A systematic review of research on professional doctorates

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Abstract

Alongside the growing numbers of professional doctorate programmes being offered within universities in the past 20 years, there has been a growth in the academic literature associated with various aspects of these research degrees. This systematic literature review draws on the evidence of 193 academic papers to map out the existing academic knowledge about professional doctorates and highlight the gaps that this special issue aims to address. We use a simple vote-counting approach to categorizing the identified papers, considering: the type of professional doctorate studied, the country in focus, the main themes explored, the research methods used and the year of publication. This review highlights the need for academic work in this area to move beyond individual case studies of practice on programmes towards developing principles of practice for professional doctorates as a whole. This special issue hopes to start that academic conversation.

Keywords: professional doctorates; systematic literature review

Introduction

This special feature of the *London Review of Education* marks the twentieth anniversary year of the doctor in education (EdD) programme at UCL Institute of Education. As professional doctorate programmes, such as our own, are offered more widely by other higher education institutions, and now have an established history in British higher education, it is timely to reflect on the past 20 years in terms of what we have learnt as an academic community about professional doctorates. This systematic literature review seeks to scope out the academic literature on professional doctorates and map areas that could be further researched. Many, but not all, of these areas have been explored in this special issue.

Building on prior studies such as by Bourner *et al.* (2001), Mellors-Bourne *et al.* (2016) report that in the past five years there has been continued growth in the number of universities in England offering professional doctoral programmes, especially within post-1992 institutions. The main professional doctorates found were EdD, DBA (doctorate in business administration) and DClinPsy (doctorate in clinical psychology). Although there were growing numbers of professional doctorates, all were based in areas where a contribution to professional practice can be expected. Despite this increase in the scope of professional doctorates, it was found that many had very small cohorts and significant numbers of programmes were not recruiting. Mellors-Bourne *et al.* (2016) also report a lack of evidence of the contribution that professional

doctorates make, as well as flagging concern about the perceived difference in quality between these and the PhD. Alongside the growing number of professional doctorate programmes being offered within universities worldwide in the past 20 years, there has been a growth in the academic literature associated with various aspects of these research degrees. Mellors-Bourne *et al.* (2016) focus on the programmes offered and counting the numbers of students thereon, as was the brief provided by the funder, the Higher Education Funding Council for England (HEFCE).

This systematic review will seek to take a broader approach to the literature review than this report, and seek to explore the academic literature to identify gaps in the knowledge on professional doctorates and propose potential areas for future research. This is undertaken by mapping the development in the academic literature since the seminal book by Scott *et al.* (2004) attempted to start the academic discussion about professional doctorates and their emerging pedagogy. This systematic literature review draws on the evidence of 193 academic papers to map the existing academic knowledge about professional doctorates and to highlight the gaps that this special issue aims to address. A list of the 193 papers is provided in the Appendix.

Methodology

Our search for this study involved a systematic review of studies of professional doctorates. Similar to earlier studies on meta-analysis by Yerrabati and Hawkes (2014, 2015, 2016), the review stages used in this study were informed by the guidelines set by three sources: Campbell and Cochrane Collaboration guidelines on systematic reviews in health care and social policy (Higgins and Green, 2011); Centre for Reviews and Dissemination (CRD, 2009); and Evidence for Policy and Practice Information and Coordinating Centre (EPPI-Centre, 2010) at UCL Institute of Education.

We started our search by using a list of pre-established search criteria to identify all studies in the English language on professional doctorates. We did this in two stages: the first stage involved identifying relevant databases to uncover both published and unpublished studies; the second stage involved listing keywords for the search. Keywords such as professional doctorate, doctorate, EdD and education doctorate were used in our search in addition to the list of individual professional doctorates. The list of professional doctoral programmes was drawn from the Mellors-Bourne *et al.* (2016) report for HEFCE on professional doctorates (Mellors-Bourne *et al.* 2016: 10, Table 2). Full names and acronyms were used in the search, for example 'EdD' and 'doctor in education'.

In hindsight, this selection of search terms based on Mellors-Bourne *et al.* (2016) may have led to the exclusion of literature that does not use UK programme names. For example, in the USA, education professional doctorates are commonly referred to as education doctorates. This could have led to the exclusion of important works, and therefore a robustness check was undertaken to extend the search terms to include 'education doctorates'. This robustness check suggested one more theme could have been identified if this had been included, that is the debate about the relative status of the professional doctorates and the PhD. Therefore, within the results below we may have under-reported the literature from the USA and focused on this debate. Given the nature of the systematic literature review approach, we have not extended the analysis to include this omitted field, to avoid narrative review bias. However, we note that this area of the literature may be under-reported in the results below.

