



Confidentiality of PhD Theses in the UK

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Summary

This report is based on a survey conducted in March 2010 aimed at establishing an overview of current trends in practice among UK institutions (as represented by UK Council of Graduate Education (UKCGE) members) with respect to addressing issues of confidentiality as they pertain to PhD theses in the UK. The report and the survey take as their base the earlier work of Professors Stuart Powell and Howard Green that was published in the first edition of this report in 2005. The 2010 survey revisits some of the areas covered by the previous survey, but also extends beyond the scope of the original survey in areas which the intervening years has shown to be of particular importance.

The 2010 survey has revealed that, contrary to expectations, the number of requests to restrict access to PhD theses has not increased significantly since the original survey in 2004. It is evident from the survey that UK universities take requests seriously, with few being declined. But at the same time, there was a markedly reduced tendency to impose the maximum allowable embargo period compared to the 2004 survey, with the duration instead being determined much more on a case-by-case basis.

The traditionally cautious attitude that academia has toward confidentiality, is predicated on the need to uphold the fundamental principle of free and open access to research outcomes and transparency of standards in research degrees. This principle however is sometimes challenged where research relies on industrial sponsorship. The most frequently cited reason for requesting an embargo on a PhD thesis, in both the 2004 and 2010 surveys, is that of protecting “commercial interests”. It was anticipated therefore that the advent of electronic submission and access to PhD theses (substantially widening access to them) would increase the perceived need for confidentiality.

However, the 2010 survey found that electronic submission and access has not yet reached the point of being standard practice across UK universities, and this may provide an explanation for the static number of requests for confidentiality being received. Electronic access to doctoral theses is nevertheless a reality, and UK universities should consider viable alternatives to placing an embargo on the whole thesis document; an approach that conflicts with the ethos of free and open access to research. This report identifies some emerging solutions, including the creation of “embargoed appendices”, placing embargoes on the electronic (but not the Library) copy of theses, or the adoption of a portfolio approach to presenting doctoral research, similar to that often used for the professional doctorates.



1 Introduction

In 2005 Professors Stuart Powell and Howard Green published the first report for the UK Council of Graduate Education (UKCGE) on the issue of confidentiality of PhD theses in the UK. Their work highlighted a number of important issues facing UK universities which continue to prevail today. Most prominent among these concerns is the need for academia to uphold two long-standing fundamental principles in the face of modern day challenges: firstly, that free and open access to the results of academic research is essential in order for scientific and technological progress to take place, and secondly, that transparency with respect to academic research enables critical and constructive debate to take place, allowing the quality of academic research to be upheld. Both issues are particularly critical with respect to research degree programmes.

Furthermore, Powell and Green (2005) state that for doctoral research degrees in particular, claims made with respect to the contribution to knowledge can only really be tested through peers in the wider intellectual community. Confidentiality therefore, is rightly considered with caution by the academic community, since these ethical standards must be upheld.

Nevertheless, as the survey conducted by Powell and Green (2005) revealed, a proportion of UK universities receive requests to treat PhD theses as confidential beyond examination. In the UK, PhD theses are treated “implicitly or explicitly” as documents in confidence to the point of examination (Powell and Green, 2005), after which it is common practice for theses to be placed in the public domain, usually by placing a copy in the library of the awarding institution. The challenge that such requests represent with respect to the basic tenets of academic practice, and on which this report will focus, has two major elements to it.

The first concerns the motivations behind the requests themselves – their validity and whether placing an embargo on the thesis document is an appropriate remedy. UK universities have, encouraged by government and the opportunity to supplement their income, sought to work more closely with commercial enterprise (Crespo and Dridi, 2007; Shattock, 1997), leading to inevitable conflicts with the academic ethos of free and open access to research outcomes. Indeed, the 2004 survey identified the protection of “commercial interests” as the most frequently cited reason given for requesting that PhD theses remain confidential.

Other reasons included the protection of individuals from possible reprisals on racial or political grounds. Such concerns were only cited in a small number of cases, and Powell and Green (2005) questioned whether a temporary embargo would in fact be sufficient to alleviate what could be a long term issue. The serious nature of these requests however dictates that any discussion concerning confidentiality of PhD theses should give such matters due consideration.

The second major issue concerning the treatment of PhD theses as public documents is the growing trend toward making them available in electronic form, and therefore accessible to a far wider audience than had previously been the case. This trend was noted by Powell and Green (2005) and in many ways is most likely the underlying concern behind requests for confidentiality, regardless of the stated reason. The traditional “hard copy” PhD thesis held in the University library, whilst essentially in the public domain, in reality offers very limited accessibility and undoubtedly causes little concern to most industrial sponsors or other affected parties. Access to electronic copies of theses via increasingly prevalent e-depositories changes matters considerably, and may drive a far higher demand for PhD theses to remain confidential in the future. This report will therefore extend beyond the scope of that of Powell and Green (2005) to establish to what extent this development is having an impact.

It should be noted that requests to treat PhD theses as confidential amount in practical terms to *restricting* access to the thesis, such that the document would not be placed in the public domain and access would only be possible with the permission of the author and other related parties. This is how confidentiality is defined within the context of this report, and the survey on which it is based.

One final issue of importance from a broader perspective which Powell and Green (2005) briefly highlight, is the degree of diversity that exists in the UK with respect to doctoral education. UK universities differ considerably from Europe in their approach to the examination and dissemination of doctoral research. However, even within the UK, there is little consistency of approach across UK universities with regard to doctoral education and issues such as confidentiality which arise from it. Whilst a full discussion of such issues is beyond the scope of this report, the key concerns that this raises are briefly discussed in Section 2.5 in order to set this work, and that of Powell and Green (2005), within this broader context. The 2010 and 2004 surveys may play a useful role in disseminating differences in practice and policy across UK universities, and thus help continue the debate such that some convergence to a best practice may emerge in the future.

2 The Background Context

The key issues identified above are discussed here in greater depth, to provide the necessary context to this report, prior to describing the rationale and structure of the 2010 survey. First, the inevitable tensions between academia and the commercial world with which universities now frequently collaborate will be considered, before focusing specifically on the issues of access to doctoral research.

Powell and Green (2005) identified two fundamental aspects of confidentiality as it relates to the PhD thesis in the UK; the extent to which PhD research is held to be confidential prior to examination, and the principle that the PhD should enter the public domain following examination and approval by the awarding institution. Whilst it is the issue of allowing theses to remain confidential after the examination which is of primary importance, the two issues are inherently linked and therefore both are worthy of consideration.

The focus will then turn toward developments in electronic access to theses via e-repositories and the issues that this has raised, particularly with regard to protection of intellectual property. This leads to the question of how reasonable requests to restrict access to doctoral research may be addressed, and whether an embargo on the whole thesis document is always necessary. Some initial ideas in this regard are briefly considered, and will be revisited in the main discussion (Section 5). Finally, the whole area of doctoral education in the UK and the diversity that currently exists is briefly addressed from the broader perspective of plans in Europe to create a European Higher Education Area. Whilst diversity can be highly beneficial and indeed desirable, it could also inhibit the free movement of academics and students within the European Union. There is therefore a significant incentive for UK universities to work toward a degree of convergence on important aspects of doctoral education in order to maintain a competitive position in the wider marketplace.

2.1 Academic Practice versus Commercial Imperatives

The traditionally cautious attitude that academia has towards confidentiality, and in particular restricting access to PhD theses, is predicated on the academic arguments set out in the Introduction. However, there are compelling issues from the commercial perspective also, and these arguments cannot be ignored. The economic realities of the late 20th and early 21st century (with government funding diminishing in real terms) and a move toward improving the economic and social value of research, have led many universities in the UK and elsewhere to work increasingly closely with industry and commercial enterprise (Crespo and Dridi, 2007; Harman, 1999; Shattock, 1997).

Business realities dictate that the commercial realisation of scientific discovery and technological advancement can only succeed if competitive advantage is respected and protected. Research and development is costly and risky, and even when technical success is achieved, successful commercialisation is not guaranteed. The complexities involved in technological progress, increases in competition and the need for innovation, provide powerful incentives for companies to collaborate with universities (Crespo and Dridi, 2007). But successful commercialisation of any new product or process would be seriously undermined by the loss of competitive advantage which inevitably occurs when new knowledge is made more widely accessible.

Academia's mission to publish research and the opposing need of industry to maintain secrecy, can cause tensions (Dooley and Kirk, 2007). Researchers funded by UK Research Councils and Charitable funding bodies are generally subject to the stipulation that reasonable dissemination should take place. Nevertheless, reports highlighting concerns amongst academics that close involvement with commercial enterprise would result in the suppression of research publications are not new (Harman, 1999). Delays to publication in some sectors in the United States for example, can vary from just one to two months (the time required to apply for a patent) to six months or more (Blumenthal *et al.*, 1996). Recent evidence from the UK (Dooley and Kirk, 2002) and Australia (Harman, 1999; Harman, 2002) suggests that delays to publication continue to be a feature of academia's close association with industry. Delays of up to nine months have been reported in the pharmaceutical industry, for example (Dooley and Kirk, 2002) whilst Harman (2002) reports that delays up to six months or more observed in Australia were justified on the basis of (amongst other, lesser reasons) allowing time for a patent application, protecting proprietary value, allowing time for licence agreements and resolving disputes over intellectual property.

