

Other social sciences¹⁵

885 UK-domiciled doctoral graduates (24% of SS cohort), 600 respondents (68%) of which 510 entered employment in the UK (2003–2007)

'Other social sciences' contained a higher than average proportion of female doctoral graduates (58%). The percentage who had studied part-time at 43% was close to the SS average of 42%. The combined proportion of those 'entering work in the UK' and 'working and studying in the UK' (85%) was also near average (84% across all SS) (Table 2). The education sector was the most popular destination at 64%. Next was the health and social work sector (16%, the highest proportion in SS), reflecting the make up of this group of subjects (Table 3).

As with all SS subjects analysed, 'education and teaching professional' roles were the prime destination (40%) of other social sciences respondents. This was below the discipline average of 45%. The proportion of respondents specifically employed as HE lecturers (30%) was again below the SS average (34%) but well above that across all disciplines (14%). The second largest group in 'education and teaching professional' roles were FE teaching professionals.

Research roles occur across the different types of employment shown in Figure 10. Analysis of SOCs shows research

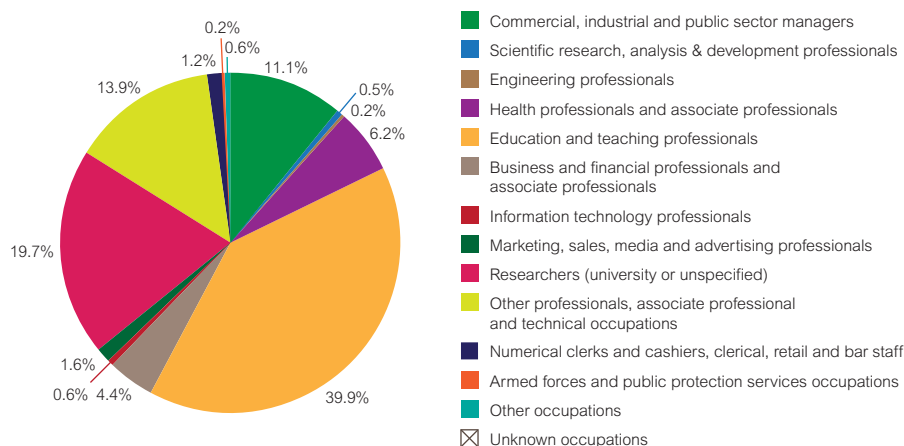


Figure 10: Types of work entered into by UK-domiciled respondents employed in the UK, graduating in 2003–2007 in other subjects in social sciences, based on Standard Occupational Classifications (SOC) returned in the DLHE surveys

occupations accounted for a total of 27% of other social sciences respondents in these subjects employed in the UK. Further analysis showed 21% of UK-employed respondents entered research staff roles in higher education¹⁶. Both are a little above the discipline average of 24% and 18%, respectively.

The only other group of occupations employing a significant proportion of other social science respondents was 'commercial, industrial and public sector managers' (11%), which covered a wide range of managerial occupations.

Academic studies in education

1175 UK-domiciled doctoral graduates, 855 respondents (73%) of which 740 entered employment in the UK (2003–2007)

Over 2003–2007, academic studies in education contained the highest proportion of doctoral graduates who had studied part-time (82%). Female doctoral graduates (62%) were also above the all disciplines average (46%). UK employment rates (87%) were above the average for all respondents (81%), while overseas employment or study (3%) was lower (7% across all disciplines) (Table 2). Unsurprisingly, the dominant destination was the education sector, absorbing 79% (the joint highest proportion of any subjects, with modern languages). Public administration accounted for 9%, compared with only 5% across all disciplines (Table 3).

Overall, 'education and teaching professional' roles accounted for 66% of education respondents (compared with the all disciplines average of 22%). 28% of education respondents were employed as HE lecturers, 38% in other education and teaching roles such as FE teaching professionals, secondary teachers, secondary and primary head teachers and education advisors.

