

Careers in Research Online Survey (CROS) 2009

Analysis of aggregated UK results



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The CROS Steering Group exists to ensure the appropriateness and sustainability of CROS and its associated activities in collecting and reporting the views and experiences of research staff employed in higher education.

www.cros.ac.uk

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Foreword

I am delighted to introduce the CROS 2009 report, which presents the key findings emerging from the recent survey of research staff in higher education institutions. It will be useful for those looking at the national picture and for those at the institutional level who want to see how they compare. The evidence presented here is due to the work of the staff who implemented and managed CROS within the participating institutions and they deserve our thanks for their efforts.

The importance of research within UK higher education, and hence of the researcher development agenda, is well recognised. What is less clear is precisely what can be done to foster the development of researchers so that they can benefit themselves, their discipline and their institutions. CROS provides the evidence to promote these developments.

The overall picture from CROS is a positive one. Recruitment processes are generally transparent; most researchers feel valued; institutions appear to recognise the importance of supporting career development; about half of all researchers have a career plan; and the vast majority of researchers believe their institutions are committed to equality and diversity.

Nevertheless there are variations and there are concerns. These are addressed in our recommendations, the last of which is that institutions should identify areas of good practice and share these with the rest of the sector through the CROS and Vitae networks. This exchange will help researchers themselves and enhance their contribution to the UK's research agenda.

I commend this report to both national stakeholders and those within institutions interested in developing researchers and researcher careers.



Dr Andrew Wilson
Loughborough University
Chair, CROS Steering Group

Executive summary

This summary provides:

- an introduction to CROS
- key findings
- recommendations

An introduction to CROS

The supply of highly skilled researchers has been recognised as critical to supporting the UK research base and the economic and cultural success of the UK. This publication reports findings from the Careers in Research Online Survey (CROS), conducted by higher education institutions (HEIs) in spring 2009. CROS is designed to gather the anonymous views of research staff in UK HEIs about their experiences, employment, career aspirations and career development.

Of the 51 institutions participating in CROS 2009, Russell Group and 94 Group institutions were strongly represented. Collectively, the institutions represented 74% of an estimated UK research staff population of approximately 38,000. The 5,908 responses equate to a 21% response rate for the target sample, or 16% of the total UK research staff population.

Comparison of the demographic information with known information about the UK research staff population confirms that the respondents are representative. The high response rate, and strong statistical confidence afforded by the large sample size, suggests that responses will be representative of the UK research staff population.

Thus CROS 2009 offers a valuable snapshot of the experiences and attributes of the UK's current research staff in higher education. The results will be invaluable to those looking at the national picture, particularly in relation to implementation of the principles of the Concordat to Support the Career Development of Researchers. It also offers individual institutions the opportunity to compare their institutional results with the UK aggregate.

Key findings

Overall the messages from CROS are positive. Most researchers feel valued, are satisfied with their work-life balance and believe their institutions are committed to equality and diversity. Institutions appear to recognise the importance of supporting career development and there is clear improvement in the uptake of induction, appraisal, and training and development opportunities by research staff compared to previous CROS results.

Most research staff are integrated within their departmental research community, and stimulated by their institution's research culture.

However, there is still much that could be done, particularly in institutions recognising the wider contributions of research staff, encouraging research staff to be more realistic in their career aspirations and to be more active in their career development planning.

There are groups of researchers, such as those who have had multiple, short-term contracts and/or long service through fixed-term contracts, who do not feel integrated within the institution, and report less positive feelings about their employer, job and career.

Findings related to the Concordat to Support the Career Development of Researchers include:

Recruitment and selection

Generally, recruitment and selection of research staff within higher education appears to be an open and transparent process. However, there appears to be a strong dependence on word of mouth in recruitment and interviewing procedures could be improved.

Recognition and value

Most respondents appear to enjoy their jobs, have a satisfactory work-life balance, and feel valued by their institution in most respects, particularly for their research-related activities. However, up to a third do not feel that their wider contributions are recognised, and some research staff do not feel they are valued equally with lecturing staff at an equivalent level.

Support and career development

Most respondents believe that they are being encouraged to consider their career development and feel able to talk to their manager about this. The availability and take-up of training and development activities appears to be rising.

More than half of respondents have long-term career aspirations in HE. Just over a third have aspirations of a career outside HE. Few currently visit their careers service or seek advice from development staff.

Researchers' responsibilities

Most respondents appear to be well informed about issues closely related to their own role and research, but less well-informed about wider issues such as progression opportunities and the operations of their departments and institutions.

Taking ownership of one's own career appears to be a significant motivating factor.

Many report enthusiasm for training in research and personal development skills, but have not yet taken advantage of such opportunities.

Diversity and equality

Almost all respondents believe that their institution is committed to diversity and equality and a large majority believe staff are treated fairly by the HEI.

However, a tenth believe that they have experienced unfair discrimination in their current post.

Implementation and review

CROS 2009 has emerged as a valuable tool in gathering the views and experiences of research staff. The results should be used to inform both national and institutional activities to support the implementation of the Concordat's principles.

Institutions are encouraged to compare their data with the aggregate results. Providing feedback to both respondents and non-respondents of the findings and subsequent actions will further demonstrate institutions' commitment to research staff.

Although comparison with the CROS aggregate results is valuable, the real benefit to institutions will come from longitudinal comparison of institutional data. Future participation in CROS will provide HEIs with valuable comparative data to assess progress against implementation of the Concordat principles.

The CROS Steering Group will continue to develop CROS, asking institutions to feed back their experiences of participating in CROS 2009, encouraging the sharing of practice and future participation. CROS 2009 also provides a rich data set worthy of further analysis, particularly to explore sub-populations.

Recommendations

These are presented under the six principles of the Concordat.

Recruitment and selection

- Institutions should ensure that all recruitment policies are open and transparent, for example all vacancies should be promoted and advertised externally
- Ensure that departments and principal investigators are aware of and follow institutional recruitment policies and procedures, including providing job descriptions to all postholders
- Wherever possible, all short-listed applicants should be interviewed by their prospective principal investigator/line manager, people from outside the immediate department should sit upon interview panels and opportunities for informal discussion with other researchers should be made available
- All institutions should ensure that new appointees are offered induction to their role and department/institution, and provided with copies of relevant documentation, such as the HEI's research strategy, code of practice, probationary requirements and information about career development opportunities

Recognition and value

- All eligible researchers should undertake regular reviews and appraisal; most research staff report these to be useful
- Appraisal processes should also address work practices and problem-solving
- Institutions should consider how they can recognise more fully the contribution of researchers, beyond their research activities
- Institutions should identify any sub-populations of researchers who do not feel integrated into their departmental or institutional communities and help them to explore career development strategies

Support and career development

- Research staff should be encouraged to engage more actively in career development planning, using the experience of their managers, staff developers and careers advisors
- Institutions should increase and promote the provision of information and advice about careers, career progression and application processes within and outside academia
- Careers services should explore ways to improve their engagement with researchers
- Institutions should recognise and build upon the desire for training/support for career management and personal development planning, through increased availability of and/or promotion of existing support in this area
- HEIs should further promote the value of transferable skills (such as team-working) for future employability in order to increase the level of take-up of development activities
- Institutions should explore how to provide more placement and secondment opportunities to broaden experiences of researchers and widen their career aspirations

Researchers' responsibilities

- Managers and staff developers should stress that researchers need pro-actively to take responsibility for their own development and career planning, including being informed about their employment and progression and how to participate in a range of wider activities
- Researchers need to be proactive in seeking out sources of information and advice in relation to career progression and employment, many of which exist already within institutions. There may be scope for career specialists and staff developers to promote the opportunities they offer more widely
- Institutions should find mechanisms to assist researchers in recording and articulating their personal contributions to facilitate full recognition of researchers' contributions, particularly outside their direct research activities

Diversity and equality

- Review institutional policies for unjustified inequalities between research staff and lecturers, particularly in promotion and progression and in participation in departmental and institutional decision-making processes
- Ensure the institution's commitment to valuing researchers is communicated effectively to researchers and their managers and implemented in practice
- HEIs should review the free text responses provided by respondents in order to explore in more detail issues around discrimination

Implementation and review

- Institutions are encouraged to compare their own response data with the aggregate responses presented here, taking into account local conditions and cohorts
- Institutions are encouraged to provide feedback to their research staff, both respondents and non-respondents, about their CROS results and subsequent actions
- HEIs should engage in benchmarking groups and other activities to share knowledge and practice, enabling comparison between institutional populations
- Institutions should be encouraged to take part in future CROS surveys and those that have run surveys both feed back their experiences to the Steering Group and also promote the benefits to colleagues in non-participating institutions
- The aggregate responses should be used to inform national activities to support the implementation of the Concordat's principles
- The CROS Steering Group should commission further analysis of sub-populations of the aggregate results, eg by broad subject areas, employment status
- Institutions should identify areas of good practice and share these with the rest of the sector through the CROS and Vitae networks

1 Introduction

Research within the higher education sector has been recognised as critical to the economic and cultural success of the UK¹. In producing 8% of the world's academic papers and 13% of the world's most highly cited works, the UK ranks second only to the USA in research outputs. Research staff in higher education are central to this achievement.

This is well recognised by the government and has been embedded in the UK's 10-year Science and Innovation Investment Framework (2004)². The Leitch Review³, with its focus on developing the UK's skill base, and the Worry Report⁴, looking at the economic impact of Research Council funding, have both emphasised the importance of developing research staff and their careers.

This report presents findings from the 2009 Careers in Research Online Survey (CROS). CROS is a web-based survey designed to gather the anonymous views of research staff in UK higher education institutions (HEIs) about their experiences, career aspirations and career development opportunities. The development of CROS is described in Appendix 1.

This report presents an overview of the aggregated UK results from the CROS surveys run by 51 HEIs between 2 March and 8 June 2009. It gives a snapshot of the views of research staff respondents and provides a national context against which individual institutions can compare and evaluate the data collected in their own CROS survey.

The report covers the context in which the 2009 survey was conducted, and presents aggregated results (responses) to the core questions common to all HEI surveys. These have been divided into two main sections. In the first we focus on the engagement of research staff with their current employer (institution), while the second principally considers issues in relation to researchers' career development. Certain key findings, emergent themes and practical implications are then identified. The full set of aggregate responses, in percentage form, is also given against each of the questions in Appendix 2. Information on the analysis of the data is presented in Appendix 3.

2 Context

2.1 Research Careers Initiative

Much of the drive to improve the working conditions and career development opportunities for researchers and enhance the international reputation of UK research training can be traced back to the Research Careers Initiative (RCI)⁵ and the 1996 Concordat on career management for postdoctoral researchers. The Concordat set out standards for the career management and conditions of employment of researchers employed on fixed-term or similar contracts and funded through research grants or analogous schemes. The RCI has played a key role in ensuring that the important contribution of research staff is more widely recognised and in identifying and encouraging good practice in researcher career management.

In the final report of the Research Careers Initiative⁶, published in 2002, Lord Sainsbury of Turville, then Minister for Science, Department of Trade and Industry, reflected on how much progress had been made in the years since the RCI was set up:

'First, national and institutional policies for research staff are unquestionably far clearer and stronger than ever they were five or six years ago. This framework has been an essential prerequisite for all that followed. Another key advance has been the development of good practice models for staff appraisal, in-service training, personal transferable skills and career guidance. Development of monitoring and evaluation systems to push forward a process of continuous improvement in training and personnel policies has been another important step.

Yet I know that, in spite of all this, there is still some disappointment that improvements are not yet taking effect in all the areas we might like to see – in greater security of employment for more staff, greater clarity of career paths, and more take-up of the excellent provision that is available. Isolated from wider national and institutional developments, the day-to-day experience of many individual research staff has, too often, not changed substantially for the better.'

¹ DfES (2003) The Future of Higher Education, London: HMSO www.dcsf.gov.uk/hgateway/strategy/hstrategy/research.shtml

² Science & innovation investment framework 2004-2014 www.hm-treasury.gov.uk/spending_sr04_science.htm

³ Prosperity for all in the global economy – world class skills. www.hm-treasury.gov.uk/leitch_review_index.htm

⁴ Increasing the economic impact of the Research Councils. www.rcuk.ac.uk/innovation/impact/worry.htm

⁵ Research Careers Initiative www.universitiesuk.ac.uk/aboutus/associatedorganisation/partnerships/Pages/Research-Careers-Initiative.aspx

⁶ Research Careers Initiative Final Report www.universitiesuk.ac.uk/aboutus/associatedorganisations/partnerships/Pages/Research-Careers-Initiative.aspx

2.2 SET for Success

Sir Gareth Roberts' review, 'SET for Success'⁷ (2002), acknowledged that much more remained to be done and took forward the work of the Research Careers Initiative through its recommendations relating to research staff and research careers, calling for:

- funding for academic fellowships
- opportunities for industrial secondments
- clear career development plans for researchers and access to appropriate training opportunities
- improved salaries for research staff.

His recommendation 5.3 (see panel), and the associated government funding, has been critical in driving forward what has become known as the 'Roberts' skills agenda'.

Recommendation 5.3:

A vision for postdoctoral researchers

It is important for postdoctoral researchers to be able to develop individual career paths, reflecting the different career destinations – Industrial, Academic and Research Associate – open to them, and that funding arrangements reflect the development of these career paths. The Review believes that enabling the individual to establish a clear career path, and a development plan to take them along it, is critical to improving the attractiveness of postdoctoral research. The Review therefore recommends that HEIs take responsibility for ensuring that all their postdoctoral researchers have a clear career development plan and have access to appropriate training opportunities – for example, of at least two weeks per year. The Review further recommends that all relevant funding from HEFCE and the Research Councils be made conditional on HEIs implementing these recommendations.

2.3 Concordat to Support the Career Development of Researchers

Sir Gareth Roberts was also Chair of the then Research Careers Committee, a sub-group of the Research Base Funders' Forum⁸, set up to allow governmental and non-governmental funders of public good research to consider the collective impact of their strategies on the sustainability, health and outputs on the research base. One of the outcomes of this committee was to recommend the need for a new Concordat for research staff.

