The Role of Publications and Other Artefacts in Submissions for the UK PhD

Professor Bruce Christianson and Professor Martin Elliot with Ben Massey
For further information about the UK Council and its activities, please contact:

The Principal Officer
UK Council for Graduate Education
Lichfield Centre
The Friary
Lichfield
Staffordshire WS13 6QG

T: 01543 308602
F: 01543 308604
E: ukcge@ukcge.ac.uk
www.ukcge.ac.uk

A list of the Council’s publications is given at the back of this book.
## Contents

Acknowledgements..............................................................................................................................5  
Executive Summary..........................................................................................................................5 
1  Introduction..................................................................................................................................9 
2  Roles for Published Papers in a PhD Submission ..........................................................10 
3  Attribution of Authors ...........................................................................................................13 
4  Other Artefacts..........................................................................................................................15 
    Unpublished Papers and Preprints .....................................................................................16 
    Confidential or Restricted Documents ..........................................................................16 
    Creative Works (e.g. novel, musical score, play, film).....................................................17 
    Definitive Texts (e.g. a critical edition) ............................................................................18 
    Software (e.g. simulation, multimedia, games) ...............................................................18 
    Hardware (e.g. experimental apparatus, prototype product) ........................................18 
    Art (e.g. paintings, sculptures, photographs, drawings) .............................................18 
    Fashion (e.g. garments, textiles, jewellery) ......................................................................19 
5  Examination Process ..................................................................................................................19 
6  Research Carried out Prior to Registration .......................................................................21 
7  Relation to other Doctoral Regulations ..............................................................................24 
8  What Next? .............................................................................................................................26 
References.........................................................................................................................................31 

Appendices ......................................................................................................................................32 

Appendix 1 ......................................................................................................................................32 
Survey Results.................................................................................................................................32  

What Happens Currently, and How Frequently? .........................................................................32  
    Scenarios: Published Papers .........................................................................................32  
    Attribution of Papers .....................................................................................................32  
    Types of Artefact .............................................................................................................33  
    Assessment Methodology .................................................................................................34  
    Pre-registration ..................................................................................................................34 
Relation to other Doctoral Regulations .......................................................................................35 

What Level of permission is required and does practice vary across the institution? ..........36  
    Scenarios: Published Papers .........................................................................................36  
    Types of Artefact .............................................................................................................37  
    Assessment Methodology .................................................................................................38  
    Pre-registration ..................................................................................................................38
Looking into the future, do you think your answers will be different in 5 years time?.......39
Scenarios: Published Papers ...................................................................................................................39
Types of Artefact .........................................................................................................................................40
Assessment Methodology ..........................................................................................................................41
Pre-registration ...........................................................................................................................................41
Key Narrative Comments ...........................................................................................................................42
Appendix 2 ...........................................................................................................................................................44
List of UKCGE Member Institutions (as of January 2015) .....................................................................44
Full Members .....................................................................................................................................................44
Associate Members ..........................................................................................................................................46
Appendix 3 ...........................................................................................................................................................47
UK Council for Graduate Education Published Titles .............................................................................47

List of figures

Figure 1 Use made of publications by PhD submissions: how frequently does each scenario occur? ..........10
Figure 2 Use made of publications by PhD submissions: what level of permission is required for each scenario? ........11
Figure 3 Which forms of attribution do your regulations require in respect of published papers that form an integral part of a PhD submission? ..........14
Figure 4 How frequently are artefacts other than published papers included as an examinable part of a PhD submission? ..........15
Figure 5 What level of permission is required at your institution to include each type of artefact? ..........16
Figure 6 Frequency of examination by viva alone or following another formal event .........................20
Figure 7 Permission required for each method of assessment .................................................................20
Figure 8 Who attends the formal event preceding the viva? ........................................................................21
Figure 9 Frequency of inclusion of research carried out prior to formal registration .................................22
Figure 10 Level of permission required to include research carried out prior to formal registration ...............22
Figure 11 Regulations for a PhD by published work vs “conventional” PhD .............................................24
Figure 12 Regulations for a “new route” PhD vs “conventional” PhD .........................................................25
Figure 13 Future predictions on the use made of published papers by PhD submissions .........................26
Figure 14 Future predictions on the inclusion of other artefacts in PhD submissions .................................27
Figure 15 Future predictions on examination by viva alone or following another formal event .................27
Figure 16 Future predictions on inclusion of research carried out prior to formal registration .....................28
The authors would like to thank the HEIs who responded to the survey, and particularly our long-suffering UKCGE link officers and their colleagues, who in many cases had to make a decidedly non-trivial effort to collate the information we asked for.

Thanks also to our colleagues Angus Burns and Carolyn Wynne at UKCGE Headquarters for their support, and to the UKCGE executive for their encouragement. Particular thanks to Alan White for starting the whole thing off, and to Gill Clarke and Tina Barnes for their incisive comments on a earlier draft of this report.

Finally, our thanks to you, gentle reader, for taking time to think about these issues with us: and if you have thoughts that you would like to share, we would love to hear from you.

Bruce Christianson    Martin Elliott    Ben Massey

Executive Summary

The traditional examination format for PhD degrees in the UK is the chapter-based dissertation as the basis for oral examination. However pressures to publish prior to thesis submission and hence to allow incorporation of publications as well as other artefacts within the assessment paradigm are challenging this conventional approach.

Based on a survey of opinion and practice at 50 UK universities, this report investigates the changing role being played by publications, and other artefacts, in submissions for the degree of Doctor of Philosophy in the UK, and the developments anticipated across the sector for the future.

There is general consensus that inclusion of published material in the body of work submitted for examination is acceptable, but not sufficient to merit a doctoral award: in addition the work presented needs to be coherent and to demonstrate explicitly the candidate’s individual contribution to knowledge. A clear division is evident between the arts, humanities, and social sciences, where publication normally follows submission for examination, and the STEM subjects, where publication prior to submission is generally expected and therefore pressure to allow incorporation of such papers into the doctoral assessment process is greater. Indeed, some institutions expressed concern that there was an opportunity cost to the institution if the PhD regulations forced candidates to rewrite such pre-published material.
However concerns about the attribution of work presented in the form of published papers (particularly when multi-authored) were evident in the diversity of their acceptance, either as an integral part of the submission, or appended to it as a non-examinable element. All institutions demanded a statement of ownership by the candidate and clear identification of collaborative content, although the precise mechanism for confirming this varied. In all cases the examiners were regarded as the sole arbiters in assessing whether the candidate merited the award.

With regard to the inclusion of other artefacts within the assessment process, there was general acceptance of a wide range of exhibits or performances, so long as the candidate could show how the artefacts related to the thesis and its defence. These currently occurred most commonly in the arts and less so in the sciences, even where development of new hardware or computer code might be essential to the success of the project, because the focus of the examination process was generally on the theoretical rather than practical aspects of the research.

In relation to future developments, a quarter of the institutions surveyed envisage extensive change to the status quo with regard to incorporation of published material into the examinable content. Several commented on the increasing pressure on students to publish during the course of their PhD to enhance employability, and the potential benefits to both student (in time saved rewriting their work) and institution (in increased outputs) of incorporating published works as an integral part of the submission.

Clearly this is an ongoing debate with several unresolved issues such as the need to craft a coherent line of argument, avoid self-plagiarism, and ensure appropriate attribution of authorship. Taken altogether, many institutional comments come down to articulating the trade-offs between having many sets of specialised regulations versus a single unified framework: the latter arrangement making it much easier to demonstrate “equivalence of doctorateness” across all doctoral awards.
THE ROLE OF PUBLICATIONS IN THE UK PhD

Frequency of PhDs incorporating published papers

Papers published by the candidate during the course of the research could form an integral part of a PhD submission but currently did so only rarely, said 45% of responding institutions. Fewer respondents said this type of submission never occurs (33%), but a small minority said it occurs quite often or is the normal practice (12% and 5% respectively).

Attribution of Papers

The usual PhD thesis convention for attributing work of other people was common practice (95%), while explicit statements of the candidate’s contribution to each paper signed by the candidate (84%), or endorsed by the co-authors (22%) were less common.

Artefacts

This chart captures the types of artefacts that were said to be included in submissions ‘Quite often’ and as the norm.

The most common artefacts that appeared in submissions were Creative Works (e.g. novel, musical score), followed by Art (e.g. paintings, sculptures), Confidential or restricted documents and Software respectively.

Less common artefacts were Unpublished papers and Definitive texts, while Hardware and Fashion artefacts were uncommon.
Assessment Methodology

82% of respondents stated that it was quite often (5%) or normal practice (77%) for everything to be done in the viva.