10% of respondents in UK employment were 'commercial, industrial and public sector managers', compared to the all

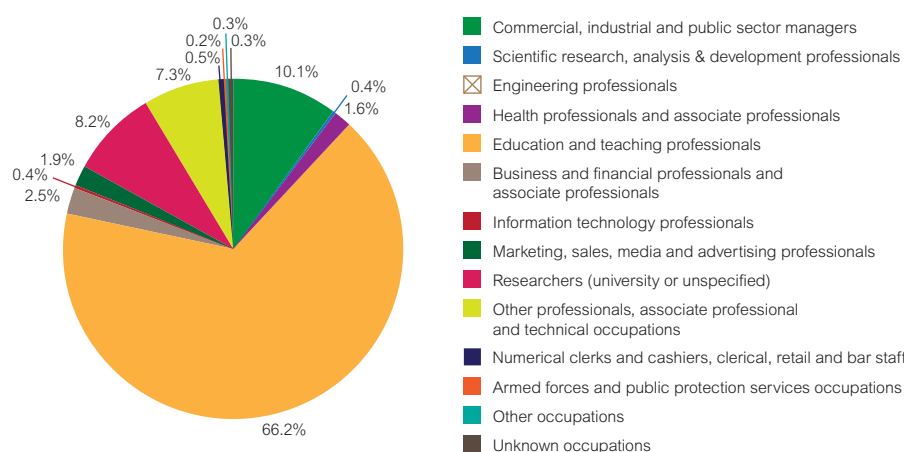


Figure 11: Types of work entered into by UK-domiciled respondents employed in the UK, graduating in 2003–2007 in academic studies in education, based on Standard Occupational Classifications (SOC) returned in the DLHE surveys

discipline average of 7%. Foremost among these were 'registrars and senior administrators of educational establishments', 'research and development managers' and 'directors and chief executives of major organisations'.

Research roles occur across the different types of employment shown in Figure 11. Analysis of SOCs shows research occupations accounted for a total of 10%

of respondents in these subjects employed in the UK. Further analysis showed 9% of UK-employed respondents entered research staff roles in higher education¹⁶. Both are well below the average across all respondents of 35% and 23%, respectively.

All other occupational groups in Figure 11 accounted for fewer than 10% of respondents in UK employment.

¹⁵ Other SS subjects include catering and institutional management, land and property management, marketing and market research, psychology (without a significant element of biological science), transport, other business and administrative studies, and 'other social studies'.

¹⁶ The methods for calculating doctoral graduates employed in research related roles and as research staff HE are given in the methodology chapter.

Methodology

This guide to the methodology used in this publication aims to facilitate comparison of institutional data against the national data¹.

'What do researchers do? First destinations of doctoral graduates by subject' (WDRDS) reports on the doctoral graduate cohort and their first employment destinations using data provided by Higher Education Statistics Agency (HESA). Employment data is collected for UK-domiciled doctoral graduates through the HESA 'Destination of Leavers from Higher Education' (DLHE) survey. The DLHE survey² was introduced in 2004 and each year a questionnaire is sent in January to all UK³ and other EU-domiciled⁴ doctoral researchers who graduated from UK institutions in the previous year. So, for example, the 2008 survey covered those graduating in 2007⁵.

The responses to the DLHE survey enable us to comment on:

- current employment status, eg employment within the UK, unemployment, moved overseas
- first destinations at the level of broad discipline groups and larger subjects and subject groupings⁶
- first destinations broken down by gender and mode of study (part-time cf full-time)
- first destinations in terms of sector of work, eg education, manufacturing
- first destinations in terms of occupations.

The DLHE survey information does not enable us to comment on:

- 'international' doctoral graduates as national data is not collected for this cohort
- outcomes by different forms of doctorates (the survey does not distinguish, for example, professional doctorates from PhDs)
- which 'first destinations' are with new employers and which maintain employment with an existing employer
- career motivation, salary information
- longitudinal career paths of doctoral graduates⁷.

Source data

The raw data come directly from the Destinations of Leavers from Higher Education Survey (DLHE) data, obtained from the Higher Education Statistics Agency (www.hesa.ac.uk).

The subset for survey response results consists of all those who responded to the survey. The subset is further refined by excluding those who were domiciled outside the UK. The data subset for employment sectors and types of work is further refined by excluding those who were working outside the UK.

Survey response categories

Entered work in the UK

Includes those listing their activity as full-time paid work, part-time paid work, voluntary or unpaid work or self-employed, in the UK.

Working and studying

Includes those listing their activity as full-time work and full-time study, full-time work and part-time study, part-time work and full-time study, and part-time work and part-time study.

Working or studying overseas

Includes those listing their activity as full-time paid work, part-time paid work, voluntary or unpaid work, self-employed, or further study overseas.