The Concordat was revised during 2007 by a UK higher education sector working group, co-ordinated by UUK and Research Councils UK (RCUK). This group mapped the existing UK legislation, guidelines and good practice against the recently launched European Charter and Code of conduct for the recruitment of researchers⁹ to provide a comprehensive mapping of UK policy and practice.

A sector-wide consultation on the overall framework of the draft Concordat, its principles and content was undertaken in 2007. There was consensus from the consultation that implementation was key and that the Concordat will only provide a framework for future progress if considerable effort is put in place to ensure that it has a higher and more sustained profile than the 1996 Concordat. The revised Concordat was launched in June 2008.

The Concordat to Support the Career Development of Researchers embodies seven key principles:

1. Recognition of the importance of recruiting, selecting and retaining researchers with the highest potential to achieve excellence in research
2. Researchers are recognised and valued by their employing organisation as an essential part of their organisation's human resources and a key component of their overall strategy to develop and deliver world-class research
3. Researchers are equipped and supported to be adaptable and flexible in an increasingly diverse, mobile, global research environment
4. The importance of researchers' personal and career development, and lifelong learning, is clearly recognised and promoted at all stages of their career
5. Individual researchers share the responsibility for and need to pro-actively engage in their own personal and career development, and lifelong learning
6. Diversity and equality must be promoted in all aspects of the recruitment and career management of researchers
7. The sector and all stakeholders will undertake regular and collective review of their progress in strengthening the attractiveness and sustainability of research careers in the UK

⁷ SET for Success: The supply of people with science, technology, engineering and mathematics skills (2002) www.hm-treasury.gov.uk/ent_res_roberts.htm

⁸ Research Base Funders' Forum www.dius.gov.uk/science/science_funding/funders_forum

⁹ European Charter and Code of conduct for the recruitment of researchers www.vitae.ac.uk/policy-practice/2667/European-Charter-and-Code.html#euro

2.4 RCUK Research Careers and Diversity Team

The creation of the Research Councils UK Research Careers and Diversity Team (RCDT)¹⁰ in 2005 further reinforced the government's commitment to developing the UK's research capacity. The RCDT's strategy has three overarching aims:

- to ensure that the best potential researchers are attracted into research careers
- to help universities to improve the quality of their research training and improve the employability of early stage researchers
- to improve retention of the best researchers by promoting better career development and management of research staff in research organisations.

It also has two crosscutting aims:

- to promote diversity within the research workforce at all levels and in the governance of research
- to enhance the attractiveness of the UK as a destination for the best researchers.

2.5 Vitae

As part of its activities to achieve these aims, RCUK funds Vitae¹¹ which is managed by CRAC¹² and was launched in June 2008. Vitae's vision is for the UK to be world-class in supporting the personal, professional and career development of researchers. It aims to achieve this by:

- 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.

One of Vitae's activities has been to support the redevelopment, management and future of CROS. Vitae financed the revision of the CROS question set, provided sector input to the project through the Vitae Hubs and its Research Staff Development Advisory Group (ReSDAG) and actively encouraged HEIs to participate in the 2009 survey, through the Hubs, ReSDAG, newsletters and events.

2.6 CROS

CROS is a web-based survey designed to gather anonymously the views of research staff in UK higher education institutions (HEIs) about their experiences, career aspirations and career development opportunities. It was originally developed through a project funded by HEFCE, SHEFC and the DTI/OST (now BIS) and included the creation of the Bristol Online Survey tool (BOS). The first survey was run in 2002 and repeated annually through to 2006. Participation was open to all HEIs and 53 HEIs have participated in at least one year.

HEIs participating in CROS recognised the value of being able to gather the views of research staff within their institution. One of the strengths of CROS is the ability to compare institutional results against the UK aggregate of all participating HEIs and to track changes over time.

Since the loss of project funding in 2005, CROS has primarily been self-funded by institutions through BOS licence revenues and managed by the BOS service team and the commitment of the Steering Group. The Steering Group acknowledged that this was not a sustainable long-term solution. For example, no funding has been available to undertake and publish a report of the CROS aggregate results since 2002. Vitae has agreed to continue to support the administration of the CROS Steering Group and provide resources and strategic leadership for the analysis and publication of the annual UK aggregate results.

In 2008 the CROS Steering Group agreed to raise the profile of CROS, encouraging more institutions to participate and to update the CROS questionnaire, particularly taking into account the principles of the revised Concordat to Support the Career Development of Researchers.

CROS is seen as a key tool for both individual HEIs and the HE sector collectively in reviewing progress of achieving the principles of the Concordat. Professor Sir Ivor Crewe, Chair of the Concordat Implementation Strategy Group, in a letter to vice-chancellors, highlighted the value of CROS to the sector and the implementation of the Concordat.

'Within the Concordat itself it is recognised that benchmarking and regular review of progress is required in order to assess impact and effectiveness. We will shortly, therefore, embark on a number of projects and activities to assist with this task. As far as possible we are looking to utilise and build on any monitoring or data collection processes already in place. In this regard I would like to alert you to the 2009 Careers in Research Online Survey (CROS) and encourage your institution to take part. This will greatly assist all of us in implementing the Concordat.'

¹⁰ RCUK Research Careers and Diversity Team www.rcuk.ac.uk/rescareer/rcdu/default.htm

¹¹ Vitae www.vitae.ac.uk

¹² CRAC: The career development organisation www.crac.org.uk

3 CROS 2009

3.1 Target audience

CROS is targeted at research staff employed in higher education institutions. While it is difficult to arrive at a common definition for research staff across every institution in the UK, the CROS Steering Group has used the definition contained in the Concordat to Support the Career Development of Researchers:

'Researchers are broadly defined as individuals whose primary responsibility is to conduct research and who are employed for this purpose. It is recognised that this broad category of staffing covers a wide range of staff with different disciplinary backgrounds, levels of training, experience and responsibility, types of contract (fixed or open-ended, full- or part-time), and different career expectations and intentions.'

The emphasis on 'primary' responsibility is intended to exclude those who are in a research support role and it also intended that lecturers are not included in this definition.'

Individual HEIs were responsible for identifying their target sample and promoting the survey to potential participants.

3.2 Methodology

CROS 2009 comprised a series of parallel surveys conducted by individual HEIs, all hosted on BOS, which provides a secure web environment for the design, delivery, administration and analysis of online surveys. Individual HEIs' surveys contained a core of voluntary questions common to all, as well as bespoke questions inserted by the particular HEI. Linkage of the surveys through the BOS tool enabled collation of the results to the core questions on a confidential basis to protect the anonymity of individual respondents and their institutions.

A new core question set was developed for the 2009 survey reflecting the principles of the Concordat to Support the Career Development of Researchers and structured in five sections:

1. Recruitment and selection (questions 1-6)
2. Recognition and value (questions 7-12)
3. Support and career development (questions 13-29)
4. Equality and diversity (questions 30-34)
5. About you (questions 35-46)

The revised survey was subject to sector input and review and was trialed with research staff from a range of institutions, under the guidance of the CROS Steering Group. The wording of questions can be seen in Appendix 2. The membership and terms of reference for the CROS Steering Group is presented in Appendix 4.

Administrative support and technical support was provided by staff from The Institute for Learning and Research Technology (ILRT) at the University of Bristol. Vitae provided administrative support and resources for the Steering Group and has conducted the analysis and prepared this publication on behalf of and under the direction of the CROS Steering Group.

The responses from CROS offer an extremely rich dataset worthy of deep analysis. It was agreed with the CROS Steering Group that the primary scope of analysis for this report would be restricted to the overall aggregate data to provide a UK overview.

Given the varied environments, infrastructure and practice to support researchers within individual universities, responses from a particular HEI cohort may well differ markedly from the aggregate responses reported here. We believe that the institutions' own data will be most useful for institutions to assess their particular progress with embedding the Concordat principles.

4 The sample: responses and demographics

4.1 Participation and response rates

Fifty-one HEIs participated in CROS 2009. This consisted of 16 of the 20 Russell Group¹³ institutions and 12 of the 18 1994 Group¹⁴ institutions. The balance of 23 institutions was from a range of other, mainly small and specialist institutions.

Individual HEIs are responsible for identifying their research staff populations. Based on these figures, the total target population was 28,165 research staff. This represents 74% of the total research staff population reported by HESA of just less than 38,000¹⁵.

At the point of formal survey closure, 8 June 2009, 7,482 research staff participated in the survey, of whom 5,908 completed questionnaires. The balance of 1,574 questionnaires was excluded as in most cases respondents had answered only the first few questions. A more detailed discussion of the issue of incomplete responses is presented in Appendix 3.

The 5,908 completed responses represent an overall response rate of 21%, which is high in comparison with many large economic and social research surveys. Overall, the mean response rate achieved by Russell Group institutions was 20%, 24% for 1994 Group institutions and 26% for other institutions (Table 1).

The number of responses to CROS 2009 compared well with previous CROS surveys, with almost twice as many responses being received. Although a published aggregate analysis only exists from the 2002 CROS survey¹⁶, limited information is also available from CROS surveys in 2005¹⁷ and 2006¹⁸. The 2002, 2005 and 2006 surveys each elicited just over 3,000 responses, and reported response rates of around 23%.

Although the 2009 response rate was marginally lower at 21%, the participation of many more HEIs in the 2009 survey meant that the proportion of the total UK research staff population reached (estimated at 16%) was much higher in 2009 than in previous surveys.

	CROS 2009	CROS 2005	CROS 2002
Completed questionnaires & response rate	5908 21%	3446 23%	2964 24%
Population sampled	28165	~15000	~12500
Participating HEIs	51	24	17
Russell Group HEIs	16 of 20 members 71% of respondents	10	6
94 Group HEIs	12 of 18 members 15% of respondents	7	2
Other HEIs	23 14% of respondents	7	9

Table 1 Participation and response rates in CROS 2009, compared with previous CROS participation

4.2 Demographics of the response sample

Section 5 of the questionnaire posed a series of questions to gain information about the demographic characteristics of the research staff respondents. Responses to selected demographic questions are summarised in Table 2, and comparisons made, where feasible, with the relevant HESA staff resources information (2007/2008).

Relatively few demographic studies have been carried out specifically with research staff and it is hoped that the information here will add to our knowledge about this population.

	CROS 2009	HESA 2007/08
Age	Under 30: 23% 30-44: 61% 45 and over: 16%	30 & under: 34% 31-45: 51% Over 45: 14%
Gender	Male: 45% Female: 55%	Male: 54% Female: 46%
Status	Full-time: 87% Part-time: 13%	Full-time: 84% Part-time: 16%
Nationality	UK: 75% Non-UK: 35%	n/a

Table 2 Summary of demographic characteristics of CROS 2009 respondents (from Section 5 of survey), compared with known parameters of the UK research staff population (HESA 2007/08)

¹³ The Russell Group www.russellgroup.ac.uk

¹⁴ The 94 Group www.1994group.ac.uk

¹⁵ HESA (2009). Resources of Higher Education Institutions 2007/08, 'research-only staff'

¹⁶ Contract Research staff Online Survey (CROS): Summary analysis of 2002 results www.vitae.ac.uk/policy-practice/1700/Initiatives.html

¹⁷ Research Career Mapping Tool (2006), Appendix B3, Review of the Careers in Research Online Survey (CROS) results for 2005 www.vitae.ac.uk/cms/files/RCMT-project-report-March-2006.pdf

¹⁸ CROS (2006) unpublished data. Selected statistics with permission of the CROS Steering Group

In terms of age (question 40), 23% of respondents to CROS 2009 were under 30 years old, 61% were aged 30-44 and 16% were 45 years or over, broadly similar to that seen for researchers across the UK in the latest HESA data. Precise comparison is not possible due to the slight differences in age categories used.

55% of all respondents in CROS 2009 were female (compared with 53% of CROS 2005 respondents). The latest figures from HESA suggest that the proportion of females in the total research staff population is 46%, and has been growing in recent years. There is evidence from many surveys, across different disciplines, that females are generally more prepared to respond to surveys than males, which could plausibly account for the difference between the proportion of females in CROS responses and the HESA overall figure.

The proportion of respondents with UK nationality was 65%, with 18% from the rest of the EU and 17% from outside the EU. 30% reported that English was not their first language. In total, responses were received from researchers of 91 different nationalities; the most numerous non-UK nationalities were, respectively, German, French, Irish, Chinese and American. HESA does not report nationality in this manner for research-only staff so comparisons cannot easily be made. HEFCE reported that collectively around 14% of senior lecturers and researchers were from outside the UK in 2006/2007 and that this proportion was rising steadily¹⁹.

The ethnicity of respondents was investigated in question 43. However, a substantial proportion (almost 20%) chose the response 'other' despite using the standard UK ethnicity categories, so no useful comparison could be made with HESA statistics.

Just over 5% of respondents considered themselves to have some form of disability (question 46). HESA records that 2.3% of all UK academic staff and 1.7% of research-only staff reported themselves to be disabled in 2007/2008. It is conceivable that respondents feel more able to report disability within a survey from a 'neutral' source than to their employer, which could account for this discrepancy.

Part-time workers made up 13% of respondents, in comparison with 16% of the overall researcher population reported by HESA.

The level of qualifications held by research staff was assessed through their responses to question 42. 80% of respondents reported that they had a doctorate or equivalent qualification, which was higher than the proportion (67%) that reported that they had undergraduate degrees. Although a proportion of

research staff may well have progressed through alternative qualifications, rather than undergraduate degrees, it is also possible that some respondents misinterpreted this question and only reported their highest qualification. Analysis using cross-tabulations suggests that 86% of male respondents reported that they had a doctorate, compared to 74% of females. There also appeared to be some variation by subject discipline, with the highest proportions of doctoral-qualified respondents being in the biological and physical sciences.

The main subject specialism of the respondents was reported in responses to question 38. Almost 30% of respondents were working in the biological sciences. Table 3 illustrates the breakdown of subjects studied, using the JACS subject groupings classification²⁰, and comparison is made with HESA staff resources data for researchers (recalculated into the same JACS groupings).

Although there is a reasonable match between most subject areas, there appears to be a mismatch between CROS respondents and HESA data in medicine, medicine-related subjects and biological sciences. However, when these three subject groups are added together the combined proportions match quite well (48% and 50%).