But 21% of respondents stated that quite often (15%) or as part of normal practice (5%), the viva is preceded by a formal seminar, exhibition or performance.

For those that did note a preceding event:

- 68% said the audience consisted of the same people as attended the viva
- 56% said attendance at the event is at the discretion of the examiners
- 51% said the event was open to members of departments and their guests
- 33% said the event is open to the general public

Prior Research

Restrictions on the inclusion of papers or artefacts to those developed while registered and receiving supervision was the norm in 81% of universities with only 14% rarely or never applying such restriction.

PhD by Published Work

83% of respondents offer PhD by Published Work, but only 59% administer this by separate regulations from the ordinary PhD.

42% of respondents offer a new route PhD, half of whom administer separate regulations from the ordinary PhD.

Change in the Future?

Over 76% of respondents already permit incorporation of publications in submissions for the PhD, and 23% anticipate significant change in practice over the next 5 years.

Respondents overwhelmingly (84%) believed answers for assessment methodology will be the same in 5 years’ time and less than 19% anticipate significant change to the types of artefact other than published papers included. Additionally, the majority of respondents commented that they expect to see growth or change in professional doctorate activity at their University.
1 Introduction

This report investigates the changing role being played by publications, and other artefacts, in submissions for the degree of Doctor of Philosophy in the UK.

The report is primarily concerned with submissions made under institutions’ “conventional” regulations for the PhD degree. This term excludes professional doctorates, and excludes PhDs by published work where these awards are made under separate regulations. However, it includes performance-based and practice-based submissions for the degree of PhD, apart from those made under special separate regulations.

Our report follows on from two earlier UKCGE reports: the report on PhD by published work in the UK (Powell 2004, UKCGE 1996) and the report on the role of publications in the PhD in Europe (UKCGE 1998).

This report is based upon data collected from 50 responses to a survey of UKCGE members. Prior to this, two preliminary surveys were conducted in 2013 by UKCGE. The first, carried out by our colleague Alan White, indicated that the situation with the PhD by published work was relatively stable, with the number of awards by this route remaining relatively low, and if anything declining.

In contrast the second preliminary survey, carried out by Martin Elliott, highlighted the changing role being played by publications in the PhD degree generally, and this motivated the more detailed survey upon which the present report is based.

The full survey asked a series of questions about current policy and practice within institutions, and then invited respondents to speculate about what aspects of this might be likely to change in the future. The questions included a multi-choice element, along with space for free-field comments and reflections.

Perhaps unsurprisingly, the answers reveal that there is a great deal of diversity of practice in the UK, not just between institutions, but also between discipline areas.

Several institutions reported that it was difficult to determine what the frequency of various practices actually was, as distinct from what their regulations permitted, as the appropriate data did not appear to be collected or stored.

A number of institutions said that their regulations appeared to allow a particular practice provided appropriate permission was given, but that it was not clear who was authorised to give this permission.

---

1 It was our desire to capture what was happening with performance- and practice-based PhDs that led us to include other research artefacts besides publications in the scope of the survey.
2 Of these responses, 25 were from pre-92 and 25 from post-92 institutions.
3 That is to say, where these awards are covered by separate regulations to the conventional PhD.
In the sections which follow, we summarise the responses for each of the survey sections in turn. We attempt to structure this discussion so as to expose the underlying issues as a starting point for further debate.

2 Roles for Published Papers in a PhD Submission

The survey began with a set of questions which concerned the extent to which published work can be integrated into a submission for the PhD. Firstly, is it permitted to include published papers as supplementary material, to which the examiners may refer if they wish? And secondly, can the publications themselves form an integral part of the submission, with crucial parts of the defence relying upon the examiners having read the submitted papers?

Figure 1 Use made of publications by PhD submissions: how frequently does each scenario occur?

1. The submission contains no reference to any published papers authored (or co-authored) by the candidate
2. The submission references papers published by the candidate, but does not include their text
3. The publication texts are included with the submission, but not as an integral part
4. Publications form an integral part of the submission, together with a critical overview/conspectus
5. The submission consists exclusively of publications

Each responding institution selected one of four options. The horizontal bars show the proportion selecting each option.

---

4 Possibly including an understanding of the context, methodology, or significance of the work.
The responses reveal general acceptance of including published papers as supplementary material, but also reflect a continuing concern that a PhD submission must be an expression of a coherent piece of work and not just a package of published papers.

Even where the inclusion of publications as an integral part of the submission is sanctioned, all the respondents seem (in the light of their narrative comments) to require the submission of some form of conspectus or critical review, prepared specifically by the candidate for the process of PhD submission, and which places the research described in the papers into an appropriate unified conceptual framework.

The major division in practice seems to occur between the areas of arts humanities and social sciences (broadly understood), and science technology engineering and medicine (popularly known as STEM).

---

5 Over 90% of responders routinely allow scenario 3.
6 This element is referred to as the exegesis in Jackson 2013.
7 In some cases this document would be written in two halves, which surround the other elements of the submission like bookends.
8 Of course, the division is not quite as clean as this glib statement implies: mathematics, for example, has a foot in each camp.
In the arts and humanities, most students still follow the traditional practice of submitting for the award of PhD and afterwards using the examiners’ comments combined with those of other readers to rework the dissertation, either into a monograph or a series of journal papers, published subsequent to the award of the degree.

Disciplines in the STEM area, in contrast, typically expect a PhD candidate to have published reasonably extensively prior to submission for the award. Consequently, there is an incentive for enabling candidates to reuse this published material by incorporating it as an integral part of their PhD submission without labour-intensive re-writing, especially given the pressure to complete within three to four years for full-time candidates in these areas.

Indeed, some institutions expressed concern about candidates spending time writing their dissertation instead of preparing articles for publication, and felt that there was an opportunity cost to the institution if the PhD regulations forced them to do this.

The ability to include publications as an integral part of the submission has a clear advantage from this point of view, enabling the preparation of a relatively short submission-specific critical conspectus, rather than the traditional integrated monolithic monograph.

On the other hand there was general concern, expressed across the board, that integration of publications as they stood into a PhD submission made it more difficult for examiners to verify that doctoral candidates had been trained to see the full research process, both through the inclusion of their own original ideas, and also with regard to practical and methodological concerns.

Many institutions identified this issue as the reason why their regulations stated clearly that the submission, however structured, must be a coherent piece of work.

Some institutions ask all candidates to include publications for which they are the primary author as an appendix at the end of the dissertation. A number of institutions commented that this practice was more common in science and technology, where it happened very often, and less common in arts and humanities where it happened only rarely.

In some institutions the regulations are explicit that the examiners can refer to these included published papers when addressing in their report the question whether the submission contains matter suitable for publication, but that the papers themselves cannot form part of the work being examined.

Some institutions explicitly require published work to be rewritten and reformatted to ensure integration with the hypotheses and central arguments of the thesis, in order to ensure that the submission reads as a coherent whole.

---

9 This pressure comes not simply from league tables, but also from the funding models used for PhD studentships in STEM areas, and the pressures to reallocate expensive laboratory space and equipment quickly to new projects. Completion within three to four years represents a comparatively short timeframe relative to PhDs in North America and continental Europe.

10 See Clarke & Lunt 2014.
Some institutions that forbid published manuscripts to be included as dissertation chapters do allow movement in the opposite direction: material from the dissertation (such as text and figures) may be published as it stands before the submission has been approved for the degree.

On the other hand, a majority of institutions\textsuperscript{11} permit publications that have already appeared to form an integral part of the submission, so long as they are appropriately integrated and referenced.

Some institutions commented that the inclusion of previously published elements as an integral part of the submission was popular in a small number of specialist areas, but that there were certain areas in which the practice was viewed unfavourably by the discipline, even when the institution’s regulations permitted it.

A number of institutions explicitly disallow hybrid submissions: in other words either all of the chapters must be published or none of them.

Conversely, some institutions seem actively to encourage the hybrid model\textsuperscript{12}.

Some institutions identified explicitly as a motivation for this the desire to prevent students spending time rewriting published work so as to integrate it into the dissertation, while at the same time allowing submission to take place before all the planned publications had been finalised.

In some institutions, faculties that allow the option of including publications as an integral part of the submission are required to write faculty-specific guidance to candidates within their discipline. This guidance often specifies exactly what type of material is eligible for inclusion.

However, the incorporation of joint-authored papers into a PhD submission gives rise to a further assessment issue, which we explore in the next section.

