



DOCTORAL QUALIFICATIONS IN RELATION TO PROFESSIONAL CAREERS

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Abstract: Doctoral degrees were, for many years, primarily subject specific, but this changed following the introduction of the PhD as a research based qualification early in the 20th century. For most of the last fifty years the doctorate degree has been virtually synonymous with the PhD (except for the specific case of the MD degree).

Since 1991 there has been a rapid growth in the UK of Professional Doctorates, which have returned to the model of subject specific titles, such as DEng, and EdD. These doctorates differ in a number of respects from the traditional PhD, and this has led to a number of tensions in UK universities.

The most significant differences are that a greater proportion of the professional doctorate is taught, and that the subject matter covered by the professional doctorate includes a considerable emphasis on discipline related professional practice as well as on the content of the discipline. In some cases professional doctorates serve a dual purpose, acting as a professional qualification as well as leading to a doctoral degree.

This paper examines the differences between PhDs and Professional Doctorates, and considers how these are likely to develop over the next few years, reflecting the changing nature of the relationship between universities and employers.

Comparisons are also drawn with practice in other European countries, since there is considerable diversity of practice in the area of doctoral degrees.

BACKGROUND AND HISTORY

Universities have awarded doctorates as the highest level of academic recognition since the very early days of the mediaeval foundations such as Oxford, Heidelberg and Bologna. The term doctor – signifying one who is learned in a subject – was originally used in a subject specific way. Titles such as Doctor of Theology, Doctor of Medicine were conferred, probably with no very formal assessment of suitability, on those who had

achieved high academic status in their subjects. The basis of the doctoral qualification was essentially scholarship at this stage in the development of the universities.

In the nineteenth century a new form of doctorate appeared – the PhD, starting in Germany. This qualification was much more closely tied to research than to scholarship or to practice, and its introduction parallels the developing significance of research within universities. The PhD spread to American Universities during the latter part of the nineteenth century and it is notable that there were initially significant voices that opposed this novelty. It was argued that research in universities was an inappropriate distraction from the core business of teaching.

Resistance to the PhD was even greater in the UK, and there are no instances of the degree being awarded before 1921. However in the period since 1921 the PhD has become far and away the most common doctoral qualification offered by universities in the UK. It is now very unusual for anyone to be appointed to an academic position without holding a PhD degree, and there are a number of industrial positions where the PhD is a normal requirement for appointment.

At the start of the 1990's a new form of doctorate started to appear in UK universities – known generically as Professional Doctorates. In this context the term professional doctorate is used in contrast to academic doctorates. Since that time, there has been spectacular growth in the number of such degree programmes, with the majority of UK universities now offering at least one such doctorate and many offering several.

DEFINITION OF "PROFESSIONAL DOCTORATE"

A straightforward definition of the term 'Professional Doctorate' is not particularly easy. There are three typical characteristics:

- The field of study is closely related to an area of professional practice, such as Engineering, Business Administration or Clinical Psychology;

- A significant part of the doctoral programme is taught, whereas the traditional PhD model is based solely on research;
- The doctoral degree awarded includes a named subject area – such as Doctor of Engineering or Doctor of Education.

Of these it is clear that the first is very much the most important, in that it defines the programme as distinctly 'professional'. This is capable being understood in a number of different ways. A doctorate in a modern university must be a research degree; nothing else would be acceptable within the framework of what is understood as a doctorate. One definition of 'professional' is therefore that the degree is based on research into the practice of a profession, rather than into the theoretical and conceptual structures which underpin the practice. This is actually a difficult distinction to maintain, since practice and theory are intimately connected and it is generally not useful to draw artificial boundaries between them.

There are Professional Doctorates which have very particular relationships to the corresponding profession. The Doctorate in Clinical Psychology is, in general, accredited by the British Psychological Society and confers on its holders a licence to practice as a Clinical Psychologist. The Doctorate of Education is intended to be undertaken by mid-career senior professionals in education on a part-time basis, and almost invariably includes research based in the candidate's place of work, often a school. The Doctorate of Engineering is usually taken shortly after completion of an undergraduate degree and although formally it is a full-time programme, much of the work is done within industry and is supervised jointly by a university and a collaborating engineering company.