JACS subject group	CROS 2009 (%)	HESA 2007/08 (%)
A: medicine and dentistry	12	27
B: subjects allied to medicine	8	3
C: biological sciences	30	18
F: physical sciences	14	14
G: maths & computing science	6	6
H: engineering	8	11
L: social studies	8	6
N: business and administration	2	2
Q: English-based studies	2	3
R/T: foreign languages	1	1
V: historical/philosophical studies	2	1

Table 3 Main subject specialism of respondents (from responses to question 38), compared with HESA 2007/2008 figures for researchers, using a selection of JACS subject groupings

¹⁹ Staff employed at HEFCE-funded HEIs: update. www.hefce.ac.uk/pubs/hefce/2008/08_26/08_26.doc

²⁰ JACS (Joint Academic Coding System). www.hesa.ac.uk/index.php?option=com_content&task=view&id=158&Itemid=233

Relatively few demographic studies have been carried out specifically with research staff and it is hoped that the information here will add to our knowledge about this population. In terms of the respondents to CROS 2009:

- 77% are 30 years old or older: the majority are aged 30-44 years, with 16% over 45 years old
- 82% have fixed-term contracts, mostly of 2-3 years duration, but 19% have contracts of one year or less duration
- 8% have been with their HEI for over 10 years, and 12% have had five or more contracts with their HEI
- 37% of respondents with more than 10 years' service are on fixed-term contracts, many of these very short-term
- 63% have conducted their research career solely in their current institution
- 15% have worked in Europe and 17% elsewhere internationally
- 62% have collaborated internationally and 35% have collaborated with industry
- 5% have undertaken a placement outside higher education
- 35% come from outside the UK
- 43% have supervised doctoral researchers and masters students
- 50% undertake teaching/lecturing
- 58% aspire to a combined research and teaching career in HE in the long-term.

4.3 Representativeness of the response sample

Assuming respondents answer survey questions honestly, a key issue for any survey is to assess how representative its respondents are in terms of the wider target population. One way to assess the representativeness of the CROS sample is by comparing the demographic attributes of the aggregate CROS respondents with known demographic parameters of the total UK research staff population.

As we have seen above, the CROS sample seems to compare well with known parameters of the overall research staff population in terms of age and mode of employment. It is somewhat over-representative of females and those with a disability, which could be on account of response dynamics. The apparent mismatch between disciplinary spread in medicine, medicine-related subjects and biological sciences, may be due to classification issues. Alternatively, the differences could be due to the nature of the disciplinary areas represented in the HEIs that participated in the CROS surveys, which may not be representative of the total UK research staff population.

With HEI participation biased towards Russell Group (71% of responses) and 94 Group institutions (15% of responses), this could be seen as not being representative of the total UK research staff population. However, HESA data suggests that Russell Group institutions employ 64% of all research-only staff in the UK, while 94 Group institutions employ 14%. Taken together with reasonably similar average response rates for the different groups, indicates that the CROS 2009 sample should provide an accurate representation of both the participating institutions and the UK's research staff population in general.

In purely statistical terms, if it is a random sample and the size of the total population is known, the confidence interval for a response rate (effectively the 'error bar') can be calculated with a certain level of confidence. Typically, statistical analysis is conducted on the basis of a 95% confidence level. On this basis, 5,908 CROS responses from a target population of 28,165 researchers targeted, produces a confidence interval of 1.2%. Such high accuracy suggests that the responses should be strongly representative of the population sampled.

Overall, we believe that the CROS response sample can be taken as broadly representative of the research population as a whole.

5 Results

This chapter presents the aggregated results to the core questions common to all CROS surveys, within two main sections. In the first we focus on the engagement of research staff with their current institution, while the second section considers issues in relation to researchers' career development.

5.1 Engagement with institution

Within this section we sought to understand the experiences, perceptions and attitudes of research staff in relation to their current employment and employer, as well as how they were being supported in relation to personal development. The themes pursued included:

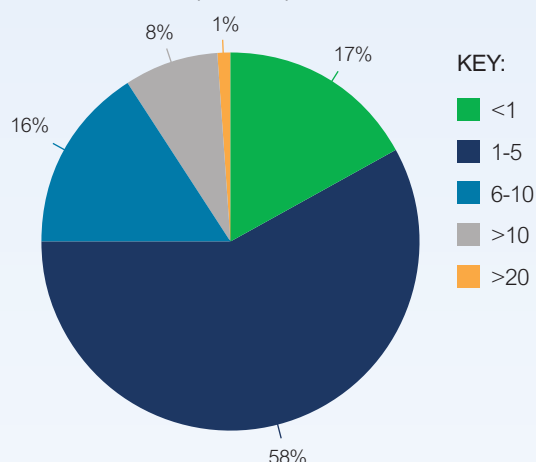
- information about their current contract of employment
- how they were appointed and have been supported
- relationship with employer and colleagues, particularly their integration within the research community
- activities, experiences and needs in relation to professional development and training.

5.1.1 Mode and length of employment with current institution

Researchers were asked how long they had worked in research at their current institution and under how many contracts of employment. They were also asked about their current mode of employment (questions 35b, 36 and 37, respectively).

As shown in Figure 1, the majority (58%) of respondents had been employed by their current HEI between 1-5 years and 24% had over six years' employment. Almost 8% had been with that HEI for over 10 years. 17% of respondents were in their first year of employment.

Years of service (N=5808)



No. of contracts (N=5673)

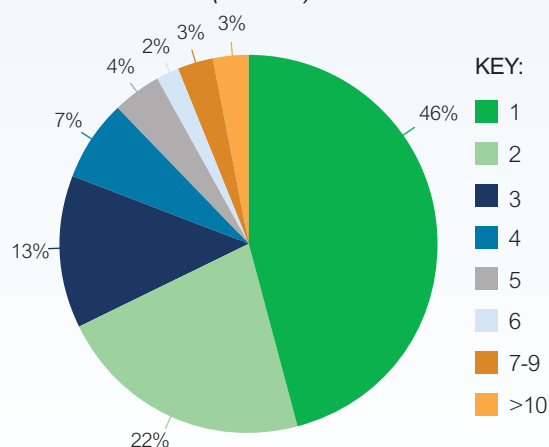


Figure 1 Length of service and number of employment contracts with current institution (from responses to questions 35(b) and 36)

Almost half (46%) were employed on their first contract with their current HEI. While 78% of respondents have had three contracts or less, 12% have had five or more contracts at their current HEI. Overall 63% of respondents have conducted their research career solely in their current institution.

Analysis of cross-tabulations by nationality or age suggested that a higher proportion of UK nationality respondents had had five or more contracts at their current HEI (17%), than of non-UK respondents. As many as 30% of those over 45 years of age have had five or more contracts with their current HEI.

The overall proportion of respondents working part-time was 12.5%, although this varied quite strongly by gender, with 18% of females employed part-time compared to 6% of males. A somewhat higher proportion of respondents with open-ended contracts were working part-time (16%) than of those on fixed-term contracts (12%). HESA figures suggest that part-time working is undertaken by around 16% of the UK's researchers (2007/2008 figures)²¹, and a figure of 15% is quoted by the Research Base Funders Forum Report²².

²¹ HESA (2009). Resources of Higher Education Institutions 2007/08

²² First Annual Report on Research Staff, covering the period 2003/04 to 2006/07. www.dius.gov.uk/~media/publications/F/FundersForumResearch%20Staff2008

5.1.2 Current terms of employment

In order to explore the contractual terms of employment, researchers were asked to state whether their current contract was of fixed-term or open-ended status (question 4a). Those with fixed-term contracts were further invited to indicate the length of the current contract.

Of the aggregate respondents, 82% reported that they were employed on a fixed-term contract and 18% on an open-ended contract. (9% of participants completing a questionnaire chose not to respond to this question, making it one of the two questions least answered.) 82% on fixed term contracts correlates well with the 84% reported in the Funders Forum First Annual Report, based on HESA data from 2006/2007. Analysis of 2007/2008 HESA data by UCU, by institution, reported that 76% of research-only academic staff were of fixed-term status, but highlighted extremely wide variations by institution²³.

Analysis using cross-tabulations suggested that a very high proportion of young respondents were working under fixed-term contracts (96% of those under 30). This was the case for 83% of those aged 30-45 and for 58% of those over 45 years old. However, separately, analysis showed that the majority (63%) of those respondents who had worked at their HEI for over 10 years had open-ended contracts. This appears to suggest that it is length of service with the institution, rather than age, that contributes to obtaining open-ended status.

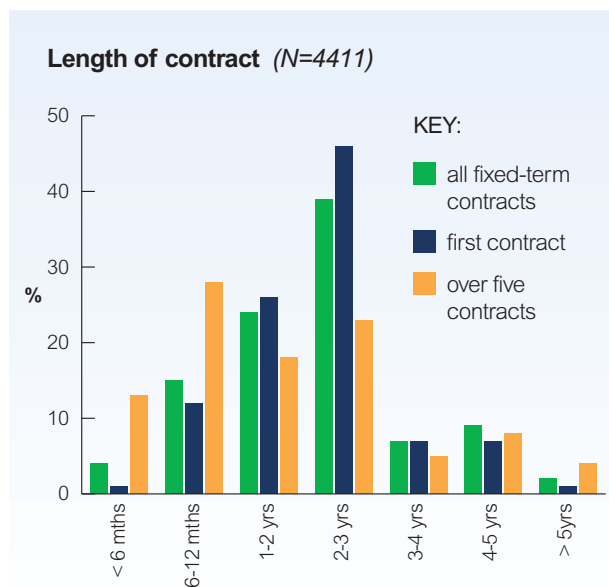


Figure 2 Length of current contract for those respondents currently on fixed-term contracts (from responses to question 4(b))

For those respondents with fixed-term contracts, the most prevalent length of contract was 2-3 years (39%) with 19% being employed on a contract of one year or less. Cross-tabulation by various factors suggested that there was some variation between sub-populations. In particular, 41% of respondents with five or more contracts with their current HEI were on contracts of 12 months or less (see Figure 2).

Of the 37% of respondents who had been with their HEI for 10 years or more and were on a fixed-term contract. About a quarter of these respondents had a contract of one year or less, reinforcing the interpretation that there is a group of researchers with long service but who are dependent on very short contracts.

5.1.3 Processes around appointment

In order to learn more about the processes currently used by universities to appoint research staff, the first three questions in the survey asked respondents about the recruitment, selection and appointment processes they had experienced in relation to their current post. Responses to question 5 revealed respondents' recollection and perception of the information and support given to them by their employer in the early period with that employer.

Although respondents identified a wide range of communication routes (Table 4), websites were the most common route by which respondents had found out about their current post. 41% learned of the position through either the institution's own site or an external jobs site. This was the case for nearly 50% of those respondents in their first post. Word of mouth is also an important route, identified by 30% of respondents. Further analysis showed that 21% of respondents found out about their position by word of mouth only.

	%
Word of mouth	30
External website (such as jobs.ac.uk)	25
Institutional website	16
Named on research grant	12
Extension of previous contract	11
Newspaper or printed media	6

Table 4 Selected methods by which respondents found out about their current post (from responses to question 1; multiple responses allowed)

Four-fifths of respondents had been interviewed for their current post, although only about half of these had been interviewed by their principal investigator or line manager. Relatively few interviews (12%) seemed to have involved people outside the researcher's department (Figure 3). Equally, only 11% of respondents reported that they had had informal opportunities to meet relevant people to discuss their potential post.

One-fifth of respondents reported that they had not been interviewed at all. With deeper analysis, it is evident that 56% of these respondents gained their position either by being named on the grant, through contract extension or redeployment.

²³ UK research-only academic staff 2007-8: % on fixed term contracts. www.ucu.org.uk/index.cfm?articleid=3539

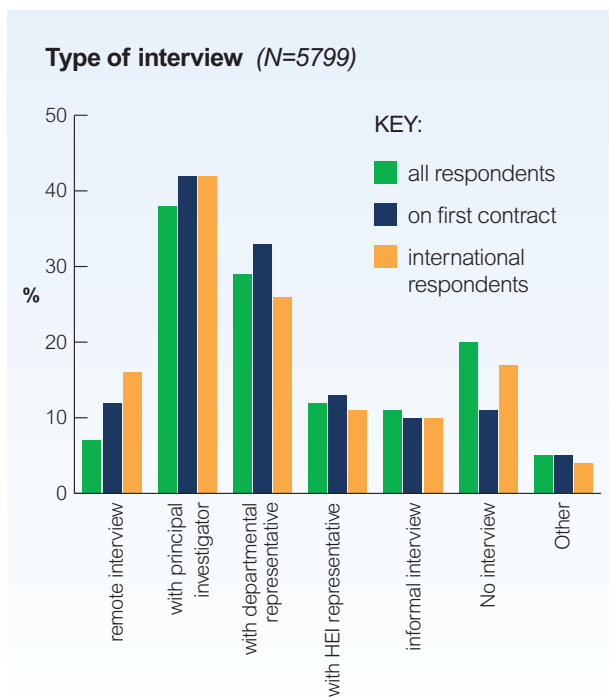


Figure 3 Type of interview for current post (from responses to question 3, multiple responses were allowed)

During the application process, 68% of respondents had been provided with a job description and almost as many (64%) had received a specification of the qualifications required for the role. Less than one third (32%) had been given details of the personal or management skills required by the post-holder. 15% reported not receiving any information on the job description or requirements for the role.

After their appointment, around three quarters of respondents reported that they had received information relating to their employment contract (92%), institutional procedures (78%) and about training/development (77%) and health and safety (78%). These were generally reported to have been useful, especially those directly relating to conditions of employment of the respondent (Table 5).

In terms of an induction process, 65% of respondents reported that they had received an induction to their role, which the majority had found useful. 53% did not receive, or at least did not remember being offered, an induction to their department. 40% remembered being offered a cross-institutional induction. Over half claimed not to have received a copy of their HEI's research strategy.

