# Improving standards in postgraduate research degree programmes

**A report to the Higher Education Funding Councils of England, Scotland and Wales**

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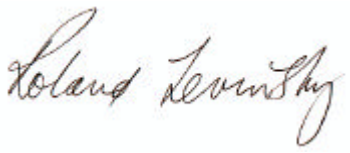
## Foreword

As Chairman of the Joint Funding Councils' Steering Group on postgraduate education it gives me great pleasure to introduce this report. When I became Head of the Graduate School at University College London I undertook a confidential web-based survey of all the PhD students, to establish whether there was variability in supervisory practices. I was amazed at how wide that variability was, even within single departments. It was also apparent that few of the students intended to pursue academic careers, and that the extremely narrow focus of their research subject left them, at completion, with few of the skills necessary to enter the job market. The improvements which we have made subsequently have done much to improve the quality of training. They included adopting a standard code of practice which is a de facto agreement between student and university; developing a series of generic skills courses; and adopting a student-held log which records research supervisions, agreed action plans and courses attended.

In setting up the committee and reviewing the evidence put to it by the consultants, it was clear that just as I had found variability in my university, similar variability existed across the country. There are many examples of good practice, and these we have collected together to draw up a framework of standards for research degree programmes. In the framework we identified threshold standards which we believe are attainable by all universities within a very short time. I believe we should set ourselves the goal to achieve higher standards of supervision within five years. After all, the desired outcome is better trained and qualified students who enter the economy able to tackle the problems of the next generation, and no university could argue against that.

It has been a privilege working with the committee and with Janet Metcalfe and her team of consultants. I urge you to read the report carefully and to reflect whether your institution meets these standards. We look forward to hearing your comments.



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## Improving standards in postgraduate research degree programmes

Report to the higher education funding councils for England, Scotland and Wales

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## 1. Executive summary

This report covers phase one of a three-stage project commissioned by the Higher Education Funding Councils of England, Scotland and Wales (HEFCE, SHEFC, HEFCW) to determine the role of threshold standards and conditional funding in improving standards in research degree programmes (RDPs). The aim of this report is to review good practice and identify indicators that could form the basis of threshold standards. Phases two and three of the project will develop these threshold standards, systems for assessment and monitoring, and the funding models needed to support such a system – and so deliver an improvement in the standards of RDPs throughout the UK.

Improving the quality of RDPs is high on the agenda for most, if not all, institutions. Implementation of the recommendations of the recent review of research, the Research Councils' drive to improve completion rates for research degrees, and institutional recognition of the need to provide a broader range of training to suit individual needs have seen the quality of RDPs improve over the last few years.

We present a framework of standards for RDPs (Annex D) that builds upon existing good practice identified through survey, institutional visits, workshops, and interviews with research funders and other stakeholders. Within this framework we identify a series of indicators that can be developed into threshold standards for funding and quality assurance.

The framework covers the breadth of research training, including the research environment, selection, induction, progress and examination of students, supervisory arrangements and skills development, together with institutional arrangements for quality assurance, procedures and regulations. We have concerned ourselves with identifying standards that relate directly to the academic provision of RDPs, how these relate to the responsibilities of supervisors and students, and necessary requirements for good institutional administrative procedures.

We believe that the framework will provide a mechanism to improve RDP provision by encouraging consistency of practice across the sector particularly with respect to:

- ensuring students are exposed to an appropriate research environment that includes adequate facilities and training programmes, and access to a sufficient body of active researchers and fellow students
- improving students' understanding of their responsibilities and those of their institution for the RDP, such that students are informed, empowered and take ownership for their research programme and personal development
- increasing the quality of the student/supervisor relationship through the use of supervisory teams, and more transparency brought about by regular independent scrutiny
- the operation of institutional quality assurance processes.

Our principal recommendation is that the Funding Councils adopt the framework and define threshold standards as the basis for conditional funding for RDPs (Recommendation 1). Institutions should be encouraged to build upon existing good practice and to take responsibility for assessing and monitoring achievement of these standards. In order to support institutions, we also make the following recommendations.

- The Funding Councils should:
  - consider developing specific initiatives to support emerging disciplines (Recommendation 5)
  - agree a co-ordinated approach to the definition of threshold standards, implementation mechanisms and funding implications (Recommendation 6).

- The Funding Councils should jointly continue to work with the Research Councils/Arts and Humanities Research Board (AHRB) and other major stakeholders to agree and adopt:
  - common threshold standards as a condition of postgraduate funding (Recommendation 4)
  - a common set of outputs and monitoring systems for RDPs (Recommendation 9).

- When implementing the framework, the Funding Councils should consider:
  - giving institutions responsibility for assessing and providing evidence of the achievement of standards and quality of RDPs (Recommendation 2)
  - adopting an external monitoring system that monitors the quality assurance processes of institutions (Recommendation 3)
  - revising the funding and allocation mechanisms to more directly reflect the cost of postgraduate training (Recommendation 7)
  - the funding implications of supporting the development of collaborative arrangements or bridging mechanisms (Recommendation 8).

It was apparent from our visits to institutions, contributions to the workshops and interviews that there is a high level of commitment from institutions and other stakeholders to continue to improve standards of RDPs. The Funding Councils have an opportunity to make a significant contribution to supporting this process by adopting the framework and revising funding mechanisms to provide positive incentives to institutions.

## 2. Introduction

In this report we present phase one of a three-phase project to determine the role of threshold standards and conditional funding in improving standards in research degree programmes (RDPs). We describe the background to the project, the aims, and the methodology adopted for identifying good practice and possible threshold standards for RDPs. We report on current practice within the sector, present a framework of standards, make recommendations on its implementation and take a forward look at the implications for phases two and three of this project.

The principal output from this phase is a framework of standards for assuring the quality of provision of RDPs. At this stage of the project we do not recommend threshold levels for the standards or how funding should be linked to the achievement of the standards. We do include indicative values[1] for each standard, to encourage institutions to use the framework to consider their RDP provision and to form a platform for further discussion across the sector. We also recommend how the framework of standards could be implemented in a way that supports institutions in improving practice.

Throughout this report we make reference to 'units' of research within an institution. In this context units should be taken to be institutionally defined cognate areas of research, which may be faculties, schools, departments, specific groups or areas of research. The word 'unit' should not be assumed to define Research Assessment Exercise (RAE) units of assessment, unless that is seen as an appropriate definition for a particular institution.

Within the report we concern ourselves only with the activities unique to RDPs. We have assumed that institutions subject their RDPs to the same requirements and scrutiny as undergraduate programmes, with respect to legal obligations and government initiatives such as ensuring equal opportunities and access.

Recommendations are noted as they arise from report findings and are summarised in Section 1. As the terminology for RDPs differs across the sector, a glossary of the intended meanings of terms used in this report and the framework is included as Annex A.

[1] For ease of presentation, particularly within the framework standards, we refer only to indicative timescales for full-time degrees. We have assumed that equivalent threshold timescales will need to be identified for part-time degrees.