For published studies, we used the following databases: EBSCO host, Science Direct, Web of Knowledge, Emerald, Age, Taylor and Francis, and Wiley Online. In addition to these, for unpublished studies or grey literature, Google Scholar was used. We searched all of these

databases, using the predefined list of keywords for professional doctorates, in the title, abstract, text and keywords. While the date of publication for the search was left open, only studies published in the English language were included. In total, 61,776 studies were obtained from various databases, as follows: Google Scholar (94), EBSC Host (1,489), Science Direct (8,346), Web of Knowledge (1,077), Emerald (93), Sage (738), Taylor and Francis (49,554) and Wiley Online (385). After reading the title and abstract of the studies, as well as eliminating duplicates, 193 studies were identified as being focused on professional doctorates.

These 193 studies were then categorized using a simple vote-counting approach, mentioned briefly in Gough *et al.* (2017). While there is some criticism of this approach for looking at quantitative data, where vote counting is used to look at the number of positive and negative numbers found, this approach is considered appropriate for this systematic review as the data generated was from qualitative data. In this study, we provide the frequency counts (simple vote-counting approach) to categorizing the identified papers, considering: the type of professional doctorate studied, the country in focus, the main themes explored, the research methods used and the year of publication. These groups were drawn on based on the type of studies identified and the content of those studies. Most of the studies identified were programme or institutional case studies providing a broad range of information.

Results

Type of professional doctorates studied

Mellors-Bourne *et al.* (2016) identified the main 'brands' for professional doctorates in terms of the number of students on programmes. These programmes were the doctorate of education (EdD), doctorate in business administration (DBA) and doctorate in clinical psychology (DClinPsy). The first grouping considered for the 193 papers identified was which professional doctorate the papers studied. Table 1 presents the distribution of the literature by the type of professional doctorate explored.

Table 1: Distribution of the literature by type of professional doctorate

Types of professional doctorate studied	Frequency	Percentage (%)
Prof doc (professional doctorate)	62	32
EdD (doctor in education)	76	39
DBA (doctor in business administration)	10	5
DNP (doctor in nursing)	13	7
DSW (doctor in social work)	9	4
Practice-based doctorates	7	4
Other professional doctorates	16	9
Total	193	100

Of the main brands identified by Mellors-Bourne *et al.* (2016), the EdD is the most studied. The EdD is the main focus in 39 per cent of the papers, and also the true main focus of most of the papers that are labelled as 'Prof doc' (professional doctorates). In total, more than 60 per cent of the papers found focused their study on the EdD. For the other brands, the literature is less developed. The DBA is little studied, with only 5 per cent of the field, and nothing was found

regarding the DClinPsy. The focus in the literature on the EdD is unsurprising, given that higher education research is most strongly associated within education departments and faculties, and it is in these departments and faculties that EdD programmes have their home.

In this special issue, we had hoped to move beyond the case studies of individual EdD programmes to draw broader links between professional doctorates. Despite our best efforts in approaching potential authors with knowledge of other professional doctorates, this special edition yet again is largely drawn from those with a focus on the EdD. This suggests that at this time, to generalize about professional doctorates could be difficult because of the dominance in the literature on the EdD. However, given the number of papers using case studies on the EdD, it may be possible to start to build more general principles for doctorates in education. More case studies on other types of professional doctorates could be fruitful, especially for the other two key brands, the DBA and DClinPsy. This is our first identified gap in the literature.

Country of professional doctorates studied

While PhD programmes are found worldwide, professional doctorates are found in a narrower group of countries. In terms of the literature, this pattern of a smaller group of countries is also found. The country in which the study of the professional doctorates was undertaken is presented in Table 2. This is the second grouping considered for the 193 papers identified on professional doctorates.

Table 2: Distribution of the literature by country of study

Country	Frequency	Percentage (%)
UK	60	31
USA	85	44
Australia	33	17
Other	15	8
Total	193	100

The literature is largely dominated by papers based in three countries: the USA (44 per cent), the UK (31 per cent) and Australia (17 per cent). Very little has been written outside these three countries, and these are the same three countries in which professional doctorates are most dominant. The growth in professional doctoral programmes in English higher education institutions found by Mellors-Bourne *et al.* (2016) has not been repeated worldwide. While recent years have seen the development of professional doctorates in East Asia, the dominance of the PhD globally has been largely unbeatable. Mellors-Bourne *et al.* (2016) refer to this in terms of the perceived quality difference between professional doctorates and PhDs.

