour to promote a 'practice' element for the Harvard DBA, in reality, the descriptors for both are difficult to separate and do not distinguish one from the other. Accordingly, there is the 'theory of perceived differences' between PhD and DBA programmes but the 'actual differences' for at least some DBA programmes, particularly those classified as research degrees, seem to be negligible.

Perry and Cavaye (2002) provided the rationale for the differences between DBAs and PhDs and listed three major distinctions between them in the business/management discipline. These were:

- qualifications and knowledge on entry into the program
- focus of the program
- the nature of the doctoral report..

As outlined earlier, entry into a DBA usually requires an MBA or equivalent, as well as significant management and/or professional experience. PhDs usually require applicants to have considerable research experience, usually a first class honours or a research masters degree. This differentiation has not changed and remains a distinct difference between the DBA and PhD. The case study example DBA in this paper provides the research training for candidates as coursework units in the early part of the award. This research training is meant to bring DBA candidates to a rigorous research standard prior to them undertaking their research project and thesis.

The second difference identified by Perry and Cavaye (2002) between a DBA and a PhD was the focus of the program. The DBA was said to be a professional doctorate for *managers or management professionals*, focusing on an executive's development and his or her practice, while the PhD was primarily for academics. In practice DBA research projects are very similar if not identical in nature to the research

projects undertaken by PhD candidates in the business and management discipline. Both degrees require a 'contribution to knowledge' and projects are inherently applied in nature compared to the more theoretical thesis undertaken in PhD programmes in other non business or management disciplines.

The third difference was said to focus around the nature of the doctoral report itself, with the DBA thesis perceived as shorter than a PhD in length and focused on a management problem rather than the literature. The author's experience as a member of both PhD and DBA examination committees over many years and as a supervisor of candidates for both awards does not support such a proposition. According to Phillips and Pugh (1994), a PhD is normally about 50,000 to 60,000 words in length with a maximum length of 100,000 words. The research undertaken for this paper found that the average length of a DBA thesis was around 60,000 to 70,000 words with the occasional thesis being up to 90,000. As both DBAs and PhDs can be longer or shorter than the recommended word length, any difference in length does not serve as a distinguishing feature.

The nature of the thesis is also no longer a point of difference. Business and management programmes at all levels by necessity must have a theory-practice link otherwise the business and management faculty will not be useful to the stakeholders it claims to serve. In summary, Table 5 details the similarities and differences between the case study DBA and PhD (for business and management only).

As shown in Table 5, the only significant difference, other than the funding source, is the entry requirements for the two awards, the DBA requiring a Masters degree or equivalent and the PhD requiring research experience, usually first class honours or equivalent.

**Differences and similarities between the case study DBA and PhD
in business and management**

Table 5

	DBA (classified as a research degree as research component greater than 66%)	PhD
Similarities		
• Contribution to knowledge	• Yes – required as one of the examination criteria	• Yes - required as one of the examination criteria
• Research project (thesis)	• Rigorous	• Rigorous
• Supervisor	• Doctorally qualified senior academic	• Doctorally qualified senior academic
• Focus	• Usually on applied business issues/problems in the field	• Usually on applied business issues/problems in the field
• Thesis word length	• In the range of 60,000 to 90,000 words	• In the range of 60,000 to 90,000 words

<ul style="list-style-type: none"> • Examination 	<ul style="list-style-type: none"> • 3 examiners two of which must be external to the university 	<ul style="list-style-type: none"> • 3 examiners two of which must be external to the university
<ul style="list-style-type: none"> • Governance 	<ul style="list-style-type: none"> • Governed under the Higher Degree Committee (Research) 	<ul style="list-style-type: none"> • Governed under the Higher Degree Committee (Research)
Differences		
<ul style="list-style-type: none"> • Entry requirements 	<ul style="list-style-type: none"> • MBA degree/management experience 	<ul style="list-style-type: none"> • Research experience usually honours or equivalent
<ul style="list-style-type: none"> • Funding 	<ul style="list-style-type: none"> • Fee paying 	<ul style="list-style-type: none"> • Funded under the government's Research Training Scheme (RTS)

Source: Miller 2009, p. 72

Nature and motivation of candidates

The nature and motivation of candidates who wish to undertake a DBA are as diverse as the nature of the topics under research. However, a number of categories of candidates can be distilled and these are discussed briefly below. There also appears to be similarities in the applicants attracted to DBAs and PhDs in the business and management discipline. Traditionally, applicants for business and management related PhDs are not directly from undergraduate awards, as is the case in the hard sciences. Usually, applicants apply to study part-time and not full-time as they are mid level executives working in industry. PhD applicants are much more likely to already have had some business or professional experience and therefore, are similar to DBA applicants, who similarly have business or professional experience and bring with them empirical understanding of organisations and of business issues.

As research classified DBAs like the case study programme are afforded the same level of recognition as PhDs by the government in Australia, these DBAs are increasingly being considered as an alternative to the PhD as a doctoral and research training award. Consequently, many of the candidates enrolling in the research DBAs are existing academics from other Australian and overseas universities. They are mature academics being pressured to obtain their doctoral qualification or are early career academics who have entered academe from industry and are looking for a relevant research degree that will be acceptable to their institution as a research doctorate for employment and promotion reasons.