However, studies of academic productivity provide evidence that the opposite can also be true. Many companies recognise and sometimes even welcome the dissemination of material through academic channels and industrial funding can even increase publication output among academic researchers, relative to peers without ties to industry (Ylijolki, 2003; Thursby and Thursby, 2001; Blumenthal *et al.*, 1986). Others provide evidence of the high quality research which can result when academia and industry collaborate (Dooley and Kirk, 2007).

Whilst the above evidence pertains primarily to journal publications, the same arguments can and do apply to the PhD thesis. The issue of making the thesis public after examination is however more complex, as outlined in the next section.



2.2 Public Access to the PhD Thesis after Examination

Powell and Green (2005) indicated that there is no universal agreement on whether or not the PhD thesis should contain no published material, have published material appended to it, or whether it should include published material in the main body of the text. Wilson (2002) in contrast, states that the traditional doctoral thesis “only rarely, and certainly not compulsorily, contains published work based on the candidate’s approved research programme”. Whilst the fundamental argument with respect to the PhD thesis is that it is, by definition, an unpublished work prior to examination, the reason for the degree of variability in practice may be that this basic principle is open to interpretation. In the context of this report, it is sufficient to state that the thesis as a whole is unpublished as a complete and distinct document; the fact that some aspects of it may have been published prior to examination is therefore a different argument and one which lies essentially outside the scope of this work.

The issue of whether to allow the PhD thesis to remain confidential after examination and approval by the awarding institution, presents a greater challenge to that of publishing limited and carefully selected material in a journal publication. The PhD thesis must contain a sufficient level of detail to satisfy the examiners of the validity of the research, and to enable them to assess the fundamental contribution to knowledge. Such details are also important for transparency of award standards and wider testing of the contribution to knowledge. As such, one important stipulation for the PhD thesis is that it should be capable of “standing alone” as an exposition of the research work and its outcomes. In some circumstances, this can have important implications if the document contains a substantial amount of material that industrial sponsors might consider “commercially sensitive”, or might have negative consequences for the author or individuals associated with the work, should it become public.

As with many aspects of the debate regarding the confidentiality of PhD theses, the specifics are subject to interpretation. Bourner *et al.* (2000) for example argue that the traditional test of whether a doctoral study makes an original contribution to knowledge, is whether “it is worthy of publication in a peer reviewed academic journal”. It is certainly common practice that the regulations for research degrees in UK universities state that the research should be of “a publishable standard”. However, “publishable” does not equate to “published” and as such there is generally no requirement for doctoral research to be published either before or after examination; the expert examiners make the determination regarding the quality and originality of the work. Thus, the PhD thesis needs only to be placed in the University library to be regarded as a “public document”.

In practice, this offers only limited accessibility, with restrictions on physical access to it and on duplication of the document. As such, the thesis document itself has traditionally been less of a concern with regard to confidentiality than journal publications, which constitute far more deliberate dissemination and are accessible to a much wider audience. The natural progression from electronic access to journal papers, to electronic submission and storage of PhD theses in e-repositories, with the potential for far wider accessibility is therefore a significant change.

2.3 Electronic Access to Theses and e-Repositories

Powell and Green (2005) highlighted a growing movement toward submission of theses in electronic form and the creation of repositories of theses which are accessible online. A number of countries around the world are reported to have been developing e-depositories for theses. Whilst a number of developed countries have been involved in such initiatives for some time, for example, the USA, Germany, Canada, Australia and the UK, a number of developing countries are also reporting such developments, including China, Brazil, India and African countries, through the Association of African Universities (Ghosh, 2008; Kiondo, 2004).

As might be expected, the motivations for such developments differ. The ethos of open access is largely predicated on the argument that it will foster further improvements in academic standards and will maximise the impacts of scientific discoveries. In the UK however, another prominent driver is that in the challenging and competitive environment in which universities now operate, increased visibility of research publications and outputs could provide a critical advantage in winning research funding and attracting high calibre postgraduate students, both domestic and international (Joint Information Systems Committee (JISC), 2008).

Among the emerging economies however, e-depositories for theses are being regarded as an important means of overcoming the financial barriers that often prevent researchers from accessing the research information that they need (Ghosh, 2008). Among the African universities, it is recognised that African researchers have great difficulty accessing each other’s work, and the development of repositories spanning the African nations may enable research to collectively achieve critical mass and thus enhance the visibility of African scholars at the international level (Kiondo, 2004); a vision not unlike that being promoted in Europe.

Nevertheless, electronic access to theses raises some important issues with respect to copyright and intellectual property rights (IPR). Traditionally, PhD theses submitted in hard copy have been archived for the benefit of future scholars and subject to restrictions on

photocopying and distribution. They are not therefore considered published works and are exempt under the Copyright Act. Copyright Law exists to protect the commercial value of such work, and the risk of damaging the copyright owner's commercial interests within such restrictions was deemed minimal. This is not however, the case with electronic copies of theses made available online.

One of the key arguments for extending the confidentiality of a PhD thesis beyond examination is to protect intellectual property, and to allow commercialisation of the findings through patents. The survey undertaken by Powell and Green (2005) found that this was the most cited reason given for requests for confidentiality. A key stipulation for obtaining a patent is that the discovery in question must not have been disclosed to others; patents in many countries are only granted on the basis of "complete newness", i.e., that the invention has not been made publicly known anywhere else in the world (Crespo and Dridi, 2007).

Thus, the issues are two-fold – protection specifically in order to retain "newness" for the purposes of obtaining a patent, and the more general protection of commercial interests from unauthorised exploitation as a result of research being far more widely accessible within a very short timeframe following examination. Nevertheless, the drivers summarised above will ensure the sustained growth of this movement. The 2010 survey reported here will provide an up-dated view of the progression of electronic submission of theses and e-repositories in UK institutions in the years since Powell and Green's (2005) original report.

Open Access repositories can be *subject-based* or *institutional*. A number of subject-based repositories exist which cover a range of disciplines – *ArXiv*, for example, is described as being "one of the most extensive repositories in the world in the fields of physics, mathematics, astronomy, computer sciences and quantitative biology" (JISC, 2008). Institutional repositories are generally developed and run by individual universities, but can also be joint projects involving a number of institutions in order to provide a national service. One of the most prominent institutional repositories is run by the Massachusetts Institute of Technology (MIT), whilst in the UK, the EThOS project in which a number of UK universities participated, proved highly successful and is now managed by the British Library (JISC, 2008).

E-repositories have therefore become a reality, and the issues that they raise must be taken into consideration in any discussion concerning the confidentiality of PhD theses. It is therefore appropriate at this point to consider alternative means of protecting commercial interests, as well as the safety and privacy of individuals.

2.4 Alternative Approaches to Presenting Doctoral Research

It is by no means an impossible task to balance the needs of academia with those of enterprise or individuals associated with doctoral research. In practice, it is often possible to "sanitise" research material, removing particularly sensitive details in the same way that individuals may be protected by anonymising their contribution. Another sanitisation approach is to make the majority of the research results publicly available, whilst withholding those elements with potential for commercial application (Slaughter *et al.*, 2002). The arguments for the PhD thesis are more complex, given the level of depth and detail required, but similar approaches can be taken which concentrate on the format in which the doctoral research is presented.

The PhD thesis embodies the final outcome of the traditional "apprenticeship" model of doctoral research training, i.e., that of an independent researcher undertaking research under the supervision of an established academic. In Europe and beyond, there has been a growing trend toward a more formal and structured model of doctoral training, with the aim of improving "drop-out" rates and reducing the duration of doctoral education (Park, 2005; Kelm, 2005). The nature of this evolution is not however, uniform or consistent. Whilst in many countries there is a general move toward including coursework, alongside supervised research for a thesis, in a number of countries both the traditional model and the new variants exist in parallel; for example, Germany, Austria, the Russian Federation, Poland, Italy, the UK and Norway (Kelm, 2005). In other countries, notably Sweden, Spain and the United States, doctoral education has moved toward a two-phase system, with the first phase consisting mostly of coursework, whilst the second phase is concerned primarily with the research and the writing of the thesis (Kelm, 2005), a system which is also finding favour in the UK (Bourner *et al.*, 2000).

Inextricably linked to these developments is the emergence of professional doctorates, as distinct from the traditional research degree embodied by the PhD. The professional doctorates have emerged precisely to address the issue of increasing the economic as well as the societal value of research, and to ensure that researchers emerge better equipped for a professional career outside of academia (SERC, 1990). They have also exemplified current discussion regarding the distinction between education and training (Kelm, 2005; Park, 2005), and the mission of doctoral research (Pole, 2000; Adams and Mathieu, 1999; SERC, 1990).