## 3. Background

In concert with the increase in undergraduate and postgraduate taught provision, there has been a considerable expansion in doctoral provision. Between 1996 (10,800) and 2000 (13,670) there was a 27% increase in the number of doctorates awarded by UK institutions.[2] The percentile distribution across the sector is very skewed. Of 129 institutions awarding at least one doctorate in 2000, 25% of doctorates were awarded by just five institutions, while 97 institutions accounted for another 25%.

Alongside the increase in numbers, over the last decade there has been an increase in the diversity of structure and provision across disciplines and doctoral programmes. This includes the provision of professional doctorates, new route PhDs, practice-based programmes in creative arts and design, and PhDs by publication. Some of the highest growth rates in doctoral provision between 1996 and 2000 are from the emerging disciplines, such as creative arts and design (138%), librarianship and information science (78%), and education (81%), that do not have a tradition of PhD training to build upon.

The sector has recognised that these trends have increased the need for institutions to assure the quality of their training programmes and the consistency of the doctoral qualification. Considerable attention has been paid to improving RDP provision both by individual institutions and by encouraging dialogue and debate across the sector.

This project originated from the recent fundamental reviews of the policies and methods for the funding and support of research instigated by the HEFCE, SHEFC and HEFCW. They all made significant recommendations concerning research degree provision.

In England, the fundamental review of research policy[3] made several recommendations related to postgraduate research training:

- research training should be the subject of a separate, but linked, assessment process to the RAE, and funding should be calculated and identified separately from the funding provided for research
- the HEFCE, together with the Research Councils and other stakeholders, should develop minimum requirements which departments would need to satisfy in order to be eligible for funding for postgraduate research student training
- collaborative arrangements should be established to enable units to meet all aspects of the postgraduate research training requirements, where they might not be able to do so alone.

In the subsequent consultation process[4] most respondents supported the separation of funding for research training from funding for research, and supported the development of minimum standards.

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[2] Millichope, R. HESA, *Doctorates awarded from United Kingdom higher education institutions*, Statistics Focus, Vol 3, Issue 2

[3] HEFCE 00/37 'Fundamental review of research'

There was a general feeling that the quality of the research training environment was not simply a function of department size or RAE rating.

In Scotland the review 'Research and the Knowledge Age' and subsequent consultations[5] shared the view that much still needed to be done to improve the quality of research training. They concluded that there may be merit in strengthening the training of postgraduate research students by establishing national criteria for the standards of training and supervision, including for the facilities and environment in which students undertake their research.

In the Welsh 'Review of Research',[6] research training was recognised as one of the most important functions of the research base, and trained researchers arguably as its most significant output. There was strong support for recognising the centrality of postgraduate research (PGR) students to the wider research environment by merging existing channels of funding. The HEFCW affirmed its intention to join discussions at UK level on the development of minimum requirements that will need to be satisfied in order to be eligible for PGR funding.

Across the sector there was apprehension about the potential for generating additional administrative burdens by separating out research training, but also a recognition of the potential to reduce burdens by co-ordinating existing quality assurance procedures with the Research Councils and the Quality Assurance Agency (QAA).

## 4. Project aims

Following the consultation, the Funding Councils announced their intention, in partnership with Research Councils and other bodies, to consider in more detail the characteristics of good practice in PhD provision, with a view to determining the role threshold standards and conditional funding could play in driving improvement throughout the UK HE sector.

A three-phase project was commissioned:

- Phase 1 – a review of good practice in HEIs and the requirements of research funders, and identification of indicators that might form the basis of threshold standards
- Phase 2 – developing, in consultation with all interested stakeholders, these indicators into threshold standards and determining how such standards might be deployed
- Phase 3 – assessing the costs of implementing such a system and possible funding models to support it.

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[4] HEFCE 01/17 'Review of research: report on consultation'

[5] www.shefc.ac.uk/content/shefc/research/ResearchReview/research.htm

[6] HEFCW W00/8HE 'Review of Research Policy' and subsequent consultations, W00/76HE, W01/76HE

A steering group drawn from the sector (Annex B) was set up to advise the chief executives of the HEFCE, HEFCW and SHEFC on the practical means of implementing the reviews' recommendations. It was asked to advise upon the feasibility of any proposals with reference to the following objectives:

- delivering improvement in provision
- compatibility with the sustainability of the research base
- providing information for potential students
- providing sufficient flexibility to allow HEIs to innovate
- minimising administrative burden.

Increasingly, the academic sector is competing in a global market for students and funding. RDPs are becoming more diverse in both substance and length. The range of research degrees, together with part-time and full-time modes of study, is increasing student choice, whilst making it increasingly difficult to define the PhD degree. Furthermore, every research degree is a unique experience dependent on the relationship between student and supervisor/team. By the very nature of these inter-relationships it is extremely difficult to ensure consistency of quality for all postgraduates, even within an institution.

Our aim is to improve standards so as to ensure consistency across the range of RDPs. In doing so we do not wish to remove from institutions the possibility of flexible and innovative approaches to research degree study. The aim is to encourage institutions and units to improve the quality of their RDP provision and the monitoring thereof, not to inhibit them from providing research training.

We also wish to ensure that students and supervisory teams are aware of their relative responsibilities within the RDP, and particularly that students have a clear understanding of the expectations of the RDP. These include the institutional requirements, the challenges they are likely to face, the facilities and resources available to them, the opportunities for broadening knowledge and training, and where guidance can be sought.

Students often readily admit that they failed to appreciate the implications of undertaking an RDP. The aim is to encourage the development of research training environments where students are informed, empowered and take ownership of their research programme.

## 5. Methodology

This report presents the outputs from phase one of the project, which was to review the current provision and quality assurance systems for RDPs, identify examples of good practice, and to produce a series of indicators that might form the basis of threshold standards.

Further stages of the project will involve the development of these indicators into threshold standards, in consultation with all interested stakeholders; consideration of how such standards might be deployed and achievement monitored; and possible funding models.

To understand the current provision of RDPs, the existing quality assurance, monitoring and regulatory systems, and to identify examples of good practice, we collated baseline data through survey and undertook interviews, visits and workshops with the academic community, major funders of research students and other stakeholders.

We supported this with a review of the QAA continuation audits reports with respect to RDPs, and a web-based search of current literature and selected overseas institutions.

The basis of the framework of standards emerged from practice observed in the sector. We found many examples of good practice at both institutional and unit level across the breadth of the framework. It was developed and refined through two workshops attended by representatives from the sector and other interested parties, and through contributions from the project steering group.

The high level of commitment to providing quality RDPs was clear from our visits to institutions and from the workshops. The discussions and contributions to the development of the framework were searching and insightful. There was a high level of agreement about the desire to improve standards and a surprising consistency in the identification of standards.

Annex C gives a more detailed description of the methodology.

