

# What do researchers do?

Doctoral graduate **destinations**  
**and impact three years on**  
2010

**Methodology**

Vitae is supported by Research Councils UK (RCUK),  
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# 1 WDRD methodology

This appendix sets out key processes in the analysis and interpretation of 'What do researchers do? Doctoral graduate destinations and impact three years on', 2010 (WDRD). It also aims to guide those wishing to recreate the analyses with the current or future L DLHE doctoral respondent datasets<sup>1</sup>.

The processes covered include:

- understanding the source data
- survey weighting and data quality
- additional coding
- defining postgraduate researchers and doctoral graduates
- key variables used in the analysis: individual background, study related variables and employment
- establishing the occupational clusters
- additional qualitative research.

## 1.1 Source data: destinations surveys

The Longitudinal Destination of Leavers from Higher Education (or L DLHE) survey is a sample-based follow up study to the census-based graduate survey that explores destinations approximately six months after graduation (DLHE survey or early survey). Both surveys are carried out by the Higher Education Statistics Agency (HESA) – the DLHE survey is undertaken by HEIs following a standard approach outlined by HESA; and the L DLHE survey is undertaken centrally by a survey contractor (most recently IFF Research Limited).

The L DLHE provides details of individual career progression over time of UK and EU domiciled graduates from UK HEIs. It is a very exciting development in the field of researching graduate careers as it provides a regular (biennial), large-scale, national picture of career paths in the medium term. The initial DLHE survey is used extensively in research and policymaking, but has recognised limitations due to its focus on immediate transitions from higher education to the labour market. Research (for example: Connor et al, 1999<sup>2</sup>) has shown that graduates of all levels take time to settle into a career and so an early snap-shot of their activities cannot truly represent their pathways and impact, particularly for research graduates.

The first L DLHE was conducted in winter 2006/07 and followed the careers of UK and EU graduates from 2002/03 – specifically focusing on their activities on 27 November

2006, approximately three and a half years after graduating. In line with the overall sampling strategy for the L DLHE survey, only a small number of doctoral graduates were contacted and only 637 responses were received. The size of this responding group meant that very little separate analysis was possible (IFF, 2007<sup>3</sup>).

The second L DLHE – and the focus of 'What do researchers do? Doctoral graduates destinations and impact three years on', 2010 – was conducted in winter 2008/09 and involved re-contacting doctoral graduates who responded to the 2005 DLHE survey. All 6,595 research postgraduates (those obtaining a higher degree mainly by research, including doctoral graduates and those with a research masters qualification) who responded to the initial destinations survey were selected to take part, and 5,587 were contacted to ensure there would be sufficient numbers of doctoral graduate respondents for robust statistical analysis. The survey achieved 2,501 responses, which represents a response rate of 45%.

The survey asked about respondents' main activity on 24 November 2008 approximately three and a half years after graduating and asked individuals to provide a more complete picture of their activities since graduating from their university or college in 2004/05. An online questionnaire, a postal survey and telephone interviews were used for the survey.

Additionally, a new section was added to the L DLHE survey aimed specifically at research postgraduates (including doctoral graduates) to explore type of qualification, reasons for undertaking a research degree, how the research was funded, skills used when undertaking study, impact of the research degree and perceptions of achievement. These changes to L DLHE follow the recommendations of the 'Options Analysis' study undertaken by IER<sup>4</sup> for RCUK as part of the 'Doctoral Career Pathways Study'.

The dataset was available for analysis in August 2009. As the L DLHE survey was essentially a census of doctoral graduates, there was no need to adjust for sampling or survey design effects and the calculation of confidence intervals is not appropriate for this dataset. However, additional work was required to improve the accuracy of the coding of occupation and sector of employment (see below).

To aid analysis, data from the initial DLHE survey and the Student Record was linked into the L DLHE data. Records were linked at the individual level to allow for detailed analysis of the outcomes of research postgraduates from different backgrounds and study experiences. It also allows for comparison of outcomes at six months and at three and a half years, at an individual level and for the whole sample.