Entered study or training in the UK

Includes those listing their activity as entered study or training in the UK, and describing it as higher degree by research, higher degree-taught, diploma or certificate or professional qualification, first degree course, private study, or other study or training.

Not available for work or study

Includes those describing their employment circumstances as permanently unable to work, temporarily unable to work, retired, looking after the home or family, and taking time out in order to travel.

Believed unemployed

Includes those describing their employment circumstances as unemployed and looking for employment, further study or training, or due to start a job within the next month.

Other

Includes those describing their employment circumstances as not employed, but not looking for employment; further study or training, or something else.

General

The survey response tables (eg WDRDS Table 1, p.11) present data referring to all responding doctoral graduates domiciled within the UK.

The discipline chapters are grouped by Joint Academic Coding System (JACS) subject codes as defined below.

Responses are categorised by the reported activity and employment circumstances.

¹ This methodology was developed by Dr Charlie Ball of the Higher Education Careers Services Unit (HECSU), based on the methodology developed for the annual first degree destination publication, 'What Do Graduates Do?', produced by HECSU and the Association of Graduate Careers Advisory Services, (AGCAS).

² The DLHE superseded HESA's previous First Destinations Survey which was sent only to full-time UK-domiciled doctoral graduates and provided less information than DLHE.

³ UK-domiciled are those whose normal residence is in the UK, including the Channel Islands and Isle of Man.

⁴ WDRDS does not cover other EU-domiciled doctoral graduates as numbers and responses rates are too low to provide representative data.

⁵ Submissions of doctoral theses and viva examinations occur throughout the year. Therefore, the resulting 'snapshot' of first destinations may record the situation of doctoral graduates anything up to 12 months after the actual completion of their degrees. However, by taking the survey at a fixed date, HESA ensures a consistent start point from which to view the data.

⁶ The doctoral cohort is not large enough to support statistical analysis at subject level for individual years. Five years of data has been combined to allow statistically large enough samples to provide insights into first destinations in the larger subjects.

⁷ The new DLHE longitudinal survey contacts graduates 3.5 years after the initial post graduation survey. The first full survey was undertaken early in 2009 and the analysis of this data will be the subject of a subsequent 'What do researchers do?' publication.

Subject grouping

Subjects are grouped in the discipline chapters by using the JACS codes⁸ as follows:

- **biological sciences:** subjects C1–D9, excluding C8, and including J7
- **biomedical sciences:** subjects A1–B9, and C8
- **physical sciences:** subjects F0–K9, excluding J7
- **social sciences:** subjects L0–N9
- **arts and humanities:** subjects P0–W9
- **other:** refers to subjects in classes X (education) and Y (combined subjects).

Within each discipline, individual subjects and combinations of allied subjects have been selected for analysis where the UK-domiciled doctoral graduate population 2003–2007 totalled at least 250. Remaining subjects have been grouped as eg 'other biological sciences'.

The subjects/subject groupings are as follows:

- **arts and humanities:**
 - history: subjects V1 to V3
 - English: subject Q3
 - modern languages: subjects R1 to R9
 - theology: subject V6
 - linguistics and ancient and classical languages: subjects Q1, Q2 and Q4 to Q6
 - other arts and humanities: all subjects in P, Q, R, T, V and W not covered elsewhere
- **biological sciences:**
 - biology: subject C1
 - biochemistry, molecular biology and biophysics: subject C7
 - microbiology: subject C5
 - agriculture: subject D4
 - other biological sciences: all subjects in C and D not covered elsewhere
- **biomedical sciences:**
 - medicine subjects: A1 and A3
 - psychology: subject C8
 - pharmacology, toxicology and pharmacy: subject B2
 - anatomy, physiology and pathology: subject B1
 - nursing: subject B7
 - others in biomedical sciences: all subjects in A and B not covered elsewhere

- **physical sciences:**
 - chemistry: subject F1
 - physics: subject F3
 - mathematics: subject G1
 - computer science: subject G4
 - physical and terrestrial geographical and environmental sciences: subject F8
 - geology: subject F6
 - electronic and electrical engineering: subject H6
 - mechanical engineering: subject H3
 - civil engineering: subject H2
 - other physical sciences: all subjects in F and G not covered elsewhere
 - other engineering and building: all subjects in H, J and K not covered elsewhere
- **social sciences:**
 - business and management: N1 and N2
 - sociology: subject L3
 - politics: subject L2
 - economics: subject L1
 - human and social geography: subject L7
 - law: subjects M0 to M9
 - other social sciences: all in L, M and N not covered elsewhere
- **other:**
 - academic studies in education: subject X3

Employment sector breakdown

The employment sectors were broken down according to Standard Industrial Classification (SIC) codes⁹.