3 Attribution of Authors

The outcome of a PhD programme may be regarded from two complementary points of view: either as a record of a completed piece of original research, or as the production of a well-trained independent researcher.

Assessing outcomes of the second kind is more problematic in some of the STEM areas, where a team-based approach to research means that most published papers have more than one author. When

\textsuperscript{11} Half of those surveyed allow scenario 4 routinely, and another quarter do so subject to specific permission being granted in advance.

\textsuperscript{12} For example the Manchester University alternative format regulations http://documents.manchester.ac.uk/display.aspx?DocID=7420
joint publications form an integral part of the submission, it can therefore be non-trivial for examiners to identify the candidate’s contribution to the submission, and the extent of their individual competence as a trained independent researcher. Different approaches appear to have been developed to deal with this.

**Figure 3** *Which forms of attribution do your regulations require in respect of published papers that form an integral part of a PhD submission?*

1. Usual PhD thesis convention for attributing works of other people
2. Explicit statement of the candidate’s contribution to each paper, signed by the candidate
3. Explicit statement of the candidate’s contribution, endorsed by the co-authors

There is an almost universal regulatory requirement for all PhD candidates to clearly identify and explicitly attribute any work described in their submission that is not entirely the candidate’s own. There is general agreement that this requirement for explicit attribution by the candidate also extends to any published papers (or indeed any other artefacts) that are included as part of the submission.

A number of comments were to the effect that whilst information about the contribution of the candidate to the published work was collected, it was provided to the examiners for information only, and the examiners are expected to form their own judgement on the basis of their examination of the candidate. Some institutions require the candidate to certify that they have the permission of the co-authors to include the papers. One institution explicitly said that the University reserved the right to contact co-authors to verify the extent of the candidate’s contributions. One institution requires the supervisor to sign on behalf of all co-authors. However some institutions require only that the candidate comply with “standard policies on research integrity”, which seems appropriate as an exit standard from a programme of research training.

13 Of course, such concerns do also arise sometimes with traditional dissertations, and are one reason why the viva is an essential part of the assessment.
Some institutions’ regulations treat publications very differently from other artefacts produced during the course of the research, but some treat them on equal terms.

The variation seems in the main due to the role that the artefact plays in the demonstration by the candidate that the criteria for the PhD have been met\(^{14}\).

**Figure 4** *How frequently are artefacts other than published papers included as an examinable part of a PhD submission?*

1. Unpublished papers/preprints
2. Confidential or restricted documents
3. Creative works (e.g. novel, musical score, play, film)
4. Definitive texts (e.g. a critical edition)
5. Software (e.g. simulation, multimedia, games)
6. Hardware (e.g. experimental apparatus/prototype products)
7. Art (e.g. paintings/sculptures/photographs)
8. Fashion (e.g. garments, textiles, jewellery)

\(^{14}\) See Christianson & Adams 2011.
Unpublished Papers and Preprints

The survey question refers to the inclusion of unpublished papers in their “standalone” form: a number of institutions commented that it would be impossible to police a regulation forbidding the inclusion of material from unpublished manuscripts.

Confidential or Restricted Documents

In many institutions, disciplines were permitted to operate different policies. In most cases embargos were permitted only where there were particular reasons: for example in the case of sponsored research or in order to allow the candidate time to prepare their material for publication post examination.

Figure 5  What level of permission is required at your institution to include each type of artefact?

1. Unpublished papers/preprints
2. Confidential or restricted documents
3. Creative works (e.g. novel, musical score, play, film)
4. Definitive texts (e.g. a critical edition)
5. Software (e.g. simulation, multimedia, games)
6. Hardware (e.g. experimental apparatus/prototype products)
7. Art (e.g. paintings/sculptures/photographs)
8. Fashion (e.g. garments, textiles, jewellery)

- Forbidden by regulations
- Requires specific permission
- Must be notified prior to submission, but permission is a formality
- No prior notification is needed

The Role of Publications and Other Artefacts in Submissions for the UK PhD

16
Comments about embargo in the arts and humanities area explicitly identified the need to avoid placing the dissertation in the public domain until the post-award publications had been prepared\textsuperscript{15}.

Conversely, in some STEM areas the need for embargo relates mainly to concerns about patents and commercial exploitation by a sponsor. Here, the pressure for rapid publication is in tension with commercial considerations.

Several institutions, perhaps surprisingly, did not require applications for confidentiality to be made until after the PhD examination had occurred.

Some institutions regarded embargos as extremely rare, while in other institutions permission for up to two years seemed to be a formality.

Some institutions allowed a submission to be redacted for a period of time before being placed in the public domain. Permanent redaction was usually restricted to issues of national security, but apart from that the maximum period seems to be in the region of three years.

Requirements to make dissertations available online\textsuperscript{16} meant that copyright of images was in many cases a live issue, particularly in respect of Research Council or CASE studentships, where dissertations must be placed online within twelve months.

**Creative Works (e.g. novel, musical score, play, film)**

Many institutions commented that practice regarding creative works varied immensely by discipline.

In some cases, permission to include artefacts needed to be agreed very early: for example at the point of admission, or at the end of the first year review. At other institutions, the format needed to be agreed with the examiners, whom it was therefore essential to appoint at an earlier stage than would otherwise be the case.

Some institutions give blanket permission for inclusion of this type of work in specific disciplines, or on specific practice-led programmes.

Some institutions commented that any format other than a classical written dissertation would not be acceptable. In contrast, other institutions indicated that in certain areas (such as creative arts and creative writing), the inclusion of creative work was almost mandatory for a PhD submission.

Many institutions were at pains to point out that the inclusion of creative work was in addition to the requirement for a written dissertation, and not a substitute for it.

\textsuperscript{15} Although (in line with RCUK policy) AHRC studentships require a full text version to be available online within a maximum of 12 months following award of the PhD: www.ahrc.ac.uk/SiteCollectionDocuments/Student-Funding-Guide.pdf

\textsuperscript{16} Barnes 2010; Barnes et al 2012.
Some institutions commented that the PhD examination tended to focus upon theoretical rather than practical aspects of the research.

**Definitive Texts (e.g. a critical edition)**

One institution indicated that they would expect an increase in this form of artefact if ‘impact’ becomes considered an important element of the doctoral examination, in the way that it currently is for REF.

**Software (e.g. simulation, multimedia, games)**

A number of institutions indicated explicitly that they saw software as an issue with which they had yet to come to terms. In most of these cases, the regulations required that supplementary material should not be critical to the reading and understanding of the thesis, and that the examiners must not be required to review it.

Some institutions noted that the inclusion of code in a submission could lead to complications with intellectual property and commercial confidentiality, and that the inclusion of software was discouraged in order to protect commercial rights.

Some institutions indicated that the inclusion of code was common in Computer Science but uncommon elsewhere.

**Hardware (e.g. experimental apparatus, prototype product)**

One institution commented that they were happy to support the practice of submitting such artefacts, but that it occurred only rarely.

Some commented that a prototype *per se* would not be considered research: although candidates very often developed hardware in the course of their PhD, the physical object was not part of the formal assessment for the submission.

Other institutions commented that their regulations appeared neither to permit nor to forbid submission of such artefacts.

One institution indicated that, even when the examiner was given a demonstration prior to the viva (which happened frequently in engineering) the written dissertation must be able to stand on its own.

**Art (e.g. paintings, sculptures, photographs, drawings)**

Some institutions allow the inclusion of photographs as part of the submission, including photographs of other artefacts, but not actual paintings or sculptures themselves. In one institution, inclusion of the latter artefacts is restricted by regulation to the specific discipline of architectural design.
Other institutions are happy to allow a wide range of exhibits, so long as the candidate can show how the artefacts relate to the thesis and its defence. In some cases of medical research, reproduction of photographs of patients involved delicate issues of confidentiality.

**Fashion (e.g. garments, textiles, jewellery)**

Submissions for doctorates in fashion typically include such artefacts, but “things are not research, it’s writing about them.”

When artefacts that do not “lie flat in an A4 format” comprise an integral part of a submission, the examination process must include a protocol to allow examiners to have appropriate access to the artefacts. Frequently this takes the form of an exhibition or performance, which may occur during the viva, or beforehand.

This consideration motivated the next set of questions in the survey.

### 5 Examination Process

Where a submission includes non-textual artefacts, the candidate is frequently invited to give an exhibition, recital, or performance at which the examiners are present. This may take place either during the viva itself, or as a separate event beforehand. This practice sometimes also occurs where the submitted artefacts are textual, such as a script for a play or film.