	Useful or very %	Not useful %	Not taken %	Not offered %	N
Information about contract	74	18	1	8	5759
Induction to role	38	20	3	35	5695
Training & development info	57	17	4	23	5681
HEI research strategy	28	23	1	48	5656
Departmental induction	35	19	4	47	5686
Cross-institutional induction	20	17	6	60	5642

Table 5 Provision of information on appointment and its usefulness (from responses to question 5)

Comparison with previous CROS survey results suggests that there has been progress in the use of induction. The figure of 65% of respondents reporting that they had received an induction to their role was higher than that reported in the 2006 survey (58%) and the 2002 survey (45%). The perceived usefulness of that induction had also risen from 53% in 2002 to 68% in 2009.

5.1.4 Knowledge and understanding of processes and policies

Respondents were asked (question 7) to rate their knowledge and understanding in relation to a variety of policies, procedures and initiatives within their institution, relating to employment and progression.

Over 30% of respondents reported a good understanding in relation to appraisal/review, terms and conditions of employment, fixed-term contracts and research codes of practice. Across all the issues questioned over half (and often three-quarters) of respondents reported that they had a good or partial understanding, or at least knew that policies existed. 20% or fewer of respondents reported that they had never heard of such policies (Table 6).

	Good %	Partial %	Know exists %	Never heard of %	N
Employment terms & conditions	37	49	13	1	5800
Performance review	37	32	22	7	5810
Promotion criteria	8	29	46	15	5801
Institutional career pathways	11	35	32	21	5798
Research codes of practice	31	34	25	9	5801
Departmental decision-making process	10	31	44	15	5806

Table 6 Knowledge and understanding of selected policies, procedures and initiatives (from responses to question 7)

The majority of respondents have some understanding of their institutions' policies and procedures in relation to these issues. However, they understand best the issues that affect them most directly in their current employment and research activity. Thus they appeared to have good knowledge and understanding of current employment conditions, and research strategy, but a lower level of knowledge about progression/promotion processes, decision-making structures and career pathways.

Using cross-tabulation of responses against employment status, it was observed that respondents with open-ended contracts tended to display a somewhat better understanding than those on fixed-term contracts of almost all issues in question 7. However, it was also noticeable that similar, significant positive variations existed between the responses of those with a career plan (question 13) compared with those without. Analysis of the responses by number of contracts held with the HEI, or the length of the current contract, did not reveal significant variations.

5.1.5 The appraisal/review process

The level of participation in staff appraisal or review has been explored in successive CROS surveys as a measure of the engagement of research staff in their own development and an indication of management processes in practice. Question 15 of the survey asked whether researchers had participated in an appraisal or review within the last two years and, if not, for what reason, while question 16 sought their perception of how useful it had been to them.

Half of respondents stated they had participated in an appraisal or staff review in the last two years. This indicates very positive progression since 2002 when only 32% of respondents to CROS 2002, and 39% of respondents in CROS 2006, reported that they had ever taken part in their institution's staff review process.

Analysis using cross-tabulation suggests that 69% of those with an open-ended contract and 46% of those with fixed-term contracts had participated in an appraisal. Significantly higher participation (at around 60%) was reported by respondents with five or more contracts with their HEI, or those over 45 years of age. Conversely, the lowest participation rates (as low as 42%) were reported by respondents under 30 years of age and those of non-UK nationality. It should be borne in mind that for some researchers in each of these sub-populations, it may have been too early in their contract for them to undertake an appraisal.

Of those respondents who had participated in an appraisal/review, 62% had found the process useful or very useful overall. More specifically, 68% had found it useful or very useful for reviewing progress, while 52% of respondents found it useful or very useful for career development. 32% found the process useful in terms of leading to changing working practices.

The respondents who had not participated in an appraisal were invited to explain why they had not done so, choosing from a range of possible reasons, shown in Figure 4. 29% of those who had not participated reported that they were on probation or had only recently been appointed. Further analysis shows that this was reported by over 40% of non-participants under 30 years old or on their first contract.

A further 5% believed they were not eligible for appraisal and 13% indicated 'other' reasons for non-participation. However, 46% of the non-participants reported that they had not been invited for an appraisal. This indicates that 23% of all the research staff responding to CROS 2009 were not invited, or at least believed that they had not been invited, to take part in an appraisal/review.

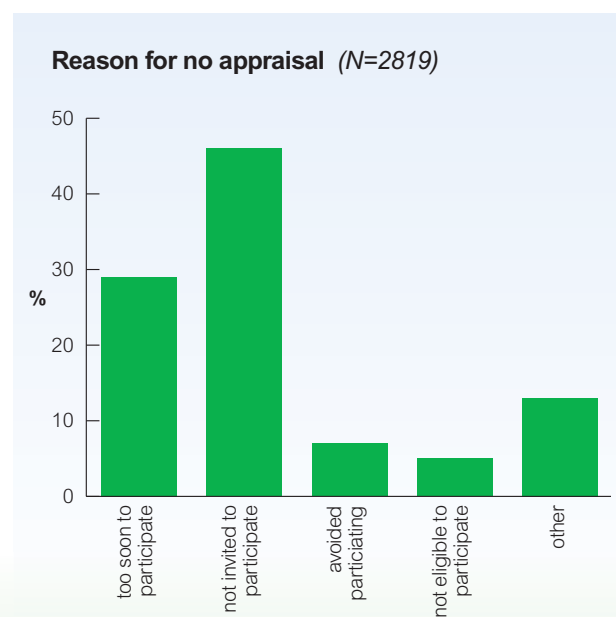


Figure 4 Reasons stated for non-participation in appraisal/review process (from responses to question 15)

5.1.6 Attitudes and perceptions

We wished to ascertain the degree to which researchers felt that they are integrated within their research and institutional communities (question 11). We were interested also to learn their perceptions of their HEI as an employer and whether they felt it treated staff fairly or discriminated against particular groups of staff (questions 30-32), and whether they felt they had been unfairly discriminated (question 33). Specifically, researchers' perceptions of whether they were treated on an equal footing by their HEI in comparison with lecturing staff were gathered in question 9. Broader perceptions of how much they felt their contributions were valued or recognised were probed in question 10, in relation to a variety of activities.

In terms of their integration within various communities, 71% of respondents agreed that they felt integrated in their departmental research community, 65% within their wider disciplinary community and 53% in their institutional research community. Almost three-quarters felt stimulated by the research culture of their HEI (Table 7).

Using cross-tabulations, we noted that those respondents with a career plan and/or those from outside the UK reported somewhat higher levels of agreement (proportionately about 10% greater) for each issue. The sub-population with the lowest level of agreement was those respondents with five or more contracts at their current HEI. This group reported 66%, 56% and 43% agreement, respectively, in terms of integration with their departmental research community, wider disciplinary community and their institutional research community.

	% Agree / strongly	% Disagree / strongly	N
Institutional research culture stimulates your work	74	26	5793
You feel integrated into department's research community	71	29	5790
You feel integrated into institutional research community	53	48	5775
You feel integrated into your wider disciplinary community	65	36	5746

Table 7 Perceived levels of integration within research communities (from responses to question 11)

Responses to questions 30-32 indicated very strong agreement that respondents believed their HEI treated staff fairly, irrespective of gender, age, ethnicity or religious belief, in relation to a variety of employment- and career-related issues. Over 90% felt that their HEI was committed to equality and diversity. 10% felt that they had been discriminated against at a personal level.

The lowest levels of agreement with statements of institutional fairness were reported in relation to progression and participation in decision-making, where 20% of respondents did not feel that all staff were treated fairly (Table 8).

	% Agree / strongly	% Disagree / strongly	Don't know	N
Institution treats staff fairly irrespective of gender	86	14	n/a	5660
Institution treats staff fairly irrespective of age	87	13	n/a	5621
Institution treats staff fairly with regard to career progression/promotion	81	20	n/a	5650
Institution treats you equally with lecturing staff in relation to visibility on websites/directories	64	25	12	5796
Institution treats you equally with lecturing staff in relation to access to training/development opportunities	76	11	14	5763
Institution treats you equally with lecturing staff in relation to opportunities for promotion and progression	23	51	27	5802

Table 8 Perceptions of fairness of institution's treatment of staff, and recognition of individual respondent's contributions in relation to selected issues (selected from responses to questions 31, 32 and 9)

Using selected cross-tabulations, further analysis suggested that 18% of female respondents felt that their institution did not treat all staff fairly irrespective of gender, in comparison with 8% of males. 11.5% of females felt that they had suffered discrimination personally.

In terms of age, 20% of respondents 45 or more years of age felt the HEI did not treat staff fairly irrespective of age, and 15% felt that they had been discriminated against due to age. Up to 30% of respondents who had five or more contracts with their HEI reported that their institution did not treat them fairly in relation to progression.

Different results were obtained when attitudes were probed around the extent to which respondents felt that they were treated on an equal footing with lecturing staff. This varied strongly depending on the issue considered. Three quarters of respondents believed that they were treated equally with lecturing staff in relation to their access to training/development and opportunities to attend conferences, and about 65% in relation to visibility on websites and in staff directories. However, half of respondents believed that they were not treated equally in relation to opportunities for

promotion and progression, or participation in department- or HEI-based decision-making processes. 35% and 39% of respondents, respectively, disagreed with or did not know that they are treated on an equal footing in terms of eligibility for performance-related pay.

Of the sub-populations of respondents analysed, those with a career plan reported higher levels of fairness, than those without a career plan. For example 57% of those with a career plan, compared with 43% of those without, believed that they were treated on an equal footing with lecturers in relation to progression. For the same issue, 40% of those respondents who had had five or more contracts with their HEI believed that they were treated equally.

Respondents on open-ended contracts were more likely to agree that they were treated on an equal footing with lecturing staff in relation to promotion and progression, and participation in departmental and institutional decision-making.

Respondents on fixed-term contracts were less likely to know if they were being treated equally with lecturing staff on the same issues. Little difference was observed between groups of respondents with short fixed-term contracts compared to longer contracts.

This relative unfairness perceived by many respondents in relation to researcher roles compared to lecturer roles was in contrast to the clear majority that considered their employer not to discriminate unfairly in terms of equality and diversity.

As to whether their HEIs recognised and valued their contributions, more than half of respondents felt recognised for their contributions to research strategy, research culture and published outputs (Table 9). Significantly fewer, and less than a third in some areas, felt that there was recognition of their management of staff and resources, teaching and supervising of doctoral and masters researchers.

However, respondents indicated greater agreement than disagreement with all but one of the statements made in relation to recognition for their contribution to various activities.

	% Agree / strongly	% Disagree / strongly	Don't know	N
Achieving the institution's research strategy	53	26	19	5782
Research culture within the department	56	26	16	5764
Publications	69	18	10	5769
Managing staff	28	31	16	5779
Managing resources	34	31	21	5780
Supervising doctoral and masters researchers	42	28	10	5778
Teaching and lecturing	33	26	11	5768

Table 9 Respondents' perceptions of whether their institution recognises and values their contributions in relation to certain activities (from responses to question 10)

5.1.7 Professional development and training

It was felt important to learn the extent to which research staff have had the opportunity to undertake activities, experiences and training in relation to professional development. Question 18 asked researchers whether and with whom they had discussed their personal and career development and if they had taken part in training activities. Question 19 sought the actual number of days spent on continuing professional development activities in the last year. More detailed information on the range of training and development activities undertaken and of interest to respondents were explored in questions 20 and 21.

Within the previous 12 months, 75% of respondents had discussed training needs and/or career development opportunities with their principal investigator (PI) or line manager. This is a significant increase against the 50% reported in the CROS 2006 survey. A similar proportion (72%) had participated in training activities or courses in the last year within their HEI, again significantly up from 36% in 2006 (CROS 2006). 47% of respondents had undertaken external training activities/courses.

14% had undertaken discussions on training needs or career development with a careers advisor in the previous year, more than double the 6% reported in the 2006 CROS survey. 23% had discussed their training needs and/or opportunities for career development with someone responsible for developing researchers, eg staff development).

The number of days spent on continuing professional development (CPD) activity (expressed as training, conference attendance, mentoring or individual reflection) within the last 12 months is shown in Figure 5. Only 8% reported that they had spent no time on professional development activities, while 23% had spent over 10 days. (Sir Gareth Roberts recommended at least two weeks per year of 'appropriate training opportunities' for research staff in SET for Success).

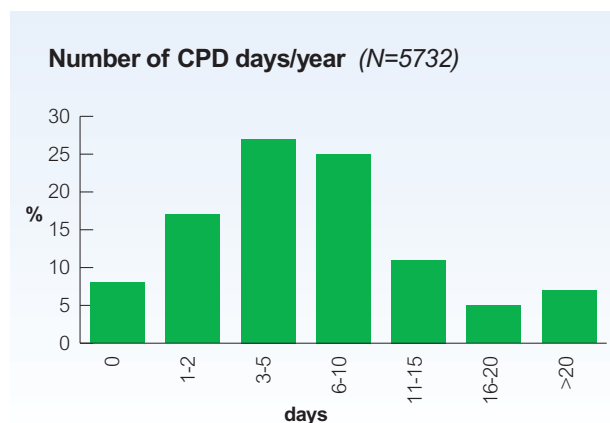


Figure 5 Number of days spent on continued professional development in the last year (from responses to question 19)

The area in which training/development had been undertaken by most respondents (39%) was skills and techniques in research. Lower proportions reported having undergone training activity to support various personal development or transferable skills, ranging from 14-25%.

Over half of respondents indicated that they would like training in career management (54%) and leadership/management (53%). Over 40% are interested in training and development in personal effectiveness, knowledge transfer and teaching, see Figure 6. The areas reported of least interest were research ethics and governance (53% stated it not to be of interest), and team-working (51%).

The usefulness of the training experienced was reported generally to be high. Career management training was rated lowest, with a third reporting it not useful. In terms of delivery mode, face-to-face training and one-to-one conversations were rated the most helpful, and online discussion forums the least helpful mode of training and development.

