

Quality and Standards of Postgraduate Research Degrees – 2009

UK Council *for* Graduate Education



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Quality and Standards of Postgraduate Research Degrees

The UK Council for Graduate Education (UKCGE) was established in 1994 to promote the interests of graduate education across all disciplines in higher education institutions in the UK. It currently has some 125 institutional members. This report on Quality and Standards of Postgraduate Degrees – 2009 is one of a series of publications from the Council investigating key issues in graduate education.

The original paper on the quality and standards of postgraduate research degrees published in 1996 was only the second in the Council's series of publications. It was prepared by a Working Group established by the Council and Chaired by Professor Michael Harloe, University of Essex. The intention of the report was to assist institutions to debate quality issues that were seen as central to the development of postgraduate education and training in the UK.

The Council has recently begun to update its reports as circumstances have required. In a number of cases this has involved conducting a survey to gather new data on a continuing issue, for example the use made by member institutions of the award of PhD by Published Work, as a means to providing a view on developments in the field. However the original report on Quality and Standards was not based on a survey but rather represented the views and discussions of the working group. In revisiting this topic, we therefore decided not to try to 'revise' the earlier work – it stands as a useful statement of the group's deliberations and we would not wish to try to

recreate those deliberations or indeed 'update' them in any way. Rather the Council asked two experts in this area (Professor Stuart Powell of the University of Hertfordshire and Gill Clarke of the University of Bristol and formerly the QAA) to offer some reflections on the current situation with regard to quality issues. There are some new considerations – significantly the revised section 1 of the QAA Code of practice for the assurance of academic quality and standards in higher education: Postgraduate research programmes ('the QAA Code') – that were simply not in place in 1996. Where relevant the authors of this new report have made use of points made in the original publication as a reference point for current principles and practices.

Professor Malcolm McCrae
February 2009
Chair, UK Council for Graduate Education

The UK Council for Graduate Education is an organisation established to promote the interests of graduate education in all disciplines in higher education institutions. The Council was established in 1994 and has over 125 institutional members.

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Executive Summary

As with the original 'Quality and Standards' Report (UKCGE, 1996), this paper seeks to identify the current context within which doctoral level education is being undertaken in the UK and review the kinds of developments that are taking place that affect the quality of that education. The paper revisits some of the thematic issues that were referred to in 1996, namely the purposes of a doctoral education, the development of so-called 'non-traditional' doctorates, assessment mechanisms and international aspects of doctoral education. It also addresses some issues and dimensions that were not referred to in 1996 (i.e. issues that had not come to the forefront of concerns at that time), namely:

- the impact on UK research degree programmes of wider European developments, including the Bologna Declaration (third cycle qualifications) and related agreements such as the Framework for Qualifications of the European Higher Education Area and the Salzburg Principles¹ (and see 1.2 below)
- the overall requirements of Research Councils and the development of their Joint Skills Statement²
- the establishment of the Arts and Humanities Research Council

- the increased focus on the quality assurance and management of research degree programmes, including the annual HEFCE survey of research degree completion rates³
- recognition of the true resource implications for institutions in providing research education, while recognizing their centrality to research quality⁴

The paper is intended to promote further discussion across the sector regarding research degree education. It is not intended as a supplement to the revised QAA Code of Practice (QAA, 2004), nor as a critique of that Code; rather it represents the views of the authors about how research education in the UK has developed in the last five to seven years, in the context of various reference points, of which clearly a significant element is the Code and its implementation.

The views expressed in this paper are those of the authors and are not necessarily those of the UK Council for Graduate Education or any other organisation or institution.

1 A Framework for Qualifications of the European Higher Education Area, Ministry of Science, Technology and Innovation, Denmark, February 2005, ISBN: 87-91469-54-6 and ISBN (Internet): 87-91469-53-8 and outcomes of the Bologna Seminar: Doctoral programmes for the European knowledge society, Salzburg, 3-5 February, 2005, General rapporteur's report: http://www.eua.be/eua/jsp/en/upload/Salzburg_Report_final.1129817011146.pdf

2 UK Research Councils, Joint Statement of Skills Training Requirements of Research Postgraduates (2001): [http://www.grad.ac.uk/cms/ShowPage/Home_page/Policy/National_policy/Research_Councils_training_requirements/pleaLXeFl#Joint%20Statement%20of%20skills%20Training%20Requirements%20of%20Research%20Postgraduates%20\(2001\)](http://www.grad.ac.uk/cms/ShowPage/Home_page/Policy/National_policy/Research_Councils_training_requirements/pleaLXeFl#Joint%20Statement%20of%20skills%20Training%20Requirements%20of%20Research%20Postgraduates%20(2001))

3 HEFCE Research Degree qualification rates, first annual publication, Issues paper, October 2007/29 (web only): http://www.hefce.ac.uk/pubs/hefce/2007/07_29/

4 Costs of training and supervising postgraduate research students – a report to HEFCE by JM Consulting Ltd, February 2005: http://www.hefce.ac.uk/pubs/RDreports/2005/rd01_05/rd01_05.doc

1. Introduction

1.1 National Reports and Initiatives in the UK

The 1996 'Quality and Standards' Report noted that *'doctoral education was frequently regarded as a cottage industry, a prestigious yet somehow fringe activity in higher education'* (UKCGE, 1996). While postgraduate research may still be a minor part of the HE sector in terms of student numbers, it is nevertheless a significant part of that sector, and particularly the output of the sector in relation to the UK economy and international research effort. In this current paper we explore whether the move over recent years to higher numbers of research students in UK universities has affected the quality and focus of research degrees.

The publication in 1996 of the UKCGE paper coincided with the Harris Report which proved a milestone in the debate about quality issues in research degree education. The Harris Report recommended the conditions under which quality could be delivered at PhD level (Harris, 1996). There are several initiatives and actions that have followed subsequent to Harris, for example:

- the Higher Education Careers Services Unit (CSU) directory of research and postgraduate qualifications (the Prospects Directory)
- the Review of Research undertaken by the HEFCE (HEFCE, 2001) which indicated the need to examine the research training provided by universities in order to produce thresholds of provision and good practice guidelines, eventually to be linked to funding. This Review, together with the two HEFCE Threshold Standards consultations⁵ (HEFCE 2003) contributed directly to the revised Quality

Assurance Agency (QAA) Code of Practice: Section 1 Postgraduate Research Programmes (QAA 2004), to the extent that some of the HEFCE threshold standards are embedded in the revised Code

- the QAA Framework for Higher Education Qualifications (FHEQ), January 2001, revised September 2008 (including as it does definitions of doctoral level outcomes in the form of a specific 'qualification descriptor')
- HEFCE's modifications to its funding model for PhD students (effectively ceasing to fund students located in departments with an RAE rating of less than 4)
- the Economic and Social Research Council (ESRC) requirements regarding the development and monitoring of supervisor capability (e.g. ESRC, 2001)
- the Research Councils and AHRB joint statement regarding skills requirements for research students which is now included as Appendix 3 in the 2004 QAA Code)
- the introduction by the ESRC of a 1+3 model for the PhD which has begun to spread to other areas, and the broadening of Research Council funding parameters generally to encourage increasing interdisciplinarity and 'themed' research projects
- the development of Doctoral Training Centres by EPSRC, BBSRC and proposed by ESRC (see 2.1 below)

1.2 Influence of Europe

The Bologna declaration and the various initiatives that have followed from it have created a new focus on doctoral education as well as on other aspects of the postgraduate agenda. The Berlin communiqué of 2003⁶ added a third cycle, which

5 Improving standards in postgraduate degree programmes: information consultation, HEFCE, 2003/01; http://www.hefce.ac.uk/pubs/hefce/2003/03_01.htm, and Improving standards in postgraduate degree programmes, Formal consultation, HEFCE 2003/23; http://www.hefce.ac.uk/pubs/hefce/2003/03_23.htmhttp://www.hefce.ac.uk/pubs/hefce/2003/03_23.htm

6 The European Higher Education Area – achieving the goals: Communiqué of the Conference of European Ministers Responsible for Higher Education, Bergen, 19-20 May 2005 http://www.bologna-bergen2005.no/Docs/00-Main_doc/050520_Bergen_Communique.pdf

included 'doctoral education', to the process that was started in Bologna. This addition was intended to promote links between the European Research Area and the European Higher Education Area. The shared 'Dublin' descriptors⁷ for academic awards include doctoral level. The impact of these initiatives is explored in more detail later in this paper.

Across Europe there are different registration patterns that link masters and doctoral programme levels. The most common of these are the 1+3 or 1+4 but variations such as 1+2+3 and 2+2+4 exist and clearly there are differences not just in terms of the pattern of time spent at the different levels but also of the sum totals of time spent. These different patterns and time frames have their origins, to a greater or lesser extent, in the attitudes held towards what is required of the learner if they are to 'step-up' to the next (research degree) level. Whereas in some subjects in the UK it is the norm for students to move straight from a first degree to a doctorate (e.g. biological sciences, law, psychology), it is unusual for a first degree graduate in Europe outside the UK to register for a doctoral qualification. Typically, such graduates follow the bachelors → masters → doctorate route. This then is potentially difficult for UK first degree graduates wishing to study for a doctorate in other parts of Europe. The equivalence of Master's programmes of all types is also relevant with, for example, credit for Master's degrees in continental Europe based on academic years, and in the UK on calendar years. However, Professor Wendy Davies's research on behalf of the UUK Europe Unit shows that there is also great diversity in the structures, length and credit weighting of Master's degrees in parts of continental Europe.