Nevertheless, the professional doctorate is not the only new variant to emerge. UK universities now offer a New Route PhD and PhD by publication. The New Route PhD, like the Professional Doctorates, places greater emphasis on training, and incorporates a taught element, generally based around developing research skills and advanced education in the appropriate discipline. The research work for a New



Route PhD still generally takes the form of a thesis, though this is often shorter than that of the traditional PhD (Park, 2005). For the Professional Doctorates however, there is greater diversity, with some universities adopting a *portfolio* approach – incorporating coursework and a number of largely, but not exclusively unpublished documents, each dealing with a specific aspect of the research. In contrast, the PhD by publication focuses on research content, but the assessment of the research is based on a body of published works rather than one distinct document (Hoddell *et. al.*, 2002).

The idea of presenting research in a format other than the single thesis document is not new. For example, in the creative arts it is acceptable to be examined on the basis of a performance, or a portfolio of creative works, accompanied by a thesis which contextualises and evaluates the work (Park, 2005). What is important about these diverging approaches to presenting the results of doctoral study, are the implications for addressing the need for confidentiality of certain aspects of the research.

Since research presented as a portfolio could constitute a collection of documents, there is the opportunity to withhold certain elements of the research from the public domain. The structure of the portfolio varies between institutions, but in some cases researchers are obliged to make public a summary document only for access by other scholars. This enables commercially sensitive details to be made available to examiners, but kept out of the public domain except by permission of the author (and the sponsor).

The summary document itself is a substantial document and should be capable of “standing alone” as an exposition of the research findings. As such, this approach will not prove helpful in all cases. For PhD research which is often conducted within a very specific and narrowly defined field, presenting the research as a series of documents rather than a coherent whole, may be a less than elegant solution. However, some universities are now offering the opportunity for researchers to adopt the portfolio approach for a PhD, in subject areas where this has not traditionally been offered, i.e., outside of the Arts. The 2010 survey provided an opportunity to determine to what extent a portfolio approach is being adopted for the PhD, and whether or not the issue of confidentiality may be a contributing factor.

An additional approach worthy of consideration is that of placing an embargo on the electronic version of the PhD thesis, whilst allowing the hard copy version to enter the University library as has traditionally been the case. Whilst e-submission and storage of theses is being encouraged, and even mandated in some cases, exceptions could be made on presentation of a good case, in the same way that researchers can currently request that the hard copy be withheld. Again, the 2010 survey offers an opportunity to identify trends in current and emerging practice among UK universities through members of the UKCGE.

2.5 Convergence and Diversity

The purpose of this report is to consider the challenges presented by developments in doctoral research and the environment in which it takes place, with respect to confidentiality of the final outcomes. However, the diversity that is inherent in UK doctoral education has wider implications for the future of research in the UK. It seems appropriate therefore to briefly summarise this wider perspective and set this report within that context.

The last decade has seen growing support among European nations to move toward greater integration of research efforts, in order that Europe should “become the most competitive and dynamic knowledge-based economy in the world” (European Council, 2000). The idea of a “Europe of Knowledge” was initially set out in the *Bologna Declaration* of 1999 (European Council of Ministers, 1999) and subsequently supported by the European Council in the *Lisbon Strategy* of 2000 (re-launched in 2005). In essence, it involves the creation of a *European Area of Research and Innovation* and (by 2010) a *European Higher Education Area* (European Council, 2005).

The issue of doctoral education and research training was placed at the centre of these initiatives, in recognition of the important roles that doctoral studies, and the institutions which support them, have to play in achieving this ambitious goal (Kelm, 2005). It was made clear that the *Bologna Process* would focus on *convergence* not *standardisation*, and thus diversity among the signatory countries would be respected (Park, 2005; Confederation of European Rectors’ Conferences and CRE, 1999). Diversity is certainly a feature of UK postgraduate education; both the Harris (1996) report and that of Dearing (1997) regarded the variety of awards, titles and structures as confusing and unhelpful. The emergence of the Professional Doctorates, along with new variants of PhD, has given rise to considerable variation among doctoral degrees alone (Hoddell *et. al.*, 2002; Powell and Green, 2005) and further serves to demonstrate the lack of a clear rationale for postgraduate education in the UK which continues to this day.

The premise of a European Higher Education Area is based on retaining diversity, but at the same time establishing “bridges” between education systems which will allow for equivalence between one system and another to be determined, and hence encourage greater mobility of students and academics within Europe (Council of Europe, 2009). This provides a compelling argument for considering what direction should be taken with any developments in research education and training in the UK. This is not to suggest that UK universities should adopt or comply with any specific European rationale or policy. Rather it is an added dimension which should be taken into

account in any debate among UK universities aimed at adapting academic practice to better serve the environment in which UK universities now operate.

The UK has been engaged in its own efforts toward greater convergence of practice and standardisation. The National Qualifications Framework was established in light of the issues raised by Dearing (1997), in order to provide a framework of quality assurance and to provide a clearer path of progression through the system of postgraduate awards (Park, 2005; Hoddell *et al.*, 2002). A clearer rationale regarding prominent issues such as the confidentiality of the doctoral thesis, would fit well within this overall ethos of consistency and clear standards.

With all this in mind, it is in the interests of UK universities to ensure that a lack of consistency does not act as an obstacle to the free movement of talented students between the Europe nations and the UK, in an ever more competitive postgraduate market. The confidentiality of PhD theses is but a minor issue in this wider scheme, but it is an area where current developments (such as electronic access to theses) could lead to further variations in policy and practice (Powell and Green, 2005). Through the 2010 survey, any patterns in response to such developments will emerge and can be added to the on-going debate on the future direction of UK postgraduate education.

3 Methodology

The objective of the 2010 survey was to establish current trends in practice among UK institutions (as represented by UK Council of Graduate Education (UKCGE) members) with respect to handling confidential or sensitive elements of doctoral research presented in PhD theses. The questionnaire for the 2010 survey (Appendix 1) combines questions developed for the 2004 survey, with new questions designed to investigate issues of particular significance in 2010. The questions from the 2004 survey were included in order to provide a comparison of trends over the time period. This will give a clearer indication of whether confidentiality remains a significant issue with regard to doctoral research.

However, the survey extends beyond the scope of the 2004 survey in investigating issues which were just beginning to come to the fore at that time, and which have subsequently increased in their significance. The questions specifically developed for the 2010 survey, concentrate on the issue of electronic thesis submission and open on-line access, and the potential move toward a “PhD by portfolio” approach. Both are deemed important issues because of their implications for confidentiality. However, it is unclear at this stage whether either trend is significant, and in the latter case, whether the reasons for it are predicated on the ability to retain confidentiality for certain, sensitive aspects of doctoral research, or for other, entirely different reasons. The survey has therefore been designed to collect exploratory data in these areas and therefore provide some perspective on the extent to which such developments and requests for confidentiality (or more precisely, *restricted access* to theses) are linked.

The 2010 survey questionnaire was sent out electronically to all 123 UKCGE member institutions. The survey was directed initially at the UKCGE “link” person in each case, but respondents were encouraged to pass on any questions that they could not answer accurately, to others within their university better placed to do so. A copy of the questionnaire is given at the end of this report (Appendix 1). Members were asked to respond by the closing date of 19th March 2010, with a final reminder being sent to non-respondents on 15th March 2010. The survey yielded responses from 83 institutions out of the 123 members of the UKCGE, giving a response rate of 67%. Within the sample however, four institutions stated that they do not award their own degrees, that responsibility being with a partner university. These responses were therefore removed from the sample in order to avoid duplication, giving a final sample of 79 institutions out of a possible 123; a response rate of 64%. The response rate compares well with that of the 2004 survey, which yielded 64 usable returns from a sample of 129 (50%).

For the purpose of this analysis, the participating institutions were initially divided according to certain recognised groupings, namely the Russell Group, the 1994 Group and the group of post-1992 universities. The small number of institutions which are not affiliated to a specific group are included in a general category designated “other”. The survey response for each grouping was generally high enough to be regarded as a representative sample: Russell Group – 16 of 19 (84%) institutions represented among UKCGE’s membership; 12 of 17 (71%) of members belonging to the 1994 Group –; 40 of 52 (77%) of members representing the post-1992 Group and 11 of 28 (39%) members which are not affiliated to either of these groups.



4 Analysis

4.1 Regulations for Restricting Access to PhD Theses and the Maximum Embargo Period

The survey first revealed that of the 79 respondents just ten institutions from the sample do not currently have in place specific regulations relating to restricting access to PhD theses after the viva voce. Of the total sample, 66 institutions (84%) stated a maximum time period for which access could be restricted on the grounds of confidentiality. Three further institutions did not have a specific maximum stated in their regulations but were able to provide an indication of the time period deemed acceptable to them, and were thus included in the analysis. Overall, the maximum time period varied across institutions from just one year to five years, in a pattern which has changed little since 2004, Table 1.