Employment Sector Standard Industrial Classifications

Education	80
Finance, business and IT	64-67, 72, 74
Health and social work	85
Manufacturing	11, 15, 16, 20, 22-27, 29, 30-36, 40, 41, 73
Public administration	75
Other sectors	1, 2, 5, 45, 51, 52, 55, 60, 62, 63, 70, 71, 91, 92, 99, and unknown

⁸ For the full JACS coding go to www.hesa.ac.uk/jacs/jacs.htm

⁹ For the full SIC codes go to www.hesa.ac.uk/manuals/04018/04018a02.htm

Types of work

The 'type of work' categories are built from the Standard Occupational Classification (SOC) codes¹⁰ as follows:

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 ¹¹ , 22130-22160, 321, 322
Teaching professionals	23111-23160, 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 occupation	117, 331, 942
Other occupations	511-629, 712-921, 923, 925
Unknown occupations	No assigned SOC

Research staff in higher education

One of the primary destinations of doctoral graduates is employment as research staff in HE. However, such researchers are not explicitly identified in the dataset. They have been identified in WDRDS by cross-referencing available information on industrial (SIC) and occupational (SOC) classifications. The total number of first destination HE research staff were identified in the data by the total of all doctoral graduates working in SIC 8030 (Higher Education)¹² who were also classified in the following SOCs:

- 21110 Chemists
- 21111 Research/development chemists
- 21120 Biological scientists and biochemists
- 21121 Biochemists, medical scientists
- 21122 Biologists
- 21124 Botanists
- 21126 Agricultural scientists
- 21127 Physiologists
- 21130 Physicists, geologists and meteorologists
- 21131 Physicists
- 21133 Geologists, mineralogists etc
- 21134 Meteorologists
- 21135 Astronomers
- 21136 Mathematicians
- 21210 Civil engineers
- 21220 Mechanical engineers
- 21221 Aeronautical engineers
- 21230 Electrical engineers
- 21240 Electronic engineers
- 21242 Avionics, radar and communications engineers
- 21250 Chemical engineers
- 21260 Design and development engineers
- 21290 Engineering professionals (not classified elsewhere)
- 21291 Metallurgists and material scientists
- 213 Information and communication technology professionals
- 22120 Psychologists
- 22121 Education psychologists
- 22122 Clinical psychologists
- 22131 Pharmacists
- 22132 Pharmacologists
- 23210 Scientific researchers
- 23220 Social science researchers
- 23290 Researchers (not classified elsewhere)
- 23292 Researchers (university - unspecified discipline)

Doctoral graduates employed in research roles across all sectors were derived from all those employed and giving their jobs as SOC codes 211 and 232.

¹⁰ Data in WDRDS were built from a customised dataset: SOCs are at three digit level except where explicitly stated. For the full SOC listing go to www.hesa.ac.uk/manuals/03018/03018a04.htm

¹¹ In the 'What Do PhDs Do?' series (2004, 2006, 2007) UK GRAD Programme, 22122 clinical psychologists were classified under 'Other professional, associate professional and technical occupations'.

¹² This is a refinement of the methodology used in the 'What do PhDs Do?' series (2004, 2006, 2007) UK GRAD Programme, where it was only possible to cross-reference by SIC 80, (all) Education.

Resources and publications

This page brings together useful resources such as reports and research studies on the careers of researchers, their employability, and UK Government and European policy relating to researcher careers¹.

Careers of doctoral graduates in the UK

'PhD study: Trends and profiles, 1996-97 to 2004-05' (2009), HEFCE
www.hefce.ac.uk/pubs/hefce/2009/09_04/

'Higher Degrees: Postgraduate Study in the UK 2000/01 to 2005/06' (2008), HECSU
www.hecsu.ac.uk/hecsu.rd/research_reports_284.htm

'What Do PhDs Do?' (2004)
www.vitae.ac.uk/CMS/files/1.UKGRAD-WDPD-full-report-Sep-2004.pdf

'What Do PhDs Do? – A Regional Analysis' (2006)
www.vitae.ac.uk/cms/files/UKGRAD-WDPD-regional-analysis-Sep-2006.pdf