## 6. Sector position

It is clear from our visits to institutions and from the responses to the survey that improving the quality of RDPs is on the agenda for most, if not all, institutions. Implementation of recommendations from the Funding Councils' reviews of research and related reports, and the Research Councils' drive to improve completion rates for research degrees have seen standards improve significantly across the sector in the last decade. Increasingly, institutions are aware of the need to provide a broader range of training to suit individual needs and of institutional responsibilities to postgraduate research students.

### 6.1 Baseline of current practice

We were asked to identify a baseline of current practice for RDPs. This was conducted through a two-part survey looking at institutional structures to assure the provision of RDPs (part A) and operational practice (part B). The key findings of the survey are highlighted below and mapped against the framework of standards.

Additionally, we visited nine institutions to better understand the process of RDP delivery and to identify examples of good practice, gain the views of academic and administrative staff and students, and indirectly to validate the survey results.

### 6.2 Institutional practice

Overall we found that the majority, if not all, institutions have comprehensive regulations and procedures for the recruitment of students, examination of the PhD, and appeals and complaints mechanisms for RDPs. Many institutions, particularly those with an overarching management

structure for RDPs, also specify institutional requirements for the research environment, supervisory arrangements, review of progress and skills development.

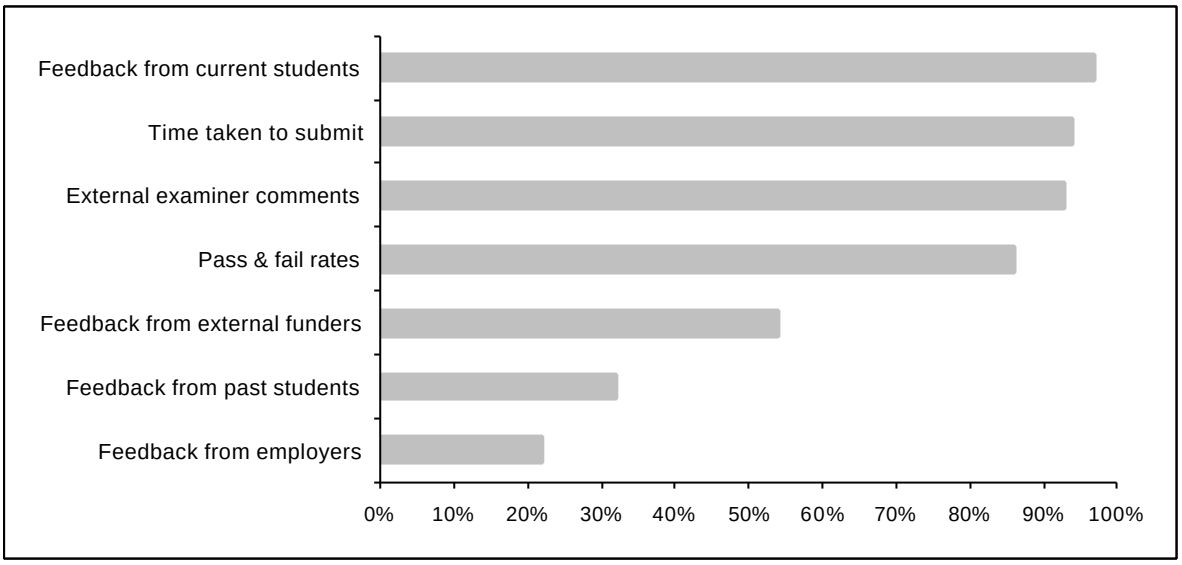
Respondents to the survey divided equally between those with an institution-wide graduate school or equivalent responsible for RDPs (53%), and those with devolved responsibilities to discipline-based units, i.e. faculty, schools or departments (47%). We noted in our visits that institutions with an overarching structure are more likely to have consistency of regulations and mechanisms to assure their implementation. Furthermore, they are more likely to provide a programme of courses and activities that are accessible to all research students.

Review of the QAA continuation audit reports (Annex F) reveals that devolving responsibility for RDPs involves an element of risk for the institution in maintaining quality and standards. Devolution leads to diversity, which may stimulate richness and variety, but may also lead to incompatibility between procedures and regulations. However, devolved responsibilities are considered to be unproblematic when there are strong central regulations, such as an institutional code of practice for RDPs and excellent procedures for monitoring variations in provision.

Several key observations emerged from the survey:

- almost all respondents (93%) have a code of practice for RDPs in place; most of the remainder (5%) are in the process of producing such a code within a year
- 87% of respondents claim that their code of practice does not vary significantly from the QAA code. Of the remainder, several claim their code to be more rigorous
- 64% of respondents monitor the effectiveness of their code annually or more frequently; 16% do so ‘as required’.

**Table 1: Factors feeding into institutional quality assurance mechanisms for RDPs (% respondents)**



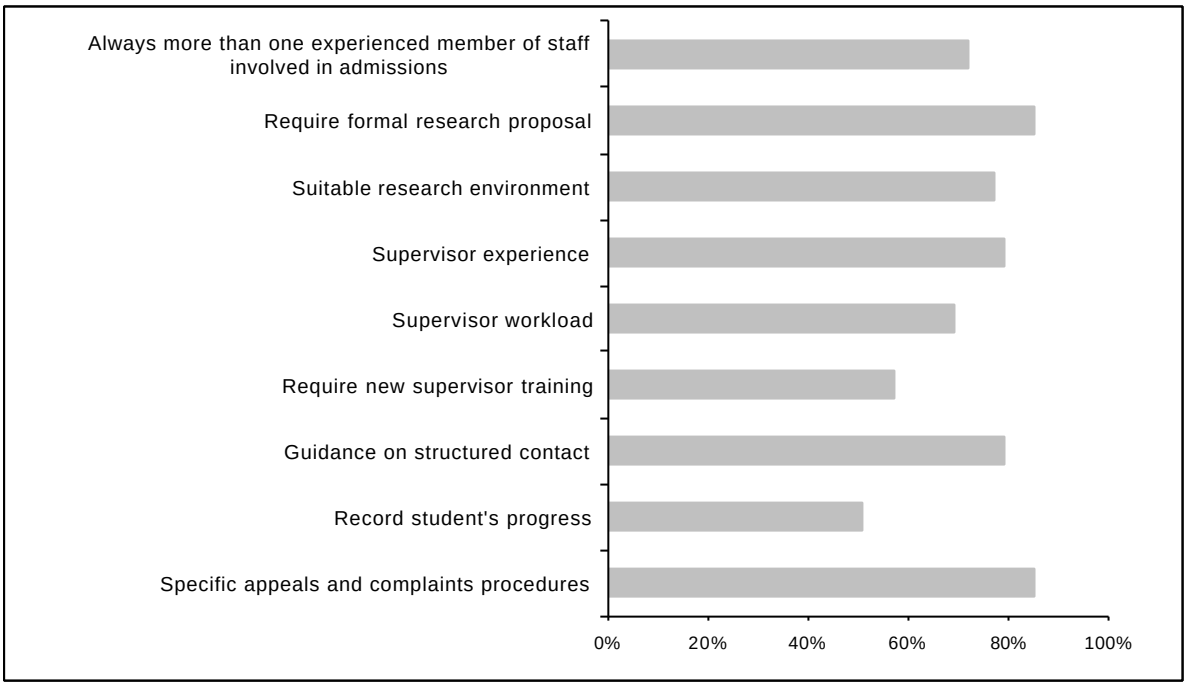

Most institutions (85-98%) use feedback from students and external examiners, and submission and pass rates in their mechanisms to assess the quality of RDPs (Table 1).