Table 1 Comparative Statistics for Maximum Period of Restricted Access for the 2004 and 2010 Surveys

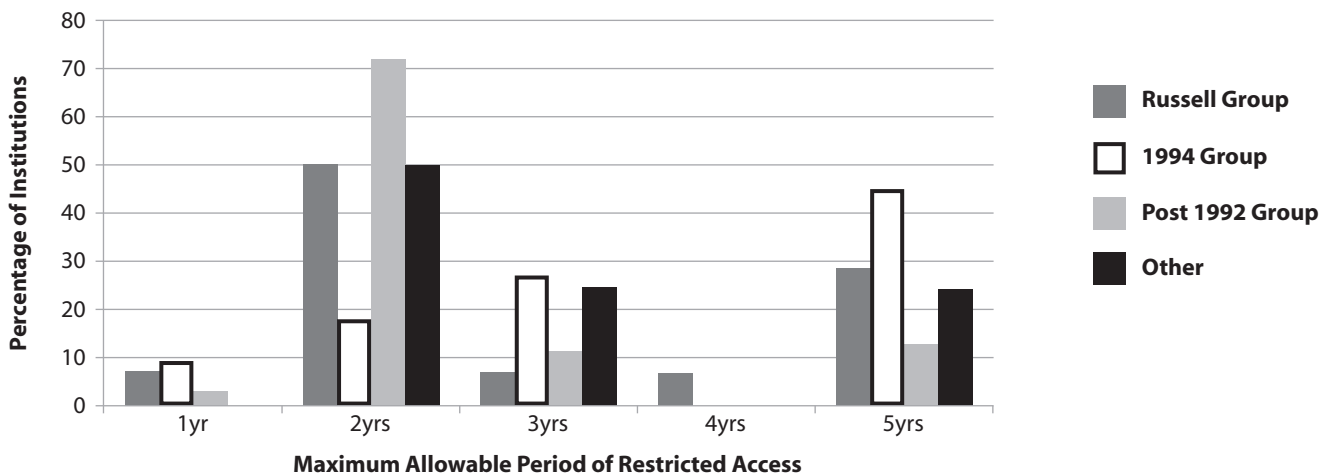
2004 Survey		2010 Survey	
No. of Years	No. of Institutions	No. of Years	No. of Institutions
1	0	1	3 (4.5%)
2	33 (66%)	2	39 (56.5%)
3	5 (10%)	3	10 (14.5%)
4	0	4	1 (1.5%)
5	12 (24%)	5	16 (23%)
Total	50	Total	69

Whilst the original survey did not differentiate between the different categories of institution, this has been done for the 2010 survey so that any differences in approach might be identified. Table 2 below compares the “mean” maximum period for each of the institutional groupings, and shows that the post-1992 Group had the lowest mean at 2.5 years, whilst the 1994 Group had the highest with a mean of 3.4 years. It is the statistics for “mode” however which proved more meaningful; the length of embargo period which appears most frequently in a given sample. The mode statistics reveal that whilst most of the institutions in the Russell Group, the post-1992 Group and the “other” universities favoured a maximum embargo of two years, a slightly larger relative proportion of institutions in the 1994 Group favoured a longer, five-year maximum, with a slightly higher tendency also for a three-year maximum evident in the data, Figure 1.

Table 2 Statistics for Maximum Allowable Period of Restricted Access

Institutional Group	Sample Size	Max. Period (yrs)	
		Mean	Mode
Russell Group	15	3	2
1994 Group	11	3.4	5
Post 1992 Group	35	2.5	2
Other	8	3	2

Figure 1 Variation in the Maximum Allowable Period of Restricted Access within each Institutional Group



Since the sample sizes in each case are small, these results should be interpreted as only broadly indicative, however it does suggest a slight difference in approach to restricting access to theses among the 1994 Group of universities. The 1994 Group is, by definition, a group of small (relative to the Russell Group) research-intensive universities, and the result may be explained by a tendency toward greater commercial sponsorship of research, but this could not be adequately verified through the survey data.

4.2 The Number of Requests to Restrict Access to Theses

With respect to the number of requests made to restrict access to theses, comparison with the 2004 survey suggests little change in the total number of requests received, but that a smaller number of institutions were receiving such requests – an estimated maximum of 503 requests (where a respondent stated a range, the maximum was used) were made in the 2003/4 academic year by 51 institutions (80% of the total sample), compared to an approximate maximum of 525 requests reported for the 2008/9 academic year by 46 institutions (58%). For the 2010 survey, 12 participating institutions (15% of the total) were unable to provide an estimate, with a number of other institutions providing estimates but stating that accurate records were not held. A further 21 institutions (27% of the sample) indicated that they had received no requests to restrict access to theses for academic year 2008/9. This is in comparison with seven respondents (10% of the total) in the 2004 survey who were unable to give an estimate with a further nine institutions (14%) stating that they had received no requests for that year. The data therefore suggests that fewer universities in the 2010 survey were receiving a greater share of the requests compared to 2004, and a greater number of institutions in 2010 had received no requests at all. This seems to run counter to the expectation that the number of requests to restrict access to PhD theses would rise as a result of a trend toward electronic submission of theses. However, a closer examination of the data for both surveys suggests a significant degree of uncertainty in the responses and in some cases, inconsistencies in response by the same institutions across the two surveys. For example, one institution stated a very approximate estimate of 100 requests for 2008/2009, but had stated that no data was available at the time of the 2004 survey. Thus, these findings should be treated with caution.

The 2004 survey suggested that the data on requests received by individual institutions in 2003/4 was significantly skewed with three institutions accounting for a large proportion of the requests. The 2010 survey presents a similar picture with three institutions (though not the same institutions as for the 2004 survey) accounting for more than 50% of the estimated number of requests (each with between 50 and 100 requests), and a further four institutions contributing significantly larger numbers of requests (typically between 20 and 35) than the general population (typically between 0 and 10). Table 3 presents a breakdown of the data relating to requests received for 2008/9 by individual institutions. The data is grouped according to category of institution (the number of institutions responding to this survey question in each group is indicated in brackets) and shows the proportion of institutions receiving 0 requests, 1-10 requests, 11-50 requests or more than 50.



Table 3 Number of Requests for Restricted Access to Theses Received by Institutions

Institutional Group	Proportion of institutions (% of total sample)				No. of Institutions (% of category)			
	0 Requests	1-10 Requests	11-50 Requests	>50 Requests	0 Requests	1-10 Requests	11-50 Requests	>50 Requests
Russell Group (15)	7.6	8.9	1.3	2.5	37.5	43.7	6.3	12.5
1994 Group (11)	6.3	6.3	1.3	1.3	41.7	41.7	8.3	8.3
Post 1992 Group (40)	21.5	27.8	1.3	0.0	42.5	55.0	2.5	0.0
Other (11)	3.8	6.3	3.8	0.0	27.3	45.4	27.3	0.0

The analysis suggests that the post-1992 institutions have the largest proportion of institutions (by % of the total sample) with zero requests or very small numbers of requests (1-10), but this is to be expected given the large size of this particular category. If a calculation is made on the basis of the proportion of institutions within each group receiving zero or very small numbers of requests (by % of category), then the figures for the post-1992 group are broadly similar to that of the other groups. The picture was more mixed for the high end of the range – the unaffiliated universities included three institutions with numbers of requests in the 11-50 range for 2008/9 (representing 3.8% of the overall population) and just two institutions from the Russell Group and one from the 1994 Group received requests numbering in the >50 range (representing 2.5% and 1.3% of the overall population respectively). However, since so few institutions have such large numbers of requests, these findings have no particular bearing on the behaviour of their respective institution groups; they are effectively “outliers”.

The survey did not reveal a clear reason for the significantly greater numbers of requests received by this small number of institutions. Whilst one of the institutions mandates electronic submission of theses, a second stated only that e-submission is encouraged and the third did not comment on this. Two of the three stated that requests were most likely to arise from the engineering department, with one of them also citing biological sciences and chemistry as being likely sources. The third institution again, did not provide any additional information. There is a higher likelihood of industrial/commercial sponsorship in the disciplines identified and this may provide a possible explanation, but this could not be verified through the survey.

4.3 Applying Restrictions

Participating institutions were also asked whether the maximum embargo period was applied automatically in requests which were approved, or whether the decision on the length of the embargo was taken on a case by case basis. It was found that only a small minority of institutions within each category automatically applied the maximum period (between 0 and 18%) with a significant proportion (between 82 and 100% according to category) making the decision on a case by case basis, Table 4. These results are in marked contrast to the 2004 report which found that 86% of the institutions declaring a maximum time period for restricting access to theses automatically applied the maximum on approving a request. It was suggested at the time that the reasons may be “administrative efficiency and clarity and transparency of policy”. The results for the current survey suggest that a more cautious approach is now being adopted. A number of respondents to the 2010 survey indicate a concern that the academic principle of open access to research findings needs to be upheld and that restricting access to theses should not therefore be encouraged. It is possible therefore that institutions are reacting to an anticipated rise in the number of requests as a result of the move toward e-submission, to protect this fundamental principle.

Table 4 Statistics for Application of Embargo Period

Institutional Group	Sample Size	Application (% of category)	
		Maximum	Case by Case
Russell Group	16	6	94
1994 Group	12	0	100
Post 1992 Group	38	10	90
Other	11	18	82

The participating universities were asked how many of the requests to restrict access to theses were actually granted. It was found that of the 75 institutions that responded to this question, just four reported having declined such requests. The number of requests declined in each case were very small – just one or two. This finding would seem to conflict with the cautious approach taken regarding the length of the embargo. This may indicate that institutions are generally sympathetic to the reasons behind these requests, but are keen to ensure that the terms of restricted access are carefully considered and justifiable.