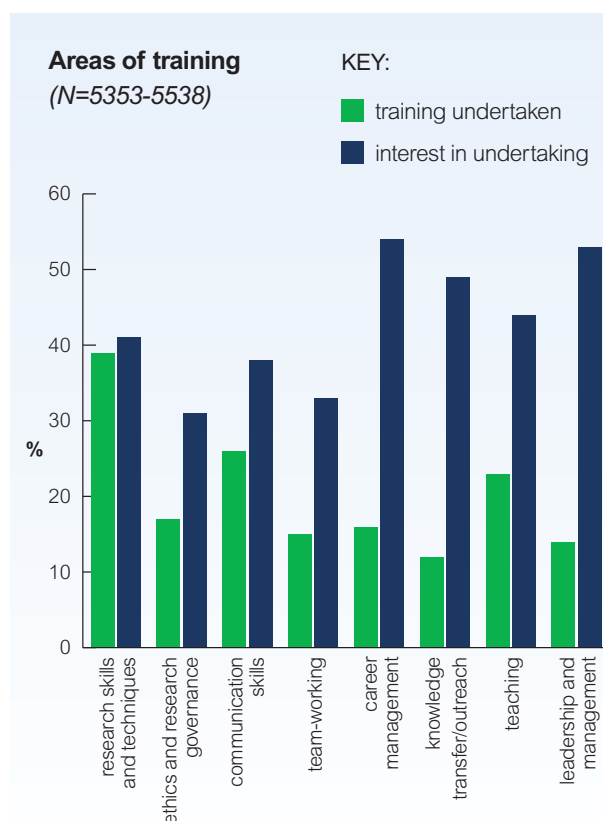


Figure 6 Areas in which training and development had been undertaken or was of interest to respondents (responses from question 20)

5.1.8 The experiences of researchers

Comparatively little appears to be known, at least formally, in terms of the breadth of experience of the current research staff population, so information was sought around the activities and experiences undertaken by researchers beyond their immediate research activity. Questions 24 to 28 aimed to build understanding of how many researchers were gaining experience outside their immediate research area, how they were developing management and communications expertise, and broadening their experience beyond research activity. In addition the researchers were asked which wider activities they would like to engage in, and in which they had no interest. Selected responses from questions 24 to 28 are shown as histograms in Figure 7.

The majority of respondents reported that they had collaborated with others: 62% internationally and 50% in cross-disciplinary teams and many more would like to do so. 35% had collaborated with industry and as many more wished to. Although only 5% had undertaken a placement outside HE, and 7% a secondment to another HEI, up to half of respondents reported that they would like that experience. However, an equal percentage had no interest in such a placement.

In terms of management experience, over half had planned and managed projects, and 35% had managed a budget. Only around 20% had participated in wider departmental or institutional decision-making structures, although up to half would like to do so. 43% had supervised a doctoral or masters

student and 50% had undertaken teaching or lecturing: fewer than 20% expressed no interest in undertaking these activities to develop their academic practice.

Generally, and perhaps unsurprisingly, the desire for development in specialist research skills and techniques appeared to be stronger than for other (personal or transferable) skills.

Although over 80% had developed their communication skills by presenting work at a conference or written for publication, only 59% had explained their work to people outside their field. 40% had participated in public engagement work and 34% in knowledge transfer activity. Over 75% had either developed or wanted to develop skills in all of these areas.

Whilst only 19% had formalised their development through a personal development plan (PDP), career development strategy or professional development record, over 50% wished to do so.

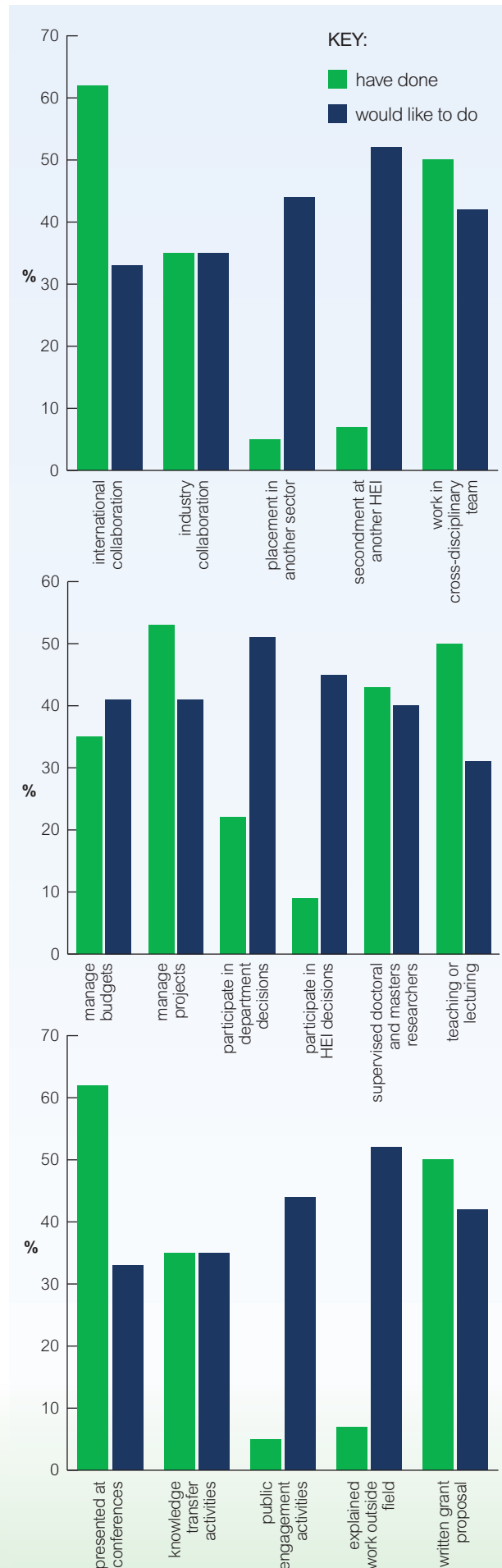


Figure 7 (see right) Percentage of respondents who have or would like to develop experience in selected activities (from responses to questions 24-28) (N=5567-5717)

5.2 Career as a researcher

Within this second section, we focus on understanding the experiences, perceptions and attitudes of research staff in relation to their career development. The themes pursued included:

- length and location of research career
- career intentions and aspirations
- career support and development activities
- knowledge of national initiatives relating to career development
- an indication of researchers' perception of wellbeing.

5.2.1 Career progress to date

We learn from further analysis of question 35 responses²⁴ (Figure 8), that 6% of respondents were in their first year as a researcher. 49% have 1-5 years' total experience and 27% 6-10 years. 18% had over 10 years' experience as research staff.

The length of time that researchers had worked at their current institution was reported in section 5.1.1. 59% of respondents had been with their current HEI for 1-5 years and 24% for six years or more. 37% of respondents had worked in more than one HEI in the UK, while 15% had worked in research in Europe and 18% outside Europe.

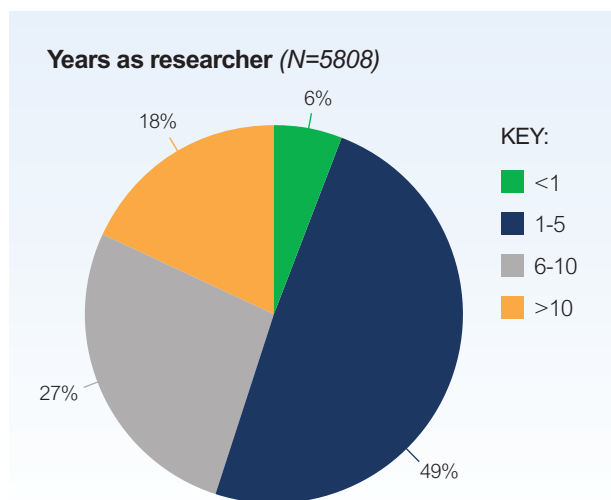


Figure 8 Length of career as research staff in years, excluding postgraduate study (by combination of responses to question 35)

5.2.2 Career aspirations

Relatively little is known about the current and future career intentions of research staff. CROS 2009 offered the opportunity to ask researchers about their own aspirations in terms of career, both in the nature of work (research or not) and whether in HE or elsewhere. Question 17 invited respondents to indicate their immediate and longer-term (five-year) career aspirations.

Overall, 64% of respondents stated that they wished currently to be in a research career in HE, (which could possibly be interpreted as indicating that they feel relatively positive about their current circumstances). 34% indicated that they wished to be in a research and teaching role. Fewer than 25% wished currently to be working outside HE.

More significant were the responses that recorded their aspiration in five years (Figure 9):

- 51% sought a career in HE which combined research and teaching
- 38% wished to continue primarily in HE research
- 34% aspired to a research career outside HE
- 25% wished to undertake a career outside research
- 13% indicated that they aspired to self-employment

Multiple responses were possible for this question, so these proportions are not exclusive. However, there is still a high proportion of respondents who aspire to a career in research or research and teaching in HE, compared to those who have wider aspirations outside of the HE environment. The figure of 13% who would consider self-employment is noteworthy.

²⁴ Appendix 4 provides a note about the format of question 35 and how responses were analysed

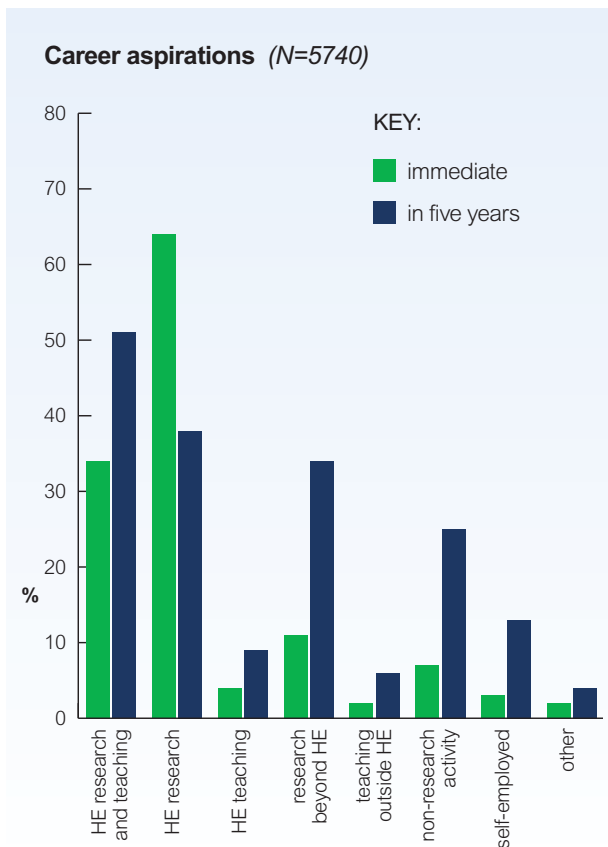


Figure 9 Current career aspirations and in five years (from responses to question 17, multiple responses were allowed)

5.2.3 Career development activities

We were interested in knowing what activities researchers might be undertaking in order to support their career development: whether they were actively managing their careers and to whom they were turning for support. Question 13 asked how many had taken particular steps or actions in terms of career development, while question 22 asked whom they had or would consult about career development. The nature of the support they sought was probed in question 23.

87% of respondents had reflected on their career development needs, and 90% had considered their career options (Figure 10). 64% of respondents agreed that they had been encouraged to engage in personal and career development, while 50% considered that they had a clear career development plan. As noted previously (section 5.1.8), 58% of respondents would like to have a career development strategy (based on question 28).

Cross-tabulations revealed variations between sub-populations in relation to whether they had a clear career plan and whether they were being encouraged to engage in career development. More of those under 30 years of age, or in their first contract, or from outside the UK, reported encouragement to engage in career development (around 70%, compared with

64% overall). Relatively fewer of those with five or more contracts at their HEI or of over 45 years of age (57%) reported encouragement to engage in career development. Slightly more of those on fixed-term contracts (65%) felt encouraged to engage in career development than those in open-ended employment (58%).

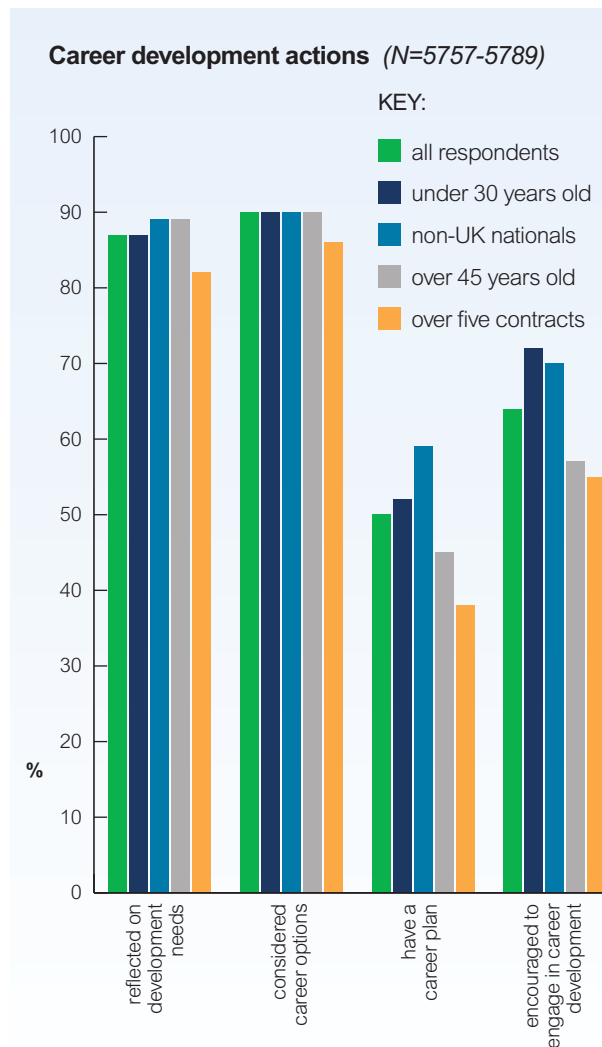


Figure 10 Percentage of researchers who have undertaken selected activities in relation to their career development (from responses to question 13)

A higher proportion of non-UK researchers claimed to have a career plan (59%), than of respondents overall (50%). Lower proportions (around 40%) of those working part-time had a career plan, or those who had been with their HEI for over 10 years, or had five or more contracts. There appeared to be very little variation between groups of respondents with open-ended or fixed-term contracts, or length of current contract.

When asked specifically whom they would consult about their career development, 40% reported that they had consulted their principal investigator or line manager. A further 45% reported that they would do so (Table 10). Only 13% had consulted a careers advisor, but 38% were likely to do so. Less than 5% had consulted a staff developer or HR specialist about their career development and only around one quarter might do so. Indeed 68% reported that they were unlikely to, or would not, consult an HR specialist.