More generally, even in the absence of such artefacts, candidates may be invited as a matter of policy to begin the oral stage of their assessment with a short presentation covering the background and significance of their thesis, and outlining the main lines of argument upon which their defence relies. In some cases, this initial presentation may take the form of a self-contained seminar, perhaps involving a wider audience than just the examiners.17

The next set of questions explored the ways in which examiners engage with the candidate’s submission.

---

17 This is almost universal practice in many parts of the Continent, including Germany.
It was pointed out by some respondents that examiners do a great deal of close reading of the submission in advance of the viva, so that it is not really true to say that examination only happens in the viva, even in the case of the most conventional examination.

Some institutions commented that informal seminar presentations preceding the viva were common but were not part of the formal assessment.

Many institutions identified it as being appropriate practice only for certain types of degree such as drama, theatre, music performance and composition. However one institution commented that their
laboratory-based subjects in life sciences and medicine required a pre-viva seminar event as part of the assessment protocol.

Other institutions indicated that they would not seek to discourage a pre-viva seminar in any area, even where it may be uncommon in practice.

**Figure 8  Who attends the formal event preceding the viva?**

1. Same audience as the viva?

2. Attendance at the examiners’ discretion?

3. Open to members of the department & guests?

4. Open to the public?

A number of institutions that allow pre-viva seminars have formal protocols to cover the involvement of examiners. Others treat examiners as “just members of the audience.”

One institution commented that in the case of a live performance examiners were explicitly forbidden to give formative feedback to the candidate between the performance and the viva.

6 Research Carried out Prior to Registration

A distinction is often drawn between the “conventional” PhD, awarded for a pre-approved programme of research carried out under formal supervision, and the PhD by published work, awarded for a retrospectively validated programme of research which may have been conducted relatively independently. But how firm is this dividing line in reality, and might there be more of a continuum? We shall see in a subsequent section that many institutions are adopting a more unified approach.
The survey questions covered in this section concern one particular aspect of the dichotomy: to what extent can a submission for a “conventional” PhD include research carried out, and papers or other artefacts prepared, prior to formal approval of the research programme by the awarding institution?

**Figure 9  Frequency of inclusion of research carried out prior to formal registration**

1. All submitted papers and other artifacts developed while registered & receiving supervision

2. The submission includes work carried out prior to registration that has gone through a formal process of Accreditation of Prior Learning (APL)

3. The submission includes work carried out prior to registration that has NOT gone through a formal process of Accreditation of Prior Learning (APL)

**Figure 10  Level of permission required to include research carried out prior to formal registration**

1. All submitted papers and other artifacts developed while registered & receiving supervision

2. The submission includes work carried out prior to registration that has gone through a formal process of Accreditation of Prior Learning (APL)

3. The submission includes work carried out prior to registration that has NOT gone through a formal process of Accreditation of Prior Learning (APL)

Forbidden by regulations

Must be notified prior to submission, but permission is a formality

Requires specific permission

No prior notification is needed
No institutions said that they had formal APL of research elements of the PhD carried out prior to registration, although some professional doctorate programmes allowed for formal APL of taught components of the programme.

A number of institutions indicated that their regulations required the submission to embody the results of research undertaken during the registered programme, although some of these institutions explicitly allow exceptions to this rule for members of staff. Some institutions allowed the only exception to be a transfer of registration from another institution with the permission of the previous institution\(^{18}\). One commented that it would be odd for an HEI to award a degree for research that was conducted in another HEI.

Some institutions had regulations requiring that the majority of the work included must have been carried out while the student was under supervision.

Some institutions commented that their candidates were not required to declare that the submitted work had been carried out since they registered, merely that it had not been submitted for any other degree, and consequently they were unable to comment on how sizeable the proportion actually was.

One institution commented that the requirement to undertake all work whilst a registered research student receiving supervision applied to the artefacts but not to the papers.

One institution allowed work done prior to registration to be used as a platform, but not as part of the claim to new knowledge. However, an exception was made for prior work that had been published, which could be used\(^{19}\).

Other institutions are more relaxed and simply have a minimum registration period for completing the conspectus under appropriate supervision\(^{20}\).

These issues raise a wider debate about how best to unpack what the PhD degree is actually being awarded to candidates for: is it for undergoing a particular prescribed process of researcher training, or for evidencing that they possess particular prescribed capabilities at the point of the final assessment? This ultimately comes down to a question of discerning the criteria (learning outcomes) for the doctoral award, and how the evidence for meeting these criteria is assimilated by the examination process.

---

18 One mentioned a case where the original supervisor had died.
19 Some institutions require work submitted for a PhD to be novel at the time of submission, or at the time of publication, if earlier. This rubric is particularly helpful to part-time students: interestingly, it provides part-time candidates with an incentive not only to publish as they go, but also to consider using the integrated model for submission, even in non-STEM areas.
20 Student feedback at one of the authors’ institutions consistently shows that experienced researchers who obtained a PhD primarily based on work published prior to registration regard preparing the critical conspectus under supervision as the “value-adding” part of the process, especially in retrospect.
How do policies and practices for the “conventional” PhD compare with those for other doctoral awards, such as the Professional Doctorates, the PhD by published work, the New Route PhD, etc.?

Some institutions reported more flexible practices for professional doctorates than for the PhD, with respect to submission of publications and other artefacts, and with regard to the examination process. However, some institutions appear to have broadened their Ph.D. regulations to keep them in line with those for professional doctorates\(^\text{21}\). Some institutions either have, or are deliberately moving towards, a single regulatory framework for all doctoral degrees.

**Figure 11 Regulations for a PhD by published work vs “conventional” PhD**

*Does your institution offer separate regulations for a PhD by published work?*

![Survey Results]

- 24%: No, we do not offer a PhD by published work
- 17%: Yes, separate regulations from the “ordinary” PhD
- 59%: We do allow a PhD award based on submitted publications, but it doesn’t have separate regulations: it’s just one form of submission for the “conventional” PhD

Some institutions have unified regulations that support both conventional submissions and submissions by published work; some institutions have separate guidelines but not separate regulations.

\(^{21}\) Indeed, if the primary output of a professional doctorate is a trained practitioner, there is some force in the argument that a PhD can also profitably be regarded as a professional doctorate for academics.
The comment was made that CASE awards, and Doctoral Training Awards from RCUK, were more akin to the “new-route” PhD.

**Figure 12 Regulations for a “new route” PhD vs “conventional” PhD**

Does your institution offer separate regulations for a "new route" PhD?

- No, we do not offer a “new route” PhD: 58%
- Yes, separate regulations from the “ordinary” PhD: 21%
- We do allow “new route” PhD programmes, but they don’t have separate regulations: it’s just a special case of the “conventional” PhD: 21%
8 What Next?

The final part of each question in the survey invited respondents to look five years into the future and reflect on how different they thought their answers might be. In this section, we present the multi-choice responses for this part of the various questions, followed by a summary of the narrative comments.

**Figure 13 Future predictions on the use made of published papers by PhD submissions**

1. The submission contains no reference to any published papers authored (or co-authored) by the candidate
2. The submission references papers published by the candidate, but does not include their text
3. The publication texts are included with the submission, but not as an integral part
4. Publications form an integral part of the submission, together with a critical overview/conspectus
5. The submission consists exclusively of publications

In five years’ time, the answers will be:

- [ ] Exactly the same
- [ ] Mostly the same
- [ ] Quite different
- [ ] Completely different
**Figure 14** *Future predictions on the inclusion of other artefacts in PhD submissions*

1. Unpublished papers/preprints
2. Confidential or restricted documents
3. Creative works (e.g. novel, musical score, play, film)
4. Definitive texts (e.g. a critical edition)
5. Software (e.g. simulation, multimedia, games)
6. Hardware (e.g. experimental apparatus/prototype products)
7. Art (e.g. paintings/sculptures/photographs)
8. Fashion (e.g. garments, textiles, jewellery)

In five years’ time, the answers will be:
- **Exactly the same**
- **Mostly the same**
- **Quite different**
- **Completely different**

**Figure 15** *Future predictions on examination by viva alone or following another formal event*

1. Everything is done in the viva
2. The viva is preceded by a formal seminar/performance/exhibition

In five years’ time, the answers will be:
- **Exactly the same**
- **Mostly the same**
- **Quite different**
- **Completely different**
Debate on the integrated-publication model was beginning in some institutions, but in many the debate has already been won, or lost at least for the moment.