A further high percentage of candidates are consultants from the private and public sectors who are looking to test models they have developed in their practice and which they are using in industry. Alternatively, the consultants are seeking to increase their own personal credibility with a doctoral qualification that they consider will increase the marketability of their skills and knowledge to better compete in a very competitive market place.

However, like the PhD in business and management, the majority of applicants are typically either interested in progressing their understanding of complex management issues or have a plan to perhaps move into academia when they burn out, have achieved all they wish to in their professional role or wish to semi-retire.

Nature of research and research topics

The research undertaken in the case study DBA programme is methodologically diverse ranging from ethnography and grounded theory to traditional surveys and structural equation modelling. The topics under study are equally diverse. Research undertaken on over 250 completed theses from the case study DBA programme is discussed here. For convenience, the areas of study have been combined and categorised into 13 sub-disciplinary areas. The percentage of theses undertaken in each sub-disciplinary area is shown in Table 6.

As can be seen from Table 6, the areas of research are diverse but dominated by projects in the related fields of human resources and organisational development and behaviour. Sales and marketing is the next significant area of research followed by entrepreneurship, innovation and new venture creation.

Topic areas and percentage of candidates researching in the area

Table 6

Sub-disciplinary area	Percentage of candidates undertaking projects in this area
Organisational development and behaviour	17.0
Human resources and employment relations	13.0
Sales and marketing	12.0
Entrepreneurship, innovation and new venture creation	10.0
Strategic management	9.0
Small business management	7.0
MIS and ecommerce	7.0
Quality management	6.0
International and comparative management	5.0
Knowledge management	5.0
Accounting and finance	5.0
Technology management	3.0
Project management	1.0

One can only speculate why the fields of human resources and organisational development and behaviour are in such demand. Perhaps it is due to the candidate's own experience related to people and organisational issues. Typically, mid-level executives spend most of their time on people issues or bringing about needed change and are therefore interested in progressing their understanding of complex management issues around change and leadership.

Observations and issues arising from the research

There are a number of observations arising from the research. These are listed here as issues to be further investigated by those responsible for aligning doctoral programmes to the Bologna principles:

- Most professional doctorates do not meet the Bologna guidelines for a 3-4 year full time programme. Traditionally, professional doctorate can be completed in a shorter time frame, often in around 2 years of full time study. This may mean that many professional doctorates will not be considered as 'third cycle system' programmes and may fall between the second and third system in the Bologna process.
- PhD programmes that are mostly coursework may not meet the Bologna guidelines if the curriculum of the programme does not consist of a core component that concerns the advancement of knowledge through original research.
- PhD programmes that strictly follow the British model and consist entirely of a research thesis and do not attempt interdisciplinary training and the development of transferable skills may not meet the Bologna guidelines.
- There is an increasing number and variety of professional doctorates being offered by universities and traditional PhDs are being re-branded to include speciality research areas designated on testamurs in the title of the award, with one example being the Doctor of Philosophy (Agriculture).
- Generalist nomenclature at the doctoral level, particularly for the PhD, is being overtaken by specifically named PhD awards, bringing about confusion as to what both PhD and professional doctorates are and claim to be.
- Many professional doctorates are in fact research doctorate degrees and are formally classified as such by the Australian government, further confusing applicants for these programmes.
- The meaning and value of the PhD vis-à-vis the professional doctorate is being confused to the point that any real distinction is becoming meaningless. Anyone interested in assessing whether a doctorate of any type is a research award or a coursework award needs to go beyond the title of the award on the testamur and critically assess the transcript for the percentage of the research component.

Conclusions

There is confusion in the discipline of doctorates both in Australia and globally. Traditional doctoral awards like the PhD are being outnumbered by professional doctorate degrees and changes to the generic nature of the PhD. Re-branding to include a speciality research area designated on PhD testamurs is muddying the

once-clear waters. There appears to be a significant change in the direction universities are heading in regard to offering doctoral programmes.

In the business and management discipline, much of the purported distinction between the DBA and PhD has been lost (if it ever was really there) as the nature of applicants for these awards and the nature of research projects undertaken converge.

Perhaps, it is time for Australian universities to consider establishing a new, advanced higher research degree that clearly differentiates university research of a very high standard from other research higher degrees. Such is the case in other countries including the *UK*, *Ireland*, and some *Scandinavian* countries. These countries have a higher tier of advanced research doctorate awarded on the basis of very high standard research and scholarship (for example the *Doctor of Sciences* (DSc/ScD) and *Doctor of Letters* (DLitt/LittD) degrees. This more advanced award might then become the standard or *requirement* for a career as *an academic or researcher* in most *fields*, as was the original intention of the '*licentia docendi*'.

Finally, the research raises important questions about doctorate programs generally that remain unanswered. For example, should the professional doctorate's sole aim be to produce quality researchers or is the sole aim to produce well-rounded practitioners/professionals? Are the aims compatible? Does the professional doctorate pose a risk to PhD programmes. If so, how? Should these programs be clearly differentiated or should they be encouraged to achieve the same outcomes and standards? How will the Bologna process impact on the structure of these programmes as universities attempt to gain global recognition for the awards. I leave these questions for debate and discussion.

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