'What Do PhDs Do? – Trends' (2007)
<http://www.vitae.ac.uk/policy-practice/14772/What-Do-PhDs-Do-Trends.html>

'What do researchers do? Career profiles of doctorate graduates' Vitae
www.vitae.ac.uk/80/careersstories

Discipline-specific career studies (UK and US)

Arts & humanities

'Career Path Study of PhD students' (2006), DTZ Consulting, Arts and Humanities Research Council
www.ahrc.ac.uk/images/PhD_Report.pdf

'PhDs in Art History: Over a Decade Later' (2003), Sadrozinski, Nerad and Cerny, University of Washington
<http://depts.washington.edu/coe/cirge/html/arthistory.html>

'Doctoral Futures: Career Destinations of Arts and Humanities Research Students' (2002) A copy can be obtained from cihe@btinternet.com

'From Rumors to Facts: Career Outcomes of English PhDs' (1999), Nerad and Cerny,
http://depts.washington.edu/coe/cirge/pdfs%20for%20web/rumors_to_facts.pdf

Biomedical and biological sciences

'Annual survey of UK biochemistry graduate employment' (2003), Biochemical Society
www.biochemsoc.org.uk/education/survey/default.htm

'Career paths of a 1988-1990 Prize Student Cohort' (2000), The Wellcome Trust
www.wellcome.ac.uk/assets/wtd003201.pdf

Physical sciences and engineering

'A Fifteen Year Longitudinal Career Path Study of PPARC PhD Students' (2003) and 'A Study of the Career Paths of PPARC PhD Students' (2003), DTZ Pleda Consulting/PPARC (now Science and Technology Facilities Council)
www.so.stfc.ac.uk/publications/publorderform.aspx#PG

'Employers' Views of Postgraduate Physicists' (2001), Jagger, Davis, Lain, Sinclair E and Sinclair T, IES/EPSC
www.employment-studies.co.uk/pdflibrary/1417phys.pdf

'Postgraduate Career Progression a survey of former SERC funded postgraduates' (2000), Whitfield, National Centre for Social Research/ESPRC. It can be purchased at Natcen
www.natcen.ac.uk/natcen/pages/op_educationand_skills.htm

Social sciences

'The Employment of social science PhDs in academic and non-academic jobs: research skills and postgraduate training' (May 2006), Purcell and Elias, ESRC
www.esrcsocietytoday.ac.uk/ESRCInfoCentre/Images/employment_of_soc_sci_phds_tcm6-15385.pdf

'Career Paths and Training Needs of Social Anthropology Research Students' (2005), Spencer, Mills and Jepson
www.theasa.org/news/careers_research.doc

'The Social Science PhDs - Five Years Out Survey' (2004), Nerad, CIRGE
<http://depts.washington.edu/coe/cirge/html/ford.html>

'Career Outcomes of Political Science PhD Recipients' (2003), Nerad, CIRGE,
<http://depts.washington.edu/cirgeweb/c/publications/260/>

Employability of doctoral graduates in the UK

'Employers' briefing: Targeting the postgraduate and researcher market' (2009) Vitae, AGCAS and AGR
www.vitae.ac.uk/CMS/files/upload/Employers%20Briefing_8pp_A4.pdf

'Employers' views of researchers' skills' (2007) Rugby Team/UK GRAD Programme
www.vitae.ac.uk/cms/files/Rugby-Team-Employers-views-of-researchers-skills-September-2007.pdf

'Recruiting PhDs: What works?' (2007), Jackson, UK GRAD Programme
www.vitae.ac.uk/cms/files/UKGRAD-Recruiting-PhDs-what-works-Mar-2007.pdf

'Employability and doctoral research postgraduates' (2006), Metcalfe and Gray, HEA
www.vitae.ac.uk/cms/files/HEA-ESECT-Employability-postgraduate-researchers-October-2006.pdf

'Survey of employer attitudes to postgraduate researchers' (2006), McCarthy and Simm, University of Sheffield
www.careers.dept.shef.ac.uk/pdf/employersurvey.pdf

'Survey into the career motivations and expectations of doctoral researchers' (2006) UK GRAD Programme
www.vitae.ac.uk/CMS/files/upload/career_expectations_survey.pdf

'EMPRESS: Employers' Perceptions of Recruiting Research Staff and Students' (2005), Souter, University of Leeds Careers Centre
http://careerweb.leeds.ac.uk/downloads/Empress_LR.pdf