<sup>1</sup> It should be noted that the 2008 L DLHE dataset used in WDRD was recoded for occupation and sector data for current employment and employment history, (see Section 1.2). This dataset is held by RCUK. It is not possible to compare the analysis of institutional datasets obtained through HESA with the WDRD data.

<sup>2</sup> Connor H, Burton R, Pearson R, Pollard E, Regan J (1999). 'Making the Right Choice: How Students Choose Universities and Colleges'. Universities UK

<sup>3</sup> IFF/YouGov (2007) Destinations of Leavers from Higher Education (DLHE) Longitudinal Study: Technical Report, HESA

<sup>4</sup> Purcell K, Elias P, Tzanakou C (2008) 'Doctoral Career Pathways, Skills and Training: Options Analysis for the Collection of Information About the Early Careers of UK Doctoral Graduates', IER/RCUK

## 1.2 Additional coding

To determine employment sector and occupation, doctoral graduates provided the name of the organisation they worked for and gave details about what this organisation mainly does. They also gave their job title and described the work they do including their main duties and responsibilities. This information was then coded by IFF using Standard Industrial Codes (SIC 1992) and Standard Occupational Codes (SOC 2000).

Subsequently, validation of the survey data by IER<sup>5</sup> for RCUK identified difficulties with the original coding for doctoral graduates particularly in enabling a distinction to be drawn between HE and non-HE careers, research and technician jobs, research administration and application, and non-research jobs. For example, although

agreement in occupational coding between IER and IFF codes was 92% at the one digit level, this fell to 61% when using four digits (the level used in the established Vitae categorisation of research roles). Similarly the agreement in industrial sector coding was 86% at the one digit level falling to 54% at the four digit level. Sector and occupational coding is difficult and dependent on the skills of the coder and the quality of information provided by the respondent.

Additional work by IER improved the quality and coverage of the sector and occupation coding:

- increasing coding of current occupation from 79.8% of cases to 88.6% of cases

- increasing coding of current sector from 85.7% of cases to 88.4% of cases
- increasing the identification of HE sector jobs from 28.5% of cases to 41.8% of cases (as many research and teaching cases were originally coded to the research and development sector instead of HE).

It should be noted that RCUK holds the most up-to-date dataset for doctoral graduates (with the recoded occupation and sector data for current employment and employment history). Any analysis using the data HESA holds will therefore produce different results.

## 1.3 Defining doctoral graduates

Postgraduate study is defined by HESA as a course leading to a higher degree, diploma or certificate, which usually requires a first degree as an entry qualification. It can be a course studied primarily through research (higher degree by research) or a course that is mainly taught (taught higher degree) or another type of postgraduate course, such as postgraduate diploma, certificate, professional qualification or institutional credit.

### Research postgraduates

For this study, the definition of research postgraduate was based on the variable 'qualification obtained' recorded in the initial DLHE response. Those selected for the L DLHE census were individuals who gained 'higher degrees by research' and this group includes both doctoral graduates and research masters graduates.

### Doctoral graduates

In this study, doctoral graduates are defined by HESA as having a 'doctorate mainly by research' and include those with a PhD or DPhil qualification. The additional category 'doctorate degrees not mainly by research', which is also used to categorise doctoral graduates (predominantly professional doctorates), was only sampled in the L DLHE survey and only a handful (N=13) responded. Given the issues around weighting and survey design, these respondents were excluded from the analysis.

### Research masters graduates

In this study, research masters graduates were those categorised as having a 'Masters degree mainly by research' and include those with an MPhil, MRes, MSc by research, and MA by research. Due to the small responding sample size of research masters graduates (N=428), these respondents were excluded from the analysis. However, the outcomes of all masters graduates (taught and research masters) and those of high achieving first degree graduates (1st or 2:1 classification) are provided as a comparison with doctoral graduate respondent outcomes where available.