4.4 The Rationale behind Requests for Restricted Access

The opportunity was also taken in the 2010 survey to establish whether or not requests for restricted access were concentrated around specific disciplines, for example those which traditionally attract industrial/commercial sponsorship. Respondents were asked to identify any departments which received a proportionally greater number of requests relative to the university as a whole. The results revealed a concentration around the sciences, technology and engineering, with small numbers relating to the social sciences, humanities and medicine.

However, such findings need to be compared with the motivations behind such requests in order to establish the overall picture. Respondents were therefore asked to identify typical reasons given to justify restricting access to theses. Seven such reasons were identified (Table 5) with a greater relative proportion citing “commercial reasons” (taken to include protecting intellectual property, patents pending or a contractually specified exploitation period). All of the cited reasons were deemed acceptable grounds for restricting access to theses by the responding institutions, though some stated that approval was not automatic and a strong case would need to be made.

Table 5 Cited Reasons for Requesting Restricted Access to Theses

Reasons for Requesting Restricting Access to Theses	Russell Group	1994 Group	1992 Group	Other
Commercial reasons	12	12	34	8
Protection of individuals	5	5	6	4
Protection of priority in publication	5	5	4	4
3rd party confidentiality	3	4	0	2
Politically or religiously contentious material	2	2	10	2
National security	1	0	2	1

It should be noted that a number of responding institutions identified more than one reason for requesting restrictions to access, and this is reflected in the above figures. The above findings indicate that of the 75 institutions that identified reasons, commercial sponsorship is the main motivation behind the majority of requests. It is likely that many such requests will originate in the sciences, technology and engineering subjects where commercial sponsorship is common. Similarly requests motivated by the need to protect information/data belonging to a third party tended to be linked to a commercial sponsor. Thus, these findings seem to support the view that the majority of requests to restrict access to theses originate in the sciences, engineering and technology and are motivated by the need to protect the commercial interests of industrial sponsors.

By contrast, requests relating to the social sciences, humanities and medicine are more likely to be motivated by the need to protect individual respondents, and/or may concern political or religiously contentious material. Individuals were deemed to need protecting for two main reasons – the author needed protection against possible reprisals because of the nature of the work, or individual participants in the research may be recognisable from the research and may suffer as a consequence, e.g., through loss of privacy. It is debatable whether, in either circumstance, a limited period of restricted access would be sufficient to protect such individuals; this concern was raised in the original 2004 report. In the latter case therefore, it would be more effective (wherever possible) to take additional steps to “sanitise” the data such that the risk of identification is minimised. The former circumstance presents a more difficult challenge and may lead to requests for further extensions of the embargo period – a number of institutions stated that extensions were available if evidence could be provided to show that the reasons for the original embargo still applied.



4.5 Trends in Electronic Access to Theses

The issue of restricting access to PhD theses was linked by Powell & Green (2005) to a growing trend toward digitising such documents and making them more widely accessible to the academic community via electronic depositories. It therefore seemed appropriate in this report to examine this trend more closely and establish the extent to which this is now becoming accepted practice among academic institutions in the UK. The respondents to the 2010 survey were asked to indicate whether the submission of theses in electronic form was mandated or simply encouraged, and whether digitised theses were stored in an internal (to the institution) repository or made potentially more widely accessible through an external repository. The results are given in Table 6 below.

Table 6 Trends in Electronic Submission and Storage of Theses

Institutional Group	Sample Size	E-submission		Sample Size	Repository for E-Theses	
		Encouraged	Mandatory		Internal	External
Russell Group	9	4	6	10	9	3
1994 Group	9	3	7	9	9	4
Post 1992 Group	25	7	19	30	28	7
Other	8	2	6	8	7	2
% of Total Survey Sample	65%	20%	48%	72%	67%	20%

The 2004 survey did not provide data specifically concerning e-submission and storage of theses since the trend was relatively new at this time, and as such it is not possible to determine the progress of this trend on that basis. It should be noted that the response rate to these questions was not as high as for other questions (just 65% and 72% respectively of the total survey population responded). In addition, some respondents gave positive answers for both the “encouraged” and “mandated” options, i.e., that e-submission is both encouraged and mandated, thus there is a small element of double counting in these statistics.

Given that this trend was noted in the 2004 report, at first sight the above figures suggest that e-submission of PhD theses is still some way from being a standard requirement among UK universities, with only 48% of the overall sample of 79 respondents indicating that e-submission was mandatory and a further 20% indicating that it was encouraged. Two institutions stated specifically that they neither encourage nor mandate e-submission at this time and two stated that the matter was still under discussion. This leaves 27% of the overall sample for which no response was recorded and thus there is a significant degree of uncertainty in these findings.

The data does however correlate quite well with the number of institutions that store e-theses in an internal repository, suggesting that the move toward e-submission of theses is generally supported by the establishment of an internal repository. In a number of cases, institutions reported having an internal repository and also submitting to EThOS the repository run by the British Library. In a very small number of cases institutions reported not yet having formally introduced e-submission of theses, but where a copy of a thesis was requested by the British Library, it would be digitised by the Library as a matter of course and then was stored via EThOS. In addition, ten of the institutions that failed to give a response on whether or not e-submission of theses was mandated/encouraged nonetheless reported having either an internal repository in place or submitting theses to EThOS. This suggests that these universities are actively participating in the trend toward e-submission but have not yet formalised this within the regulations. As such the level of participation overall is higher than it at first appears.

4.6 The Portfolio versus the Thesis for Professional Doctorates

In Section 2.4, the greater flexibility afforded by the portfolio approach to presenting doctoral work was briefly explored, in particular with respect to limiting access to sensitive elements of research. This alternative to the single thesis document has been adopted for some forms of professional doctorate, for example the EngD, and can be used to successfully delineate work that can be made public from that which must remain confidential. The 2010 survey undertook to collect some exploratory data in order to establish how widespread the use of the portfolio approach is for both the PhD and for the professional doctorates, and to determine whether or not this alternative approach was becoming more widely utilised. It should be noted however, that the portfolio approach is interpreted quite differently among the institutions and across disciplines. This is to be expected given the varying nature and demands of research across subjects. Thus, the survey data reveals a diverse picture.

Respondents were first of all asked to indicate whether the thesis or the portfolio approach had been adopted for professional doctorates within their institutions. Given that some institutions offer a number of professional doctorates in different disciplines, a mixed response was anticipated, and so respondents were also asked to identify (as far as possible) which approach was adopted relative to which professional doctorate. Meaningful and accurate statistics could not be compiled for this part of the survey because of the varying numbers of professional doctorates on offer at individual universities, and because the detail provided by them varied markedly across the sample. However, some useful indicators can be presented here.

Of the sample of 79 institutions, just two did not give any response to this set of questions, whilst 12 respondents stated that the questions either were not applicable or that they did not currently offer a professional doctorate. Thus, 65 institutions (82% of the sample) provided data concerning their professional doctorates. Some respondents made reference to higher doctorates (DSc, Dletters and MD) in answering this question; a higher form of doctorate awarded by some UK institutions on the basis of a portfolio of outstanding research, in recognition of the achievements of certain highly regarded individuals. Such responses were not appropriate and were therefore ignored.

It was noted in analysing this data that care was needed in interpreting what was meant by the “thesis”. Whilst generally the term “thesis” was used to refer to a substantial dissertation, some respondents used the term in the traditional sense of presenting the author’s theory and supporting arguments. Thus care was taken to ensure that the two were differentiated and treated accordingly for this analysis.

The survey revealed that both the thesis and the portfolio approach have been widely adopted by institutions across groups, Table 7. A number of institutions in the sample offer more than one form of professional doctorate and often different approaches were taken in each case. As a result, the statistics shown in Table 7 broadly represent the responses of individual institutions, but where both approaches are being used, this has been reflected in the figures. Hence, the total count for both the portfolio and the thesis does not correspond exactly with the total number of respondents in the sample.

Table 7 The Adoption of the Thesis or Portfolio Approaches for Professional Doctorates

Institutional Group	Sample Size	Portfolio	Thesis
Russell Group	14	7	13
1994 Group	11	9	7
Post 1992 Group	31	13	27
Other	9	4	6
Total	65	33	53

No strong patterns were apparent in the data with regard to the approach taken within specific disciplines or forms of professional doctorate. Thus for the EngD and EdD for example, the data showed a mixed response with respect to whether a thesis or a portfolio was required, i.e. six institutions stated that they apply a portfolio approach to the EngD, compared to three requiring a thesis; for EdD four stated that the portfolio approach had been adopted whilst five require a thesis. A slight tendency toward a portfolio style approach was noted among the medical and psychology disciplines and humanities subjects, as well as the arts, and this would seem logical given that many such degrees require a certain amount of course work or evidence of professional practice. However, the numbers were very small in all cases, preventing definitive conclusions from being drawn.