Her study of four European countries (UUK 2008)⁸ indicates the lack of consistency does not just lie between UK and the rest of Europe. In the authors' view, this shows the need for explicit, clear publicity and definitions of all Master's programmes offered by UK institutions, linked with the FHEQ Master's qualification descriptor and stating credit (UK and ECTS equivalent) at different levels. This may help graduates of such degrees to demonstrate equivalence and therefore facilitate entry to employment or doctoral programmes in wider Europe.

The final recommendations of a European Universities Association (EUA) Bologna seminar held in Nice in 2006⁹ helpfully (for the UK in particular) sought to maintain flexibility for institutions in admissions to doctoral degrees, as follows:

"2.3 Ensuring access and admission

In a fast-changing environment, it is essential to maintain flexibility in admissions to doctoral programmes, and full institutional autonomy: diversity of institutional missions and context, and the growing importance of lifelong learning, mean that there are good reasons for different entry requirements in institutions and programmes provided fairness, transparency and objectivity is ensured;

The Bologna commitment that the second cycle gives access (= right to be considered for admission) to the third cycle should be maintained, but access to the third cycle should not be restricted to this route."

This recommendation was subsequently formally accepted through the Bologna process.

7 Shared 'Dublin' descriptors for Short Cycle, First Cycle, Second Cycle and Third Cycle, a report from a Joint Quality Initiative informal group, 18 October 2004: <http://www.jointquality.nl/content/descriptors/CompletesetDublinDescriptors.doc>

8 'Mastering Diversity': UK HE Europe Unit report on current arrangements for Master's programmes in France, the Netherlands, Germany and Bulgaria: http://www.europeunit.ac.uk/sites/europe_unit2/resources/E-08-02.pdf

9 EUA Bologna Seminar: Doctoral programmes in Europe, 7-9 December, Université de Nice, France; details of seminar outcomes are at: <http://www.eua.be/research/doctoral-programmes/doctoral-programmes-in-the-bologna-process/doctorates-seminar/>

In addition, if we are concerned with the quality of the student experience then we need to take account of what research students bring to their current studies by way of prior experience and in this there is a need to recognise how a programme of studies at one level can be seen to prepare the student for the next. Here we need to acknowledge both direct and indirect preparation. When an institution seeks to appraise the quality of its postgraduate research provision then self-evidently it needs to make judgments about what students need to learn and how best they may be taught and supervised in terms of the characteristics of those students – and those characteristics include prior knowledge and experience as well as cultural background and so on. Where prior knowledge and experience vary widely then clearly the onus is on provision to be flexible and responsive to individual needs. In short, any institutional research degree training framework needs to be related to recruitment policies and admission criteria; for example, what counts as effective induction clearly relates to student characteristics as well as to the provision of resources by the institution.

All of the above has stimulated debate across the European Union. Green and Powell (2005) note that in France, for example, the Government has introduced the *Ecoles Doctorales* to act as the focus for PhD work, concentrating significant resources on programmes in such écoles (Ministère de la Recherche, 2001). Green and Powell also note that similar reviews are taking place in the US and Canada (citing for example Walker, 2001).

2. Some Contextual Factors

2.1 Rising demand

In 1996 the UKCGE paper (UKCGE 1996) noted the rising demand for doctoral study in the UK. If we go back a stage further, it is clear that the growth in the postgraduate population has created a higher education environment that is radically different from that of the 1960's when the Robbins

Report in 1961/62 recorded 19,400 full-time and 6,300 part-time students. Green and Powell (2005) note that by 1994/95 there were 128,300 full-time and 187,100 part-time postgraduate students and that the relative position of postgraduate student numbers had similarly changed during this period. They cite HESA (HESA, 2001) data as indicating that in '1979, 13% of the total student population were postgraduate (100,900 postgraduate in a total population of 787,000) yet in 1994/95 the comparable figure was 21% (315,400 out of a population of 1,528,600). By the end of the millennium, the total population of postgraduates was 151,330 full-time and 257,290 part-time, (Green and Powell, 2005). Similarly, Green and Powell (2005) note changes in mode of study with a growth in the number of part-time students, equalisation of the gender balance and a significant growth in the numbers of overseas students. In this latter respect there were 25,100 international postgraduate students in HEIs in the UK in 1992/93, 8% from the EU, 92% from the rest of the world. By 1997/98 this figure had risen to 81,000, of which now 33% were from the EU and 67% from the rest of the world.

While the demand noted in 1996 has continued to rise in the intervening period, a significant part of that 'growth' has perhaps been in doctoral study outside of traditional PhD programmes. Certainly, the UKCGE Reports into professional doctorates (2002 and 2005) show a marked increase in the range of nomenclature that is employed to denote these doctorates and it seems reasonable to extrapolate that numbers of students studying for these 'new' awards are increasing. In part, this increase in the number of different named awards at doctoral level is a result of new areas of study opening up at doctoral level (Powell and Long, 2005).

Preliminary analysis of the responses to the QAA doctoral discussion paper (QAA, 2007, web-published only), offers empirical evidence that the number of students registered for professional doctorates has increased in the last five years, and also that there is considerable diversity in structure and content, with clinically-based professional

doctorates offering opportunities for inclusion of clinical practice through placements and other activities. The authors are hoping to conduct further work to provide some statistics on the numbers of students currently registered on different forms of doctorate (including professional doctorates and PhDs involving a significant amount of formal training).

In short, there seems to have been an increase in interest in professional and practice-based doctorates as well as the introduction of so-called 'New Route' PhDs, intended mainly for international students. Therefore, while the number of doctoral students overall has increased, it is also the case that the range of kinds of doctoral programmes, and the range of kinds of student engaged in them, has broadened.

During 2008, funding was made available by at least one funding council for doctoral training centres (DTCs) in science and engineering, through a competitive bidding process. Although at an early stage, these developments appear to be introducing a form of doctorate that sits somewhere between the traditional PhD and the professional doctorate. Candidates will be registered on 'integrated' four-year PhDs that include elements of compulsory training.

2.2 Focus on Quality of provision

The earlier paper (UKCGE 1996) also made reference to a growing recognition by Government that postgraduate education is a *'valuable contributor to the balance of payments and, more generally, to the UK's international standing'* (page 7). The importance of research graduates to the general economy had also been publicly recognized at the UK GRAD *Profiting from Postgraduate Talent* conference in September 2004, where Raffaele Liberali, Director for the Human Factor, Mobility and Marie Curie activities at the Directorate-General for Research, European Commission and a UK government representative for higher education, provided evidence for research effort as a major contributor to GDP, highlighting

increasing demand for European Framework funding, improved co-operation between academia and industry, and greater recognition for research as a profession (UK GRAD, 2004).

More recently, a substantive research project conducted by the UK Higher Education International Unit – "The UK's Competitive Advantage: The Market for International Research Students" (UUK, 2008), noted that the UK has 15% of the international market for research students, and that 42% of all postgraduate research students in the UK are international students. The benefits to the UK of this situation are outlined in the UUK publication, alongside some less reassuring statistics that show other countries' success in recruitment are likely to make the UK's current position difficult to maintain, even though the quality of our graduates is not in question. One of the principal concerns is the cost of studying in Britain – both in relation to tuition and bench fees and the cost of living.

The UKCGE paper continued to note the Government stress on the *'need to provide an appropriate quality of service so as to ensure that value for money is achieved and that the UK's enviable reputation in this area is not damaged'* (page 7). There can be little doubt – as shown by the two HEFCE Threshold Standards consultations on postgraduate research programmes and the subsequent revision of the QAA Code of Practice in relation to those programmes – that the quality of the doctoral education on offer in UK universities has come under increasing scrutiny. This increase is in line with a greater emphasis across the sector on quality issues. Indeed, the 1996 Report tracked the development of the notion of doctoral education from an essentially *'private relationship between a supervisor and his or her research student'* (page 7) to one where institutional expectations were becoming paramount.

2.3 Completion Rates

UKCGE (1996) described a situation wherein the lack of institutional engagement with the detail of what

went on in the supervision of research students led to a potential consequence of 'poor completion times, particularly in the arts, humanities and social sciences' (page 7). However, as far as the authors are aware, there is no direct evidence of any causal link between 'poor supervision' and 'poor completion times'; indeed the QAA Special Review noted that 'in most institutions arrangements for supervision are appropriate and satisfactory' (QAA, 2007, page 7). It also noted examples of good practice in supervision in paragraphs 41, 42, and 43. Clearly, we are not claiming that there are no examples of poor practice in research degree supervision in the UK but rather that the student-supervisor relationship is critical to ensuring a research degree candidate knows what is expected of him/her and has access to the necessary resources to support the intellectual effort and creativity needed for successful completion.

The current situation is that after some years of attention from the Research Councils to the issue of comparative completion rates HEFCE are beginning to address the issue directly and for all students by looking at institutional completion, or 'qualification' rates. After approximately a two year lead-in period during which institutions were provided with direct access to HESA data on their research degree completion rates and invited to update and correct them, in October 2007, HEFCE published UK research degree qualification rates for full-time students for the first time. Two data sets were produced, one for UK/EU graduates, the other for international graduates (HEFCE, 2007, web published only). These data can be found at http://www.hefce.ac.uk/pubs/hefce/2007/07_29/

Institutions that responded to the data verification exercises proposed that the published qualification rates should exclude students who have taken periods of suspension or extension. HEFCE adjusted for this by basing their qualification rate calculations on a seven-year

completion period which would take account of the majority of full-time students who suspend or extend their studies but go on to qualify. They also noted that there should not be a significantly higher proportion of students suspending or extending their studies at one institution compared with another.