A much smaller number (20-50%) use feedback from external sources such as postgraduate funding bodies, employers and past students. In part this is due to the time and cost involved in operating these feedback mechanisms. Several institutions stated they would like to see a system of independent exit interviews for students, but have found it difficult to identify the best timing for such an exercise and to find sufficient resources.

### 6.3 Operational practice

Virtually all respondents to part A of the survey (95%) also responded to part B on operational practice within RDPs. One-fifth provided multiple responses (2-40) from more than one unit within the institution. Most aspects of the RDP are either specified by the institution or the operating unit (Table 2). One notable exception is that only 51% of respondents specify the formal recording of student progress.

**Table 2: Specified aspects of RDPs (% respondents)**




Recruitment procedures are generally institutionally specified (85%): typically they involve interviews with more than one academic member of staff on the interview panel (79%), and usually references are followed up (91%). Overseas candidates who cannot attend an interview at the institution are likely to be assessed by video or telephone interviews (31%), or in-situ by a local agent (15%).

Three-quarters of respondents (77%) specify the research environment suitable for training. They state the following as defining factors: appropriate infrastructure and facilities, the research activity and reputation of the unit, suitably qualified supervisors, level of contact and access to programmes of seminars, and a critical mass of researchers.

Nearly all (94%) have criteria for supervisory arrangements; 78% specify the experience required. Several respondents (15%) specified one or more prior completions before becoming the main supervisor. Only a few respondents mentioned having a PhD as a requirement to supervise.

Over half (57%) of all respondents require training for new supervisors and many mentioned the provision of mentoring support and good practice workshops; 24% require training for all supervisors. This topic created considerable discussion in the workshops. Everyone acknowledged the potential value of supporting all supervisors: the challenge is providing this in a way that gives benefit to more experienced supervisors.

With regard to guidance on supervisor workload, 25% of respondents specify a maximum number of students (3-10) where the academic is registered as main supervisor. The majority of respondents

define the frequency of contact with students (79%), and 51% specify procedures for recording meetings, 33% requiring a formal report or logbook.

The development of research-related skills is well embedded in most institutions, with many institutions/units providing compulsory or credit-rated research training programmes (Table 3).

Approximately half of all respondents state their research training programmes relate to the Research Councils/AHRB joint statement of skills requirements (Annex G) which describes a range of competencies they would expect their funded postgraduates to develop during their RDPs.

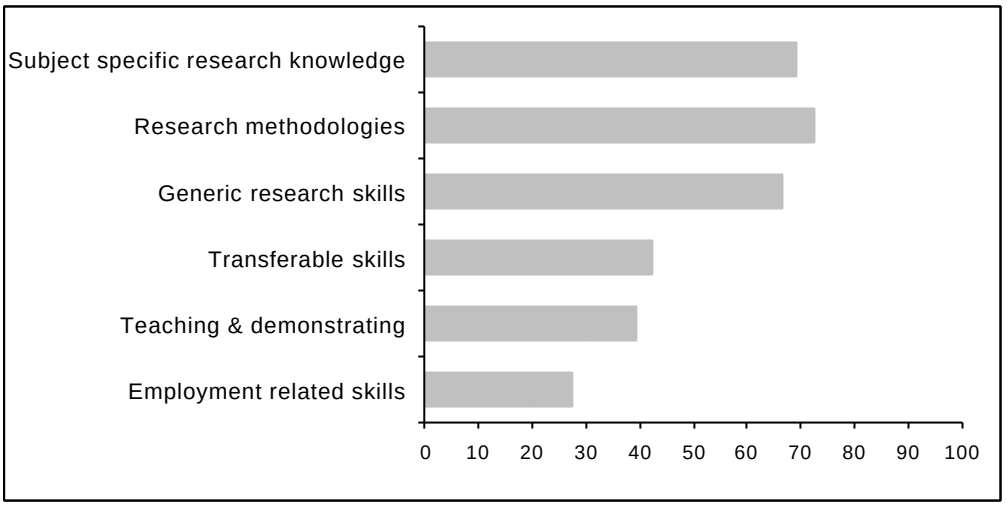
**Table 3: Provision of compulsory or credit-rated training programme**

| Area of skill development | % respondents |
|---|---|
| Subject-specific research knowledge | 40% |
| Subject-specific research skills, eg research methodologies | 56% |
| Generic research skills, eg project management, academic writing skills | 58% |
| Transferable skills, eg team working | 33% |
| Employment-related skills, career planning, CVs, interview techniques | 20% |

Students are most likely to receive directly research-focused training such as research methodologies and subject-specific knowledge, and generic research skills such as project management. Over two-thirds of respondents state that more than 50% of their students receive training in these areas.

Students are less likely to receive training in transferable skills such as teamworking, and particularly employment-related skills such as career planning, CVs and interview techniques. In only 27% of the respondent institutions will more than 50% of students receive formal career management support (Table 4).

**Table 4: Respondents providing training to more than 50% of students (%)**




## 6.4 Examples of good practice

During our visits, workshops, survey and interviews we observed many examples of good practice in RDPs both in the UK and overseas. We have used these and our experience of RDPs to develop the framework and standards.

In Annex H we provide specific examples of how selected institutions/units achieve quality within their RDPs mapped against the framework of standards. The examples are not given as 'best' practice, but rather to illustrate how particular institutions have chosen to implement elements of their RDPs to achieve a quality product.

We were able to visit only a small number of institutions during the course of the project and most of our examples of good practice relate to these visits. This is not meant to imply that good practice exists only in these institutions; rather we hope that these few examples will encourage institutions to share further examples of good practice for the benefit of the sector as a whole.

We also examined practice in Australia, Canada, France, Sweden and the US. Annex I provides an overview of these doctoral programmes and selective examples of institutional good practice. UK PhD students and training programmes are regularly compared in particular against US practice.

It is interesting to observe that debate in the US[7] around doctoral training is consistent with that in the UK:

- an increasing number of PhDs are chasing decreasing numbers of full-time academic positions
- a concentration on research training is not equipping PhDs to perform other faculty roles, especially undergraduate teaching
- non-academic organisations require highly skilled employees, yet many PhDs struggle to make the transition from academia.

We also include a selected list of relevant literature on current practice and debate within RDPs as Annex J.

## 7. Framework of quality standards

The principal output from this phase of the project is a framework to assure quality in the provision and delivery of standards across all aspects of the RDP. The structure of the framework builds on the QAA code of practice for postgraduate research programmes[8], a document that has been adopted by over 93% of institutions as the basis of their institutional code of practice.