<sup>5</sup> Purcell K, Elias P, Lyolette C, Tzanakou C (2010) 'Research Degree Holders in the Longitudinal Survey of the Destinations of 2004/05 Leavers from Higher Education: Survey Validation L-DLHE Non-respondent Survey and Qualitative Follow-up Pilot Interviews' (report to RCUK)

## 1.4 Key groupings used in the analysis

The categories or key variables computed and used in the analyses presented in the research report are defined below.

### 1.4.1 Individual background

A number of variables were used to explore the profile of doctoral graduate respondents and to compare these with the profile (where known) of the initial DLHE responding population, and to doctoral qualifiers (those recorded in HESA student data stream as completing in 2005).

#### Domicile

The categories of 'UK' and 'rest of EU', were computed based on the domicile information in doctoral graduates' initial DLHE response. 'UK' includes those domiciled in England, Northern Ireland, Scotland, Wales, the Channel Islands and the Isle of Man. 'Rest of EU' captures all other domiciles within Europe. (International graduates from outside Europe have not been surveyed in either DLHE or L DLHE).

#### Gender

The categories of 'male' and 'female' were taken from doctoral graduates' initial DLHE response.

#### Age

Age was the age calculated at the date of the L DLHE survey (24 November 2008) and was based on doctoral graduate respondents' date of birth recorded in their initial DLHE response. A small number of cases (N=32) had erroneous birth dates where the birth year had been entered as 20XX instead of 19XX. In these cases date of birth was recoded to reflect respondents' presumed true age. The categories used in the analysis were: under 30 years; 30 to 34 years, 35 to 39 years, 40 to 49 years, 50 to 59 years, and 60+ plus years.

#### Disability

Disability status was based on doctoral graduates' initial DLHE response. A reported disability includes: dyslexia; blind/partially sighted; deaf/hearing impairment; wheelchair user/mobility difficulties; mental health issues; unseen disabilities (eg diabetes, epilepsy, asthma); 'multiple disabilities'; and 'disability not listed above'. The categories used in the analysis were: disabled and no known disability. Only those answering the question were included in the analysis of disability status.

### 1.4.2 Study related variables

The nature and focus of study are key factors when exploring doctoral graduate pathways. Two key variables were used to explore the outcomes and experiences of doctoral graduate respondents. These relate to the course of study completed in 2005 as recorded in the initial DLHE response.

#### Discipline

Given the size of the responding sample of doctoral graduates (N=2,073) it was not possible to explore outcomes and experiences at subject level grouping, however it was possible to do so at broad disciplinary grouping.

Discipline of study was coded using information from the initial DLHE response using the Joint Academic Coding System (JACS) codes as outlined below. This follows the established Vitae classification (see 'What Do Researchers Do? First Destinations of Doctoral Graduates by Subject', 2009). On the rare instance where doctoral graduates had studied more than one subject they were grouped according to the

first subject presented in their student collection record. In practice this only applied to 3.9%, and in the majority of these cases (88%) both subjects studied were in the same discipline area.

Discipline categories were as follows:

- arts and humanities (P0 to W9)
- biological sciences (C1 to D9 excluding C8, plus J7)
- biomedical sciences (A1 to B9, plus C8)
- physical sciences and engineering (F0 to K9 excluding J7)
- social sciences (L0 to N9)
- others (X and Y).

Table 1 shows the subjects included in each discipline grouping.

#### Mode of study:

Mode of study was categorised as either full-time or part-time based on information from responding doctoral graduates' initial DLHE record.