Again in response to feedback from institutions during the data verification exercise HEFCE included context statistics showing the number of students who were still actively pursuing their research degree programmes and the number who transfer to another institution. For example, the numbers of students at each institution studying science-based subjects¹⁰ and (for home students) receiving Research Council support were shown as context statistics to help the reader to interpret the qualification rate and benchmark.

In addition, HEFCE introduced benchmarks in order to avoid comparisons between institutions whose student profiles were so different that they could and should not be compared directly. The benchmarks were used to calculate for each institution what the qualification rate would be if it reflected the sector average after taking into account the impact of variations in subject mix and (for home students only) the proportion of students receiving funding support from a Research Council – the two most significant remaining causes of variation in the qualification rates.

It is HEFCE's intention to publish detailed qualification rates annually, gradually building up institutional profiles. At the time of going to press, the 2008 rates have not yet been published.

2.4 Part-time research students

UKCGE (1996) noted that relatively little attention has been given to the growing number of part-time and/or self-financing research students,

10 For this purpose, science-based programmes are defined as medicine, veterinary science, subjects allied to medicine, biological sciences, physical sciences, engineering, mathematics, and agriculture.

especially since part-time students are typically not funded by the research councils or other grant-awarding bodies. The direct attention given by HEFCE to completion/qualification rates and the over-arching scope of the QAA Code changes this observation though many would still argue that despite the introduction of graduate schools and the like the issues facing part-time students are not necessarily addressed by institutions as directly as those for full-time students.

It is perhaps worth noting here that so-called 'Roberts' funding may have had a beneficial effect on provision for part-time research students since the 1996 UKCGE paper. Although this funding is intended primarily for Research Council funded students, RCUK has said that development opportunities funded through the Roberts income can be opened up to non Research Council funded students, where there is enough capacity. The spin-off from this is that such development opportunities could potentially benefit all students including those studying part-time.

2.5 Responding to the needs of industry and commerce – transferable skills

In May 1993 the Government produced a White Paper entitled 'Realising our potential: a strategy for science, engineering and technology'. This White Paper contained a number of recommendations relating to the doctoral qualifications existing in the UK at the time. In particular, it encouraged universities to respond to the perceived needs of industry and commerce. Part of this response was to be an increased emphasis on research methods and transferable skills during the early stages of research projects. Again, this trend, which had, as seen above, begun by the time of the 1996 UKCGE Report, has continued through the intervening period. Perhaps most notably the Research Councils and Arts and Humanities Research Board (AHRB, now the Arts and Humanities Research Council) issued a Joint Statement with regard to skills training requirements for research postgraduates (Joint Statement of Skills Training

Requirements of Research Postgraduates, (Research Councils, 2001)).

In short, the emphasis on a programme of doctoral study as being broader than the completion of a research project and including the student having to learn both subject specific research skills and those of a more generic kind, has increased from 1996 through to the present. The argument for more attention to be given to generic skills training was a key feature of the HEFCE consultations on 'Improving Practice in Research Degree Programmes'.

It may well be that in all of this there has been influence from the USA where skills training has formed a significant part of doctoral education for some time (Nerad, 2007). This influence has been manifest in initiatives such as the so-called 'New Route PhD'. It is also perhaps worth noting here that this influence has been variable in that the systems are not parallel and the adoption of ideas has not been universal. Many countries round the world are re-assessing their provision of doctoral education and in particular the implications of the extension of doctoral level study into 'new' areas of professional work. Tensions arise when new areas of study raise issues about the appropriateness of different forms of study and, perhaps more importantly, new forms of examination (notably where the professional practice of the candidate becomes the focus for academic development and hence of subsequent assessment). See Powell and Green (2007) for examples of such re-assessing.

It may also be worth noting here that the term 'professional doctorates' may not mean exactly the same in the USA as in the UK and elsewhere in Europe. In a 'Review of Professional Doctorates' undertaken by the National Qualifications Authority of Ireland, the characteristics of programmes of study with the title 'professional doctorates' in the USA are said to include "a substantial element of taught coursework, and a tendency towards shorter dissertations and longer periods of supervised professional practice". (National Qualifications Authority of Ireland, 2006.)

This publication goes on to say that “Most of these awards have been classified as ‘1st Professional Degrees.’” and that “The ‘1st professional degree’ is a first degree, not a graduate degree even though it incorporates the word ‘doctor’ in the title”¹¹.

The White Paper was followed by a consultative document published by the Office of Science and Technology in February 1994 entitled ‘A new structure for postgraduate research training supported by the Research Councils’ (Office of Science and Technology, 1994). In the UK however, the QAA definition of research based doctorates includes Professional Doctorates and these are listed in the FHEQ as research degrees.

2.6 Concern for Quality

2.6.1 Enhancing quality (1) positive developments

The UKCGE 1996 ‘Quality and Standards’ Report noted that *‘comparative data on the relative performances of doctoral students is currently patchy’* (page 11). To a large extent this situation has not changed, though the revised QAA Code of Practice and HEFCE’s monitoring of qualification (completion) rates (see above) and their use in the QAA institutional audit process may bring about a new transparency in relation to standards across a range of criteria (effectively those covered by the precepts in the Code). In the covering paper to the first set of qualification rates tables published, HEFCE makes it explicit that the compilation and publication of doctoral completion rates is linked with the quality assurance of research degrees: *“In keeping with our commitment to support excellence in the national research base, HEFCE requires the research degree programmes that it supports through its grant to meet minimum standards set out in the revised Quality Assurance Agency (QAA) Code of Practice”* (HEFCE, 2007).

Of course, the Research Councils generate submission statistics as they did in 1996 but these are limited in terms of representing performance measure that go beyond how long it takes for the average student to complete their studies.

It is worth noting here that many UK HEIs have introduced, or are introducing, on-line systems that both facilitate tracking of research student progress and encourage candidates to reflect on their own development and the progress of their research degree programmes. The introduction of such systems, therefore, brings increased administrative efficiency but also raises the possibility of enhancing student self monitoring.

Until 2005/06 assessment of the quality of current doctoral learning experiences was based primarily on the outcome of institutional audits undertaken by QAA and its predecessors (mainly HEQC) though clearly other direct and indirect measures were also available, for example: the proportion of students gaining doctoral awards and the contributions made by research students within the RAE exercises.

It is perhaps worth reminding ourselves here of the positive developments revealed by HEQC (1994 and 1996) audits. Those listed below were included in the 1996 UKCGE ‘Quality and Standards’ Report (page 11):

- increased use being made of supervisory teams
- development of institutional induction programmes for research students
- development of more formal frameworks for the management of graduate level activities
- improved monitoring of research student performance
- improvements in the opportunities for research students to make their views known
- the development of operational codes of practice

11 First professional degrees are classified by the National Centre for Educational Statistics (NCES) as those awarded after completion of academic requirements to begin practice in the following professions: chiropractic (D.C.); dentistry (DDS or DMD); law (LLB or JD); medicine (MD); optometry (OD); osteopathic medicine (DO), pharmacy (Pharm.D); podiatry (DPM, DP, PodD); theology (MDiv, MHL, BD or Ordination) or veterinary medicine (DVM). The classification of these kinds of degrees is under review within the NCES. See <http://nces.ed.gov/ipeds/trp15a.asp>

In terms of developments in these respects since 1996, it is arguable that the QAA Code has addressed all of these 'positive developments' and made them a set of universal benchmarks rather than examples of good practice not universally accepted. Certainly, the use of supervisory teams rather than single supervisors was one of the contentious issues that arose during the HEFCE consultations regarding 'Improving Standards' (HEFCE, 2003), but that was partially resolved in the revised section of the QAA Code of Practice published in 2004 (QAA, 2004, precept 12). Use of teams has been a feature of some, but not all, universities' practice for some time and the Code has brought it to a 'normal' status. However, these 'positive developments' may not in themselves enhance the experience of the research student. The elements listed above are parts of a framework that enable such enhancement – the question that this current report considers is the extent to which these developments (and more) can be seen to assure that the experience of doctoral study is enhanced for all students. In the current climate of concern with quality we are in danger of making sure systems are in place but not necessarily looking at what the students actually receive. It may well be then that the challenge facing institutions at the moment is how to assure themselves that a) these desirable elements are in place and b) they are making a difference to the student experience and to successful completion.

2.6.2 Enhancing quality (2) – problems (as identified in the UKCGE 1996 paper)

The 1996 UKCGE paper reported some 'problems' in RDP provision as highlighted by HEQC; we should note that these were given as examples – it was not the stated intention to provide an exhaustive list. These are paraphrased below in order to give some historical perspective on quality issues that were pertinent in 1996.

- (a) variable supervision arrangements,
- (b) lack of supervisor training,
- (c) inadequate training and monitoring of students engaged in teaching;

- (d) weaknesses in methods used to select and brief external examiners;
- (e) variable completion rates for postgraduate doctoral students;
- (f) inadequate training for students in 'research techniques and quantitative methods';
- (g) absence of effective rules and procedures regarding appeals,
- (h) variations in the mechanisms for transfer of registration from MPhil to PhD.