The QAA code identifies a set of precepts that it expects institutions to address effectively through their quality assurance processes, procedures and regulations. In common with most codes, the QAA code stresses that it is not intended to be prescriptive. However, neither is performance against its precepts measurable.

Our concern is to develop a framework of threshold standards, achievement of which could be a necessary condition for funding. To achieve this we have built on these precepts to develop measurable standards reflecting actual practice in the sector.

[7] At Cross Purposes: What the experiences of doctoral students reveal about doctoral education (www.phd-survey.org).

[8] Quality Assurance Agency for Higher Education Code of Practice for the Assurance of Academic Quality and Standards in Higher Education: Postgraduate Research Programmes

### 7.1 Framework descriptions

Within the framework we identify eight inter-related elements of an RDP:

1. Institutional arrangements to bring together the elements of the framework into a code of practice that is monitored and reviewed

2. Research environment appropriate for offering RDPs

3. Selection, admission, enrolment and induction of students

4. Supervisory arrangements

5. Initial project approval and subsequent progress through the RDP to examination

6. Development of research and other skills

7. Feedback mechanisms to inform quality assurance processes

8. Appeals and complaints mechanisms.

The full framework is presented as Annex D. For each section we identify good practice and highlight the standards that we believe are important in ensuring consistent academic standards in RDPs (column 1).

We further identify how these academic standards translate into the responsibilities of the supervisory team (column 2) and the student (column 3). We believe it is crucial to the successful outcome of the RDP for the supervisory team and in particular the student to understand and acknowledge their respective roles. We encourage institutions to follow the good practice of many institutions by incorporating these responsibilities within documents targeted specifically to each audience, for example as ‘guidelines for postgraduate students’.

We also identify the necessary requirements for good administrative procedures and regulations to deliver and assure academic standards (column 4).

Although the definition of minimum standards is for a later stage of the project, we include indicative threshold levels here (shown in square brackets) to illustrate potential requirements. For convenience these relate to full-time students. In the next phase of the project appropriate threshold levels will need to be agreed for conditional funding for both full-time and part-time students.

### 7.2 Use of inputs, processes and outputs standards

In this project we have not concerned ourselves directly with the principal output of the PhD, the thesis as an original piece of work. This is, rightly, the responsibility of the degree-awarding institution in assuring the quality of the thesis. In identifying quality standards we have considered

the inputs (people, environment, facilities), the processes (how those resources are used), and the additional output measures that form the totality of the RDP experience.

In identifying standards we concentrate on achieving our aim to improve existing RDP provision through specifying the training environment, achieving consistency by raising the visibility of the process, protecting students by informing and empowering them, whilst still being flexible enough to meet the demands of an increasingly diverse range of RDPs.

The framework standards are discussed below and summarised as Annex E.

### 7.3 Training environment

We identify a range of indicators (and indicative thresholds, shown in square brackets) that relate to aspects of the training environment (Table 5).

Although the quality of the research environment is not the only factor in providing quality research training, it is an important element. The use of RAE ratings as one of the identifiers of the research environment was the subject of much debate in the workshops. The RAE is widely seen as a blunt instrument, in that it measures a fixed point in time and the RAE units of assessment do not map perfectly onto institutional 'units' of research.

However, the RAE is at present our only national measure of the research environment. To use the inputs that inform the RAE – such as research active staff, publications, grants and funding – as potential indicators would create an unacceptable administrative burden on institutions. We believe that in the absence of an alternative measure of the quality of the research environment the RAE should be used as one of the indicators with the framework. We also believe that it would be inappropriate to define minimum standards for research degree programmes without reference to the research environment. It follows from this that there should be a threshold RAE level for funding alongside other standards. We recognise that this is not a purpose for which the RAE was designed and hope that the funding councils' review of the RAE will bear in mind the need for appropriate measures in proposing approaches to research assessment.

There was similar recognition in the workshops of the need to expose students to a critical mass of active researchers and other postgraduates. There was considerable debate over identifying appropriate standards and how these could be achieved for smaller units and institutions.

We expect and encourage units to develop collaborations within and outside the institution. For some subjects – such as nursing and allied subjects, or art and design – it may be necessary to develop collaborations at a national level to achieve critical mass. We develop this issue later in the report under section 9.1 'Implications for funding'.

**Table 5: Standards relating to the research training environment**

| Numbers relate to the standards in Annex D. Indicative thresholds are shown in square brackets. | |
|---|---|
| 2A: | RDPs in units with a minimum RAE rating [consistent with QR funding][9] |
| 2B: | Demonstrate a way of providing effective interactions within the unit/cognate area:<br>- with a minimum of [5] research active staff/postdoctorates<br>- between a group of at least [10] students |
| 2C: | Facilities for the research project, including library and IT facilities, should be available at or above the level needed for research of a [national] standard |
| 6A: | Provide training programmes to develop a range of skills and knowledge consistent with the joint statement of skills requirements by the Research Councils/AHRB, including skills for employment, and provide mechanisms to assess formally the development of these skills |
| 6D: | Minimum level of activities defined and monitored to promote breadth and depth of knowledge and experience by means of attendance at internal and external seminars, conferences, discussion forums, [twice annual] 'presentations', teaching and demonstrating experience |

We have incorporated the Research Councils/AHRB joint statement of skills requirements (Annex G) into the framework as a useful description of the range of skills, knowledge and attributes against which institutions can map their programme of training courses.

We support the Research Councils/AHRB view that the needs of individual students will vary considerably, and many of these skills may already be present or developed during the course of the RDP. However, it is important that the institution provides a comprehensive training programme that is accessible to all students across the institution.

As part of the development of students' competencies, institutions should ensure that students have access to a range of seminars, conferences and workshops to extend their knowledge of their subject and develop their critical faculties.

### 7.4 Improving visibility

An important aim of the framework of standards is to increase the visibility of RDPs and provide mechanisms for monitoring and review procedures to allow institutions to assure the consistency of RDPs. These standards are presented in Table 6.

[9] Mainstream quality-related (QR) research funding is currently allocated for RAE ratings of 3a and above in England and Scotland, 3b and above in Wales.

**Table 6: Indicators to improve the consistency of RDPs**

**Recruitment of students**

3A: Institutional minimum level of academic entry standard [2.1, masters, or institutionally defined equivalent assessment of prior (experiential) learning – APL/APEL]

3B: Selection process and admission decision to involve at least [2] experienced and research active academics, trained in admission processes

**Supervision arrangements**

4A: Provide a supervisory team consisting of at least [2], one of whom should be designated as the 'main' supervisor with overall responsibility for the student

4B: At least [2] members of the 'supervisory team' should be demonstrably research active academics with relevant knowledge and skills to supervise, and with defined roles

4C: At least [1] member of the supervisory team to be from a minimum [3a] RAE rated department

4D/F: The 'main' supervisor should have had experience of at least [1] successful supervision within a supervisory team and should take prime responsibility for a maximum [8] students

4F: Training should be institutionally specified and compulsory for [new] supervisors

4G: There should be structured interaction with the supervisory team to report, discuss and agree academic and personal progress at least every [3 months]. Outcomes of all such meetings to be recorded as agreed

**Independent review and examination**

5A: Progress should be subject to review by a panel of at least [3] research active and relevant academics, the majority of whom are independent of the supervisory team. At least one of the independent panel members should be from a minimum [3a] RAE rated department

5C: Final examination to be by a viva to an independent panel of at least two examiners who are research active in relevant fields, at least one of whom is an external examiner

5D: At least one of the examiners should be from a minimum [3a] RAE rated department. Each examiner to provide an independent report on the thesis prior to the viva.