Interestingly, 12 institutions stated that for certain degrees the portfolio approach had been adopted, but students were expected to submit a thesis (a dissertation) as part of the portfolio; combining the two forms. This constitutes 36% of the total number of universities that have adopted the portfolio approach for some professional doctorate programmes. A few respondents indicated specifically for which professional doctorates this mixed approach was applied – ClinPsyD, DBA and EdD were indicated but again, the numbers were too small for this to constitute a trend.

There was also variation in what is regarded as a portfolio, i.e., what it can contain. Again, the numbers of respondents providing sufficient detail was too small (just 15 institutions) to allow definitive conclusions to be drawn, but the results suggest that a portfolio can include a mix of published and unpublished works, often includes a thesis document and in a number of cases course work, or could constitute a series of detailed project reports with a summative thesis or critical commentary, or a substantial thesis document and a number of published or unpublished papers. Further, in the arts, a portfolio could consist of creative works such as musical compositions, images,



artefacts, and evidence of performances or exhibitions. Thus, the portfolio is widely interpreted according to the needs of the specific discipline or doctorate programme.

The flexibility of the portfolio approach would seem to be an essential element driving its adoption, but the survey suggests that the perceived flexibility is generally around its structure and contents, rather than using it specifically as a vehicle for controlling public access to sensitive elements of the research. Not all elements of a portfolio are made publicly accessible, but those elements which are not placed in the public domain generally seemed to be course work and reflective statements. It is noted that the latter may in some circumstances be deemed quite personal to the author, or in the case of psychology and humanities subjects, may make reference to specific individuals dealt with as part of the researcher’s professional practice; such omissions are therefore understandable. Where the portfolio incorporated a thesis document, the data suggested that this was generally placed in the public domain.

4.7 The Portfolio versus the Thesis for the PhD

The intention of the above analysis regarding the approaches taken with professional doctorates was to further inform a similar analysis of the PhD, and to enable a comparison of the two. Thus, attention is now turned to the PhD. The 2010 survey asked respondents to similarly indicate whether a portfolio or a thesis approach was required for PhDs within their institutions, and where the traditional thesis is still required, whether there were any indications that this may change in the future.

Of the 79 institutions in the overall survey population, 74 institutions (94%) provided valid responses to some or all of this set of questions. Of the remaining five, either no response was given or the responses referred specifically to the PhD by Published Work. This is a distinct form of PhD whereby the candidate submits a portfolio of journal papers and other published works, presented as a coherent thesis through an overarching critical discussion document. Since this report focuses specifically on the traditional form of PhD, such responses were deemed unsuitable for inclusion in this analysis.

Table 8 shows that the portfolio approach is also widely utilised for the PhD, though as with the figures for the professional doctorates, there is a slight tendency to favour the thesis still. Similar to the survey data on the professional doctorates, 17 of the respondents indicated that a portfolio approach had been adopted for their PhDs but that a thesis document must form a significant part of it. The figures in Table 8 for portfolios include responses where this mixed approach is applied. The mixed approach constitutes 53% of the total number of universities that have adopted the portfolio approach for some PhD programmes. Overall therefore, taking into account the “thesis only” responses and those adopting a portfolio but with a substantial thesis document, the data suggests very strongly that the thesis remains the preferred means of presenting the bulk of the academic content for a PhD.

Table 8 The Adoption of the Thesis or Portfolio Approaches for the PhD

Institutional Group	Sample Size	Portfolio		Portfolio considered in Future		
		“Yes”	“No”	“Yes”	“No”	“Maybe”
Russell Group	15	5	7	1	6	3
1994 Group	12	4	8	5	3	1
Post 1992 Group	37	18	12	4	17	5
Other	10	5	2	1	6	3
% of Total Survey Sample	64 (81%)					

The survey data on PhDs was distinct from that of the professional doctorates was in the disciplines in which a PhD by portfolio is allowed. Whereas for the professional doctorates the programmes cited were primarily in education, engineering, health, psychology, social science and humanities (including social work), the PhD data concentrated primarily on the arts; drama, music creative writing, fine art, media arts, theatre and design. However, there were also references to economics, technology, engineering and the built environment. As with the professional doctorates, few respondents in the sample provided such details and thus the numbers are too small to be considered evidence of a clear trend.

It is however indicative of why the portfolio approach is favoured for PhDs. Indeed, in response to the questions would a portfolio approach be considered in the future for PhDs and why, a small number of respondents who responded “yes” or “maybe” to the former indicated that this was because of the flexibility it affords, that it allows for evidence of practice and thus enables a more accurate assessment of the research achievements among the creative disciplines. The survey results therefore indicate that again, it is the flexibility of the portfolio in terms of its structure and content that is driving the adoption of this alternative form of submission for doctoral research (particularly in the arts) rather than as a vehicle for restricting access to certain elements of the research for commercial reasons or to protect individuals.

5 Discussion

The trend in requests for the confidentiality of the PhD thesis beyond the examination in the UK, is for the most part a manifestation of academia’s increasing partnership with industry and commercial enterprise. The realities of the economic environment in the late 20th and early 21st century has made such a move imperative to the survival and continuing independence of universities, in the UK and elsewhere. Whilst this reality has signalled a distinct change in academia’s mission, away from knowledge and learning largely for the “public good” toward one which places greater emphasis on usefulness and with a more commercial orientation (Dooley and Kirk, 2007), some have suggested that both regimes can successfully co-exist in universities (Crespo and Dridi, 2007; Gumpert, 2002; Shattock, 1997).

Whilst there can be no doubt that the imperatives of competitive advantage sometimes dictate that confidentiality of research and PhD theses for an extended period is essential (Crespo and Dridi, 2007), it is also important that UK universities maintain high standards of doctoral research. Such standards rely heavily on the ethos of transparency, free and open access to research outcomes, and open, critical discourse. Requests for confidentiality relating to PhD theses arise primarily, though not exclusively, from this tension between the worlds of academia and commerce. This report has attempted to capture trend developments in this area, the main outcomes of which will now be discussed.

5.1 Trends in the Numbers of Requests to Restrict Access to PhD Theses

The 2004 report “Confidentiality of PhD Theses in the UK” by Powell and Green indicated that the number of requests for access to PhD theses in the UK had remained broadly static relative to previous years, with only 20% of respondents to the 2003 survey reporting an increase in numbers. The 2010 survey suggests that this remains broadly the case, with only a very small apparent increase in the estimated number of requests made for the 2008/9 academic year, a narrowing of the spread of requests across the sample population and a greater number of institutions (relative to the earlier survey) reporting that no requests had been made during this period. This finding runs counter to anticipated growth in the number of such requests as a result of the trend among universities toward submitting PhD theses electronically; making them potentially more easily accessible by the wider academic community. Interestingly, only two respondents to the 2010 survey specifically indicated that requests for restricted access to theses were increasing, but in each case the stated reason for the increase was the move toward electronic submission of theses.

5.2 The Influence of Electronic Submission and Access to PhD Theses

The significance of the move toward e-submission of theses is illustrated in the comment of one respondent that e-submission had increased the perceived importance of issues related to copyright and confidentiality. The wider accessibility of PhD theses in electronic form (as opposed to the hard copy traditionally held within the awarding institution’s library) has brought to the fore issues of obtaining permission to use third party material in theses, protecting the exploitation of significant research findings and protection of individuals (both authors and participants in the research), which are being treated with greater seriousness than before.

A possible explanation for the lack of evidence for a significant increase in requests to restrict access to doctoral theses, is that the move toward e-submission is itself still some way from becoming established practice across UK institutions. The reasons for this are unclear but it is unlikely to be because universities are not in favour of wider accessibility. On the contrary, a number of respondents to the survey indicated that UK universities remain committed to the principles of open access to research findings despite high levels of commercial sponsorship and involvement in academic research. One respondent summed up the key issue at the heart of this principle; that confidentiality agreements obstruct dissemination of new knowledge and lead to inefficiency, i.e., students “re-inventing the wheel”.



5.3 Trends in the Treatment of Requests for Restricting Access to Theses

It is evident from the 2010 survey that UK universities take very seriously the need for temporary restrictions to accessibility under certain circumstances. The survey suggests that a very high proportion (95%) of requests to restrict access to theses were granted by UK universities in the 2008/9 academic year. Approval is not however automatic, with a significant number of institutions treating requests on a case by case basis, particularly with respect to the length of the embargo period to be imposed. The grounds on which approval depend were described in some detail by a number of respondents, some of whom also stressed the need for a strong case to be made. This constitutes a marked change from the 2005 report in which the majority of responding institutions automatically applied the maximum embargo period available. Taken together, these findings suggest that UK universities are being very cautious in attempting to balance what may be regarded as a natural progression toward making theses accessible in electronic form (upholding and even enhancing the principle of open access to new knowledge) with the need (in clearly prescribed circumstances) for temporary restrictions to protect the exploitation of that knowledge.