Current areas of consistency

As a result of initiatives such as the QAA Code of Practice some consistency can now be expected across the sector in terms of (using the numbering as above): (a) the need for supervisory teams (rather than single supervisors), (b) the training of supervisors, (d) rigorous procedures for selecting, appointing and briefing examiners (internal and external) (f) the expectation that students will be offered development opportunities (supported by Roberts funding), including research methods training, (g) the need for transparent rules and procedures for Appeals and (h) clarity in the transfer from MPhil to PhD registrations. It is also the case that the issue of (e) 'completion' is now coming under increased scrutiny with the HEFCE survey of qualification rates (completion has been deemed too imprecise a date and the actual conferring of the award by the relevant committee on behalf of the institution, or similar, has been chosen as the census point).

Students who teach

The issue of students who teach is also addressed in the revised Code (within Precept 9). But here the matter is less clear-cut. Teaching by students is referred to in the context of entitlements and responsibilities. Thus it is not quite so clear that what was perceived of in 1996 as 'inadequate training' is a clear focus of change in the current climate. However we should note that the QAA Code does make it explicit that when research students/doctoral candidates are asked to undertake teaching duties, they should receive

appropriate and adequate training for, and be supported in the role.

Selection and briefing of examiners

This leaves (d) selection and briefing of examiners. Certainly, selection is addressed in the revised Code and briefing is covered in section (a) of Precept 23 *“Other issues include how to establish that the examiners have relevant qualifications and experience and a clear understanding of the task”* and also in (b) *“Institutions will wish to consider ways of making sure that the examiners have the information and conditions they need to identify the areas to be explored at the viva.”* In spite of this precept it may be that variable expectations and variable notions of the purposes and practices of the examination process remain issues largely unresolved (see for example discussions in Tinkler and Jackson 2000 & 2004).

Certainly, Williams (2007) among others has noted the differences in approach to examination at research degree level between disciplines and indeed between subject areas within disciplines. For example, Tinkler and Jackson (2000) note that the average length of vivas differs according to discipline. While this may seem a fairly superficial distinction, we suggest that it is indicative of different processes followed by examiners across disciplines which in turn relate to different concerns about what is being examined and how that examination can best be carried out.

Training in ‘Research Techniques and Quantitative Methods’

The other issue that perhaps remains unresolved from 1996 is that of inadequate training in ‘research techniques and quantitative methods’. This comment from 1996 is interesting for a number of reasons. First, it is noteworthy that it is quantitative methods that were called into question. This selection ignores the range of qualitative methods and it is hard to know if this is a result of a perception, by the authors of the 1996

Report, that training in the latter was adequate or rather unworthy of mention. Certainly there are no positive references to training in qualitative methods. Second, it is interesting that the concern in 1996 was with research specific skills rather than with generic skills.

It might be argued that the growth in emphasis on generic skills over the past ten years has been at the expense of an emphasis on subject specific or research specific skills. However, it is also the case that many working in the sector have maintained a focus on research methods as part of a wider training which includes generic issues. Indeed, the Research Councils’ Joint Skills Statement as quoted in section 1 of the QAA Code of Practice states that they *“would also want to re-emphasise their belief that training in research skills and techniques is the key element in the development of a research student, and that PhD students are expected to make a substantial, original contribution to knowledge in their area, normally leading to published work. The development of wider employment-related skills should not detract from that core objective”*. (QAA, 2004). Although ‘Roberts’ Funding is explicitly given to institutions for generic skills training (i.e. skills in sections C to G of the Joint Skills Statement) and not for the skills listed in sections A or B, in practice it is often difficult to differentiate between research and generic skills. That is, there is a blurring of the boundaries between the two, which is normally of benefit to the research candidate – he/she is often learning generic skills as an integrated part of doing and learning about research.

The increased emphasis on skills development mirrors perhaps the change in perception of the purpose of the PhD itself. PhD training was criticised as being too narrow and as producing thinkers and does not sufficiently capable of communicating and collaborating with peers from different disciplines (the 1993 Government White Paper ‘Realising our Potential’ had made this broad point). Subsequently the PhD has been interpreted by some (e.g. Felton, 2008) as a broad high-level training within a cognate discipline with attention

to the ways in which that discipline impacts upon others. As we have noted earlier, generic skills have become – to many – an integral part of the doctoral process (including here the professional doctorates as well as the ‘traditional’ PhD).

Monitoring and assessing generic skills

While it is relatively straightforward to see how subject-specific knowledge and skills can be monitored and ultimately assessed in the production and examination of a thesis, it is less clear how the learning of generic skills can be similarly monitored and assessed (at least within the ‘traditional’ PhD programme of study). In short, to be judged as truly ‘generic’ a learnt skill would need to be demonstrated by the student and assessed by an examiner in a range of situations – i.e. it is precisely the generalisability that needs to be the focus of any assessment procedure. Both the criteria for the award and the assessment method would need to change in response to this ‘new’ element in the learning process.

If an institution does not make changes of this kind then the situation may arise wherein there is an insistence on the learning of generic skills within a formal programme of study with no adequate way of measuring the success of the learning that goes on. On the other hand an institution that does make changes of the kind described has to balance what is to be taken as truly important in the programme of study and hence in the assessment – is it to be the ‘contribution to knowledge’ or the candidate’s ability to communicate and collaborate in a range of (possibly unspecified) situations? It can of course be both, but then an institution has to face the possibility of a candidate making a significant ‘contribution to knowledge’ whilst being judged not sufficiently capable of communicating with others outside the discipline about his/her findings and thus denied the award (or given the award conditional upon giving evidence to overturn the judgment of insufficiency in generic skill ability).

On the other hand, there is a sense in which the oral examination that is almost without exception seen as a necessary part of research degree examination in the UK does, by definition, assess some generic skills: the ability to communicate clearly, orally and in writing, critical thinking and analytical skills, and the ability to present a reasoned argument.

All of this is not to deny the place of generic skills learning in doctoral study but to raise, from the quality perspective, the difficulties of managing the assessment of that learning in a transparent way that is meaningful in the context of a doctoral award. What these issues do perhaps require of the sector is to revisit and review the purpose and outcomes of the doctorate itself. The quality questions we have raised above can only really be resolved when there is transparency about what institutions are doing when they educate doctoral candidates – in this sense assessment should follow purpose and when purpose is unclear then assessment will necessarily be impaired.

Reviewing the criteria for the award

The initial focus for any revisiting and reviewing of the purpose of the doctorate might be to examine the criteria for the award. If one takes the view that all elements of a learning programme need to be reviewed in any assessment of the award in question then, in the case of the PhD, the criteria for the award would need to be amended to reflect this requirement. In short, the learning of an assessable skill would need to be built into the criteria for gaining the award.

This becomes a particularly pertinent issue when one considers the non-traditional routes to a doctoral award. If there is parity of level between, for example, the PhD and a professional doctorate, then that parity needs to be apparent in the assessment criteria for both types of award. This is not to suggest that the criteria need to be the same – indeed for these to be separate awards then necessarily the criteria need to spell out how

one is distinguished from the other – but they need to relate to each other in a way that indicates that the level of achievement is comparable.

In a pragmatic sense it may be that the two sets of criteria would share many of the same words, for example about evidence regarding ‘contribution to knowledge’ ‘independent critical ability’, ‘technical competence in the chosen field’, ‘the ability to present and defend a thesis in a lucid and scholarly manner’, and ‘the production of material worthy of peer-reviewed publication’. Yet these criteria would differ in the interpretation of the location and kind of contribution to be made by the candidate in order to merit the award and in this sense standard or level of award would remain consistent though the focus within which it is achieved may differ.

From part of the initial analysis of responses to the QAA discussion paper on doctoral degrees, it is clear that many institutions use consistent assessment criteria for different types of doctorate. ‘Publishability’ remains an important criterion, supported by different definitions of ‘originality’. A detailed summary about responses relevant to this discussion is available at:
<http://www.qaa.ac.uk/academicinfrastructure/doctoralProg/Q8Responses.pdf>
(Clarke, 2008)

In terms of the level of two doctoral awards of different kinds it is difficult to see how parity can be assured if the criteria are wholly unrelated. It may be that it is preferable for an institution to consider the criteria for all its doctoral awards within a common evaluative frame, as some institutions have done (Clarke, 2008) (cf doctoral qualification descriptors in the FHEQ). Parity will be hard to sustain where the prime driver for the development of the criteria for one doctoral award (or more likely sub-set of doctoral awards) is pre-specified curriculum content rather than a (unifying) notion of ‘doctorateness’. Conversely, it may be that the ability to have parity in the standards of academic awards is more about

fitness for purpose in the subject (e.g. professional doctorates are more common in the social sciences, engineering and, to a limited extent, clinical subjects, than in arts or science), than about whether someone who has a PhD has or has not achieved a different academic level from someone with a professional doctorate. We suggest that this is a matter that institutions might wish to debate as they develop standards and criteria that meet them across a range of doctoral awards.

In short, there is a need for a wider debate about the purpose of the doctorate and hence what criteria should be applied in order for a candidate to gain a doctoral award.