**Table 1: Classification of discipline**

Discipline	Subjects included
Biological sciences	Biology; biochemistry, molecular biology, and biophysics; microbiology; agriculture; other biological sciences (all subjects in C and D not covered elsewhere)
Biomedical sciences	Medicine; psychology; pharmacology, toxicology and pharmacy; anatomy, physiology and pathology; nursing; others in biomedical sciences (all those in A and B not covered elsewhere)
Physical sciences and engineering	Chemistry; physics; mathematics; computer science; physical and terrestrial geographical and environmental sciences; geology; electronic and electrical engineering; civil engineering; mechanical engineering; other physical sciences (all in F and G not covered elsewhere); other engineering and building (all in H, J and K not covered elsewhere)
Social sciences	Business and management; sociology; politics; economics; human and social geography; law; other social sciences (all in L, M and N not covered elsewhere)
Arts and humanities	History; English; modern languages; theology; linguistics and ancient and classical languages; other arts and humanities (all in P, Q, R, T, V and W not covered elsewhere)
Others	Academic studies in education

### 1.4.3 Employment details

Doctoral graduates' employment situation at the time of the L DLHE survey was explored using the following variables:

#### Employment status

Employment status was coded using responses to section A of L DLHE and reflects graduates' employment status on 24 November 2008. 'PUBCAT'<sup>6</sup>, which is supplied with the L DLHE dataset, is a breakdown of doctoral graduates' main activity at the time of the survey and is derived using responses to Q1, Q2 and Q4 of the L DLHE questionnaire. The categories used in our analysis for employment status were: full-time paid work (including self employment); part-time paid work; work and further study; further study only; assumed to be unemployed; and other (this includes: voluntary/unpaid work only, employed (mode unknown), not available for employment, and other).

#### Employment circumstances

The broader category 'Employment circumstances' also focuses on graduates' main activity at the time of the survey and was derived using a combination of PUBCAT and answers to Q7 'What country was your place of work in?'. The categories used in the analysis were: working in the UK; working and/or studying in the UK; working and/or studying overseas; not available for work or study; assumed unemployed; work/study location unknown or other. Note that working includes full-time, part-time, self employed and voluntary work.

Several employment circumstances categories were combined to create 'in UK employment' and this category was used as a key filter in much of the analysis exploring nature of work, finding and securing employment, and impact (particularly impact at work). Respondents were classed as being in UK employment if their main activity was full-time, part-time or voluntary work, if they were simultaneously in work and study, or if they were in employment but their work mode was unknown, AND their place of work was in the UK.

#### Employment sector

Where graduates were in employment, the sector or industry of the employing organisation of their main job was categorised using the IER recoded data (this was based on Q5 and Q6 of the L DLHE survey – name of employer and main business of employer). As noted above IER recoded the data to Standard Industry Classification (SIC) codes. The SIC codes included in each sector grouping are shown in Table 2.

**Table 2: Classification of employment sector using SIC**

Employment sector	SIC codes included (2-digit level unless indicated)
Higher Education	8030*
Education (other)	80 (except HE 8030)
Finance, business and IT	64-67, 72, 74
Health and social work	85
Manufacturing	10-41
Research and development	73
Public administration	75
Other sectors	1-9, 45-63, 70, 71, 90-99

Note: \*at the 4-digit level

**Table 3: Classification of occupation using SOC**

Occupation	SOC codes included (3-digit level unless indicated)
Marketing, sales, media and advertising occupations	341-344, 354
Commercial, industrial and public sector managers	111-116, 118, 121-123, 23170, 411
Scientific, research, analysis and development occupations	211, 23210*
Engineering professionals	212
Health professionals and associate professionals	22110-22113*, 22122*, 22130-22160*, 321, 322
Teaching professionals (including lecturers)	23110-23160*, 23190-23194*
Business and finance professionals	242, 353, 356
Information technology professionals	213, 313
Other professional, associate professional and technical occupations	22120-22121*, 22123*, 23220*, 23290-23292*, 241, 243-245, 311, 312, 323, 351, 352, 355
Numerical clerks and cashiers, clerical, retail and bar staff	412-415, 421, 711, 922
Armed forces and public protection service occupations	117, 331, 924
Other occupations	511-629, 712-921, 923, 925
Unknown occupations	No assigned SOC

Note: \*at the 5-digit level

#### Occupation

Occupation was derived using IER recoded data for those who were in work at the time of the L DLHE survey. Occupation categories were coded from responses to Q8 'What was your job title?' using SOC codes as shown in Table 3. These follow the established Vitae categories.