5.4 The Motivations for Restricting Access to Theses

On the motivations behind requests for restrictions to be placed on access to theses, there was broad agreement between the 2004 and the 2010 surveys. The predominant reason was to protect the commercial interests of sponsors keen to maximise exploitation of research findings, and the related issue of protecting third party material which will often be owned by the sponsors. The 2004 survey did not explore the origin of these requests but the 2010 survey has provided some indication that the protection of commercial interests was predominantly the intention of requests originating in the science, engineering and technology disciplines, as would be expected given the high instance of industrial interest and support of research in those sectors. Requests intended to protect individuals from harm, loss of privacy and other negative consequences and/or to limit access to politically or religiously contentious material, were less significant in numbers and are most likely related to the correspondingly small number of requests originating from the social sciences, humanities, psychology and medicine.

Whilst clearly of a serious nature, the latter type of request raises the question of how effective a temporary embargo on access to theses is likely to be. A more appropriate approach would be to “sanitise” data and research findings more effectively in order to minimise the risks to the individuals concerned. This seems to be the essence of a number of comments made by respondents to the survey, and some pragmatic approaches to this problem are beginning to emerge.

5.5 Alternative Approaches to Protecting Sensitive Material

The survey data provided some useful indications of alternative approaches to placing an embargo on the whole thesis document, that are starting to emerge. One simple suggestion is that un-cleared or confidential material should be moved to “embargoed appendices” such that the main body of the work would remain accessible to the public. Other suggestions relate directly to the advent of e-submission and the particular challenges it presents.

Two institutions, for example, are considering making a distinction in the regulations between electronic and hard copies of the thesis, such that different conditions apply. In both cases, the electronic copy would be subject to an “automatic” embargo (which could be raised on application by the student), whilst the hard copy would be accessible via the institution’s library, and thus technically the research would remain in the public domain. Such ideas certainly offer relatively simple solutions to the problems raised specifically by e-submission, but great care must be taken to ensure that the general trend in such approaches does not run counter to the whole ethos of electronic access; that research should be more widely accessible, both to enable wider participation in research on a global scale (particularly among developing nations), and greater efficiency (and therefore speed) in the progress of scientific discovery and human development.

Therefore, whilst the idea of an “embargoed appendix” would seem an appropriate measure, enabling the majority of the work to remain in the public domain, it may not be appropriate to apply an automatic embargo on electronic theses. Reliance on the student to apply to have the embargo lifted may lead many theses to remain accessible in hard copy only. Whilst the idea of treating hard and soft copies differently seems quite reasonable, giving the student the opportunity to apply for an embargo on the soft copy only (rather than have it automatically applied) would seem more conducive to upholding the overall principle of open access.

Another approach explored briefly by this report is that of greater utilisation of the portfolio as an alternative means of presenting research outcomes (as opposed to the traditional thesis document). This report has shown that the portfolio approach, whereby the research outcomes may be presented in a variety of forms and constitute a number of documents, as well as other related artefacts, is already widely used not just among the professional doctorates but also among PhDs. The adoption of this approach appears to be fundamentally

based on the flexibility it allows in terms of its structure and content, making it particularly appropriate for the creative arts where the research may rely heavily on demonstrations of practice and creative works. This flexibility has also been a feature of its adoption among professional doctorates in which evidence of professional practice are often an important element of the assessment of the research, and where there is a taught element to the programme. But the portfolio approach also allows for the inclusion of published and unpublished works, suggesting that some elements of the research outcomes may be more widely accessible and visible than others.

5.6 The Portfolio as an Alternative to the Thesis for PhDs

It is possible that the flexibility of the portfolio approach, whereby not all documents or materials contained within a portfolio need enter the public domain, could be more widely exploited. This is an approach which is already practised in some professional doctorates, and the survey data seems to suggest that the regulations for many doctoral programmes would allow for such measures.

Indeed, one respondent highlights the fact that in many cases, the regulations for a doctoral programme state that doctoral work should be of a “publishable standard” as opposed to “published”. This distinction is important as it highlights the difference between material which is in the public domain (essentially accessible) and material which is deliberately disseminated in public through publication. Through the portfolio this idea can be taken further, allowing for doctoral research to exist with differing levels of accessibility – material which is deliberately disseminated through publication, material which is in the public domain (whether that be through electronic means or simply through a hard copy placed in the library) and material which is essentially treated as confidential and is therefore allowed under the regulations for the degree to be withheld from the public, with access only possible with the express permission of the author (and in some cases a third party). Furthermore, the fact that many doctoral programmes which allow for submission by portfolio require that a substantial thesis document form a significant part of it, suggests the manner in which this approach may be applied. The thesis would remain the main basis on which the research is made available in the public domain, but with certain sensitive elements of the work reported separately in other documents and made available only to the examiners.

However, this approach is unlikely to be workable in all cases. In many cases, the sensitive elements of the research will simply constitute raw data or a small number of experiments, in which case the use of an embargoed appendix would be both more appropriate and much simpler to apply. It is only where the sensitive material extends to the need to embargo larger elements of the work, involving analysis and critical discussion that would warrant such an approach. It is noted that the survey results did not suggest that the portfolio approach has been adopted for PhDs specifically for this purpose as yet.

It can nonetheless be concluded that a number of viable solutions are now beginning to emerge in response to the challenge of balancing academic freedom and open dissemination of research outcomes, with its commercial exploitation and the need to protect the rights of individuals. A simple embargo on the whole of the work for a limited period of time, as is current practice, is likely to remain an option open to students – none of the respondents made any indication to the contrary, and contractual arrangements with commercial sponsors may make this the only viable option in some cases. However, whilst the data from both the 2004 and 2010 survey suggest that the number of requests to restrict access to theses is not increasing to any discernible extent, the concern remains that this may start to rise as electronic access to theses becomes more pervasive. Should this occur, it is important that universities consider all possible means of balancing the needs of all those concerned in ways which allow for the maximum practicable access to research outcomes to be maintained.

6 Conclusions

The 2010 survey has revealed that, contrary to expectations, the issue of confidentiality of PhD theses in the UK has not increased in significance since the original survey in 2004. The number of requests to restrict access to PhD theses has not increased appreciably and the evidence suggests that requests are being received by a smaller proportion of the population than in 2004. Whilst UK universities appear to be adopting a far more cautious approach to such requests, very few are declined, suggesting that universities are generally sympathetic to the reasons for them, and/or the request is based on a strong case.

These findings may indicate that the issue of confidentiality has simply reached a natural level, and only some significant change in the research environment will result in a further rise. One such change investigated in this survey, was the move toward electronic submission and access to theses, substantially widening access to PhD theses beyond that offered by the tradition of placing a hard copy in the University library. The link between requests to restrict access to PhD theses, as first identified by Powell and Green (2005), is not just based on logical deduction. The most frequently cited reason for requesting an embargo on PhD theses, in both the 2004 and 2010



surveys, is that of protecting “commercial interests”, with additional requests pertaining to protecting third party material. There is longstanding evidence (noted in Section 2.1) that commercial/industrial sponsors can often seek to suppress dissemination of research, at least until the outcomes have been fully exploited. It also follows that where the concern is for the protection of the individual, the wider the accessibility of sensitive material, the greater are the risks of negative consequences.

However, the survey found that electronic submission and access has not yet reached the point of being standard practice across UK universities, and this may provide an explanation for the static number of requests for confidentiality being received. Electronic access to doctoral theses is however a reality and will become accepted practice throughout academia, not just in the UK, but across the world, in developed and developing nations. It is therefore important for UK universities to consider viable alternatives to placing an embargo on the whole thesis document in every case; an approach that conflicts with the ethos of free and open access to research that UK universities are still committed to upholding.

The 2010 survey has identified a number of ideas which are emerging, most notably creating an “embargoed appendix” or treating electronic copies differently to the traditional hard copy, such that access can be controlled. The possibility of wider utilisation of the portfolio approach, as an alternative to the thesis, was explored in this report, given the greater flexibility that it affords. The survey revealed that the portfolio is already widely used for PhDs, though mostly in the creative arts. But in the majority of cases, the thesis still forms a substantial part of the portfolio and the main vehicle for conveying the intellectual content of the research. For the PhD, which is generally more narrowly bounded in terms of its focus and scope than a professional doctorate, the portfolio approach may be simply too unwieldy in many cases. It does however present another alternative to be considered as the impact of the changing academic environment begins to emerge more strongly.

Given the move toward greater convergence of practice and policy within Europe on postgraduate education, and specifically doctoral research, it is important not only that UK universities adapt proactively to changes in the academic environment (such as electronic access to research), but also work together to establish common practice and policy in addressing such change. It is hoped that this report will contribute to that process through the dissemination of emerging trends, practices and solutions.

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Appendices

Appendix 1 Confidentiality of PhD Theses in the UK Survey



UK Council *for* **Graduate Education**

UKCGE Survey Confidentiality of PhD Theses in the UK

This survey will provide the basis for a report which will build on an earlier work addressing this important issue, produced by Professors Stuart Powell and Howard Green published in 2005. The aim of the new survey is first of all to provide a comparative dataset which will enable the most recent trends in this area to be investigated and discussed in a new edition of this report. Secondly, the survey will further investigate issues which were just beginning to come to the fore at the time of the 2005 report, and which have subsequently increased in their

significance. The survey will therefore hopefully present some new perspectives on such issues as the impact of differences in the structure of the PhD relative to some of the Professional Doctorates on the issue of confidentiality, and what can be learned from this. It will also consider how the growing phenomenon of electronic submission of theses have changed the landscape with respect to such fundamental issues as copyright and access to doctoral research.