Respondents' predominately use informal channels to consult about their career development. Colleagues and family/friends had already been used by around 40% of respondents and would be used by a further 40-50%.

	% Have consulted	% Would consult	% Would not	N
Principal investigator/ line manager	40	45	12	5654
Careers adviser	13	38	45	5592
Colleagues	36	54	9	5635
Family/friends	43	45	10	5627
Staff developer	4	36	50	5478
HR specialist	2	23	68	5471

Table 10 Respondents' sources of advice for their career development (from responses to question 22)

There was strong correlation between responses to questions 22 (career development) and 18 (training needs and opportunities) in relation to discussions with a careers advisor. In both cases 13% claimed to have had discussions with a careers advisor about training needs and opportunities, and career development.

However, the responses in relation to discussion with people responsible for developing researchers (eg staff developer) appeared to differ. 23% claimed to have had discussion of training needs and/or career development opportunities in the last 12 months (question 18), but only 4% reported that they had consulted a staff developer about career development (question 22). It is possible that this difference could reflect researchers' expectation and/or perception that staff developers are available for and focused on training and not support for career development.

Respondents were asked in which areas they would find information, advice and guidance (IAG) helpful to assist in their career decision-making and progression. IAG would be valued by 72% to assist with job applications and careers within academia, while 48% said that they would like information about careers outside academia. The 28% of respondents who would like information on placement and secondment opportunities is somewhat lower than the 50% who claimed (in question 24, section 4.2.7) that they would like the opportunity to undertake such a placement.

5.2.4 National initiatives

Given the timing of the 2009 CROS survey (Spring 2009), there was an opportunity to investigate the level of awareness of researchers in relation to national initiatives in researcher development, including the Concordat to Support the Career Development of Researchers and Vitae, both launched in June 2008.

Given the recent launch of these initiatives, respondents reported a reasonable knowledge of these national initiatives. 58% claimed a partial or good knowledge of the Concordat. 27% either claimed some knowledge of, or knew of, the existence of Vitae: a similar proportion was aware of the Roberts agenda (Table 11).

	% Good understanding	% Partial understanding/ know exists	% Never heard of	N
Concordat to Support the Career Development of Researchers	7	50	42	5782
Vitae	2	25	72	5787
Research Assessment Exercise / Research Excellence Framework	22	67	10	5778

Table 11 Respondents' understanding of national initiatives relating to researchers (from responses to question 8)

There was little variation between sub-populations in terms of responses, although those from outside the UK or whose first language was not English were somewhat less likely to be aware of the initiatives. Older researchers were somewhat more likely to be aware of the Roberts agenda than those under 30, but for knowledge of Vitae that variation was reversed.

Given the high profile of the Research Assessment Exercise (RAE), it is perhaps somewhat surprising that 10% of respondents had not heard of the RAE and a further 21% only knowing of its existence. Closer inspection through cross-tabulation shows that this was the case for only 6% of UK researcher respondents but 18% of foreign nationals, and that knowledge of the RAE tended to increase with age or length of research career.

5.2.5 Wellbeing

One of the key metrics used in contemporary employment research, and the wellbeing of employees, tends to be employees' assessment of work-life balance. This is often understood more broadly than as a simple measure of hours of work and non-work. 72% of respondents stated that they were satisfied or very satisfied with their work-life balance, and only 7% stated that they were not at all satisfied with it (Figure 11).

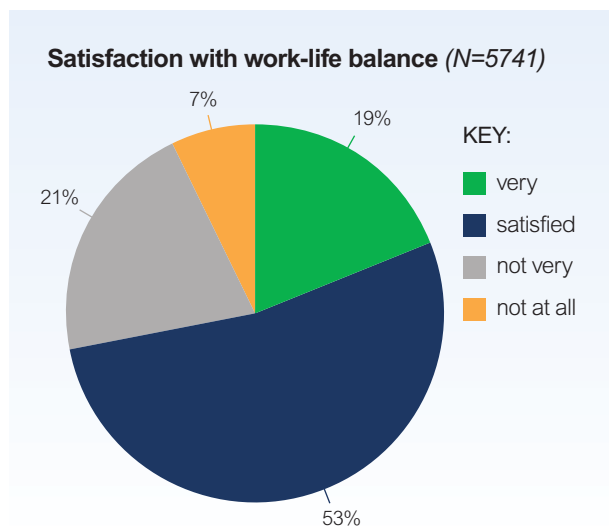


Figure 11 Respondents' satisfaction with their work-life balance (from responses to question 30(b))

Cross-tabulations revealed there to be some variations between sub-populations of respondents. Those respondents under 30 and/or on their first contract were more satisfied (around 75%) than those over 45 years old and/or with five or more contracts or more than 10 years service with their HEI (around 65%). Those with open-ended contracts or long contracts (of over three years' duration) appeared to be somewhat less satisfied than those with fixed-term or shorter contracts.

A number of recent studies have been conducted in relation to work-life balance, and employee satisfaction more generally, with employers outside the HE sector. Work conducted by CRAC with Generation Y graduates working for a small number of private and public sector employers revealed that less than 50% were satisfied with their work-life balance and less than 40% felt valued by their employer²⁵. Those figures contrast strongly with the positive results for research staff respondents reported here.

A combination of the high level of satisfaction with work-life balance expressed here and the previous findings in Section 5.1.6, that respondents are more likely to agree than disagree with statements that their institution recognised and valued their contributions, tends to support a feeling of wellbeing.

²⁵ Retaining and developing the best Generation Y employees. www.crac.org.uk/crac_new/Ideas_Exchange/conferences/past_events/Generation_Y_2007.asp

6 Key findings and recommendations

We identify here the key findings, implications and recommendations based on the aggregated results, summarised under the key sections of the Concordat. Many of these recommendations reinforce existing guidance, though some are new. What is key is that our recommendations are based on clear evidence from researchers themselves.

We identify here some key findings, implications and recommendations based on the aggregated results, which are summarised under the key Concordat principles.

The respondents to CROS 2009 appear to be broadly representative of the UK's research staff in higher education, based on comparison of responses with known demographic information and the high statistical confidence due to the large response sample achieved. There is slight over-representation of Russell Group institutions, from which 71% of responses were received, whereas 64% of all researchers are employed there.

The data provided by each institution's own CROS survey will be most useful for institutional staff supporting the development of researchers, but it should prove helpful to compare those results against the aggregate results presented here. Given the varied nature of institutions, some variations are to be expected between responses from individual HEI cohorts and the national sample.

6.1 Recruitment and selection

Generally, recruitment and selection of research staff within higher education appears to be an open and transparent process, with institutions demonstrating commitment to equality and diversity policies.

Respondents identified job opportunities through a wide range of media and routes. However, word of mouth is the most common route, with a fifth of respondents informed by word of mouth only. Only a quarter of respondents identified external websites as a source of information for their current post, increasing to 37% for those in their first post. Whether researchers are aware of and accessing external resources for job opportunities warrants further investigation.

The vast majority of respondents were interviewed for their current role, through either formal or informal mechanisms. Perhaps surprisingly, under half were interviewed by their principal investigator or line manager. Few interviews involved people from outside the immediate department or informal opportunities to meet relevant people and discuss the role.

Two thirds of respondents were supplied with job descriptions and other employment-related information: although less than half of these were provided details of the required personal and management skills for the role.

The proportion of respondents receiving an induction to their role has risen to nearly two thirds, from less than half in 2002 (CROS 2002), although the availability and take-up of departmental or institutional induction has risen less.

Recommendations

- Institutions should ensure that all recruitment policies are open and transparent, for example all vacancies should be promoted and advertised externally
- Ensure that departments and principal investigators are aware of and follow institutional recruitment policies and procedures, including providing job descriptions to all postholders
- Wherever possible, all short-listed applicants should be interviewed by their prospective principal investigator/line manager, people from outside the immediate department should sit upon interview panels and opportunities for informal discussion with other researchers should be made available
- All institutions should ensure that new appointees are offered induction to their role and department/institution, and provided with copies of relevant documentation, such as the HEI's research strategy, code of practice, probationary requirements and information about career development opportunities

6.2 Recognition and value

The positive attitudes reported by the majority of respondents suggest that most like their current jobs, have a satisfactory work-life balance, and feel valued by their institution in most respects, particularly for their research-related activities.

However, a significant number (up to a third) does not feel that their wider contributions, such as supervision of doctoral researchers and masters students, managing and supporting other researchers or resource management, are recognised.

There is a concern that research staff are not valued equally with lecturing staff at an equivalent level. About a half of all respondents feel that they are not treated on an equal footing with lecturing staff in relation to opportunities for career progression and participation in departmental and institutional decision-making. Three-quarters do not know if they are treated equally on eligibility for performance-related pay, or believe that they are not.

About three-quarters of respondents feel integrated within their departmental research community, and stimulated by their institution's research culture, but only half feel integrated in their institutional research communities.

Participation in appraisal or staff review has risen, and half of respondents had participated within the last two years, compared with only 32% ever having experienced an appraisal in 2002 (CROS 2002). Most experiencing appraisal found it useful in reviewing personal progress and highlighting issues,

but less found it useful in deriving solutions to work practice issues and problem solving. 23% of those eligible for appraisal reported that they had not been invited to appraisal.

Certain groups of researchers, such as those who have had multiple, short-term contracts at their HEI, and/or long service through fixed-term contracts, do not feel integrated within their departmental or institutional communities, and report less positive feelings about their employer, job and career.

Recommendations

- All eligible researchers should undertake regular reviews and appraisal; most research staff report these to be useful
- Appraisal processes should also address work practices and problem-solving
- Institutions should consider how they can recognise more fully the contribution of researchers, beyond their research activities
- Institutions should identify any sub-populations of researchers who do not feel integrated into their departmental or institutional communities and help them to explore career development strategies

6.3 Support and career development

Participating institutions appear to recognise the importance of supporting the career development of their research staff.

Most research staff respondents believe that they are being encouraged to consider their career development and feel able to talk to their manager about it: 40% have done so in the last year. Over half of respondents would like to undertake training in career management.

Despite the shortage of job opportunities in higher education, more than half (58%) have long-term career aspirations in HE combining teaching and research. 40% aspire to remain in research roles. Just over a third aspire to a career outside HE.

Research staff would like greater access to specific information and advice about career progression and application processes, within and outside academia, although currently few visit their careers service (13%) or seek advice from development staff (23%).

The availability and take-up of training and development activities appears to be rising. Two-thirds of respondents participated in training within their HEI in the last year, up from a third in 2006 (CROS 2006). Almost half claim to have undertaken over five days of continuing professional development in the last year.

The researchers report that they would like training in a variety of skills areas, although research skills and techniques feature more prominently than personal and transferable skills. There is also enthusiasm for broader experience such as work placements or secondments, which have been undertaken only by small numbers.

Recommendations

- Research staff should be encouraged to engage more actively in career development planning, using the experience of their managers, staff developers and careers advisors
- Institutions should increase and promote the provision of information and advice about careers, career progression and application processes within and outside academia
- Careers services should explore ways to improve their engagement with researchers
- Institutions should recognise and build upon the desire for training/support for career management and personal development planning, through increased availability of and/or promotion of existing support in this area
- HEIs should further promote the value of transferable skills (such as team-working) for future employability in order to increase the level of take-up of development activities
- Institutions should explore how to provide more placement and secondment opportunities to broaden experiences of researchers and widen their career aspirations

6.4 Researchers' responsibilities

The vast majority of respondents have a good understanding or have heard of a wide range of institutional policies and processes relating to research staff.

Most respondents appear to be well-informed about issues closely related to their own current employment and research, but are less well-informed about wider issues such as their potential progression opportunities and the operations of their departments and institutions.

Many more respondents claim that they would like to get involved in departmental and institutional activities and processes than have actually done so.

About half of respondents have a career plan. Taking ownership of one's own career appears to be a significant motivating factor in terms of attitude to employment and activity to support career progression. Those who do not actively plan their career tend to be less engaged and take less advantage of opportunities on offer.

Over 40% of respondents aspire to a career primarily in research within HE and 58% a lectureship, both of which are unrealistic for most. Few respondents are looking beyond HE or beyond research as career opportunities. Significant minorities aspire to self-employment (14%) and careers outside of research (19%), which seems to suggest a broader understanding of opportunities for researcher careers from these respondents.

There appears to be enthusiasm to undertake placements in other HEIs, perhaps driven by the fact that two thirds of respondents have only worked as a researcher within their current HEI. There is scope to explore how researchers can

broaden their understanding of the academic environment and become more integrated in wider research communities.

Many report enthusiasm for training in research and personal development skills and, although they believe access to such training is fully open to them, have not yet taken advantage of such opportunities. Only two-fifths of respondents have had training in research skills and techniques. Less than a quarter of all respondents have undertaken other training and development activities, such as research ethics, team-working, career management and teaching, with many showing no interest in training in these areas.

Recommendations

- Managers and staff developers should stress that researchers need pro-actively to take responsibility for their own development and career planning, including being informed about their employment and progression and how to participate in a range of wider activities
- Researchers need to be proactive in seeking out sources of information and advice in relation to career progression and employment, many of which exist already within institutions. There may be scope for career specialists and staff developers to promote the opportunities they offer more widely
- Institutions should find mechanisms to assist researchers in recording and articulating their personal contributions to facilitate full recognition of researchers' contributions, particularly outside their direct research activities

6.5 Diversity and equality

Over 90% of respondents believe that their institution is committed to diversity and equality and a large majority believe staff are treated fairly by the HEI across a range of activities, including promotion, access to training and day-to-day treatment at work.

However, over half feel that they are not treated on an equal footing with lecturing staff when it comes to promotion and progression, or participation within their departments' decision-making processes. 10% believe that they have experienced unfair discrimination in their current post.

Recommendations

- Review institutional policies for unjustified inequalities between research staff and lecturers, particularly in promotion and progression and in participation in departmental and institutional decision-making processes
- Ensure the institution's commitment to valuing researchers is communicated effectively to researchers and their managers and implemented in practice
- HEIs should review the free text responses provided by respondents in order to explore in more detail issues around discrimination

6.6 Implementation and review

The Concordat recognises the importance of reviewing progress toward implementing the Concordat principles both across the UK and at institutional level. CROS 2009 has emerged as a valuable tool in gathering the views and experiences of research staff in relation to the principles.