#### Annual salary

Annual salary was calculated using 'Q11 SUMMARY' in the L DLHE dataset. This variable is a composite variable using responses to Q11 in the L DLHE questionnaire where responses may be given annually, monthly, weekly, hourly, or some other time period, and is calculated according to HESA's assumptions about the number of months, weeks, or hours worked in a year<sup>7</sup>. The median is given as a measure

<sup>6</sup> PUBCAT is the variable used in most HESA reporting of DLHE and L DLHE outcomes.

<sup>7</sup> Responses given monthly are multiplied by 12, responses given weekly are multiplied by 52, and hourly wages are multiplied by 1820 (assumes a working week of 35 hours)

of average income (this is the standard measure to use with income data, and is the measure used in HESA reports). Incomes between the fifth percentile and 95th percentile figures are given as a measure of the range of incomes among doctoral graduates.

Salary bands were calculated using Q11 SUMMARY, and the main reporting categories were: £25,000 or less; £25,001 to £30,000; £30,001 to £40,000; £40,001 to £50,000; and £50,001 or more. However to compare with masters and first degree graduates salaries a slightly different categorisation was used: less than £25,000, £25,000 to £29,999, £30,000 to £39,999, £40,000 to £49,999, and £50,000 or more.

In the main, annual salary data presented in the report are based on those in full-time work in the UK to avoid issues around comparability of income between those working in full-time and part-time work as the income variables used cannot account fully for full-time equivalence (FTE).

### 1.4.4 Establishing the occupational clusters

The occupational clusters used in the analysis were derived using a combination of information on employment sector and work occupation, using the definition of researchers and HE researchers developed in previous Vitae publications<sup>8</sup> as a starting point. Those in work (as their main activity) at the time of the L DLHE survey (where Q2 was equal to '1 - Employed, either full-time or part-time') were assigned to an occupational cluster using IER recoded SIC and SOC data as follows:

- **'HE research occupations'** – all those working in the HE sector (SIC code 8030) working in any of the occupations listed in Table 4
- **'Research (not in HE sector)'** – all remaining respondents working as researchers or scientists and mathematicians (SOC codes 211 and 232) who were not working in the HE sector
- **'Teaching and lecturing in HE'** – respondents working in the 'Higher Education Teaching Professionals' group of SOC codes (23110 to 23114). This consists of those describing their occupation as 'HE professors', 'HE lecturers', 'teacher training college lecturers' and 'university tutorial and teaching assistants'
- **'Other teaching occupations'** – this cluster consists of all other teaching professionals (SOC codes 23120 to 23194), including 'Further education teaching professionals', 'Secondary

**Table 4: Occupations included in 'HE research' occupational cluster (5-digit SOC level)**

SOC	Occupation	SOC	Occupation
21110	Chemists	21240	Electronic engineers
21111	Research/development chemists	21241*	Broadcasting engineers
21112*	Analytical chemists	21242	Avionics, radar and communications engineers
21120	Biological scientists and biochemists	21250	Chemical engineers
21121	Biochemists and medical scientists	21260	Design and development engineers
21122	Biologists	21270*	Production and process engineers
21123	Bacteriologists and microbiologists	21280*	Planning and quality control engineers
21124	Botanists	21281*	Planning engineers
21125*	Pathologists	21282*	Quality control engineers
21126	Agricultural scientists	21290	Engineering professionals (not classified elsewhere)
21127	Physiologists	21291	Metallurgists and material scientists
21130	Physicists, geologists and meteorologists	21293*	Heating and ventilating engineers
21131	Physicists	21294*	Food and drink technologists (including brewers)
21132*	Geophysicists	21295*	Acoustic engineers
21133	Geologists, mineralogists etc	213	Information and communication technology professionals
21134	Meteorologists	22113	Specialist registrars, consultants and general practitioners
21135	Astronomers	22120	Psychologists
21136	Mathematicians	22121	Education psychologists
21210	Civil engineers	22122	Clinical psychologists
21211*	Water, sanitation, drainage and public health engineers	22123*	Occupational psychologists
21212*	Mining, quarrying and drilling engineers	22130*	Pharmacists/pharmacologists
21213*	Construction engineers	22131	Pharmacists
21220	Mechanical engineers	22132	Pharmacologists
21221	Aeronautical engineers	22160*	Veterinarians
21222*	Automobile engineers	23210	Scientific researchers
21223*	Marine engineers	23220	Social science researchers
21224*	Plant and maintenance engineers	23290	Researchers (not classified elsewhere)
21230	Electrical engineers	23291*	Researchers (media)
21231*	Electricity generation and supply engineers	23292	Researchers (university - unspecified discipline)
21232*	Telecommunications engineers		