Many institutions indicated that the debate about permitting inclusion of papers as an integral part of a PhD submission had given rise to controversy within the institution. Interestingly, there was a perception in some institutions that the debate to some extent pits “old” researchers against “new”, rather than dividing straightforwardly along disciplinary lines.

Recurring issues about operating a revised format for PhD submissions revolved around the crafting of a coherent line of argument, the need to avoid self-plagiarism, and ensuring appropriate attribution of authorship.

As mentioned above, the debate on these issues forces a reconsideration of the criteria for the PhD award, and of how to operationalize assessment of these criteria, in the absence of a process-driven approach that standardises a specific sequence of experiences the candidate must undergo in order to submit for the award.22

One of the things that a trained researcher should be able to do is to publish, and it would seem appropriate that the assessment for a PhD should address this.

---

21 Any such “prescribed process of formation” tends to vary quite significantly from institution to institution, as well as from discipline to discipline, which makes assuring comparability of doctoral standards problematic. It also mitigates against both the inter-disciplinary agenda, and the propagation of the PhD to “new” areas (nursing and creative arts being relatively recent examples.) A criterion-based approach (albeit with learning outcomes evidenced in discipline-specific ways) seems to be easier to map. See Winter at al. 2000.
Particularly where the normal form of publication is the monograph, the candidate could reasonably prepare a monograph\textsuperscript{23} as part of their training; but, particularly in disciplines where the majority of publications are co-authored, learning how to co-author papers could also be regarded as a legitimate approach to addressing the “ability to publish” learning outcome for a PhD programme\textsuperscript{24}.

A number of institutions identified increasing pressure on students to publish during the course of their PhD. Many institutions stressed the need for their PhD graduates to be able to compete in an increasingly international job market, although concern to ensure that PhD researchers develop a publication record prior to graduation in order to be able to compete effectively seems particularly acute in STEM disciplines.

Many institutions were aware that integrating publications with the submission lowered the incremental cost of preparing the dissertation.

Several institutions commented that if the expectation became that students would spend longer than 3 years doing a PhD, then the proportion publishing prior to submission would increase. A number of institutions also stated that they were moving, or had moved, to a 1+3 approach for the PhD.

A substantial number of institutions indicated that they will be moving towards allowing publications to become integral parts of a submission, or that they expected such an alternative format to become more widely used\textsuperscript{25}. Some anticipated that uptake would vary immensely by discipline across the institution. Others indicated that although they already permitted the integrated format, they expected uptake to continue to be relatively uncommon.

Some institutions were considering addressing the integration issue by opening up their PhD by published work format to everybody, instead of restricting it to members of staff. A major issue seemed to be how to handle the case where examiners wanted changes made prior to the award of PhD: one possibility was to cover this by updating the critical appraisal in the conspectus.

The “prospective publication” route is popular in Scandinavia and Australia\textsuperscript{26}, and is already being offered by some UK institutions: several more are actively considering it.

In contrast to the position with published papers, few institutions (less than 10%) expected their position to be quite or completely different in respect of other artefacts in five years’ time.

\textsuperscript{23} Or at least an embryonic draft of one.
\textsuperscript{24} Even in disciplines where it is not the tradition, co-authorship can be re-framed as a legitimate doctoral pedagogic practice, see Kamler 2008.
\textsuperscript{25} At the moment 76% allow the integrated format (scenario 4); 62% say it is currently used, of which 45% say rarely. However 23% expect their answers to be quite or completely different in five years: 62-45+23 = 40, suggesting 40% as a rough estimate for use “quite often” five years in the future.
\textsuperscript{26} Davies & Rolfe 2009; Jackson 2013; Robins & Kanowski 2008
A small number of institutions indicated that they were thinking of reviewing their assessment process and possibly instigating a formal seminar before the viva; this is a practice which a majority of the respondents already allow.

One explicitly planned to institute seminars across the institution, in line with the practice that they already had for creative works.

Many institutions discovered during the course of filling in the survey that their regulations were more flexible than they had believed, and noted that proposed changes in practice would not actually require changes to their regulations, just to policy and guidance.

Others noted that, in some cases at least, enabling changes to regulations would be required.

Many institutional comments come down to articulating the trade-off between having many sets of specialised regulations, versus a single unified framework: the latter arrangement requires carefully articulated award criteria, but can make it much easier to demonstrate “equivalence of doctorateness” across all doctoral awards.

A number of institutions indicated that they planned to allow greater flexibility, and to move towards having one standard set of regulations for all doctoral degrees, a situation at which some institutions have already arrived.
References


Appendices

Appendix 1  Percentages have been rounded to the nearest integer and consequently do not always sum to 100

Survey Results

What happens currently, and how frequently?

Scenarios: Published Papers

For the following Scenarios, respondents have identified the frequency of how often each event occurs.

Scenario 1; The submission contains no reference to any published papers authored (or co-authored) by the candidate

Scenario 2; The submission references papers published by the candidate, but does not include their text

Scenario 3; The publication texts are included with the submission, but not as an integral part

Scenario 4; Publications form an integral part of the submission, together with a critical overview/conspectus

Scenario 5; The submission consists exclusively of publications

| Frequency | Scenario 1 | | | Scenario 2 | | | Scenario 3 | | | Scenario 4 | | | Scenario 5 | | |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|           | Percent   | Total     | Percent   | Total     | Percent   | Total     | Percent   | Total     | Percent   | Total     | Percent   | Total     | Percent   | Total     |
| Never     | 5%        | 2         | 16%       | 7         | 9%        | 4         | 38%       | 16        | 74%       | 31        |
| Rarely    | 37%       | 16        | 44%       | 19        | 43%       | 18        | 45%       | 19        | 19%       | 8         |
| Quite Often | 39%       | 17        | 33%       | 14        | 38%       | 16        | 12%       | 5         | 5%        | 2         |
| It’s the Norm | 19%       | 8         | 7%        | 3         | 10%       | 4         | 5%        | 2         | 2%        | 1         |
| Answered  | 43        | 42        | 43        | 42        | 42        | 42        | 42        | 42        |
| Skipped   | 7         | 8         | 7         | 8         | 8         | 8         | 8         | 8         |

Attribution of Papers

<table>
<thead>
<tr>
<th>Attribution Required</th>
<th>Yes</th>
<th>It Depends</th>
<th>No</th>
<th>Response Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contains clear attribution of any work submitted which is not entirely that of the candidate</td>
<td>95% (38)</td>
<td>0% (0)</td>
<td>5% (2)</td>
<td>40</td>
</tr>
<tr>
<td>Contains an explicit statement of the candidate’s contribution to each paper, signed by the candidate</td>
<td>64% (23)</td>
<td>0% (0)</td>
<td>36% (13)</td>
<td>36</td>
</tr>
<tr>
<td>Contains an explicit statement of the candidate’s contribution to each paper, endorsed by the co-authors of the papers</td>
<td>22% (7)</td>
<td>12% (4)</td>
<td>66% (21)</td>
<td>32</td>
</tr>
</tbody>
</table>
## Types of Artefact

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Artefact 1 Unpublished papers/preprints</th>
<th>Artefact 2 Confidential or restricted documents</th>
<th>Artefact 3 Creative works (e.g. novel, musical score)</th>
<th>Artefact 4 Definitive texts (e.g. a critical edition)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percent</td>
<td>Total</td>
<td>Percent</td>
<td>Total</td>
</tr>
<tr>
<td>Never</td>
<td>32%</td>
<td>13</td>
<td>15%</td>
<td>6</td>
</tr>
<tr>
<td>Rarely</td>
<td>55%</td>
<td>22</td>
<td>65%</td>
<td>26</td>
</tr>
<tr>
<td>Quite Often</td>
<td>10%</td>
<td>4</td>
<td>17%</td>
<td>7</td>
</tr>
<tr>
<td>It’s the Norm</td>
<td>3%</td>
<td>1</td>
<td>3%</td>
<td>1</td>
</tr>
<tr>
<td>Answered</td>
<td>40</td>
<td>40</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>Skipped</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Artefact 5 Software (e.g. simulation, multimedia, games)</th>
<th>Artefact 6 Hardware (e.g. experimental apparatus/prototype products)</th>
<th>Artefact 7 Art (e.g. paintings/sculptures/photographs)</th>
<th>Artefact 8 Fashion (e.g. garments, textiles, jewellery)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percent</td>
<td>Total</td>
<td>Percent</td>
<td>Total</td>
</tr>
<tr>
<td>Never</td>
<td>23%</td>
<td>9</td>
<td>50%</td>
<td>20</td>
</tr>
<tr>
<td>Rarely</td>
<td>56%</td>
<td>22</td>
<td>44%</td>
<td>17</td>
</tr>
<tr>
<td>Quite Often</td>
<td>18%</td>
<td>7</td>
<td>3%</td>
<td>1</td>
</tr>
<tr>
<td>It’s the Norm</td>
<td>3%</td>
<td>1</td>
<td>3%</td>
<td>1</td>
</tr>
<tr>
<td>Answered</td>
<td>39</td>
<td>39</td>
<td>39</td>
<td>39</td>
</tr>
<tr>
<td>Skipped</td>
<td>11</td>
<td>11</td>
<td>11</td>
<td>11</td>
</tr>
</tbody>
</table>
### Assessment Methodology