These examples illustrate an important point – the nature of the relationships between Professional Doctorates and their related professions is very varied. The key factor, however, is that there is such a relationship and it is this that constitutes the defining characteristic of the Professional Doctorate. The following definition is therefore proposed:

A Professional Doctorate is a qualification based on a programme of advanced study and research which, while satisfying the University criteria for award of a doctorate, is designed to meet specific needs of a professional group external to the University, and which involves members of that group in the design, development or delivery of the programme.

Members of the external professional group may also be involved in assessment of the standard achieved within the doctoral study, but this is not a necessary characteristic. Some universities would have concerns about that, rooted in a sense that the final decision about the standard to be achieved in a doctoral degree of a university should rest with the university.

This definition is a long way from what is often seen as the standard definition – one which defines the Professional Doctorate as a taught programme. It is an inevitable consequence of the definition quoted above that the programme could not achieve the objective of meeting specific professional needs without some teaching, at least in the sense of guidance in the development of practice skills. For this and other reasons there is a significant amount of taught content in Professional Doctorates; but this is not a defining characteristic.

ORIGINS OF PROFESSIONAL DOCTORATE

It has already been pointed out that the development of the PhD was very much associated with the increasing significance of research as a key university activity. The twentieth century saw a total transition of the university system from being teaching based to being research based. Within this change, the PhD has become of great significance as the essential qualification for entry into the academic profession. The route which has become traditional – first degree, PhD, post-doctoral research, academic appointment – highlights the importance of research at every stage after the first degree.

As universities have become more focussed on research, the research that goes on has become increasingly specialised. The PhD has been characterised as research which achieves a high level of specialisation in a very narrow field. This has led to many seeing the PhD as being detached from real concerns, and of significance only within the academic world.

In practice this is something of an oversimplification in a number of different respects. Firstly, for all that those outside universities have frequently been critical of the narrowness of the PhD, they have also been keen to employ holders of PhD in a wide range of roles. Secondly, there are some subject areas where the academic PhD has been seen as entirely appropriate as a preparation for employment; for example the chemical industry has a long tradition of employing PhD chemists in industrial research and management roles.

Forty years ago the proportion of school leavers who proceeded to study to degree level was around 5%. Possession of a degree guaranteed admission to an elite group. However one of the major changes over the

intervening years has been the increase of this proportion to over 30%, and it is planned to rise further. Possession of a degree is now therefore much more common, and certainly does not confer the elite status that it did a generation ago. This has generated pressure for a greater number of people to seek postgraduate qualifications.

Although much of the postgraduate expansion has been in the form of Master's level courses, it has also generated a change in the way the PhD is seen. Rather than being used solely as the admission route into academic life, it has become of interest to a wider range of employers. This generated some concern about the extent to which the PhD prepared students for employment in industry and commerce as opposed to in universities. At the same time there was a change in the nature of the relationship between universities and industry and commerce. Employers started to demand that the courses offered by universities met their needs rather than being willing to accept whatever the universities provided; and employers became more directly involved in what universities were doing.

The final important change is in the challenges facing the organizations that employ graduates. Both public and private sector organizations are under considerable pressure to improve the quality of the services and products they provide, and to reduce costs. At the same time there is an increasingly complex environment in terms of regulations, health and safety requirements, and the demand for more openness, particularly in the public sector. The skills of research and enquiry which characterise doctoral level qualifications are therefore becoming increasingly important in a wide range of employment contexts.

The Professional Doctorate is a logical consequence of these developments. With doctoral qualifications being used for an increasing range of careers, it was appropriate that questions about the suitability of the PhD for this role should be raised.