This special issue has encouraged papers from outside the usual areas of study: the UK, the USA and Australia. Papers are included herein considering international students' views, with contributions from international students from Israel, India and Ireland. In addition, one contribution from an author in Singapore has been included. This is clearly an important dimension of study to explore, even for EdD programmes. This would enable the development of more general principles of professional doctorates with more worldwide appeal. Clearly there is still scope to explore the development of professional doctorate programmes outside the UK, the USA and Australia.

Themes studied

Our third grouping concerns the aspects of professional doctorates that have been considered in the individual papers. This grouping helps us to identify which aspects of professional doctorates are less well investigated, as well as those where the literature has a broad consensus. Much of the literature identified follows a case study research design. Such papers often report what we do on our programme and why it is considered valuable. This leads to a wide diversity in the material covered within individual papers. As this research design encourages the exploration of many themes, those identified within each paper have been arranged in four main groups, as set out in Table 3.

Table 3: Distribution of the literature by theme explored

Country	Frequency	Percentage of literature (%)
Value of professional doctorate to institution	21	6
Faculty reflection	5	
Faculty view	10	
Policy	6	
Programme content	208	55
Overview of professional doctorates	49	
Overview of local programme	54	
Assessing the programme	8	
Pedagogy	9	
Curriculum	43	
Requirements of programme	3	
Quality assurance	2	
Practical relevance	40	
Research degree aspects	35	9
Methodology	6	
Theses	12	
Supervision	8	
Dissemination	2	
Ethical issues	1	
Attrition, retention and completion	6	
Student experience	113	30
Supporting students/mentoring	15	
Student experience	46	
Student perception	12	
Student motivation	6	
Student attitude	2	
Student training	4	
Student challenges	2	
Student learning	11	
Student engagement	5	
Student assessment	10	
Total	377	100

The first panel presents the proportion of the literature and subgroups within the group that considers the value of professional doctorate programmes to the institution. This topic covers 6 per cent of the literature. As found by Mellors-Bourne *et al.* (2016), we did not identify any academic literature on the wider effect of professional doctorates, beyond the impact on either the individual and/or the institution. Much is claimed in terms of anecdotal evidence of the wider impact on professional practice of professional doctorates, but nothing more than that is found in the academic literature. The search did attempt to include theses, professional papers and other grey literature, but it is possible that any work on the wider impact in professional publications that is published there is under-reported, given the nature of the search terms and databases used. This is clearly an important gap in the academic literature, and one we hope to address in future research.

The second panel presents the proportion of the literature and subgroups that consider professional doctorate programme content. This topic covers 55 per cent of the literature and is the largest aspect of the published work. Within this theme, overviews of professional doctorates (both in general as a group or in terms of local programmes offered) are the main content in the field. This is largely the focus of the older literature, which dedicates a lot of case study time to highlighting the innovative design of these programmes, often in relation to the PhD. The more contemporary literature focuses on the curriculum development of professional doctorates and their practical relevance. This aspect of the literature is very well developed, and largely focuses on the EdD. Over time, a focus on research methods and professionalism as the core content for a doctorate in education become largely agreed upon in the literature. The practical relevance is often used to motivate this focus on professionalism and research methods, as well as being used to signal the unique contribution of professional doctorates. However, this practical relevance is less well developed in the literature, often reported through anecdote and the views of programme leaders. This links to Mellors-Bourne *et al.*'s (2016) call for more research on the practical relevance of professional doctorates.

The third panel records that 9 per cent of the literature considers the research degree aspects of professional doctorates. Issues around supervision, thesis development and completion rates are much more widely studied for PhD programmes than for professional doctorates. While the focus on the curriculum of the taught aspects of the programme have led to a general consensus on what to offer in the early stages of an EdD programme, the lack of research on the research stage gives scope for further research on aspects of the professional doctorates focused on supervisor and thesis issues. Research by Hawkes (2017) attempts to start this conversation, building on Hawkes and Taylor (2016), by considering the resources developed online to support EdD students at the thesis stage.

The fourth and final panel explores the second-largest theme in the literature, which related to the student experience. This is unsurprising, given the focus on the EdD and the origin of many papers from education researchers. The student experience is often reported as positive, and the findings largely suggest that students welcome the structure of the professional doctorate programme, the cohort of students they are based within and the focus on a problem of practice in their research. This broad consensus in the literature on EdDs could be extended to consider other professional doctorates, and is an identified gap in the field. Storey (2013, 2016) attempts to explore in more detail the value of the EdD cohort, applying a critical friends approach. This work shows the scope for considering the benefits of the cohort using education theory.