3. What is ‘Quality’ in Postgraduate Research Education?

3.1 Definitions of quality

In the 1996 ‘Quality and Standards’ paper UKCGE suggested five definitions of quality, which can be summarised as follows:

- (i) the highest possible standard (of academic achievement, as well as of support for and management of research degrees)
- (ii) fitness for purpose
- (iii) effectiveness in achieving institutional goals
- (iv) conformity to a specification or standard
- (v) meeting the stated or implied needs of customers

Of course these are not mutually exclusive definitions and certainly (iii) and (iv) are compatible with (and perhaps subsidiary to) the other three definitions.

(i) The highest possible standard

The 1996 Report makes the point that the first definition above – the highest possible standard – may be the ‘traditional’ one but it is not generally what concerns HEIs in terms of their quality

assurance procedures. All might aspire to the highest possible standards but what is taken currently as the objective is to set an acceptable level of quality of provision for research students – a threshold standard. Further, it might be possible to find ready agreement that this threshold should be as high as possible so in one sense this definition becomes a part of any working definition (the highest possible standard acceptable for all). Certainly, it might be acceptable to most that, as noted in 1996 (page 13) any system should seek to raise in a progressive way the threshold standard. This is an important point in as much as it indicates one aspect that we may argue should be an integral of any quality system – the notion of an inbuilt self-evaluative structure that seeks feedback and accommodates it within a continuing cycle of review and revision of both principles and practices.

(ii) Fitness for purpose

The 1996 Report argues for this definition as both the most commonly accepted (e.g. adopted by HEQC and HEFCE, page 13) and the one most readily equated with the authors' notion of quality (page 14). However, fitness for purpose of the award without some notion of the 'quality' of that purpose is a somewhat hollow notion. Certainly, one might expect that fitness for purpose would require a contextual framework involving some value statements about what is desirable and what is not if it to be more than a rather blunt utilitarian device. In our view therefore any quality framework relating to doctoral study would need to address the purpose of the study itself and its level (why do we need people to be studying in these research areas and why do they need to study as this particular (doctoral) level?) This, of course, brings us full-circle to criteria for the award.

In responding to the QAA consultation on doctoral degrees, institutions supported firm yet flexible criteria (FHEQ doctoral qualification descriptor) at national level to set clear academic standards for doctoral awards. Implicit in this is a need for

interpretation at subject level (see comments above about discipline-related imperatives) together with recognition of the importance of consistency and doctoral graduates that are 'fit for purpose' for the next stage in their career, whether this be industry, academia, or one of the hundreds of other destinations of research degree graduates.

This setting of an academic standard for doctoral qualifications is underpinned by Section 1 of the QAA Code of Practice, which provides a framework within which institutions are working towards, and achieving, high quality provision, including in institutional arrangements and the research environment, as well as in admissions, supervision, assessment, etc. Institutional frameworks are explored further below.

(iii) Effectiveness in achieving institutional goals

This definition lies somewhere at the heart of procedures followed by some quality assurance methodologies (e.g. QAA). There may be a sense that what it is possible to recognize and to some extent measure is (a) the nature of what an institution sets out as its goals for research education and (b) how clear it is that it meets them, including what evidence is available. However, as noted in the 1996 'Quality and Standards' paper (page 13), this (i.e. institutional goals and quality assurance methods) cannot tell the whole story. Certainly, it is important that an institution is clear about the goals it seeks to attain but of course the goals themselves matter – at least in our interpretation of 'quality'. We diverge from the earlier Report in suggesting that goals with regard to doctoral education do differ across the sector – not just within disciplines but also according to institutional views of doctoral education and what are reasonable routes to achieving a doctoral award. Therefore it seems fair to suggest that it is not enough (in our view of achieving a quality learning environment for doctoral students) to be effective in achieving institutional goals – the goals themselves need to come under scrutiny. It is

perhaps worth noting here that the use of external examiners is in itself an attempt to give this kind of scrutiny and ensure some notion of uniformity of quality within disciplines and between HEIs.

In addition, and perhaps as importantly, the way in which an institution sets about developing its goals for doctoral study matters when it comes to making judgments about the quality of doctoral education and frameworks within which this is offered. One might legitimately expect that an institution should work through, in some systematic and consensual way, the arguments for particular kinds of processes and procedures to support doctoral student 'training', i.e. research student education, on the one hand and 'doing research' on the other. In short, for a quality learning environment to exist in an institution there needs to be an argued through and thought out stance with regard to what can be expected of students and what the institution's responsibilities are in enabling the student to meet those expectations. Currently, many institutions seek to make such expectations and responsibilities transparent via induction days or similar devices.

(iv) Conformity to a specification or standard

This definition does not exclude that given above in (iii). The difficulty with this definition lies in the potential of a set specification, once set down, to be applied inflexibly. Where a specification is laid down in a way deemed by institutions as immutable then some individuals in those institutions may target their activities to meet that specification without thinking through the changing context within which they are working and the implications of meeting the specification. Similarly, where the specification is set out in numerical form then institutions may begin to operate on the basis of meeting targets in an overly simplistic way that may deny opportunities for improving quality or prevent students from achieving their full potential. Policies and advice at institutional level need to be feasible, fully owned, and therefore understood by those working within the institution. It may well be that (as implied in the 1996 'Quality and Standards'

paper) the temptation to simplify issues by producing clear and measurable performance indicators may lead to an inability to evaluate the quality of research education, or at least may only allow a narrow aspect of it to be judged in an inflexible way. The issue with any specific target standard, then, is how to ensure that meeting the standard will in itself realize an increase in quality of the student experience. Where such realization is not automatic then raising quality becomes a matter of an institution making use of the specification to guide its practice – this latter approach requires of the institution a more reflective *modus operandi* than the former. Such reflection might form part of training and updating programmes for research degree supervisors that are set in line with QAA expectations.

An aspect of this principle might be that, to be effective, any specification or standard needs to be sufficiently flexible to address the needs of diverse students, staff and subjects within an institution, and nationally, the needs of diverse institutions with different missions, e.g. those with large numbers of part-time students compared with those that have large numbers of full-time, Research Council funded students. The framework set out through the precepts of Section 1 of the QAA Code was designed with the above diversity in mind and to enable any institution to create the conditions within which research education can flourish.

(v) Meeting the stated or implied needs of customers

This is perhaps a deceptively straightforward definition of quality in postgraduate research degrees. In the sense that students have needs in relation to their study then meeting them would seem to relate directly to the quality of the experience. But, as noted in the 1996 Report, it is not so straightforward to define 'customers' in this area. The funders of research degree study – whether they be government agencies, independent charities or overseas bodies have

legitimate claims to be stakeholders in research degree study and hence in this sense 'customers'. In short, what counts as a successful outcome may differ according to the needs of stakeholders. Therefore any notion of quality as applied in this area perhaps needs to accommodate the differing needs of the various stakeholders (and, above all, to meet the rigorous academic standards set by the assessment criteria used by institutions and examiners of research degree candidates).

3.2 Purposes of the doctoral qualification

The discussion of different definitions of quality leads inevitably to a need to examine the purpose of doctoral study itself and the purpose of the doctoral qualification.

The purpose of *doctoral study* may be defined as the finding out of more about the topic by the student and in so doing enhancing that student's research skills and his/her personal knowledge of the substantive area as well as of knowledge in a more general sense. The purpose of the *doctoral qualification* on the other hand is less straightforward. Here the 1996 Report (pages 15 & 16) considers the problem from the perspective of the 'product' of which the qualification is evidence. That product is interpreted as the independent researcher him/herself (the doctoral candidate) and/or the contribution to knowledge made by the doctoral submission (the thesis). In all of this we may conclude that perceptions of the purpose of qualification may differ according to stakeholder, whereas the purpose of study may remain constant.

In one sense, the discussion above may seem to be about the process and the product of research degree study, with the process relating to the learning of the student and the product to the outcomes in terms of personal development of candidates and the (universal) knowledge base. In our own view however discussion may not be so readily separated out. The issue runs to the heart of any debate about quality. The doctorate is

typically taken to represent the pinnacle of academic achievement (setting aside for a moment the so-called 'higher doctorates') and in that sense its purpose is, crudely put, to demarcate or identify those who have attained the pinnacle. The doctorate is attained by means of an educative process in which students learn via a process of engagement with 'teachers' and submit the results of their learning for assessment by examiners.

The single aspect that makes the doctorate unique in the educational system is that, for the doctoral qualification to be affirmed, the learning of the student must change the very nature of the 'topic' that he/she has studied to gain such affirmation. The evidence that candidates present for examination is this 'change' and their ability to understand it to a level that indicates that they can go on to make further such changes in an independent and creative way. In this sense the purpose of doctoral study is to lead a candidate to a state - the doctoral qualification - in which he/she makes the contribution and successfully indicates the ability to continue in the independent way noted above. Stakeholders may graft their own purposes upon this underlying *raison d'être* but we suggest that those concerned with quality need to focus on the latter rather than be sidetracked by the former.

We note above that a single aspect makes the doctorate unique: it involves a changing of the topic under study, i.e. it makes a 'contribution' to knowledge. It follows then that all other aspects of doctoral study and qualification are not necessarily unique but may share common features with other levels and aspects of university study and qualification. So for example, it seems to us that while the sector may use the term 'supervision', this is not radically dissimilar to 'teaching' at other levels in HE (excepting that a supervisor teaches towards the 'contribution'). Similarly, progress through a programme of study is often given the status of 'transfer' from MPhil to PhD registration when in reality it is merely a matter of showing that the candidate has worked towards a goal and has plans that make further progress to a new goal reasonable.