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Assessment Methodology 1: Everything is done in the viva</th>
<th>Assessment Methodology 2: The viva is preceded by a formal seminar/performance/exhibition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percent</td>
<td>Total</td>
</tr>
<tr>
<td>Never</td>
<td>11%</td>
<td>4</td>
</tr>
<tr>
<td>Rarely</td>
<td>8%</td>
<td>3</td>
</tr>
<tr>
<td>Quite Often</td>
<td>5%</td>
<td>2</td>
</tr>
<tr>
<td>It’s the Norm</td>
<td>76%</td>
<td>29</td>
</tr>
<tr>
<td>Answered</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>Skipped</td>
<td>12</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Does the audience consist of the same people as attended the viva?</th>
<th>Is attendance at the event at the discretion of the examiners?</th>
<th>Is the event open to members of the department and their guests?</th>
<th>Is the event open to the general public?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent</td>
<td>Total</td>
<td>Percent</td>
<td>Total</td>
</tr>
<tr>
<td>Yes</td>
<td>50%</td>
<td>13</td>
<td>33%</td>
</tr>
<tr>
<td>Sometimes</td>
<td>38%</td>
<td>10</td>
<td>22%</td>
</tr>
<tr>
<td>No</td>
<td>12%</td>
<td>3</td>
<td>45%</td>
</tr>
<tr>
<td>Answered</td>
<td>26</td>
<td></td>
<td>27</td>
</tr>
<tr>
<td>Skipped</td>
<td>24</td>
<td></td>
<td>23</td>
</tr>
</tbody>
</table>

### Pre-registration

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Scenario 1; All papers or other artefacts developed while registered</th>
<th>Scenario 2; Includes prior work with formal Accreditation of Prior Learning (APL)</th>
<th>Scenario 3; Includes prior work with no formal Accreditation of Prior Learning (APL)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percent</td>
<td>Total</td>
<td>Percent</td>
</tr>
<tr>
<td>Never</td>
<td>3%</td>
<td>1</td>
<td>68%</td>
</tr>
<tr>
<td>Rarely</td>
<td>11%</td>
<td>4</td>
<td>27%</td>
</tr>
<tr>
<td>Quite Often</td>
<td>5%</td>
<td>2</td>
<td>0%</td>
</tr>
<tr>
<td>It’s the Norm</td>
<td>81%</td>
<td>30</td>
<td>5%</td>
</tr>
<tr>
<td>Answered</td>
<td>37</td>
<td></td>
<td>37</td>
</tr>
<tr>
<td>Skipped</td>
<td>13</td>
<td></td>
<td>13</td>
</tr>
</tbody>
</table>
Relation to other Doctoral Regulations

<table>
<thead>
<tr>
<th>Does your institution offer separate regulations for a PhD by published work?</th>
<th>Percent</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No, we do not offer a PhD by published work</td>
<td>17%</td>
<td>7</td>
</tr>
<tr>
<td>Yes, separate regulations from the “ordinary” PhD</td>
<td>59%</td>
<td>24</td>
</tr>
<tr>
<td>Yes but it doesn’t have separate regulations: it’s just one form of submission for the “conventional” PhD</td>
<td>24%</td>
<td>10</td>
</tr>
<tr>
<td>Answered</td>
<td></td>
<td>41</td>
</tr>
<tr>
<td>Skipped</td>
<td></td>
<td>9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Does your institution offer separate regulations for a &quot;new route&quot; PhD?</th>
<th>Percent</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No, we do not offer a &quot;new route&quot; PhD</td>
<td>69%</td>
<td>24</td>
</tr>
<tr>
<td>Yes, separate regulations from the “ordinary” PhD</td>
<td>31%</td>
<td>11</td>
</tr>
<tr>
<td>Yes but they don’t have separate regulations: it’s just a special case of the “conventional” PhD</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>Answered</td>
<td></td>
<td>35</td>
</tr>
<tr>
<td>Skipped</td>
<td></td>
<td>15</td>
</tr>
</tbody>
</table>
What Level of permission is required and does practice vary across the institution?

Scenarios: Published Papers

For the following Scenarios, respondents have identified the frequency of how often each event occurs.

Scenario 1; The submission contains no reference to any published papers authored (or co-authored) by the candidate

Scenario 2; The submission references papers published by the candidate, but does not include their text

Scenario 3; The publication texts are included with the submission, but not as an integral part

Scenario 4; Publications form an integral part of the submission, together with a critical overview/conspectus

Scenario 5; The submission consists exclusively of publications

<table>
<thead>
<tr>
<th>Practice Is</th>
<th>Scenario 1</th>
<th>Scenario 2</th>
<th>Scenario 3</th>
<th>Scenario 4</th>
<th>Scenario 5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percent</td>
<td>Total</td>
<td>Percent</td>
<td>Total</td>
<td>Percent</td>
</tr>
<tr>
<td>Forbidden by regulations</td>
<td>0%</td>
<td>0</td>
<td>14%</td>
<td>6</td>
<td>5%</td>
</tr>
<tr>
<td>Requires specific permission</td>
<td>5%</td>
<td>2</td>
<td>7%</td>
<td>3</td>
<td>2%</td>
</tr>
<tr>
<td>Must notify prior to submission</td>
<td>7%</td>
<td>3</td>
<td>7%</td>
<td>3</td>
<td>15%</td>
</tr>
<tr>
<td>No prior notification is needed</td>
<td>88%</td>
<td>38</td>
<td>72%</td>
<td>30</td>
<td>78%</td>
</tr>
<tr>
<td>Answered</td>
<td>43</td>
<td>42</td>
<td>40</td>
<td>41</td>
<td>41</td>
</tr>
<tr>
<td>Skipped</td>
<td>7</td>
<td>8</td>
<td>10</td>
<td>9</td>
<td>9</td>
</tr>
</tbody>
</table>
### Types of Artefact

<table>
<thead>
<tr>
<th>Practice Is</th>
<th>Artefact 1 Unpublished papers/preprints</th>
<th>Artefact 2 Confidential or restricted documents</th>
<th>Artefact 3 Creative works (e.g. novel, musical score)</th>
<th>Artefact 4 Definitive texts (e.g. a critical edition)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forbidden by regulations</td>
<td>25%</td>
<td>8%</td>
<td>5%</td>
<td>14%</td>
</tr>
<tr>
<td>Requires specific permission</td>
<td>18%</td>
<td>61%</td>
<td>23%</td>
<td>34%</td>
</tr>
<tr>
<td>Must notify prior to submission</td>
<td>2%</td>
<td>13%</td>
<td>30%</td>
<td>12%</td>
</tr>
<tr>
<td>No prior notification is needed</td>
<td>55%</td>
<td>18%</td>
<td>42%</td>
<td>40%</td>
</tr>
<tr>
<td>Answered</td>
<td>40%</td>
<td>39%</td>
<td>40%</td>
<td>35%</td>
</tr>
<tr>
<td>Skipped</td>
<td>10%</td>
<td>11%</td>
<td>10%</td>
<td>15%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Practice Is</th>
<th>Artefact 5 Software (e.g. simulation, multimedia, games)</th>
<th>Artefact 6 Hardware (e.g. experimental apparatus/prototype products)</th>
<th>Artefact 7 Art (e.g. paintings/sculptures/photographs)</th>
<th>Artefact 8 Fashion (e.g. garments, textiles, jewellery)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forbidden by regulations</td>
<td>5%</td>
<td>24%</td>
<td>11%</td>
<td>19%</td>
</tr>
<tr>
<td>Requires specific permission</td>
<td>28%</td>
<td>24%</td>
<td>34%</td>
<td>25%</td>
</tr>
<tr>
<td>Must notify prior to submission</td>
<td>18%</td>
<td>15%</td>
<td>21%</td>
<td>19%</td>
</tr>
<tr>
<td>No prior notification is needed</td>
<td>49%</td>
<td>37%</td>
<td>34%</td>
<td>37%</td>
</tr>
<tr>
<td>Answered</td>
<td>39%</td>
<td>33%</td>
<td>38%</td>
<td>32%</td>
</tr>
<tr>
<td>Skipped</td>
<td>11%</td>
<td>17%</td>
<td>12%</td>
<td>18%</td>
</tr>
</tbody>
</table>
### Assessment Methodology

| Practice Is | Assessment Methodology 1: Everything is done in the viva | Assessment Methodology 2: The viva is preceded by a formal seminar/performance/exhibition |
|-------------|----------------------------------------------------------|==================================================================================|
|             | Percent | Total | Percent | Total |
| Forbidden by regulations | 8% | 3 | 11% | 4 |
| Requires specific permission | 8% | 3 | 35% | 13 |
| Must notify prior to submission | 5% | 2 | 19% | 7 |
| No prior notification is needed | 79% | 29 | 35% | 13 |
| Answered | 37 | | 37 | |
| Skipped | 13 | | 13 | |