'Higher Degrees of Freedom: The Value of Postgraduate Study' (2004) Institute for Employment Studies
www.employment-studies.co.uk/pubs/report.php?id=410

UK policy reviews

The Vitae website has a comprehensive policy section dedicated to UK policy relating to researchers and their professional development
www.vitae.ac.uk/policy-practice/1398/UK-policy.html

'Pathways to the future: the early career of researchers in the UK. A report by the Council for Science and Technology' London (2007) Council for Science and Technology
www.cst.gov.uk/cst/reports/#Pathways

'Leitch Review of skills' (2006)
www.hm-treasury.gov.uk/media/6/4/leitch_finalreport_051206.pdf

'Increasing the Economic impact of the Research Councils - The Worry Report' (2006)
www.berr.gov.uk/files/file32802.pdf

'Code of practice for the assurance of academic quality and standards in higher education' (2004)
www.qaa.ac.uk/academicinfrastructure/codeOfPractice/section2/default.asp

'Lambert Review of Business-University Collaboration' (2003), Sir Richard Lambert, HM Treasury
www.hm-treasury.gov.uk/consultations_and_legislation/ambert/consult_lambert_index.cfm

'SET for Success: the supply of people with science, technology, engineering and mathematics skills' (2002) Sir Gareth Roberts' Review, HM Treasury
www.hm-treasury.gov.uk/documents/enterprise_and_productivity/research_and_enterprise/ent_res_roberts.cfm

'Joint Statement of the UK Research Councils' Training Requirements for Research' Students (2001)
www.vitae.ac.uk/cms/files/RCUK-Joint-Skills-Statement-2001.pdf

International studies and policy reports

Summary of European policy developments and initiatives
www.vitae.ac.uk/policy-practice/1703/Initiatives.html

'Towards an open and competitive European area for research careers: Some basic findings from the Max Weber Programme Academic Careers Observatory' (2008) European University Institute
www.iue.it/MaxWeberProgramme/AcademicCareers/ACODocument2008.pdf

'Labour market characteristics and international mobility of doctorate holders: results for seven countries' (2007) OECD
www.vitae.ac.uk/cms/files/OECD-Careers-Doctorate-Holders-first-data-7-countries-Feb-2007.pdf

'Researchers in the European Research Area' (2007) Bryony Gill and Louise Ackers
www.resistresearch.net/cms/site/docs/WP2_Researchers%20in%20the%20ERA_submission%20Final.pdf

Lisbon Strategy (2000)
www.vitae.ac.uk/policy-practice/2674/Lisbon-strategy.html

The European Research Area (part of the Lisbon strategy)
www.vitae.ac.uk/policy-practice/1707/European-Research-Area.html

The Bologna Process (started in 1999)
www.vitae.ac.uk/policy-practice/1705/Bologna-Process.html

Other career-related resources

The careers section on the Vitae researchers' portal is a comprehensive web-based resource for researchers looking to develop their careers
www.vitae.ac.uk/1270/Careers.html

It includes links to many other sources of online careers support
www.vitae.ac.uk/1679/Websites.html

Vitae also has an expanding number of resources for those supporting the career development of researchers
www.vitae.ac.uk/policy-practice/1392/Resources.html

Higher education institutions have websites with very useful resources to support the career development of their researchers, for example through university careers services, staff development units and graduate schools

Individual HEI careers services can be accessed through the Association of Graduate Careers Advisory Services (AGCAS)
www.agcas.org.uk/people/regional_groups_of_member_services

Many professional and learned societies also offer careers support to researchers

'Beyond the PhD' A career resource for arts and humanities PhD researchers
www.beyondthephd.co.uk

¹ All links were retrieved May 2009.



Incorporating the UK GRAD Programme and UKHERD

Vitae builds on previous work by the UK GRAD Programme and UKHERD. Vitae is supported by Research Councils UK (RCUK), managed by CRAC: The Career Development Organisation and delivered in partnership with regional Hub host universities.

The role of Vitae is to work 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 of researchers.

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

To achieve our vision we have four aims:

- championing the development and implementation of effective policy
- enhancing higher education provision through sharing practice and resources
- providing access to development opportunities and resources
- building an evidence base to support the researcher development agenda.

For further information about the range of Vitae activities go to www.vitae.ac.uk or contact enquiries@vitae.ac.uk

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