Finally, it is arguable that the research degree examination in the UK has become an affair that is often shrouded in mystery and with unclear purposes and procedures. Certainly it is fair to say perhaps that a significant number of candidates are not aware of what is required of them in the doctoral examination (see for example Pearce, 2005), yet in reality it should simply be a matter of judging whether or not the candidate has met the criteria for the award. Our point is that when talking of quality there is a need to cross-reference to what counts for quality in other parts of the higher education system rather than seeing research degree study as somehow separate and necessarily different. Certainly, it is distinctive (for the single reason we give) but principles of effective pedagogy and assessment still apply.

3.3 'Non-traditional' doctorates

The 1996 paper discussed the need to consider 'non-traditional' doctorates within the same quality domain as the traditional PhD. To a great extent this has been achieved in practice, although there is some evidence that not all involved with doctoral education are committed to parity of esteem between professional doctorates and the PhD. However, the need for similar measures of quality to be applied to all forms of doctoral study has perhaps become more pronounced over the last ten years as these forms have increased in both number and popularity (in terms of number of students studying) – see for example the UKCGE reports on Professional Doctorates (2005) and the PhD by Published Work (2004). It may also be, however, that the issues of quality differ across the various forms of doctoral study. The forms referred to in 1996 were: (i) the PhD by Published Work, (ii) doctorates in the creative arts and (iii) so-called 'taught doctorates'.

3.3.1 PhD by published work

The 1996 paper points out correctly that, while it may be the case that a candidate's published work does not provide direct evidence of successful

training in research methods, there is typically an acceptance in institutional regulations where such awards are on offer, that success in the process of publication itself provides evidence of the ability to carry out research through to completion. Care is obviously required when assessing whether or not that ability is of an independent kind - that is the levels of collaboration and the kinds of input made by various individuals named as collaborators need to be checked to ensure that the successful candidate can continue as an independent researcher in a sustained and creative way.

The oral examination clearly takes on a key significance in these respects. The 1996 paper spells out the need for: (a) recognition of contributions from others, (b) overall coherence of the work presented and (c) the need for particular rigour in terms of involvement of two external examiners appointed with no input with regard to their selection from the candidate. While we have no real issue with these points (except perhaps the last one – input from the candidate) it does seem to us that the real issue again is the purpose of the study and the qualification. If we return again to the making of a contribution and the providing of evidence that the candidate can continue to make such contributions in an independent and proactive way then the matter of quality of award is not diminished from the 'traditional' PhD. The level can be seen as the same; it is merely that the candidate has taken a different route to providing the evidence that he/she has met the criteria for the award.

The real question in relation to quality is where the criteria for the award of PhD by Published Work lie in relation to its traditional counterpart. It seems to us that any deviation from the standard set out for the traditional PhD would result in diminished quality of award and thus of student experience. If the level of the doctoral qualification refers to the standard as set down in the Framework for Higher Education Qualifications then, for quality to be maintained across awards, it must apply equally to the PhD and to the PhD by Published Work.

Our recommendation then would be that institutions make reference to their own criteria for awards and where any discrepancies of level exist between these two doctoral awards then such discrepancies would need to be addressed. If the criteria of the two awards refer to levels that are on a par, then issues to do with where the study was undertaken and the period of time that was taken to reach the point of submission become less relevant.

3.3.2 Doctorates in the creative arts

The 1996 Position

The 1996 paper did not dwell on doctorates in the creative arts, noting that a working group to examine them had just been set up by UKCGE. It did however put forward a view that this form of award did not 'fit neatly' within the kind of doctoral framework involving training in carrying out research leading to the production of a piece of original research. It argued that, while it might be possible to chart a student's progress in learning relevant skills through the exhibition of works by that student, there is *'necessarily no viva voce examination since there is no thesis to be examined, and in its absence there appears to be no basis in which to award a research degree, or to base any system of quality assurance'* (UKCGE, 1996, page 18). The authors are aware of institutions where assessment regulations for research degrees have been revised such that this point is addressed: in summary, candidates have to submit a written commentary to accompany the artefact, analysing the process and methods used and saying how that artefact contributes to knowledge in the particular area. Our impression is that such (or similar) assessment criteria are now common in institutions where creative arts doctorates are awarded.

Because of the inevitable constraints on space in writing this current paper, we have followed the 1996 original in addressing the issues surrounding doctorates in the creative arts rather than extending our discussion to include other notions of 'practice-based' doctoral study.

Doctorates awarded solely on the basis of creative outputs

There are problematic issues arising from views about whether or not a doctorate can be awarded solely on the basis of the production of a creative work(s) assessed by knowledgeable peers, experienced in the field, as worthy of note as excellent and as contributing to knowledge in that field. Since the 1996 Report there has been a debate about this issue with perhaps an emerging consensus suggesting that, however much critical acclaim can be agreed upon, the work(s) requires an intellectual contextualisation and critical interpretation if it is to be deemed worthy of a doctoral award. However, we should note that this is not universally accepted, particularly perhaps within the domain of music (and the award of DMus).

Contribution to knowledge through practice

There is a contrary view to the one put forward in the 1996 Paper, which suggests that doctoral level study may be accommodated within all intellectual domains, including the arts, and therefore that a PhD award can be made in any such domain (see Green and Powell, 2005, Chapter 6, for a full discussion). In this view the PhD is a generic award made for contribution to knowledge of whatever kind and within it may be a distinctive sub-group of areas that are rooted in practice and where, more importantly, the contribution to knowledge may be made through the practice itself. What is involved here then is a 'creative product' and a different orientation to the process of researching. This kind of doctorate is not, therefore, merely a doctorate awarded in an area that includes an element of practice but rather one involving a kind of study where knowledge is advanced by means of the practice itself.

The UKCGE survey of Professional Doctorates in the UK (Powell and Long, 2005) indicated that a large (and at the time of that publication ever increasing) number of professional doctorates have developed in response to professional practitioner needs, for example in psychology and other health disciplines, in business, and in

engineering. This brings new challenges throughout the range of concerns about doctoral education. Such challenges are perhaps exemplified by the use of portfolios for assessment in areas such as engineering and the arts where many examiners used to examining PhDs expect a thesis or dissertation and are faced with a portfolio that looks somewhat different and in turn needs addressing in a different way. We are not saying here that portfolios do not represent an appropriate academic level but rather that the way in which contribution is presented in them differs from that in the traditional thesis/dissertation and therefore ways of evaluating that contribution need to vary accordingly.

Quality assurance and purpose of the award

In considering the assurance of the quality of the award of a practice-based doctorate within the creative arts it is necessary to revisit its purpose. There are three dimensions to purpose here.

- (i) If the PhD is inseparably related to training in how to do research then assessment of the creative output should include a judgment about whether the candidate is able to conduct independent research. While a creative output may indicate that the creator has engaged in such training (e.g. has investigated, designed and made use of research techniques) such an indication will remain implicit and hence not amenable to assessment unless the candidate sets down an account of how the research goals were achieved. In essence this is what is required within a traditional PhD submission where the candidate sets down the outcomes of the research programme but also a discursive account of how those outcomes were achieved.
- (ii) If dissemination of findings is a necessary requisite of successfully undertaking research and, in turn, of being awarded a higher degree for doing it, then successful research at doctoral level must result in a contribution to knowledge that is realised when it is communicated effectively to others in the field.

The point of debate in this dimension is whether the contribution can be communicated adequately without a supporting discursive account that describes how the research that underpinned the creative act(s) was designed and carried out. Arguably, the acid test in this dimension might be that others working in the field need to be able to learn from the creative output if it is to be acceptable as a contribution to knowledge.

- (iii) A doctoral examination typically takes the form of the candidate defending argument set out in the thesis. Here there is a distinction between a creative work that is presented without explanation or critique and one presented with an attendant critical analysis. Both might have some legitimacy in their own right; however, while the former conveys meaning to its audience and has a potential to make a subjective impact on that audience, the latter conveys critical explanation about, and analysis of, that meaning and that impact. The question then arises for the examiners: can the merits of the creative work be measured against the criteria for the award by examining the creative works alone?

In terms of ensuring the standard of the academic award, we suggest that the latter rather than the former that can be deemed an academic exercise and thus worthy of an academic award. This is not, of course, to deny the intellectual effort required in a creative act but rather to focus on the needs of any assessment process leading to an academic award.

There is a contrary view that we should note here and which suggests that the intellectual position and its defence *can* be embodied in the creative output. This view is perhaps most prevalent in the area of musical composition (see Green and Powell, 2005). The debate about how an artefact may be understood in relation to any concepts that are being communicated (i.e. whether an artefact in itself can embody knowledge or if understanding of it only comes about through its

contextualisation) is summarised in Green and Powell (2005, pages 105-111) and in Biggs (2002).

Definitions within the wider academic field

Definitions of research in the arts may be still open to debate within the field but the wider academic community (e.g. Higher Education Funding Council of England Research Assessment Exercise and the UK Arts and Humanities Research Council (AHRC)) seem to have consolidated a view that suggests that, to qualify as research, artistic projects should specify and be located within a 'research context'. More recently the topic is examined in the AHRC Research Review – Practice-led Research in Art Design and Architecture (2007) (available on line at http://www.ahrc.ac.uk/About/Policy/Documents/Practice-Led_Review_Nov07.pdf).