In 1991 a working group chaired by Parnaby (SERC 1991) examined this in relation to engineering, and proposed a new model, in which the experience of research for a doctoral degree was based in industry rather than academia. To reflect this shift, a different title was suggested – the Doctorate of Engineering (EngD or DEng). Such programmes were funded in a number of UK Universities by one of the government funded Research Councils, the EPSRC¹. These programmes were reviewed in 1997 by the EPSRC, and an expansion in the number of programmes was recommended (EPSRC 1997).

¹ At the time of the introduction of the Engineering Doctorate (1992) this was the Science and Engineering Research Council (SERC), subsequently renamed the Engineering and Physical Science Research Council (EPSRC).

The Doctorate in Education (which is now offered by a large number of UK universities) has rather different origins. School level education in the UK has been the target of much critical comment in recent years, and this has led to a perceived need to examine educational practice in considerable detail, as well as to a loss of self-confidence within the education profession. The Doctorate of Education attempts to address both of these issues: by bringing a high level research perspective to bear on the problems of education, and by conferring on some of the senior practitioners the title of Doctor.

The Doctorate of Clinical Psychology was developed in conjunction with a number of universities by a professional body, the British Psychological Society, which is responsible for conferring on individuals the authority to practice as Clinical Psychologists. The DClinPsych serves this purpose, which implies considerable constraint on the structure of the programme. There is also a question of status which arises here. Clinical Psychologists frequently work alongside medical practitioners, and the title of Doctor helps to secure parity of esteem in this context.

There is a clear pattern that Professional Doctorates have been developed particularly in professions which there is perceived to be a need for improved status. There are other professions, such as Law, where there is no tradition of PhD study, but there has been no pressure for the development of Professional Doctorates. Law is a very high status profession in the UK.

The consequence of all these pressures is that there has been a very fast expansion in the number of Professional Doctorate programmes being offered by UK universities. Taking the figures for England alone, in 2000 just over 70% of universities were offering at least one Professional Doctorate; the aggregate number of programmes has been increasing by nearly 20% per year in recent years (see table 1).

Table 1 - Total number of Professional Doctorate programmes in English Universities
From Bourner et al (2000)

YEAR	NUMBER
1998	109
1999	128
2000	153

RELATION OF THE PROFESSIONAL DOCTORATE AND THE PhD

Since there is such a wide variety of Professional Doctorates, and indeed some variation of practice between universities over the structure of PhDs, it is difficult to make systematic statements about the relationship between the two. The following table

therefore lists typical characteristics, rather than providing a rigorous taxonomy.

PhD	Professional Doctorate
Based solely on research, assessed via a thesis	Includes taught elements in addition to a dissertation which may constitute a research thesis
Usually undertaken full-time, but may be part-time	Usually part-time, but may be full-time in some subject areas
Individual study & research, although may form part of a research group or team	Undertaken in a cohort with other candidates
Can be undertaken after a Bachelor's degree, although in some subject areas admission is usually based on a Master's degree	Usually admission requires a Master's degree
Only assessment criterion is <i>a significant original contribution to knowledge, of publishable quality</i> (or an equivalent formulation)	Assessed against additional criteria related to knowledge and understanding in relation to professional practice

Professional Doctorates have been given a mixed welcome in UK universities. There is a widespread perception that the PhD represents an immutable standard for doctorates and that any other forms of doctorate must be demonstrably equivalent. This has tended to imply that the Professional Doctorate has in some universities been expected to meet both the assessment requirements of the PhD and other additional criteria. It is an open question whether that is satisfactory as a definition of doctoral standard in the context of professional practice; it is certainly a sufficient condition for the award of a doctorate, but it may exceed the requirements of a necessary condition.

There is another reason why Professional Doctorates may have been viewed rather equivocally. They involve external professions in determining what is done in university educational programmes at the highest level. While in some disciplines, notably those that are linked to the professions, this is fairly normal practice, this is less true of more strictly academic disciplines.