Notes: \*Although there were no cases in these occupations in the dataset we analysed, for consistency of approach respondents in these occupations should be coded as HE researchers when the SIC code is 8030.

<sup>8</sup> Vitae (2009). 'What Do Researchers Do? First destinations of doctoral graduates by subject'. The Careers Research and Advisory Centre (CRAC) Ltd.

**Table 5: Occupations included in 'other common doctoral occupations' cluster (4-digit SOC level)**

SOC	Occupation
1111	Senior officials in national government
1112	Directors and chief executives of major organisations
1113	Senior officials in local government
1114	Senior officials of special interest organisations
1121	Production, works and maintenance managers
1122	Managers in construction
1123	Managers in mining and energy
1131	Financial managers and chartered secretaries
1132	Marketing and sales managers
1133	Purchasing managers
1134	Advertising and public relations managers
1135	Personnel, training and industrial relations managers
1136	Information and communication technology managers
1137	Research and development managers
2421	Chartered and certified accountants
2422	Management accountants
2423	Management consultants, actuaries, economists and statisticians
3531	Estimators, valuers and assessors
3532	Brokers
3533	Insurance underwriters
3534	Finance and investment analysts/advisers
3535	Taxation experts
3536	Importers and exporters
3537	Financial and accounting technicians
3539	Business and related associate professionals NEC

education teaching professionals', 'Primary education teaching professionals', 'Special needs teaching professionals', 'Education officers', 'Registrars' and 'Teaching professionals NEC'

■ **'Other common doctoral occupations'** – to derive this cluster, analysis was carried out using the Labour Force Survey (LFS) to identify occupational groups at the three-digit SOC level with a high volume of doctoral graduates working in them<sup>9</sup>. The three-digit SOC codes identified in the analysis were: 111, 112, 113, 212, 213, 221, 242, and 353. Respondents working in any of these three-digit SOC codes and

not already in one of the above four occupational clusters were classed as 'other common doctoral occupations'. Table 5 shows the occupational groups at the four-digit SOC level included in this cluster. Table 6 shows the most common occupational groups in this cluster at the three digit SOC level

■ **'Other occupations'** – this cluster consists of respondents who were in work as their main activity and were working in any other occupation not already described above. Common occupations at the three-digit SOC level in this cluster can be seen in Table 7.

**Table 6: Most common occupations in 'other common doctoral occupations'**

Other common doctoral occupations (3-digit level)	%
Corporate managers and senior officials (111)	2.6
Production managers (112)	4.1
Function managers (113)	18.5
Engineering professionals (not research) (212)	14.2
Information and communications technology professionals (not research) (213)	9.5
Health professionals (not research) (221)	36.0
Business and statistical professionals (not research) (242)	7.0
Business and finance associate professionals (353)	8.1

Base: All doctoral graduate respondents in employment in the UK in 'other common doctoral occupations'. N=400. Only the most common occupational groups are listed

Source: 'Destinations of Leavers from Higher Education Longitudinal Survey Report 2004/05', 2009 (IES analysis)

**Table 7: Most common occupations in 'other occupations'**

Other occupations (3-digit level)	%
Managers and proprietors in other service industries (123)	11.6
Science and engineering technicians (311)	8.5
Artistic and literary occupations (341)	9.4
Sales and related associate professionals (354)	7.8
Public service and other associate professionals (356)	9.9

Base: all doctoral graduate respondents in employment in the UK in 'other occupations'. N=233. Only the most common occupational groups are listed (above 5%)

Source: 'Destinations of Leavers from Higher Education Longitudinal Survey Report 2004/05', 2009 (IES analysis)

<sup>9</sup> This analysis utilised aggregated quarterly LFS data consisting of the 12 quarters from July 2005 to July 2008. High volume occupational groups were defined as SOC codes containing 4,000 or more PhD graduates.