Further, HEFCE (1999) requires that the work should be open to critical review and that it should be possible to judge its impact and influence on the work of peers. AHRB requires that the work should specify and justify the particular research methods chosen. Of course, research context, methods and impact are often not defined or are ill-defined, nevertheless the implication is clear – if there is to be adequate quality control over academic awards in this area then for artistic endeavour to be 'counted' as research, and therefore be amenable to assessment for a research degree, it would need to involve critical reflection on both processes and products.

Summary of our view in relation to doctorates within the creative arts

To summarise our view therefore: it seems reasonable to suggest that, if they are to have parity with other doctoral degrees, practice-based doctorates within the creative arts should stand scrutiny under the same standards of assessment as any other kind of doctorate. The criteria used to attain the standard might differ in kind but it should be possible to relate them to other doctoral criteria in terms of level.

Successful candidates will be expected to demonstrate that they have learnt to place their work within the arena of other related work and to judge its impact on related areas of creative endeavour; they will be able to demonstrate that they have understood how they have applied particular methods (both conceptual and practical) in the production of their creative works and justify why choices of those methods were made; they will be able to communicate both their methodologies and their resulting works in an explanatory and analytical way to an audience of critical peers; they will be able to develop, set down in a written text and defend an intellectual position relating to their creative works by sustained argument.

Further, the doctoral qualification demands that they be able to continue that contribution in an independent and self-critical way. Finally, in as much as the award of a doctorate signifies admission to a community of scholars, then in our view no area of intellectual endeavour such as the creative arts should be excluded from this process on the grounds that assessment is difficult to conceptualise and organise and because it may involve subjectivity.

3.3.2 Professional doctorates

A third area for debate noted in the 1996 Report is the notion of a (wholly or largely) 'taught' doctorate. The report noted an extension of taught doctorates to a wider range of professions has been especially in the United States and slowly developing in the UK, *'for example in education, clinical psychology and engineering'* (UKCGE, 1996, page 18) The Report suggested that 'steps should be taken, for example by *'giving them a title other than PhD, to indicate that they are forms of professional advanced training rather than research based qualifications'* (UKCGE, 1996, page 18). It seems to us that this is one area in which understanding has moved on since 1996. The use of 'taught doctorates' synonymously with 'professional doctorates' is not helpful where the

distinguishing features of this latter grouping of doctorates relate to focus of intellectual enquiry and kinds of contribution to knowledge rather than necessarily to mode of study. Whether or not there are some elements of study that involve attending 'taught' sessions is not the issue. Rather, it is about the graduate's attributes and abilities at the end of the programme being at doctoral level (and therefore being in alignment with the doctoral qualification descriptor). The term 'taught doctorate' is also unhelpful when trying to assure parity of esteem between professional doctorates and the PhD, especially in a global context. Given the world-wide competitiveness for doctoral candidates, we suggest that it is important for the UK to protect its doctoral 'brand' and that this is inhibited by referring to 'taught doctorates', which could also be viewed as a contradiction in terms.

In relation to a concern with the quality of the learning that takes place and the kinds of outcomes that may accrue what matters is the level of skills and contribution that is attained by the successful candidate. For many in the sector a 'taught doctorate' is a contradiction in terms. As we have already noted to attain doctoral level necessarily involves making a contribution to an intellectual field and showing evidence of being able to continue to make such a contribution and in this sense it is not possible to define a 'syllabus' that will lead to such a level in the same way that it is possible in taught courses. Having said that, we have also recognized that research degree students are, in one sense, *taught* by supervisors and other senior academic colleagues, and quite possibly through attending lectures and seminars. They also learn from their peers. It is the nature of the learning outcomes that separates out the traditional notion of 'taught courses' from 'research degrees' rather than the forms that learning may take.

3.4 The doctoral programme

The 1996 Paper considers two main issues under the heading of 'doctoral programme' (i) research methods and generic skills and (ii) supervisor

training. Its main conclusions are that prescription in either of these areas is unlikely to enhance quality because of the diversity of needs in relation to both students and disciplines. While it is certainly the case that doctoral study is a diverse occupation and hence uniform requirements are unlikely to work, it may also be argued that there are certain principles that may apply across the board. Since 1996 the introduction of the revised section 1 of the QAA Code of Practice - Research Degree Programmes has to a large extent mapped out what may count as 'effective practice' in relation to (i) giving students access to a range of learning opportunities that encompass generic as well as subject specific skills and (ii) giving supervisors access to training that focuses upon the requirements of the specific educative process at research degree level.

In our view the focus of concern when seeking to assure quality of learning within a programme of study at research degree level needs to be on the specifics of the learning required of the student to attain the expected level of academic achievement and subsequently on how that learning can best be achieved in terms of environment and pedagogy. It is erroneous to focus on generic skills without first defining what they might be, why they might be valuable to individual researchers and how best they can be attained.

Subsequent to this comes the question of how the acquisition of those skills may best be assessed. This latter issue is often overlooked, yet in terms of the quality of the student's learning experience, it is hard to justify an assertion of something's usefulness without indicating a way of measuring how readily it has been learnt and how usable it is in the learner's continuing experience. Similarly, to say that supervisors should be trained is nebulous without an engagement with what it is that makes research degree supervision different from any other kind of university teaching and therefore what it is that potential supervisors need to know and to be able to do (QAA Code of Practice, Section 1, Precepts 11 to 14).

3.5 Assessing the doctorate

The 1996 Report made four main suggestions with regard to the examination of doctoral candidates. First, that there is *'little purpose in requiring the holding of a viva if it is clear to the examiners that the candidate will pass'* (page 20). Second, that making use of external examiners from outside of the UK would ensure *'some sort of international equivalence in the standard required for the award of a research degree'* (pages 20 and 21). Third, that Codes of Practice for the conduct of examinations should be *'actively encouraged'* (page 21) and similarly mechanisms for appeal against examination outcomes should be clearly available to candidates (and these mechanisms should include making examiners reports available to candidates). Four, that examiners might be enabled to comment on the standard of doctoral education that the candidate has received though the report does not advocate routine comment from examiners on general standards of provision. We revisit these issues below.

3.5.1 Why an oral examination?

It is recognized in the literature (e.g. Green and Powell, 2005; Powell and McCauley 2002, 2003; Tinkler and Jackson 2004) that institutions vary in respect of their use of the viva as an essential or non-essential component of the doctoral examination process – though for the majority of UK universities the *viva voce* is seen as an integral part of the process (albeit one where, in some institutions, exceptions may be made, for example to accommodate particular medical circumstances). In our view the questions need considering in terms of the quality control of the examination process – its reliability and its fairness.

In as much as doctoral candidates should (again, in our view) set out their 'thesis' – their intellectual position – which they then defend in their written submission, then the viva becomes a matter of enabling the examiners to pass judgment on the viability of the intellectual position and on candidates' understanding of it and their ability to

continue the defence that they have set out in writing, in the face of an individual, oral, cross-examination.

For the quality of the doctoral award to be ensured there is a need for this final stage if part of the notion of a 'doctor' is that the holder of such a title can initiate research that contributes to knowledge and, importantly, be aware enough of the context and the implications of their work to explain and defend it and continue to initiate work of a similar standard. In short, for the quality of the award to be ensured then the examiners need to be sure that not only has the candidate contributed to knowledge but also that he/she can continue to do so in an independent and sustained way. This latter judgment can best be made in an oral context where questions can be asked and chances to justify and expand can be given. An examination where no oral component exists is open to the charge that while the former condition might be met (the written submission contributes to knowledge) the latter condition (of independent continuation) cannot adequately be met.

In short, the need for a *viva* as part of doctoral examination cuts to the heart of what the award is about. The decision as to the level of necessity for a *viva* therefore matters in terms of (a) how a university perceives the doctoral award and (b) the controls it places on the quality of successful doctoral candidates.

3.5.2 International equivalence

In one sense it seems straightforward to advocate the involvement of international examiners to ensure some notion of parity of doctoral awards across national borders. Indeed this is common practice in many other countries (e.g. Australia and Sweden). Yet the question for those concerned with the quality of the process is the extent to which an examiner from overseas is judging like with like if he/she applies the standards of his/her own country to the examining of a UK doctoral candidate. This is not of course to argue for any imbalance in level

necessarily but that processes of doctoral study differ across international boundaries to such an extent (see Green and Powell, in press) that what may be expected in terms of the actual examination, if not in terms of the written submission, will also differ. As a matter of ensuring the quality of the process of examining therefore, any involvement of an examiner from overseas should incorporate some guidance on the nature of study undertaken, the criteria for the award, the expectations of the examination process and the qualities within the candidate that are deemed necessary for success. Of course, such guidance is necessary for all examiners (and we include here internals) though we would argue that guidance for overseas examiners requires greater contextualization.

Returning once more to Bologna and related developments, it has been suggested that UK doctoral examinations might be improved if they were more closely aligned to practice in continental Europe. For example, in many European countries, a public defence of the thesis is required, which can address any doubts about the candidate's ability to present and defend his/her arguments, at the same time assuring the originality of the work and sharing it with a wider audience. To our knowledge, there are no moves to adopt such models at present in the UK.