EMPLOYER PERSPECTIVES

A survey has been carried out to learn something of the attitudes among employers of those on Professional Doctorate programmes. The results present some interesting insights into the relationship between employers and students and the Professional Doctorate programmes on which the students are enrolled. The information was provided by the line managers of individual students. As such it represents a middle management view; senior management perspective may differ.

To place the results of the survey in context it is important to note that the whole Professional Doctorate market is significantly skewed towards the public sector.

The EdD represents the largest part of the market, with various Psychology related professions occupying a further large proportion. As a result a substantial proportion of the total number of Professional Doctorate candidates are employed in either public sector education or in the health service.

Although the programmes have been developed to meet the needs of employing organizations, in the vast majority of cases the idea of undertaking a Professional Doctorate was reported to have originated with the student. It is, of course, probable that in many cases information about the possibility may have been disseminated to employees by the employing organization; to that extent the idea may have originated with the employer. In about 40% of cases the employer pays the fee entire fee. 35% of students pay their own fees, and for just under 20% of students the fee is shared between employer and employee. Although the numbers are not large, there is discernible pattern between subject areas. In the case of Business or technical subjects (DBA, EngD etc.) the employer pays. For the Education Doctorate a significant minority of students either pays or contributes. In the various Psychology disciplines the student is usually self-funding.

Most employers were satisfied with the amount of information that they received about the course. However a minority of employers felt that they had been able to influence the choice of modules taken by their students. However, nearly all employers felt that their organizations were involved in the research aspect of the doctorate; usually this consisted of the research being actually carried out in the organization.

The benefits perceived by employers included:

- the development of individual skills, particularly in the area of research;

- the development of organizational skills, by dissemination from the individual student together with involvement in the programme;
- retention and motivation of staff;
- improved skills in management and leadership;
- improved quality of output/product of the organization.

Most of the employers would repeat the experience of sponsoring students – the reasons for so doing corresponded quite closely to the perceived benefits set out above. In an interesting contrast, one response specifically indicated a preference for the Professional Doctorate over the PhD because of its inclusion of project management and co-ordination of the work of others; and one response said that in future the organization would stick to 'proper PhDs'. This pair of responses encapsulates some of the contrasting attitudes to Professional Doctorates.

One consistent negative aspect that was raised in the responses was the problem of the amount of staff time and energy that the course absorbed. However it appeared that the positive aspects outweighed this for most employers. A number of employers also commented adversely on the cost of the programmes in terms of fees; the public sector bias makes this a rather unsurprising observation, given the constraints on funding.

THE LOCATION OF PROFESSIONAL DOCTORATE PROGRAMMES

The UK university system is broadly made up of two types of universities. There are traditional academic institutions which were established at various times between about 1100 and 1964. More recently a set of new universities were created from the polytechnics in 1992, and these, reflecting their polytechnic heritage, are seen as being more distinctively vocational in character. There are already signs that the two groups are converging. However, given the vocational emphasis of the new universities it is surprising that the development of professional doctorates was concentrated initially in the traditional universities. This may be explained by the involvement of external professional groups. There is little doubt that the polytechnics had less prestige than the universities, and in the early 1990s many people retained some concerns that the new universities were of lower status than the traditional universities. External groups therefore tended to show a preference for collaboration with the traditional universities.

UK NATIONAL QUALIFICATIONS FRAMEWORK

In 1999 the UK Quality Assurance Agency for Higher Education (QAA)² embarked on the establishment of a national framework into which all qualifications could be fitted. This project was motivated by a desire to make clearer the significance of qualifications for the benefit of the users of Higher Education, and followed publication of a report which was critical of the level of confusion between different UK qualifications (Harris 1996). The underlying principle of the proposals is that qualifications bearing the same titles should be reasonably comparable in academic standard, and that both potential students and employers have access to information which makes this standard clear.