Comparison with previous CROS results, where possible, demonstrates that progress is being made, particularly in the areas of engagement with appraisal, participation in induction and the level of training and CPD undergone. However, there is still much that could be done, particularly in recognising the wider contributions of research staff, encouraging research staff to be more realistic in their career aspirations, and to be more active in their career development planning.

Although comparison of institutional results with the CROS aggregate results will be valuable, the real benefit to institutions will come from longitudinal comparison of institutional data. Future participation in CROS will provide HEIs with valuable comparative data to assess progress against implementation of the Concordat principles.

Recommendations

- Institutions are encouraged to compare their own response data with the aggregate responses presented here, taking into account local conditions and cohorts
- Institutions are encouraged to provide feedback to their research staff, both respondents and non-respondents, about their CROS results and subsequent actions
- HEIs should engage in benchmarking groups and other activities to share knowledge and practice, enabling comparison between institutional populations
- Institutions should be encouraged to take part in future CROS surveys and those that have run surveys both feed back their experiences to the Steering Group and also promote the benefits to colleagues in non-participating institutions
- The aggregate responses should be used to inform national activities to support the implementation of the Concordat's principles
- The CROS Steering Group should commission further analysis of sub-populations of the aggregate results, eg by broad subject areas, employment status
- Institutions should identify areas of good practice and share these with the rest of the sector through the CROS and Vitae networks

Appendix 1: The development of CROS

CROS was originally developed through a project funded by HEFCE, SHEFC and the then DTI/OST²⁶ and included the creation of the Bristol Online Survey tool (BOS). The first survey was run in 2002 and repeated annually through to 2006. Participation was open to all HEIs and 53 HEIs have participated in at least one year, with HEI participation rates ranging from 15 in 2002 to a peak of 45 in 2003; subsequent participation averaged 21 HEIs each year.

HEIs participating in CROS recognised the value of being able gather the views of research staff within their institution. One of the strengths of CROS, and the BOS survey tool, is the ability to compare institutional results against the UK aggregate of all participating HEIs. The opportunity to track changes over time was also valued, with 41 HEIs participating in more than one year.

For those institutions participating in CROS it is seen as central to improving the working conditions and career development of research staff. Cardiff University, for example, found that it provided *'...essential information about the views and experiences of our researchers, the CROS tool has enabled us to begin to respond more effectively to the needs of this group of staff and to ensure that any policy developments are evidence-based...'*

However, it was recognised by both the CROS Steering Group²⁷ and institutional CROS users that the environment for research staff had changed since the design of CROS in 2002 and that the original 30 question-set should be updated to take into account new policy developments in this area. In 2008 the Steering Group agreed to raise the profile of CROS, encouraging more institutions to participate and to update the CROS questionnaire, particularly taking into account the principles of the revised Concordat to Support the Career Development of Researchers, launched in June 2008. The process included consultation with key stakeholders, including CROS officers, the National Research Staff Association (NRSA), Vitae Research Staff Development Advisory Group (ReSDAG), the research and funding councils and the Vitae network. A consultation feedback session was held at the Vitae researcher development conference in September 2008, and the revised questionnaire was trialed with research staff in a range of institutions.

The revised questionnaire was launched as CROS 2009 and made available for institutional use during spring 2009.

A1.1 2009 Questionnaire structure

The online questionnaires set up on the BOS system by individual HEIs contained a series of voluntary core questions structured within five sections:

1. Recruitment and selection (questions 1-6)
2. Recognition and value (questions 7-12)
3. Support and career development (questions 13-29)
4. Equality and diversity (questions 30-34)
5. About you (questions 35-46)

Institutions added their own bespoke questions after section 4 of the questionnaire. The wording of the core CROS questions can be seen in Appendix 2.

The questions invited responses in a variety of formats, such as selecting particular options, or indicating level of agreement with particular statements (ie Likert-style scales), with a number of invitations to add qualitative comments. All questions were voluntary.

²⁶ Now the Department for Business, Innovation and Skills

²⁷ See Appendix 4 for Steering Group membership and terms of reference

Appendix 2: CROS 2009 core questions with percentage aggregated responses

Careers in Research Online Survey CROS 2009

Introduction

Welcome to the Careers in Research Online Survey (CROS) 2009, and many thanks for taking the time to share your experience of being a researcher in UK higher education. It should only take you around 20 minutes to complete the survey, but the information you provide will have long lasting benefit to you and your peers.

CROS has been designed to capture the anonymised views and experiences of researchers working in higher education in the UK. The results will be used by institutions and research funding bodies to inform decision making and monitor developments and initiatives relating to the employment, training and career development of research staff.

Since it was introduced in 2002, CROS has led to improvement in local staff review and appraisal systems, local induction processes and communication with research staff. The feedback it has provided to government has been invaluable and led to additional funding to institutions for research staff development, as well as significantly raising the profile of research staff both within institutions and nationally. Recently, the second Concordat to Support the Career Development of Researchers has been developed and RCUK has funded Vitae, which champions the professional and career development of doctoral researchers and research staff.

As you can see, CROS, far from being 'just another survey', has had and will continue to have a significant impact on the lives of research staff in the UK. Your input and that of your colleagues is therefore very important and highly valued, and we appreciate the time you are taking out of your busy schedule to tell us about your experiences.

Section 1 - Recruitment and Selection

This section asks you about how you were recruited to your current post.

1. How did you find out about your current post? (Select all that apply) – N=5840²⁸

	%
In a newspaper or other printed media	6
On the institution's website	16
On jobs.ac.uk or another external website	25
On a Listserv or email distribution	4
By word of mouth	30
I was named on the grant	12
I was redeployed (eg to avoid redundancy)	2
My previous contract was extended	11
I don't know/can't remember	1
Other	10

²⁸ All questions were voluntary. The number of respondents (N) is included for each question.

2. During the application process, which of the following were you provided with?
(Select all that apply) – **N=5783**

	%
A written description summary of what the job entailed (job description)	68
Details of the qualifications required of the post-holder	64
Details of the specialist research skills required of the post-holder	57
Details of the transferable/personal/ management skills required of the post-holder	32
None of the above	15
I don't know/can't remember	6
Other	6

3. How were you interviewed for your current post? (Select all that apply) – **N=5799**

	%
Remotely by telephone or video interview	7
By face-to-face interview with the principal investigator(s) or research leader	38
By an interview panel made up of representatives from within the department	29
By an interview panel including representatives from across the institution	12
By a less formal opportunity to meet relevant people and discuss the role	11
I did not have an interview	20
Other/any comments	5

4. (a) What is the nature of your current contract? (Select one answer only) – **N=5377**

	%
Fixed-term	82
Open-ended	18

(b) If fixed-term, what is the total length of your contract? – **N=4411**

	%
3 months or less	1
4 – 6 months	3
7 – 12 months	15
13 – 24 months	24
25 – 36 months	39
37 – 48 months	7
49 – 60 months	9
More than 5 years	2

5. When you started with your current employer how useful did you find the following? (%)

	Very useful	Useful	Not very useful	Not at all useful	Not offered	Offered but not taken	N
a) Information about your employment contract	19	55	15	3	8	1	5759
b) Information about your probationary requirements	8	38	20	5	28	1	5687
c) Copies of institutional policies and procedures (eg complaints procedures)	5	38	27	6	22	2	5684
d) Statement of your rights and responsibilities	7	40	20	4	28	1	5662
e) Copy of the institution's research strategy	5	23	18	5	48	1	5656
f) The induction to your current role	10	33	15	5	35	3	5695
g) Departmental induction programme	6	25	14	5	47	4	5686
h) Cross – institutional induction programmes	2	14	13	4	60	6	5642
i) Training or information about equality and diversity	2	19	18	8	45	8	5662
j) Training or information about health and safety	6	41	20	7	22	5	5681
k) Information about other training and development opportunities	12	45	14	3	23	4	5681

6. Please provide any additional comments on your experience of being appointed and inducted into your current post.

Section 2 – Recognition and Value

7. How would you rate your knowledge and understanding of the following institutional policies, processes and initiatives in relation to research staff? (%)

	I have a good understanding of this/these	I have a partial understanding of this/these	I know these exist but I don't know the detail	I have never heard of this/these	Not applicable	N
a) Appraisal/performance review	37	32	22	7	1	5810
b) Bullying and harassment policies and procedures	11	25	53	11	1	5813
c) Complaints process	6	21	60	12	1	5809
d) Departmental decision-making structures	10	31	44	15	1	5806
e) Equality and diversity policies	14	32	49	5	1	5797
f) Fixed-term contracts	36	44	16	2	2	5800
g) Institutional decision making structures	5	28	51	15	1	5788
h) Institutional research career pathways	11	35	32	21	1	5798
i) Institutional research strategy	11	36	39	14	0	5798
j) Internal funding sources	9	33	40	17	1	5800
k) Job evaluation processes	11	33	35	20	1	5791
l) Probation processes	14	32	38	12	3	5786
m) Promotions criteria and processes	8	29	46	15	3	5801
n) Redundancy and redeployment	7	28	48	15	3	5782
o) Research codes of practice (eg research integrity/academic conduct/ethics)	31	34	25	9	0	5801
p) Terms and conditions of employment	37	49	13	1	0	5800

8. How would you rate your knowledge and understanding of the following policies and initiatives relevant to research staff? (%)

	I have a good understanding of this/these	I have a partial understanding of this/these	I know these exist but I don't know the detail	I have never heard of this/these	Not applicable	N
a) Concordat to Support the Career Development of Researchers	7	25	26	42	0	5782
b) Research Assessment Exercise (RAE)/ Research Excellence Framework (REF)	22	46	21	10	1	5778
c) 'Roberts' Agenda	4	10	13	73	1	5779
d) Vitae (incorporating UK GRAD Programme & UK HERD)	2	9	16	72	1	5787

9. To what extent do you agree that you are treated on an equal footing with lecturing staff at a similar level with regard to... (%)

	Agree strongly	Agree	Disagree	Disagree strongly	Don't know	Not Applicable	N
a) Opportunities for promotion and progression?	5	18	25	26	20	7	5802
b) Requests for flexible working?	24	41	6	4	17	7	5799
c) The job evaluation of your role (pay and grading schemes)?	8	33	19	11	26	4	5777
d) Terms and conditions of employment (excluding any fixed-term nature of contract)?	9	37	13	10	22	8	5749
e) Your visibility on websites and staff directories?	18	46	15	10	9	3	5796
f) Eligibility for performance-related pay?	4	14	19	16	39	10	5785
g) Access to training and development opportunities?	26	50	7	4	11	3	5763
h) Opportunities to participate in departmental decision-making processes (eg committees)?	7	23	26	21	18	6	5791
i) Opportunities to participate in cross-institutional decision-making processes?	3	12	26	25	27	7	5780
j) Opportunities to attend conferences and external meetings	29	45	11	5	8	3	5801

10. To what extent do you agree that your institution recognises and values the contributions that you make to... (%)

	Agree strongly	Agree	Disagree	Disagree strongly	Don't Know	Not applicable	N
a) Achieving the institution's research strategy?	10	43	17	9	19	2	5782
b) External collaborations?	11	42	18	9	15	6	5786
c) Grant applications?	11	36	18	9	13	13	5777
d) Knowledge transfer and commercialisation activities?	6	29	16	8	22	19	5768
e) Managing resources?	5	29	22	10	21	14	5768
f) Managing staff?	4	24	21	10	16	26	5779
g) Promoting the institution?	8	36	19	8	21	9	5760
h) Public engagement with research?	7	34	17	7	21	14	5756
i) Publications?	19	50	12	6	10	3	5769
j) Research culture within the department?	13	43	17	9	16	2	5764
k) Supervising students?	9	33	18	10	10	21	5778
l) Supporting others (eg informal mentoring)?	8	32	23	11	14	11	5777
m) Teaching and lecturing?	6	27	17	9	11	30	5768
n) World-class research?	14	41	15	8	18	5	5762

11. To what extent do you agree that... (%)

	Agree strongly	Agree	Disagree	Disagree strongly	N
a) The research culture of the institution stimulates your work?	26	49	20	6	5793
b) You are integrated into your department's research community?	22	49	22	7	5790
c) You are integrated into your institution's research community?	12	41	39	9	5775
d) You are integrated into your wider disciplinary community?	17	48	30	6	5746

12. Please provide any additional comments on how you are recognised and valued by your institution, or what more it could do to recognise and value your contributions?