## 1.5 Additional qualitative research

To support the quantitative analysis of destinations data (DLHE and L DLHE) a small number of interviews with those involved in the funding and training of postgraduate researchers were undertaken along with focus groups of doctoral graduates who had completed the L DLHE survey.

### 1.5.1 Stakeholder discussions

In commissioning the study, RCUK felt it was important to gather the views of key stakeholders, those involved in the funding and training of doctoral graduates, particularly in terms of measuring the impact of research and gaining a true picture of doctoral graduate careers. This would provide insights that would ensure the analysis would be relevant and focused on issues of widespread interest.

A range of stakeholders were consulted during May and June 2009, using a discussion guide devised in consultation with RCUK. In total 21 individuals agreed to take part in telephone interviews or provide input via email. These individuals represented a number of key organisations including:

- 1994 Group
- Association of Graduate Careers Advisory Services (AGCAS)
- Association of Medical Research Charities (AMRC)
- Biotechnology and Biological Sciences Research Council (BBSRC)
- UK Department for Business, Innovation and Skills (BIS)
- Equality Challenge Unit (ECU)

- Engineering and Physical Sciences Research Council (EPSRC)
- Economic and Social Research Council (ESRC)
- Higher Education Careers Service Unit (HECSU)
- Higher Education Funding Council for England (HEFCE)
- Higher Education Funding Council for Wales (HEFCW)
- CBI Inter-Company Academic Relations Group (ICARG)
- Institute of Physics (IoP)
- Russell Group
- Royal Society of Chemistry (RSC)
- Science and Technology Facilities Council (STFC)
- Universities and Colleges Employers Association (UCEA)
- Universities UK (UUK)
- Vitae
- Wellcome Trust.

Discussion with stakeholders explored:

- expectations of doctoral graduates and challenges they face in the labour market
- dominant career paths of doctoral graduates
- defining success or a positive career outcome for doctoral graduates
- factors influencing outcomes and pathways of doctoral graduates
- the added value of a PhD in academia and in other sectors
- the impact of doctoral graduates on the economy, society and culture.

### 1.5.2 Focus groups with doctoral graduates

In addition to consulting with stakeholders, and in order to inform the analysis of the L DLHE data, a small number of survey respondents were invited to take part in a series of focus group discussions. The groups were designed to gain qualitative feedback from doctoral graduate respondents themselves on how well they felt the survey captured their own experiences (coverage and relevance), to explore any issues around interpretation of specific questions (particularly those aimed at research postgraduates), and to probe on willingness to participate in further research (and what form this should take). These were not designed to be representative but instead to begin to gather qualitative data from a range of research postgraduates.

In total five focus groups were held during August 2009: two in London, one in Scotland, one in the West Midlands and one in the North of England. They tended to be held in the evening to enable a wider range of participants to attend and individuals were given a small sum towards their travel expenses. Twenty-five research doctorates took part – a mix of men and women, from different disciplines, of different ages, with different previous experiences and subsequent career paths (representing academic research and teaching careers, work in the public sector, self employment, and work in the private sector).



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## Vitae

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Vitae works with UK higher education institutions (HEIs) to embed professional and career development in the research environment. Vitae plays a major role in innovating, sharing practice and enhancing the capability of the higher education sector to provide professional development and training for researchers.

Our vision is for the UK to be world-class in supporting the personal, professional and career development of researchers.

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- evidencing the impact of professional and career development support for researchers.

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