### Pre-registration

<table>
<thead>
<tr>
<th>Practice Is</th>
<th>Pre-registration Scenario 1; All papers or other artefacts</th>
<th>Pre-registration Scenario 2; Accreditation of Prior Learning (APL)</th>
<th>Pre-registration Scenario 3; No Accreditation of Prior Learning (APL)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percent</td>
<td>Total</td>
<td>Percent</td>
</tr>
<tr>
<td>Forbidden by regulations</td>
<td>3%</td>
<td>1</td>
<td>60%</td>
</tr>
<tr>
<td>Requires specific permission</td>
<td>11%</td>
<td>4</td>
<td>35%</td>
</tr>
<tr>
<td>Must notify prior to submission</td>
<td>9%</td>
<td>3</td>
<td>0%</td>
</tr>
<tr>
<td>No prior notification is needed</td>
<td>77%</td>
<td>27</td>
<td>5%</td>
</tr>
<tr>
<td>Answered</td>
<td>35</td>
<td></td>
<td>37</td>
</tr>
<tr>
<td>Skipped</td>
<td>15</td>
<td></td>
<td>13</td>
</tr>
</tbody>
</table>
Looking into the future, do you think your answers will be different in 5 years time?

**Scenarios: Published Papers**

<table>
<thead>
<tr>
<th>In 5 years answers will be</th>
<th>Scenario 1</th>
<th>Scenario 2</th>
<th>Scenario 3</th>
<th>Scenario 4</th>
<th>Scenario 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent</td>
<td>Total</td>
<td>Percent</td>
<td>Total</td>
<td>Percent</td>
<td>Total</td>
</tr>
<tr>
<td>Exactly the same</td>
<td>35%</td>
<td>15</td>
<td>34%</td>
<td>14</td>
<td>32%</td>
</tr>
<tr>
<td>Mostly the same</td>
<td>58%</td>
<td>25</td>
<td>54%</td>
<td>22</td>
<td>55%</td>
</tr>
<tr>
<td>Quite different</td>
<td>2%</td>
<td>1</td>
<td>10%</td>
<td>4</td>
<td>13%</td>
</tr>
<tr>
<td>Completely different</td>
<td>5%</td>
<td>2</td>
<td>2%</td>
<td>1</td>
<td>0%</td>
</tr>
<tr>
<td>Answered</td>
<td>43</td>
<td>41</td>
<td>40</td>
<td>40</td>
<td>39</td>
</tr>
<tr>
<td>Skipped</td>
<td>7</td>
<td>9</td>
<td>10</td>
<td>10</td>
<td>11</td>
</tr>
</tbody>
</table>
### Types of Artefact

<table>
<thead>
<tr>
<th>In 5 years answers will be</th>
<th>Artefact 1 Unpublished papers/preprints</th>
<th>Artefact 2 Confidential or restricted documents</th>
<th>Artefact 3 Creative works (e.g. novel, musical score)</th>
<th>Artefact 4 Definitive texts (e.g. a critical edition)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percent</td>
<td>Total</td>
<td>Percent</td>
<td>Total</td>
</tr>
<tr>
<td>Exactly the same</td>
<td>34%</td>
<td>14</td>
<td>36%</td>
<td>14</td>
</tr>
<tr>
<td>Mostly the same</td>
<td>59%</td>
<td>24</td>
<td>56%</td>
<td>22</td>
</tr>
<tr>
<td>Quite different</td>
<td>7%</td>
<td>3</td>
<td>5%</td>
<td>2</td>
</tr>
<tr>
<td>Completely different</td>
<td>0%</td>
<td>0</td>
<td>3%</td>
<td>1</td>
</tr>
<tr>
<td>Answered</td>
<td>41%</td>
<td>39</td>
<td>39%</td>
<td>39</td>
</tr>
<tr>
<td>Skipped</td>
<td>9%</td>
<td>11</td>
<td>11%</td>
<td>11</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>In 5 years answers will be</th>
<th>Artefact 5 Software (e.g. simulation, multimedia, games)</th>
<th>Artefact 6 Hardware (e.g. experimental apparatus/prototype products)</th>
<th>Artefact 7 Art (e.g. paintings/sculptures/photographs)</th>
<th>Artefact 8 Fashion (e.g. garments, textiles, jewellery)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percent</td>
<td>Total</td>
<td>Percent</td>
<td>Total</td>
</tr>
<tr>
<td>Exactly the same</td>
<td>32%</td>
<td>12</td>
<td>36%</td>
<td>13</td>
</tr>
<tr>
<td>Mostly the same</td>
<td>60%</td>
<td>23</td>
<td>61%</td>
<td>22</td>
</tr>
<tr>
<td>Quite different</td>
<td>8%</td>
<td>3</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>Completely different</td>
<td>0%</td>
<td>0</td>
<td>3%</td>
<td>1</td>
</tr>
<tr>
<td>Answered</td>
<td>38%</td>
<td>36</td>
<td>38%</td>
<td>36</td>
</tr>
<tr>
<td>Skipped</td>
<td>12%</td>
<td>14</td>
<td>12%</td>
<td>14</td>
</tr>
</tbody>
</table>
Assessment Methodology

<table>
<thead>
<tr>
<th>In 5 years answers will be</th>
<th>Assessment Methodology 1: Everything is done in the viva</th>
<th>Assessment Methodology 2: The viva is preceded by a formal seminar/performance/exhibition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percent</td>
<td>Total</td>
</tr>
<tr>
<td>Exactly the same</td>
<td>50%</td>
<td>16</td>
</tr>
<tr>
<td>Mostly the same</td>
<td>47%</td>
<td>15</td>
</tr>
<tr>
<td>Quite different</td>
<td>3%</td>
<td>1</td>
</tr>
<tr>
<td>Completely different</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>Answered</td>
<td></td>
<td>32</td>
</tr>
<tr>
<td>Skipped</td>
<td></td>
<td>18</td>
</tr>
</tbody>
</table>

Pre-registration

<table>
<thead>
<tr>
<th>In 5 years answers will be</th>
<th>Pre-registration Scenario 1; All papers or other artefacts</th>
<th>Pre-registration Scenario 2; Accreditation of Prior Learning (APL)</th>
<th>Pre-registration Scenario 3; No Accreditation of Prior Learning (APL)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percent</td>
<td>Total</td>
<td>Percent</td>
</tr>
<tr>
<td>Exactly the same</td>
<td>50%</td>
<td>15</td>
<td>45%</td>
</tr>
<tr>
<td>Mostly the same</td>
<td>50%</td>
<td>15</td>
<td>52%</td>
</tr>
<tr>
<td>Quite different</td>
<td>0%</td>
<td>0</td>
<td>3%</td>
</tr>
<tr>
<td>Completely different</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Answered</td>
<td></td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Skipped</td>
<td></td>
<td>20</td>
<td></td>
</tr>
</tbody>
</table>
Key Narrative Comments

Change in the next 5 years:

Probably quite different, hard to speculate.

Position is to continue to include flexibility in the types of PhD thesis and examination possible, written into our standard one set of doctoral regulations. We are currently looking at our quality assurance monitoring and guidelines to ensure original contribution of the student in non-standard submitted research is stated as part of the thesis and is verified.

As noted earlier, we will be review PhD and publications, so there may be an expansion of the current regulations regarding submission.