Most institutions already have rigorous criteria and procedures for the recruitment of students. We recommend that all students should have a minimum academic qualification (or equivalent training/learning) and are assessed by more than one experienced academic before being offered a place on an RDP.

Although many institutions now require multiple supervision, it is not difficult to find examples of sole supervision. The supervisory relationship can be a very private one. In the majority of cases this is an extremely constructive and fruitful partnership, but there are times when relationships break down, with consequences for the student, the supervisor and the research. By specifying multiple supervision as one of the framework standards, we believe the increased visibility of this relationship with give added protection to students, supervisory teams and the institution.

The institution will need to consider the appropriate supervisory relationships for students working on multi-disciplinary or collaborative projects, particularly with input from external organisations such as industrial funders. For example, in cross-discipline projects with two supervisors from different disciplines it is important that the student does not act as the 'bridge' between the disciplines. In these cases it may be appropriate to have another 'independent' supervisor in the team.

Institutions should consider the appropriate supervisory environments for students from different cultural backgrounds, for example those that are uncomfortable working with supervisors of the opposite gender or are not familiar with having 'critical debate' with seniors. As one student noted in our visits, '*supervisors are in very powerful positions – they often don't realise the impact of their words on students'*.

We believe that alongside the use of supervisory teams, it is important for a student's progress to be subject to regular independent reviews throughout the training. These should be real hurdles, particularly at transfer or upgrade to a PhD. They require mechanisms for informing and supporting students who may not be able to reach the standard required for a PhD, for example by offering positive exit routes such as an alternative qualification.

### 7.5 Student protection

Our aim is to ensure students are informed, empowered and take ownership of their research programme. We have identified a series of standards relating to the induction of students, their personal development and their contribution to improving RDPs (Table 7).

**Table 7: Indicators to increase students' understanding and ownership of their RDP**

| |
|---|
| **Recruitment and induction** |
| 3C: Open access to all relevant material on the web |
| 3D: Formal offer letter should include:<br>- fees and charges<br>- period of study<br>- direction of study<br>- specific requirements<br>- other requirements |
| 3E: Student and institution to sign up to an agreement on the learning outcomes of the RDP |
| 3F: Provide a formal institutional induction process with monitored attendance |
| **Need analysis and record of progress** |
| 6B: Student and supervisory team to identify and agree a training needs analysis against the joint Research Councils/AHRB statement of skills requirements, as part of the [induction] process. It should be reviewed [quarterly] to ensure needs are being met |
| 6C: Student to maintain a jointly agreed record of personal progress |
| **Feedback mechanisms** |
| 7A: Establish and operate confidential feedback mechanisms for:<br>- current students<br>- supervisory teams and review panels<br>- external parties, such as examiners, funders, collaborative organisations, employers, and alumni.<br>Incorporate this feedback into the regular review of academic standards and provide information on action taken in response |
| 8A: Institution to arrange and publicise separate, fair, transparent, robust and consistently applied complaints and appeals procedures, appropriate to all categories of research students |

It can be difficult for prospective students to access sufficient information to make informed choices of where to study. For example, not all institutions have key documents, such as their code of practice and student and supervisor guidelines, freely available on their web sites. In discussions with groups of students, this was a particular issue for applicants from overseas who generally found it harder to access information on RDPs in the UK than in other competing countries. UK-based students regularly stated that they preferred to remain in their current institution rather than risk a move to less familiar surroundings.

The relevant standards on recruitment and induction ensure students are provided with sufficient information to understand their responsibilities and those of the institution within the RDP.

Perhaps critical to students taking ownership of their RDP are the requirements to undertake a training needs analysis and to maintain a formal record of progress. We use 'training' in its broadest sense: it may encompass self-development, supervisory support, attendance at training courses and seminars, and so on.

All institutions provide a variety of student support mechanisms such as access to a postgraduate tutor, personal mentors, and student support services. However, many students are wary of raising issues to do with their project, particularly through official channels, for fear of being disadvantaged or stigmatised. A typical response from a student was: *'I don't trust the process enough to be confidential and make a difference'*.

Feedback from students, and other stakeholders, can provide valuable input to the quality assurance and improvement of RDPs. Concern was expressed that inviting feedback may only generate negative feedback: happy students mostly remain silent. We believe the majority of students will provide constructive feedback if they can see it makes a difference.

### 7.6 Institutional quality assurance procedures

The standards above are overlaid by institutional procedures to assure quality and to monitor outputs (Table 8). In the next section we discuss how these may relate to any external monitoring system.

**Table 8: Institutional procedures**

| | |
|---|---|
| 1A: | Institution's code of practice must meet, and preferably exceed, the standards in the framework |
| 1B: | Institution to monitor, review and act on the application of the standards in its code, including the various standards set out in this document |
| 1C: | Institutional and unit performance to be monitored [annually] on progress and attrition against agreed targets, including for gender and ethnic groupings:<br>- submission rates [80% within 4 years]<br>- average time to submission<br>- completion rates [80% within 4.5 years]<br>- level of appeals, complaints<br>- student feedback |
| 5B: | Institutional procedures and time limits to be set and unit performance monitored for initial review and subsequent progress covering:<br>- initial review [within 12 months of 'enrolment' and confirm continuation/upgrade to a PhD]<br>- [annual] review process<br>- implications of the possible outcomes of each assessment<br>- criteria for deciding suspension or termination of a student's registration |

Our recommendations of standards and the supporting good practice within the framework come from practice observed in the sector in the delivery of RDPs. Many institutions already achieve the indicative minimum standards in part, if not in full. The aim of the framework is to encourage institutions to exceed the minimum standards. We expect that institutions will continue to develop their RDPs and threshold standards will continue to increase, such that within five years what is now good practice will become minimum standards.

**Recommendation 1: the Funding Councils adopt the framework and define threshold values for standards as the basis for conditional funding for RDPs.**

### 7.7 Institutional self-assessment

We support the academic sector's view that any assessment process for RDPs should be principally institutionally driven, albeit with external mechanisms to monitor compliance. For a quality assurance system to be most effective it should focus on improvement through promoting a self-critical and reflective style of working, rather than being an externally driven assessment. By the Funding Councils encouraging self-assessment and ownership of the standards, they are most likely to result in real improvement in quality.

We believe that the value of these indicators will be recognised by the sector. Institutions will strive to exceed them to maintain and improve their position in the UK and against international competition.