Taking an international perspective, it is not a universal requirement for doctoral candidates to defend their thesis (either in public or in a closed examination) in order to be awarded the degree. In Australia, for example, it has never been the norm for candidates to undergo an oral examination: assessment is based on examiners' reading and commenting on the candidate's work. It seems unlikely that the UK or other European countries would wish to move to a remotely assessed model for doctoral degrees as the defence of the thesis is central to the examiners' being assured of the candidate's depth and breadth of knowledge and understanding, as well as the original nature of the research. The oral examination also enables examiners to check for plagiarism.

3.5.3 Codes of practice

Since the 1996 UKCGE Report the QAA Code has taken forward the notion of Codes of Practice and the importance of transparent appeals processes. We do not wish to diminish their importance – clearly they are central to any quality regime - but for the purposes of this current report we will accept such things as 'givens' within the UK scene. They are discussed in detail in the QAA Code and we will therefore not duplicate that discussion here.

3.5.4 Remit for examiners

In our view the remit that is given to examiners needs to reflect sharply the nature of the task that is required of them and the focus that they need to bring to bear on that task. To ask an examiner to pass comment on the whole of a department's research training provision (or indeed of such provision university-wide) is to potentially misrepresent their task and provoke unfair comment if they are basing their comments on judgments of just one case out of a much larger number. Of course if they are examiner of cohorts of doctorates (e.g. of a professional doctorate programme) then they might be expected to make such judgments in the same way as examiners of taught programmes might be expected to do. But in the normal course of events an examiner is required to make complex decisions about a (if successful) high level of performance. Whatever processes of learning and teaching have gone on and whatever resources have been provided, doctoral candidates have to stand or fall on their own ability to decide on their thesis and on the best way to present and defend it. To ask an examiner to go beyond the decision-making on the central point of concern (the doctoral level of the individual) is to confound process with product. Doctoral study does not involve a predetermined curriculum (which might be open to criticism) nor a set pattern of pedagogic delivery (which similarly might be open to evaluation) therefore the usual kinds of judgment making undertaken by examiners of taught programmes are not applicable.

4. The Assessment of Quality

In the current climate, where the need for accountability permeates the way in which institutions are expected to behave, there is an ever present demand for quality to be assessed. The act of assessing implies that some kind of measurement is possible and it is arguable if 'quality' is something that is amenable to measurement in this way. Nevertheless the 1996 UKCGE paper engaged with the notion and separated out such assessment into dimensions in an effort to make measurement of a kind manageable.

There are several dimensions to the way in which the quality of higher educational provision in general may be assessed and here we describe those dimensions within the context of research degree study, following from the 1996 paper.

- The kinds of **inputs** that an institution makes to the research degree process can be measured and hence assessed, for example judgments can be made about the appropriateness of the human and physical resources that are applied within the research degree context
- The kinds of **processes** that are in place within an institution can be judged, for example the characteristics of supervisory arrangements can be measured against agreed criteria
- The **outputs** of research degree study, for example the number and rate of success of doctoral submissions and the destinations of research degree students can be measured against agreed criteria

It is arguable that all three of these dimensions are important in any attempt to understand the quality regime of an institution. It is equally the case that some dimensions are more amenable to assessment than others – notably it is relatively straightforward to measure outputs such as numbers of progressions and number of successful (examination) outcomes within a set period of time. It is easier to assess the outcomes

of students' study than the input that they received and the processes of study through which they went. The readiness of outputs to be measured in this way may lead to an unbalanced overall approach in which the importance of input and process factors is underestimated. Indeed, if output factors alone are used to assess quality of provision then what results will not be a genuine assessment of the quality of the student's learning experience and it is perhaps worth re-iterating what was said in the 1996 UKCGE paper – namely that such a regard for the learning experience has *'been the primary focus for the assessment of the quality of taught programmes in higher education'*. We can assume that parity in these quality matters with what goes on in taught programmes is desirable (if not similarity of approach – taught and research may require different approaches to reach a level of quality provision that has parity).

The 1996 UKCGE paper went on to list factors in the three dimensions of input, process and output (pages 24 - 30). Interestingly, all these factors are addressed in greater or lesser specificity in the QAA Code of Practice with two exceptions:

- (i) In the 1996 paper UKCGE made some play of 'taught elements' within doctoral programmes and noted quality concerns in that respect. The revised QAA Code of Practice makes no mention of such elements, except once when mentioning skills training; however, the quality concerns with which the Code deals do encompass - in spirit if not explicitly- any taught elements that might exist within a programme of research study
- (ii) One output factor suggested by UKCGE is: 'career progression as measured, for example, by information 5 years post-PhD'. In this regard the Code does mention career progression but rather as something that is part of the process of learning rather than an output measure

It seems to us that neither of these exceptions is significant in terms of what is covered and, to

summarise, the revised QAA Code of 2004 addresses all the main areas considered important by the 1996 UKCGE report. What remains as a question however is how the current quality regime can ensure that a balance is achieved between the focus on inputs and processes on the one hand and outputs on the other?

5. International Dimensions

The final section in the 1996 UKCGE paper dealt with the international dimension to the UK doctorate stressing the importance of the quality of the UK doctorate both in terms of its standing abroad and its standard in relation to countries overseas. It also made the point that comparisons between doctoral training here in the UK and that abroad are hard to sustain where there are fundamental differences in conception of doctoral characteristics and hence of doctoral training requirements. Since the 1996 paper some publications (e.g. Powell and Green, 2007) have explored those differences and found them to be persisting despite the general drive towards harmonisation that comes from the EU. Certainly there are moves to regularize frameworks for research degree study – particularly in terms of the place of that study in relation to other levels of study (i.e. the Bologna and subsequent agreements) but differences in, for example, the way in which doctoral submissions are judged persist (e.g. there are distinctive notions, between countries, of ‘defence’ on the one hand and ‘examination’ on the other that share some characteristics but which are divided by fundamental differences of view in terms of just what is being assessed at the examination phase and how it may be judged).

6. Conclusions

The 1996 UKCGE Report concluded with a call for a wider debate about quality issues in postgraduate research education and by the involvement of other named organisations. It is

interesting to re-read that call now as many of the organisations have changed names or developed into new forms with shifted responsibilities. The main development being the publishing of the QAA Code of Practice three years after the UKCGE paper – in 1999 and then its revision and the publication of a 2nd Edition in 2004. Both of these moves were in line with what UKCGE was advocating at the time.

In one sense it seems futile to try to revisit the questions of which organisation should bear which responsibility for quality assurance of research degrees provision given the current landscape. However, it does seem prescient to make some comment about the drawing of quality assurance under the umbrella of a national organisation with designated responsibility for that assurance. We make that comment below along with some conclusions from the discussions we have set out in this paper.

6.1 The effects of monitoring

Drawing quality assurance under the umbrella of a national organisation with designated responsibility for that assurance means that national standards of research degree provision can be determined, described and communicated in a way that is understandable by all concerned (including students) and then an institution’s attempts to meet those standards can be monitored. The issue that may arise, and which we have noted earlier in this paper, relates to the knock on effects of this monitoring process. For the monitoring to be effective it requires that the national organisation assesses how well an institution is matching up to the precepts that it lays down. That process of assessment may lead to the institution focusing on how best to describe what it does in such a way as to meet the apparent criteria that underpin the assessment and do so in a way that is compatible with the reporting culture of the national organization. This would result in a change of description rather than a change in what it does so that those criteria are met.

The current situation, in England at least, is that several organizations are involved in monitoring the quality of research education. As noted above, the Research Councils, QAA and HEFCE all have different perspectives on the quality of doctoral education and graduates, measured by distinct processes. However, it is always the higher education institution in whose name the doctorate is awarded that is responsible for maintaining the academic standards of the qualification and the graduates thereof.

raising quality becomes a matter of an institution making use of the specificity of guidance to inform its practice and this in turn requires a reflective mode of operation.

6.2 In-built self evaluation

Any system should seek to raise, in a progressive way, the threshold standard. This is an integral aspect of any quality system – the notion of an inbuilt self-evaluative structure that seeks feedback and accommodates it within a continuing cycle of review and revision of both principles and practices.

6.3 Expectations

For a quality learning environment to exist in an institution there needs to be an argued through and thought out stance with regard to what can be expected of students and what the institution's responsibilities are in enabling the student to meet those expectations. For example, raising expectations of achievement without addressing issues raised by predetermined time periods for that achievement is, arguably, a significant concern.

6.4 Measurable performance indicators

Governments and/or institutions may seek to simplify quality issues by producing clear and measurable performance indicators; however such simplification may lead to an inability to evaluate the quality of research education, or at least may only allow a narrow aspect of it to be judged in an inflexible way. The issue with any specific target setting with regard to standards is how to ensure that meeting the standard will in itself realize an increase in quality of the student experience. Where such realization is not automatic then

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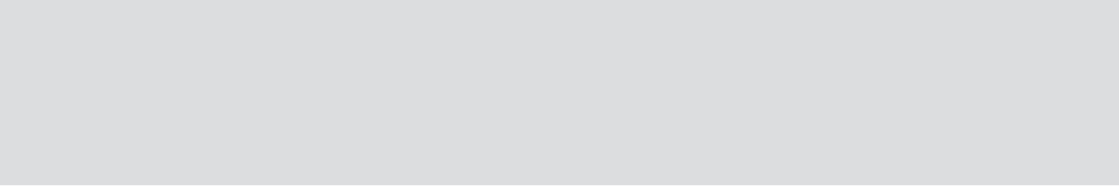
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