We shall probably have Professional Doctorates and would like to consider a Publications route for students, though this type of submission is currently not REF returnable so this may be a deterrent.²⁷

There may be some increase in the number of students undertaking professional doctorates. The frequency of PhD by published works is less than 1 per year and is more likely to decrease than increase.

We are moving to this, limited only by funding constraints. Where we can obtain 3.5 or 4 funded years...

I think we will see increasing numbers of different kinds of doctorates, and hence different kinds of doctoral submissions - the PGR Regulations will have to keep up!

We are likely to be moving to a position where including publications within the thesis will be the norm. Our current regulations for PhD by publication makes this route unavailable to full time students in certain disciplines (natural sciences, for example). We support funded (RCUK) 1+3 PhD programmes and will continue to do so. We intend to look at our MRes portfolio with a view to encouraging the 1+3 approach.

We hope to be able to accommodate more 'new route' PhD students.

There will be a small shift towards prof docs in the social sciences but not in lab based subjects.

There is no demand for the [traditional] PhD by publication route except in those disciplines where a PhD was (previously) not the norm for professional practice (Education, Law, Social Work, Nursing) and even here the numbers are small and reducing.

Same as presently, but maybe with more clarification around inclusion of published work in the main thesis. Open access developments may have a bearing on thesis rules and regulations.

Professional Doctorates may change to meet professional expectations but the structure is quite stable with expectations of original research in the thesis component.

---

²⁷ Output could be REF-returnable if co-authored with a supervisor.
We have discussed the PhD by published work and have rejected it each time believing that it does not train doctoral graduates to see the full research process through for their original ideas and also for a number of practical concerns. Our regulations allow us to offer a programme like the new route PhD without separate regulations.

There will be more professional doctorates x 4.

Similar, except for the Integrated/New Route, this route will possibly not exist.

I think that we will have 1). Achieved our own RDAP, 2). Will have Prof Docs, 3). a more sophisticated approach to PhD by Publication that includes reference to artistic/creative works 4). A robust process for APL.

Probably same as above. Probably more Prof Doc courses in existence.
Appendix 2  List of UKCGE Member Institutions
(as of January 2015)

Full Members

University of Aberdeen  Durham University
Aberystwyth University  University of East Anglia
Al Maktoum College of Higher Education  University of East London
Anglia Ruskin University  Edge Hill University
University of the Arts, London  Edinburgh Napier University
Arts University Bournemouth  University of Edinburgh
Aston University  University of Essex
Bangor University  University of Exeter
Bath Spa University  University of Falmouth
University of Bedfordshire  Glasgow Caledonian University
Birmingham City University  The Glasgow School of Art
University of Birmingham  University of Glasgow
Bishop Grosseteste University  University of Gloucester
University of Bolton  Glyndŵr University
Bournemouth University  University of Greenwich
University of Bradford  Harper Adams University
University of Brighton  University of Hertfordshire
University of Bristol  University of Huddersfield
Brunel University  University of Hull
Buckinghamshire New University  Imperial College London
Canterbury Christ Church University  Institute of Cancer Research
Cardiff Metropolitan University  Institute of Education
Cardiff University  University of Kent
University of Central Lancashire  Keele University
City University London  King's College London
University of Chester  Kingston University
University of Chichester  Lancaster University
Cranfield University  Leeds Beckett University
University of Cumbria  University of Leeds
De Montfort University  Leeds Trinity University
University of Derby  University of Leicester
University of Dundee  University of Limerick
University of Lincoln
Liverpool John Moores University
Liverpool School of Tropical Medicine
University of Liverpool
London School of Hygiene and Tropical Medicine
London South Bank University
Loughborough University
Manchester Metropolitan University
University of Manchester
Middlesex University
National Institute for Medical Research
University of Newcastle
The University of Northampton
Northumbria University
Nottingham Trent University
University of Nottingham
The Open University
University of Oxford
University College Plymouth St Mark and St John
Plymouth University
University of Portsmouth
Queen’s University Belfast
Ravensbourne College
Robert Gordon University
University of Reading
Roehampton University
Royal College of Art
Royal Holloway, University of London
The Royal Veterinary College
St George’s, University of London
University of Salford
Scottish Marine Institute (incorporating UHI)

Scotland’s Rural College
University of Sheffield
Sheffield Hallam University
University of South Wales
University of Southamptop
Southampton Solent University
University of St Andrews
Staffordshire University
University of St Mark and St John
University of Stirling
University of Strathclyde
University of Sunderland
University of Surrey
University of Sussex
Swansea University
Teesside University
UHI Millennium Institute
University Campus Suffolk
University College London
University for the Creative Arts
University of Wales, Trinity Saint David
University of Warwick
University of the West of England
University of West London
University of the West of Scotland
University of Westminster
University of Winchester
University of Worcester
York St John University
University of York
University of Ulster at Jordanstown
Associate Members

Auckland University of Technology          Markfield Institute of Higher Education
Biochemical Society                       Monash University
The British Library                        National Union of Students
British Sociological Association          RMIT University, Australia
British School of Osteopathy              Royal College of Surgeons in Ireland
Canadian Association for Graduate Studies Royal Conservatoire Scotland
Cork Institute of Technology               Royal Society of Chemistry
Dublin Institute of Technology             School of Advanced Study, University of London
Hibernia College                          Scottish Agricultural College
Higher Education Academy                   University of Texas at Dallas
The Islamic College                       University College Dublin
University of Macau                       University of the West Indies
# Appendix 3  UK Council for Graduate Education

## Published titles

<table>
<thead>
<tr>
<th>ISBN</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-9525751-0-8</td>
<td>Graduate Schools (1995)</td>
</tr>
<tr>
<td>0-952-5751-1-6</td>
<td>The Award of the Degree of PhD on the Basis of Published Work in the UK (1996)</td>
</tr>
<tr>
<td>0-9525751-9-1</td>
<td>Quality and Standards of Postgraduate Research Degrees (1996)</td>
</tr>
<tr>
<td>0-9525751-2-4</td>
<td>Practice-Based Doctorates in the Creative and Performing Arts and Design (1997)</td>
</tr>
<tr>
<td>0-952-5751-3-2</td>
<td>The status of published work in submissions for doctoral degrees in European Universities (1998)</td>
</tr>
<tr>
<td>0-952-5751-4-0</td>
<td>Preparing Postgraduates to Teach in Higher Education (1999)</td>
</tr>
<tr>
<td>0-952-5751-5-9</td>
<td>The International Postgraduate: Challenges to British Higher Education (1999)</td>
</tr>
<tr>
<td>0-952-5751-6-7</td>
<td>Research Training for Humanities Postgraduate Students (2000)</td>
</tr>
<tr>
<td>0-9525751-7-5</td>
<td>Research Training in the Creative and Performing Arts and Design (2001)</td>
</tr>
<tr>
<td>0-952-5751-8-3</td>
<td>Professional Doctorates (2002)</td>
</tr>
<tr>
<td>0-9543915-2-7</td>
<td>The Award of PhD by Published Work in the UK (2004)</td>
</tr>
<tr>
<td>0-9543915-3-5</td>
<td>Confidentiality of PhD Theses in the UK (2005)</td>
</tr>
<tr>
<td>0-9543915-4-3</td>
<td>Professional Doctorate Awards in the UK (2005)</td>
</tr>
<tr>
<td>0-9543915-5-3</td>
<td>Access to Doctoral Examiners’ Reports (2007)</td>
</tr>
<tr>
<td>0-9543915-6-0</td>
<td>Higher Doctorate Awards in the UK (2008)</td>
</tr>
<tr>
<td>0-9543915-7-7</td>
<td>Quality and Standards of Postgraduate Research Degrees (2009)</td>
</tr>
<tr>
<td>0-9543915-9-1</td>
<td>Preparing to Teach in Higher Education (2010)</td>
</tr>
<tr>
<td>0-9543915-8-4</td>
<td>A Review of Graduate Schools in the UK (2010)</td>
</tr>
<tr>
<td>0-9563812-1-7</td>
<td>Professional Doctorate Awards in the UK (2010)</td>
</tr>
<tr>
<td>0-9563812-2-4</td>
<td>Confidentiality of PhD Theses in the UK (2010)</td>
</tr>
<tr>
<td>0-9525751-8-3</td>
<td>Professional Doctorates in the UK (2011)</td>
</tr>
<tr>
<td>0-9563812-3-1</td>
<td>Electronic Doctoral Theses in the UK (2012)</td>
</tr>
<tr>
<td>0-9563812-7-9</td>
<td>Higher Doctorates in the UK (2013)</td>
</tr>
</tbody>
</table>