**Recommendation 2: institutions should be given responsibility for assessing and providing evidence of the achievement of standards and quality of RDPs.**

### 7.8 External monitoring

That is not to say that the Funding Councils should not overlay any self-assessment system with external monitoring such as periodic or random checks. This should build on existing processes such as the use of peer assessment as in the QAA continuation audits, as an adjunct to the RAE assessment, or possibly through the Research Councils' assessment processes for discipline-specific monitoring.

Although the implementation of threshold standards is the subject of later stages of this project, we would recommend that the Funding Councils consider a 'light touch' with respect to external monitoring through a process that reviews the quality assurance processes of the institution rather than the provision itself.

For example, SHEFC has proposed a move to an enhancement-led approach[10] to quality assurance for learning and teaching from 2002-03, on the principle that institutions are best placed to monitor and ensure the quality of provision through internal review processes, and that the proposed arrangements would significantly reduce the burden of external audit. The same holds true for

[10] HEC 02/2002 'An enhancement-led approach to quality assurance'

RDPs: there is potential to develop a consistent monitoring approach for both teaching and research programmes.

**Recommendation 3: the Funding Councils should consider adopting an external monitoring system that monitors the quality assurance processes of the institution for RDPs.**

### 7.9 Fit with Research Council requirements

The Research Councils and the AHRB are major funders of full-time UK doctoral students in UK institutions. Each has adopted differing methods of allocating postgraduate funding, ranging from 'student-driven' competition for the AHRB through to the Engineering and Physical Sciences Research Council's (EPSRC) Doctoral Training Grants, allocated principally against grant income. The Economic and Social Research Council's (ESRC) pre-recognition exercise – which requires institutions to demonstrate they have a suitable existing training programme prior to receiving funding – was cited by several institutions as a useful catalyst in improving provision.

Despite these variations in approach, the specific factors taken into account by the Research Councils and the AHRB in making funding decisions are generally consistent with the standards in the framework. One principal difference from the framework is that all the Research Councils and the AHRB rely on various systems of peer review for assessing the suitability of the research environment and/or project. Only the Biotechnology and Bio-Sciences Research Council (BBSRC) and the Natural Environment Research Council specify a minimum RAE rating as a criterion for funding. The others see the RAE rating as 'double-counting' their peer review systems or the RAE units of assessment as being too broad to identify pockets of excellence. In theory the other Councils (EPSRC, ESRC, Medical Research Council (MRC), Particle Physics and Astronomy Research Council) and the AHRB can offer funding to a unit with an RAE rating below 3a (3b in Wales), although in practice this rarely happens. Most funding by all Research Councils goes to units rated 4 and above. For example, more than 97% of AHRB, 96% of BBSRC and 95% of MRC studentships are currently in units with an RAE rating of 4 and above.

An area where the Research Councils and AHRB take a consistent approach to postgraduate training is in the definition of the competencies required of a postgraduate student. This is formalised in the Joint Research Councils/AHRB statement of skills requirements, published in 2001 (Annex G).

The Research Council/AHRB procedures for assessing the quality of RDPs mapped against the framework are presented in Annex K.

The Research Councils/AHRB, along with the Wellcome Trust, support the aims of this project and have stated their intention to consider the Funding Councils' threshold standards as the basis on which to build their specific discipline research training requirements. They have also stated an intention to consider, where appropriate, the same threshold standards for their institutes that are not supported by the Funding Councils.

**Recommendation 4: the Funding Councils jointly work with the Research Councils/AHRB and other major stakeholders to agree and adopt common threshold standards as a condition of postgraduate funding.**

## 8. Implementation

### 8.1 Implications for institutions

Any attempt to identify minimum threshold standards for conditional funding will be prescriptive to some extent. HEIs wishing to have funded provision for research postgraduates will need to establish that they are at least meeting the threshold standards.

We believe there is sufficient flexibility within the standards for institutions to incorporate them in their codes of practice in a way that best meets their particular needs and those of their units. Our intention is that institutions will work with individual units to define appropriate standards that conform to the spirit of the framework to improve practice.

There are many units and institutions that already exceed many, if not all, of the standards. It is not our intention that 'minimum' standards are interpreted as 'acceptable' standards. Rather, we expect that as practice improves and the baseline moves towards good practice, the Funding Councils will progressively review their definitions of the thresholds.

For institutions where some or all units do not meet all threshold standards there will be institutions who:

- Can find ways to improve the provision in some units to bring them above the thresholds
- Through working together with one or more other institutions or external organisations, will be able to exceed the thresholds in some units
- Will not have the capacity (and/or the inclination) to exceed the thresholds in some or all units even working in conjunction with partners.

It will be for institutions to identify into which category each of their units falls, and to decide upon appropriate courses of action. The consequence of these decisions will obviously affect the level of postgraduate funding.

Where institutions cannot or decide not to reach the minimum standards within some or all units, then a necessary effect of implementing conditional funding is that these units will not be eligible for postgraduate funding from the Funding Councils. However, the Funding Councils have no intention, or indeed authority, to prevent an institution from providing RDPs within these units.

For those institutions who state their intention to bring their provision above the threshold standards, where necessary we recommend that the Funding Councils should continue to provide 'bridging' funding over an agreed period to allow the institution time to improve.

### 8.2 Collaborative arrangements

For those institutions/units unable to meet the minimum standards, there is the option to arrange collaborative agreements with other units (both internal and external to the institution) to achieve, and preferably exceed, the minimums.

For institutions that cannot meet all standards through internal provision, for example by providing critical mass in a cognate area, we support the development of collaborative arrangements with other organisations. These may be within or between institutions at a national or local level, or with non-academic institutions such as learned societies and industrial organisations. Where collaborative arrangements are set up to achieve a critical mass of students, or access to facilities, seminars and so on, we would expect the arrangements to be reasonable in terms of travelling, and for the institution to provide students with access to funds to cover additional expenses.

We expect that some will wish to go further and set up inter-institutional, or regional collaborations. Several examples of these are already in operation. For example, the Scottish Doctoral Programme in Economics provides a single site Masters to serve the PhD programmes for eight Scottish institutions. During the PhD there is continuing interchange between the postgraduate community at a series of seminars and weekend reading parties. The White Rose Consortium of the Universities of Leeds, Sheffield and York provides access to generic skills training across the three institutions.

Of particular concern are the needs of emerging disciplines – such as nursing and allied subjects, art and design, library and information management – where there may be insufficient numbers of academics or students to form effective collaborative arrangements, even on a national basis. In the implementation stage of the project the Funding Councils should consider developing specific initiatives to support emerging disciplines to achieve the threshold standards for their RDPs, rather than exclude them or lower standards.

**Recommendation 5: the Funding Councils should consider developing specific initiatives to support emerging disciplines.**

### 8.3 Diversity of provision

We have considered the current diversity of RDPs in both length and structure within the context of the framework. We believe that the standards are sufficiently generic to be applicable across all RDPs. We expect that institutions, the Research Councils or other stakeholders may want to overlay the framework with specific, possibly discipline-related, requirements.