Name	
Institution	

Question 1. Do your regulations permit theses submitted for the degree of PhD to be kept confidential after the examination process?

Yes No

Question 2. Do your regulations specify an upper limit on the length of time that theses can be kept confidential?

Yes No

Question 3. If your answer to question 2 is "yes," please specify the length of time allowed (in years and/or months).



Question 4. What are the usual reasons given for theses to be kept confidential? Please specify.

Question 5. Of the reasons given, which are more likely to be deemed acceptable by your institution?

Question 6. Where a request for confidentiality is granted, is:

- The maximum time period applied in every case?
- The time period is determined on a case by case basis?
- Other

Question 7. If your answer to question 6 is "other" please specify.

Question 8. How many requests for confidentiality were made in the 2008/9 academic year?

Question 9. And, how many of these were granted?

Question 10. On what grounds might a further extension to the confidentiality period be granted?

Question 11. Are there any specific departments/disciplines for which the number of requests for confidentiality are generally higher? If yes, please specify which departments/disciplines.

Question 12. Do your regulations:

- Encourage electronic submission of theses?
- Mandate electronic submission of theses (except where exemption is granted)?

Question 13. Does your institution:

- Operate its own electronic depository for theses and dissertations?
- Submit theses and dissertations to an external electronic depository?

Question 14. If you do, please specify which depository.

Question 15. For each of the Professional Doctorates operated by your institution, please state whether a portfolio approach or thesis is required.



Question 16. If possible, please state what constitutes a portfolio and how much of it is placed in the public domain. For example:

- Multiple documents – the “summary” document only becomes public domain
- A number of published papers
- A mix of published and unpublished material
- Other

Question 17. If you selected "other" for Question 16, please specify.

Question 18. Do your regulations for the PhD allow for the submission of a portfolio, instead of a thesis? If yes, please state in which disciplines.

Question 19. Is your institution considering allowing PhD submission by portfolio?

- Yes No Maybe

Question 20. If your answer to either questions 18 or 19 is "yes", please explain why (if known).

Question 21. Do you have any other comments that you would like to make concerning the confidentiality of research degree theses/portfolios?

Appendix 2 Assistance from Institutions

Assistance from the following institutions is greatly acknowledged

University of Abertay Dundee	University of Glamorgan	University of Oxford
Anglia Ruskin University	Glasgow Caledonian University	University of Plymouth
Bath Spa University	University of Glasgow	University of Portsmouth
University of Bath	Glyndŵr University	University of London Queen Mary
University of Bedfordshire	University of Greenwich	Queen's University of Belfast
Birmingham City University	University of Hertfordshire	Royal Holloway University of London
Birmingham, University of	University of Huddersfield	Royal Veterinary College
University of Bolton	University of Hull	University of Salford
Bournemouth University	Imperial College London	Scottish Agricultural College
University of Brighton	Institute of Education	University of Southampton
University of Bristol	University of Kent	Staffordshire University
Brunel University	King's College London	University of Stirling
Buckinghamshire New University	Kingston University	University of Strathclyde,
University of Cambridge	Lancaster University	University of Sunderland
Canterbury Christ Church University	Leeds Metropolitan University	University of Surrey
Cardiff University	University of Leeds	University of Sussex
University of Central Lancashire	University of Leicester	Swansea University
University of Chester	University of Lincoln	University of Teesside
University of Cumbria	Liverpool Hope University	Thames Valley University
De Montfort University	University of Liverpool	University of Ulster at Jordanstown,
University of Dundee	London School of Economics	University College London
University of Durham	London South Bank University	University College Plymouth St Mark and St John
University of East Anglia	Manchester Metropolitan University	University of Warwick
University of East London	Middlesex University	University of West of England,
Edge Hill University	National Institute for Medical Research	University of Winchester
University of Edinburgh	University of Newcastle	University of Wolverhampton
University of Essex	University of Northampton	University of Worcester
University of Exeter	Oxford Brookes University	



Appendix 3 List of UKCGE Member Institutions (as of February 2010)

Full Members

University of Abertay
Aberystwyth University
Al Maktoum Institute
Anglia Ruskin University
Aston University
Bangor University
Bath Spa University
University of Bath
University of Bedfordshire
Birmingham City University
University of Birmingham
University of Bolton
Bournemouth University
University of Bradford
University of Brighton
University of Bristol
Brunel University
Buckinghamshire New University
University of Cambridge
Canterbury Christ Church University
Cardiff University
University of Central Lancashire
University of Chester
University of Chichester
Cranfield University
University of Cumbria
De Montfort University
University of Derby
University of Dundee
Durham University
University of East Anglia
University of East London
Edge Hill University
University of Edinburgh
University of Essex
University of Exeter
University of Glamorgan
Glasgow Caledonian University
The Glasgow School of Art
University of Glasgow
University of Gloucestershire
Glyndŵr University
University of Greenwich
Heriot-Watt University
University of Hertfordshire
University of Huddersfield
University of Hull
Imperial College London
Institute of Cancer Research
Institute of Education
Keele University
University of Kent
King's College London
Kingston University
Lancaster University
Leeds Metropolitan University
University of Leeds
University of Leicester
University of Limerick
University of Lincoln
Liverpool Hope University
Liverpool John Moores University
University of Liverpool
London Metropolitan University
London School of Economics
London School of Hygiene and Tropical Medicine
London South Bank University
Loughborough University
Manchester Metropolitan University
University of Manchester
Edinburgh Napier University
National Institute for Medical Research
University of Newcastle upon Tyne
The University of Northampton
Northumbria University
Nottingham Trent University
University of Nottingham
The Open University
Oxford Brookes University
University of Oxford
School of Pharmacy, University of London
University of Plymouth
University of Portsmouth
Queen Mary, University of London
Queen's University Belfast
Ravensbourne College of Design & Communication
University of Reading
Roehampton University
Royal College of Art
Royal Holloway College
The Royal Veterinary College
University of Salford
University of Southampton
University of St Andrews
The College of St Mark and St John
Staffordshire University
University of Stirling
University of Strathclyde
University of Sunderland
University of Surrey
University of Sussex
Swansea University
University of Teesside
Thames Valley University
UHI Millennium Institute
University of Ulster at Jordanstown
University College London
University for the Creative Arts
University of the Arts, London
University of Wales Institute Cardiff
University of Wales, Newport
University of Warwick
University of the West of England
University of the West of Scotland
University of Westminster
University of Winchester
University of Wolverhampton
University of Worcester
York St John University
University of York

Associate Members

Athens Graduate School of Management

The British Library

British Sociological Association

British School of Osteopathy

Canadian Association for Graduate Studies

The Islamic College

Markfield Institute of Higher Education

National Union of Students

Royal Scottish Academy of Music & Drama

Royal Society of Chemistry

The Royal Academy of Engineering

Society for Endocrinology

Society for General Microbiology

School of Advanced Study, University of London

Scottish Agricultural College

UK Council for Graduate Education

Published titles – all available from the UKCGE website, <http://www.ukcge.ac.uk>

ISBN	Title
0-9525751-0-8	Graduate Schools (1995)
0-952-5751-1-6	The Award of the Degree of PhD on the Basis of Published Work in the UK (1996)
0-9525751-9-1	Quality and Standards of Postgraduate Research Degrees (1996)
0-9525751-2-4	Practice-Based Doctorates in the Creative and Performing Arts and Design (1997)
0-952-5751-3-2	The status of published work in submissions for doctoral degrees in European Universities (1998)
0-952-5751-4-0	Preparing Postgraduates to Teach in Higher Education (1999)
0-952-5751-5-9	The International Postgraduate: Challenges to British Higher Education (1999)
0-952-5751-6-7	Research Training for Humanities Postgraduate Students (2000)
0-9525751-7-5	Research Training in the Creative and Performing Arts and Design (2001)
0-952-5751-8-3	Professional Doctorates (2002)
0-9543915-0-0	Research Training in the Healthcare Professions (2003)
0-9543915-1-9	A Review of Graduate Schools in the UK (2004)
0-9543915-2-7	The Award of PhD by Published Work in the UK (2004)
0-9543915-3-5	Confidentiality of PhD Theses in the UK (2005)
0-9543915-4-3	Professional Doctorate Awards in the UK (2005)
0-9543915-5-3	Access to Doctoral Examiners' Reports (2007)
0-9543915-6-0	Higher Doctorate Awards in the UK (2008)
0-9543915-7-7	Quality and Standards of Postgraduate Research Degrees (2009)
0-9543915-9-1	Preparing to Teach in Higher Education (2010)
0-9543915-8-4	A Review of Graduate Schools in the UK (2010)
0-9563812-1-7	Professional Doctorate Awards in the UK (2010)





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