In summary, the literature has focused on the programme (taught) aspects and student experience. There is largely agreement in the literature for EdDs that curriculum is based on professionalism and research methods, and that the student experience values the programme structure, the cohort and the focus of the research on professional practice. Much less is written

on the research degree aspects associated with supervisors and thesis development, or on the value of professional doctorates beyond the institution. These are clear gaps in the research that are worth exploring and some that we hope to address in this special issue on professional doctorates.

Research methods used

While most papers in this area are case study based, within each paper a range of different research methods are used to collect data. A paper can use more than one technique to collect data. Table 4 presents the range of research methods employed in the studies. A large proportion of the field is based on narrative papers, with those working with professional doctoral students sharing their insights. For those collecting data, the most common approach is to interview or survey the student body, and more recently to exploit secondary data. Given this range of research methods, it is interesting that consensus on the curriculum of EdDs and the key components to ensure student experience have been found. In this special issue, we have attempted to encourage authors to move beyond the case study to draw together a big-picture view of where we are, as professional doctorate programmes reach maturity. We have been able to broaden the range of techniques used to explore this area to include philosophy and systematic literature review.

Table 4: Distribution of the literature by methods used

Methods	Frequency
Literature review	5
Case study	14
Secondary data	34
Questionnaire/Survey	30
Interview	46
Focus groups	9
Observations	8
Narrative paper	81
Content analysis	6
Self-reflection	28
Grounded theory	5
Total	266

Year of publication

Finally, we consider the year of publication as a grouping for the literature. Table 5 provides a distribution of the literature by year of publication. In total 89.2 per cent of these papers (excluding those without a year of publication) are published after the seminal work by Scott *et al.* (2004). This shows the growth of publications has mirrored the growth and establishment of professional doctorate programmes in the UK, the USA and Australia. Again, it is worth remembering that many of these are based on the doctorate in education programme.

Table 5: Distribution of the literature by year of publication

Year	Frequency	Percentage (%)
No date	7	4
1991–2000	9	5
2001–2010	82	42
2011–2016	95	49
Total	193	100

Conclusion

This review highlights the need for academic work in this area to move beyond individual case studies of practice on programmes towards developing principles of practice for professional doctorates as a whole. This special issue hopes to start that academic conversation. The current state of the literature has focused on EdD programmes from the UK, the USA and Australia. This literature has led to consensus being developed on the curriculum of EdD programmes and the factors associated with positive student experiences. For the curriculum, a focus on research methods and professionalism completed in a brief taught phrase at the start of the programme has been established in practice and in the literature for the EdD programme. Similarly, for a positive student experience on an EdD programme, the value of the structure of the programme, the student cohort and the focus of the research on a problem of practice are well documented and largely considered as building blocks for a successful EdD programme in practice. Our own EdD programme at UCL Institute of Education follows the consensus in the literature with a focus on the curriculum and student experience, and these values and principles have been celebrated in our twentieth anniversary year.

This systematic review also highlights some significant areas for future research. First, while the literature on EdDs has led to general consensus on two important aspects – curriculum and student experience – the literature on other types of professional doctorates is limited, and there is therefore scope for research in these areas for other professional doctorates. This provides an opportunity for future research, especially for the other key brands, DBA and DClinPsy, to see if these two important aspects from the EdD literature are transferable to other professional doctorates. This special issue once again is largely focused on contributions from those associated with EdD programmes, although contributions were actively sought from those working on other professional doctorates.

Second, the focus of the literature on the UK, the USA and Australia provides scope for exploring professional doctorates outside these countries. In this special issue we have been able to start this conversation with papers from Singapore, Israel, Ireland and India.

Finally, we identify two significant gaps in knowledge, even on the EdD programme. The first, also identified by Mellors-Bourne *et al.* (2016), is literature on the wider impact of professional doctorates. While it is clear for those who work with professional doctoral students that there is a wider value, this is not well documented in the literature. The second is a significant gap in the literature on the research phase of the EdD. The majority of the literature focuses on the taught aspects of the EdD programme and little is known about the thesis stage and the role of the supervisor. In this special issue some papers consider these two important aspects.

Notes on the contributors

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Sridevi Yerrabati is an experienced economic systematic literature reviewer who uses meta-regression techniques to understand key economic relationships. She is a higher education teacher with more than ten years of teaching experience and Fellow at the Higher Education Academy, UK.

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APPENDIX

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