Although the framework is equally applicable to part-time students, when identifying the thresholds the Funding Councils may want to consider whether there are standards more directly relevant to such students. For example, in the framework we identify as good practice that students should have access to any training programme across the institution. For part-time students good practice will entail also providing training in a variety of ways and times to suit their needs, such as on-line, evenings and weekends.

We would further expect institutions to ensure that the provision of their RDPs is within the scope of their institutional equal opportunities policies, and therefore subject to similar monitoring procedures with respect to applications, enrolment, completion, and complaints.

## 9. Next steps

We have recommended that the Funding Councils adopt the framework of standards for improving the quality of RDPs. One challenge for the next stages of this project will be to develop a funding mechanism based on this framework that also achieves our aim of minimising any additional administrative burden on institutions. It may be necessary to identify a set of 'key' standards within the framework, the achievement of which is a condition of funding. However, we would still expect institutions to be able to demonstrate on request that they have adopted the framework within their code of practice, and are achieving all the threshold standards.

We endorse the three Funding Councils' decisions to collaborate on this the first stage of the project. Whilst we recognise there may be local conditions that may prevent this, we would further encourage the individual Councils to work towards a consistency of approach in both the definition of threshold standards and the implications for implementation and funding.

Furthermore, we would stress the importance of ensuring that the Research Councils/AHRB and other major stakeholders agree to endorse and implement the threshold values for their studentships.

**Recommendation 6: the Funding Councils should agree a co-ordinated approach to the definition of threshold standards, implementation mechanisms and funding implications.**

### 9.1 Implications for funding

Although funding mechanisms differ to some extent across the three Funding Councils, they all operate direct funding for postgraduate training programmes through the research training/supervision fees model.[11] Only units that qualify[12] for quality-related research funding (QR) receive funding for postgraduate research training, which is allocated on a flat rate per postgraduate student (subject to a 'cost of research' weighting). The funding available is small: 8 -12% across the three Funding Councils of the total available through mainstream QR research funding.

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[11] In England, research postgraduates in year one (full-time) are funded through the teaching funding model. This funding is not subject to a minimum RAE threshold. The appropriateness of this approach should also be reviewed as part of the total postgraduate funding mechanisms.

Scotland is transferring the funding of postgraduate research training from the teaching funding stream to the main quality research grant from August 2002.

[12] RAE rating 3a and above for England and Scotland, and 3b and above for Wales.

Mainstream QR funding is heavily weighted by RAE rating and, although not directly related to postgraduate training, contains postgraduate numbers within the funding algorithm.[13] Including a postgraduate volume measure as one of the factors for QR funding may encourage institutions to increase numbers, with potential implications for the quality of provision.

For example, in England the HEFCE allocates more than double the funding through the postgraduate volume measure for QR funds (£145M) than through supervision fees (£67M). As QR funding is weighted by RAE rating, higher rated units have significantly more to gain from driving up postgraduate numbers.

Due to a lack of information, we do not know whether the current funding levels through these mechanisms adequately reflect the total cost of postgraduate training. It is certain that they do not provide sufficient, if any, incentive to improve the quality of the research training environment.

To improve the quality of RDPs, the Funding Councils need to provide funding incentives that drive quality and not just volume. The Funding Councils should consider removing postgraduate numbers as a volume measure in QR funding. Furthermore they should explore the implications of funding for postgraduate research training that more directly reflects the cost of that training.

**Recommendation 7: the Funding Councils should consider revising the funding and allocation mechanisms to more directly reflect the cost of postgraduate training.**

We have identified that some units and emerging disciplines may need to develop collaborative arrangements to meet thresholds. Other institutions or units may require time and appropriate bridging mechanisms to achieve standards. The Funding Councils will need to consider the funding implications of supporting these arrangements. It may be appropriate to extend the current funding initiatives that support collaborative projects and developing research potential such as the Scottish Research Development Foundation Grant[14] scheme and the Welsh Pockets of Quality Initiative.[15]

**Recommendation 8: the Funding Councils should consider the funding implications of supporting the development of collaborative arrangements or bridging mechanisms.**

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[13] QR funding is allocated principally according to RAE scores and a volume rating that includes numbers of research active staff, research assistants and fellows, postgraduate students and levels of charitable income.

[14] Scotland's Research Development Grant scheme particularly supports research proposals that takes interdisciplinary and collaborative approaches, from institutions who have had limited opportunities to create centres of research strength, and emerging subject areas.

[15] Wales's Pockets of Quality Initiative is to strengthen pockets of quality research to enable the departments concerned to improve their standing in future assessments of research and to increase their level of public funding for research.

### 9.2 Monitoring mechanisms

We have recommended that in the next stage of the project the Funding Councils consider developing a monitoring system for the quality assurance processes of the institution, rather than directly assessing the RDP provision.

Within the quality indicators, we specify that institutions record and monitor a series of outcomes such as submission rates, completion rates, and student feedback responses. Most, if not all, of these outcomes are also of interest to the Research Councils, other funders and national bodies. To standardise data collection and avoid duplication of effort we recommend the Funding Councils agree with the major stakeholders a common data set and monitoring system for outputs. stakeholders.

If these outputs were collected on a national basis – for example through the Higher Education Statistics Agency (HESA) First Destination Survey,[16] or as part of the (HEFCE) project on information on quality and standards in higher education[17] – this would reduce the burden on institutions and allow the production of consistent data. For example, both HESA and the Research Councils require institutions to provide data on completion rates and first destinations for their funded students; these are currently collected through different mechanisms with resultant incompatible data sets. Initial consultations with both bodies indicate potential to access data for both Research Councils' and Funding Councils' requirements through the HESA system.

The Funding Councils should consider gathering student feedback at a national level through a web-based feedback mechanism, such as the Contract Research Online Survey (CROS) project[18] for contract researchers, which also allows institutions to customise the data collection for their own use.

These systems could be supported by a programme of targeted and/or random peer group monitoring visits so that institutions can demonstrate that they are an example of good practice. These visits would also provide constructive feedback to support and reinforce a cycle of continuous improvement, and be a vehicle to identify and share good practice across the sector.

**Recommendation 9: the Funding Councils should agree with other major stakeholders a common set of outputs and monitoring systems for RDPs.**

### 9.3 Sector consultation

The implementation of this project and its implications for postgraduate funding represent a major opportunity to influence the quality of postgraduate training in general. It will bring RDPs in line with quality assurance mechanisms familiar at undergraduate level.

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[16] HESA 01/01-03 First Destinations Circulars

[17] HEFCE 02/15 Information on Quality and Standards in Higher Education

[18] CROS: University of Bristol, http://www.ilrt.bris.ac.uk/cros

Inevitably, there will be implications for the academic sector and stakeholders. Although we have consulted with representatives from across the sector and with major stakeholders, we recommend that the Funding Councils undertake a full consultation exercise before phases two and three.