The National Qualifications Framework makes no significant distinction between Professional Doctorates and PhDs. A single *qualification descriptor* defines the characteristics to be expected from those who hold a doctoral qualification (see box). The obvious observation about this descriptor is that it contains a number of references to employment related skills. It is precisely these characteristics which were seen by a number of professions as lacking in the traditional PhD and which led to the development of the Professional Doctorate as an alternative model. It is difficult to avoid the conclusion that adoption of this descriptor will create further changes in the PhD, bringing it closer to the Professional Doctorate.

Descriptor for qualifications at Doctoral (D) level: Doctoral degree

Doctorates are awarded to students who have demonstrated:

- i. the creation and interpretation of new knowledge, through original research, or other advanced scholarship, of a quality to satisfy peer review, extend the forefront of the discipline, and merit publication;
- ii. a systematic acquisition and understanding of a substantial body of knowledge which is at the forefront of an academic discipline or area of professional practice;
- iii. the general ability to conceptualize, design and implement a project for the generation of new knowledge, applications or understanding at the forefront of the discipline, and to adjust the project design in the light of unforeseen problems;
- iv. a detailed understanding of applicable techniques for research and advanced academic enquiry.

² The QAA is an autonomous non-governmental agency representing the interests of Universities, the Higher Education Funding Councils and the Department for Education & Employment, the government ministry responsible for education.

Typically, holders of the qualification will be able to:

a make informed judgments on complex issues in specialist fields, often in the absence of complete data, and be able to communicate their ideas and conclusions clearly and effectively to specialist and non-specialist audiences;

b continue to undertake pure and/or applied research and development at an advanced level, contributing substantially to the development of new techniques, ideas, or approaches;

This descriptor also illustrates that it is unlikely to be realistic to equate Professional Doctorates with taught doctorates, as is quite commonly done. The skills that are required within the doctoral description will demand some teaching – and in any case it is becoming increasingly common for teaching in areas such as research skills to form an inseparable part of a PhD programme.

INTERNATIONAL COMPARISONS

Doctorates have always been managed differently in different countries, and this remains very much true. A comprehensive analysis of practice in different countries in relation to the Professional Doctorate model would be very difficult to do, because of the differences of terminology and definition. This section is therefore confined to a few comments about particular countries.

The Professional Doctorate model as described here is found in its best developed form in Australia, where it has been a very successful and widely adopted model. As in the UK, a key function has been to support the professionalization of roles which feel themselves to be undervalued. There are therefore many programmes in Education and in Nursing.

The American PhD has always had a substantial taught component, and tends to come closer in some respects to the UK Professional Doctorate model than to the UK PhD model. While there are some US doctoral programmes that have a clear professional emphasis and would therefore be classified as Professional Doctorates in terms of the definition used in this paper, they usually lead to the award of a PhD.

In Germany the PhD in the traditional form remains the mainstay of doctoral level education. Universities in Germany are traditionally more independent of government and other external pressures than has been the case in the UK, and have therefore been less susceptible to pressure to realign doctoral programmes to meet external employment needs.

In the light of the Bologna Declaration, it is important to recognise that there is now considerable pressure for the harmonisation of academic qualifications across the EU states. The distinction between the PhD and the Professional Doctorate may therefore come to have much wider significance than it does at present. The routes to qualification in particular professions differ widely across different EU states. The concept of a doctoral qualification which is specifically related to the needs of particular professional groups is therefore rather complex. Any form of harmonization of academic qualifications is necessarily closely related to the harmonization of professional qualifications; this may, however, be particularly true for some of the areas currently covered in the UK by Professional Doctorates.

CONCLUSIONS

Professional Doctorates represent an important new development in Higher Education, if the definition proposed in this paper is appropriate. They are a form of qualification where the structure and content are significantly determined by groups and bodies who represent the professions that depend on HE. That is a development which is not easily accepted by everyone working in the university system. However the current indications are that in most of the subject areas where Professional Doctorates have been developed they are welcomed by the candidates and actively supported by relevant employing organizations. As such it is likely that this particular sector of Higher Education will continue the pattern of rapid expansion that has been characteristic of the first nine years of operation.

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