Section 3 – Support and Career Development

13. To what extent do you agree that... (%)

	Agree strongly	Agree	Disagree	Disagree strongly	N
a) You have reflected on your development needs?	27	61	12	1	5789
b) You have considered your career options?	32	58	10	1	5785
c) You have a clear career development plan?	14	36	43	7	5780
d) You are encouraged to engage in personal and career development?	15	49	28	7	5757

14. Over the past two years (or since taking up your current position if that is more recent) have you participated in probation? – N=5645

	%
YES	31
NO	69

15. Over the past two years (or since taking up your current position if that is more recent) have you participated in staff appraisal/review – N=5675

	%
YES	50
NO	50

If NO, is this because – N=2819

	%
You are on probation?	8
You've only recently been appointed?	21
You haven't been invited to do so?	46
You haven't arranged this?	7
You are not eligible?	5
Other	13

16. If you have participated in your institution's staff review/appraisal scheme how would you rate this scheme's usefulness... (%)

	Very useful	Useful	Not very useful	Not at all useful	Not applicable	N
a) Overall?	9	36	21	8	27	4173
b) In identifying your strengths and achievements?	9	38	20	7	27	4154
c) In leading to training or other development opportunities?	7	29	27	10	27	4145
d) In leading to changes in work practices?	3	19	33	14	31	4140
e) For highlighting issues?	8	40	17	8	28	4148
f) For finding solutions to problems?	5	25	29	12	29	4137
g) In helping you focus on your career aspirations and how these are met by your current role?	8	30	24	12	27	4145
h) In reviewing your personal progress?	11	39	16	7	27	4140

17. In what areas of work would you place your immediate and longer-term career aspirations? (Please tick all that apply – you can tick the same option both for now and in 5 years time) – **N=5740 (%)**

	Now	in 5 years
a) Career in higher education – primarily research and teaching	34	51
b) Career in higher education – primarily research	64	38
c) Career in higher education – primarily teaching	4	9
d) Research career beyond higher education (eg in a private research organisation, charity or in an industrial environment)	11	34
e) Teaching career outside higher education	2	6
f) Self-employment (including setting up own business)	3	13
g) Non-research career in business/industry/public sector	4	17
h) Any other professional career	3	8
i) Other (including not planning to enter employment)	2	4

18. During the past 12 months (or since taking up your current position if that is more recent) how often have you done each of the following? (%)

	Very often	Often	Some-times	Never	Not applicable	N
a) Discussed your training needs and/or opportunities for career development with your principal investigator or line manager	6	17	53	22	3	5778
b) Discussed your training needs and/or opportunities for career development with a mentor	3	8	23	55	11	5769
c) Discussed your training needs and/or opportunities for career development with a careers advisor	1	2	11	82	5	5755
d) Discussed your training needs and/or opportunities for career development with someone responsible for developing researchers e.g. staff development)	1	3	19	73	4	5753
e) Discussed your progress towards any probationary requirements	1	3	12	48	36	5719
f) Participated in internal institutional training activities or courses	4	17	51	25	2	5759
g) Participated in external training activities or courses	2	8	37	50	3	5757

19. During the past 12 months (or since taking up your current position if that is more recent) approximately how many days have you spent on your continuing professional development (eg training, conference attendance, individual reflection, mentoring)? – **N=5732 (%)**

	%
0	8
1 – 2	17
3 – 5	27
6 – 10	25
11 – 15	11
16 – 20	5
More than 20	7

20. In which areas have you undertaken or would you like to undertake training and development? (%)

	Undertaken and found useful	Undertaken and found not very useful	I would like to do this	This is of no interest to me currently	N
a) Research skills and techniques	35	4	41	20	5534
b) Ethics and research governance	13	4	31	53	5429
c) Personal effectiveness	13	5	45	37	5451
d) Communication skills	21	5	38	36	5457
e) Teamworking	11	4	33	51	5353
f) Career management	10	6	54	29	5472
g) Knowledge transfer and outreach activities	9	3	49	39	5387
h) Teaching	18	5	44	34	5475
i) Leadership and management	11	3	53	33	5509

21. How helpful do you find the following modes of training and development? (%)

	Very helpful	Helpful	Not very helpful	Unhelpful	Not applicable/experienced	N
a) Face-to-face presentations	27	56	7	1	9	5671
b) In the workplace	24	50	6	1	18	5603
c) Interactive workshops	26	48	11	2	13	5638
d) Mentoring and coaching	26	37	8	1	29	5602
e) One-to-one conversations	42	45	4	1	9	5640
f) Online discussion forums	4	19	33	11	33	5595
g) Online resources	12	49	19	5	16	5617
h) Self-reflection	20	51	15	4	10	5619

22. Who have you, or would you, consult about your career development? (%)

	Have consulted	Would definitely consult	Likely to consult	Unlikely to consult	Would not consult	Not applicable	N
a) Careers advisor	13	10	28	34	11	4	5592
b) Careers service resources	10	9	29	36	12	5	5535
c) Staff developer	4	8	28	39	11	10	5478
d) Human resources specialist	2	6	17	50	18	7	5471
e) Principal investigator/line manager	40	22	23	8	4	3	5654
f) Your appraiser	20	15	22	13	3	25	5497
g) Mentor	17	17	18	8	3	37	5531
h) Colleagues	36	24	30	6	3	2	5635
i) Professional body/learned society	5	10	25	39	13	9	5480
j) Funding organisation	4	8	19	42	18	3	5505
k) Recruitment agency	3	5	16	43	25	9	5516
l) Online social networks	2	3	10	40	37	9	5483
m) Partner/family/friends	43	21	24	7	3	2	5627

23. In which of the following would you find information, advice and guidance particularly helpful to assist your career decision making and progression? (Select all that apply) – N=5230

	%
Job application processes in academia	72
Job application processes outside academia	39
Information on careers inside academia	72
Information on careers outside academia	48
Information on international job opportunities	43
Information on secondment and placement opportunities	28
Information on self-employment and freelance consultancy	22
Information on business skills and enterprise	18
Other	3

24. Which of the following have you done, or would you like to do as part of your current role?

Acquiring experience outside your immediate area

	I have done this	I would like to do this	I currently have no interest in this	N
a) Collaborate with colleagues outside the UK	62	33	5	5709
b) Collaborate with industry	35	35	30	5641
c) Undertake a placement in another sector (eg business/voluntary/government)	5	44	51	5601
d) Undertake a secondment to another institution	7	52	42	5585
e) Work as part of a cross-disciplinary team	50	42	8	5692

25. Developing management experience or expertise

	I have done this	I would like to do this	I currently have no interest in this	N
f) Manage a budget	35	41	24	5694
g) Participate in departmental decision making processes and committees	22	51	28	5679
h) Participate in institutional decision making processes and committees	9	45	46	5634
i) Plan and manage a project	53	41	5	5712

26. Developing a broader experience of research functions

	I have done	I would like to do this	I currently have no interest in this	N
j) Apply for a fellowship	33	45	22	5648
k) Develop specialist research skills and techniques	58	37	5	5692
l) Explain work to people outside your field	59	28	14	5677
m) Knowledge transfer	34	45	21	5567
n) Supervise a doctoral or masters student	43	40	17	5669
o) Write a grant/funding proposal	51	40	9	5697
p) Write up research for publication	80	18	2	5733

27. Improving skills of communication or engagement

	I have done this	I would like to do this	I currently have no interest in this	N
q) Demonstrating	47	17	36	5619
r) Presenting work at a conference (orally/poster)	83	15	3	5717
s) Participating in public engagement activities	40	36	24	5655
t) Teaching or lecturing	50	31	19	5703

28. Engaging in personal development activities

	I have done this	I would like to do this	I currently have no interest in this	N
u) Develop a Personal Development Plan or a career development strategy	19	58	24	5674
v) Maintain a professional development record	18	52	30	5635
w) Engage in coaching, mentoring or action learning	14	51	35	5628

29. Please provide any comments you have about the training and career development you have undertaken or suggestions for activities you would like to have the opportunity to undertake.

Section 4 – Equality and Diversity

30. Please indicate your level of agreement or disagreement with the following statements (%)

	Agree strongly	Agree	Disagree	Disagree strongly	N
a) I believe my institution is committed to equality and diversity	33	58	8	2	5739
b) I am satisfied with my work-life balance	19	53	21	7	5741

31. Overall, I think that staff at my institution are treated fairly, regardless of ethnic background, gender, religion or belief, sexual orientation, disability or age with regard to...(%)

	Agree strongly	Agree	Disagree	Disagree strongly	N
a) Recruitment and selection	33	59	6	2	5686
b) Career progression/promotion	27	54	16	4	5650
c) Reward	27	55	15	3	5605
d) Day to day treatment at work	31	59	7	2	5676
e) Access to training and development	34	60	5	1	5658
f) Participation in decision making	25	54	17	4	5618

32. Overall, I think that staff at my institution are treated fairly irrespective of (%)

	Agree strongly	Agree	Disagree	Disagree strongly	N
a) Gender	33	53	11	3	5660
b) Ethnicity	36	58	5	1	5638
c) Nationality	35	57	6	2	5623
d) Ability/disability	34	60	5	1	5605
e) Age	31	56	11	2	5621
f) Sexual orientation	36	61	2	1	5582
g) Religion/belief	36	60	3	1	5572

33. (a) Have you felt unfairly discriminated against in your current post? – N=5511

	%
YES	10
NO	90

(b) If YES, please explain in what way you felt discriminated against?

34. Please provide any additional comments you have about diversity and equality.

Section 5 – About You

35. How long have you been a researcher?²⁹

	0	<1	1-5	6-10	>10	N
a) As a postgraduate researcher	2.2	2.4	85.0	8.5	1.9	4476
b) As member of research staff at this institution	0.2	17.2	58.7	15.9	7.9	5808
c) As member of research staff at other institutions/organisations in the UK	35.2	5.9	41.6	10.4	6.9	3282
d) As member of research staff at other institutions/organisations in Europe	61.8	5.8	26.2	4.5	1.7	2309
e) As member of research staff at other institutions/organisations elsewhere	55.6	6.1	29.8	5.5	3.1	2344

36. How many individual contracts of employment as a researcher have you had with your current institution? N=5673

	%
1	46
2	22
3	13
4	7
5	4
6	2
7-9	3
10 or more	3

37. Are you currently employed – N=5724

	%
Full-time?	87.5
Part-time?	12.5

²⁹ Refer to Appendix 3, Analysis of question 35 responses, to see how these numbers were derived

38. What is your main subject specialism (current contract)? – N=5645

	%		%
Medicine and Dentistry	6.5	Social Work	0.4
Medical Science and Pharmacy	5.8	Human and Social Geography	0.8
Nursing	1.1	Law	0.4
Other subjects allied to Medicine	6.7	Business	0.6
Biology and related Sciences	24.5	Management	1.0
Sports Science	0.3	Finance and Accounting	0.1
Psychology	5.1	Tourism, Transport and Travel	0.2
Veterinary Sciences	0.5	Media Studies	0.2
Agriculture and related subjects	0.5	Communications and Information studies	0.3
Physical Science	11.4	English-based studies	0.7
Physical Geography and Environmental Science	2.4	European Languages and Area studies	0.6
Mathematical Sciences	2.2	Other Languages and Area studies	0.4
Computer Science	3.9	History and Archaeology	2.1
Mechanically- based Engineering	2.4	Philosophy, Theology and Religious studies	0.3
Electronic and Electrical Engineering	2.3	Art and Design	0.6
Civil, Chemical and other Engineering	2.8	Performing Arts	0.3
Technology	0.9	Other Creative Arts	0.1
Architecture, Building and Planning	0.7	Teacher Training	0.1
Economics	1.3	Education Studies	1.9
Politics	0.6	Combined	2.3
Sociology, Social Policy and Anthropology	4.7		

39. How is your current position funded? (Tick all that apply) – N=5710

	%
Institution funded	21
Research Council funded	38
Charity funded	20
UK industry funded	6
UK government (including devolved administrations) funded	14
EU/EC funded	9
Overseas funded	3
Other	8

40. What is your age? – N=5751

	%
Under 25	2
25 – 29 years old	21
30 – 34 years old	31
35 – 39 years old	19
40 – 44 years old	11
45 – 49 years old	7
50 – 54 years old	4
55 – 59 years old	3
60 or older	2

41. What is your gender? – N=5725

	%
Female	55
Male	45

42. Which of the following qualifications do you have? (Tick all that apply) – N=5760

	%
Undergraduate degree	67
Taught postgraduate qualification	26
Research masters	20
Doctorate or equivalent professional qualification	80
None of the above	1

43. How would you classify your ethnic group and cultural background? – N=5643

White	%
British	41
English	11
Scottish	4
Welsh	2
Irish	3
Any other White background (please specify below)	11
Mixed	
White and Black Caribbean	0.1
White and Black African	0.1
White and Asian	0.1
Any other Mixed background (please specify below)	0.7

Asian, Asian British, Asian English, Asian Scottish, or Asian Welsh	%
Indian	2.6
Pakistani	0.4
Bangladeshi	0.3
Any other Asian background (please specify below)	0.4
Black, Black British, Black English, Black Scottish, or Black Welsh	
Caribbean	0.2
African	0.3
Any other Black background (please specify below)	0.1
Chinese, Chinese British, Chinese English, Chinese Scottish, Chinese Welsh	
Chinese	4.2
Other	
Other	19.4

44. Please provide your nationality – N=5248

	%		%		%		%
Afghan	0.0	Brazilian	0.2	Dominican	0.0	Haitian	0.0
Albanian	0.0	British	61.6	Dutch	1.1	Herzegovinian	0.0
Algerian	0.0	Bruneian	0.1	East Timorese	0.0	Honduran	0.0
American	2.3	Bulgarian	0.2	Ecuadorean	0.0	Hungarian	0.2
Andorran	0.0	Burkinabe	0.0	Egyptian	0.1	I-Kiribati	0.0
Angolan	0.0	Burmese	0.0	Emirian	0.0	Icelandic	0.0
Antiguans	0.0	Burundian	0.0	Equatorial Guinean	0.0	Indian	1.8
Argentinean	0.2	Cambodian	0.0	Eritrean	0.0	Indonesian	0.1
Armenian	0.0	Cameroonian	0.0	Estonian	0.0	Iranian	0.2
Australian	1.5	Canadian	1.1	Ethiopian	0.0	Iraqi	0.0
Austrian	0.4	Cape Verdean	0.0	Fijian	0.0	Irish	2.6
Azerbaijani	0.0	Central African	0.0	Filipino	0.0	Israeli	0.2
Bahamian	0.0	Chadian	0.0	Finnish	0.1	Italian	2.3
Bahraini	0.0	Chilean	0.1	French	3.0	Ivorian	0.0
Bangladeshi	0.2	Chinese	2.3	Gabonese	0.0	Jamaican	0.1
Barbadian	0.0	Colombian	0.2	Gambian	0.0	Japanese	0.2
Barbudans	0.0	Comoran	0.0	Georgian	0.0	Jordanian	0.0
Batswana	0.0	Congolese	0.0	German	3.4	Kazakhstani	0.0
Belarusian	0.1	Costa Rican	0.0	Ghanaian	0.0	Kenyan	0.1
Belgian	0.4	Croatian	0.1	Greek	1.1	Kittian and Nevisian	0.0
Belizean	0.0	Cuban	0.0	Grenadian	0.0	Kuwaiti	0.0
Beninese	0.0	Cypriot	0.1	Guatemalan	0.0	Kyrgyz	0.0
Bhutanese	0.0	Czech	0.2	Guinea-Bissauan	0.0	Laotian	0.0
Bolivian	0.0	Danish	0.2	Guinean	0.0	Latvian	0.1
Bosnian	0.1	Djibouti	0.0	Guyanese	0.0	Lebanese	0.1

	%		%		%		%
Liberian	0.0	Namibian	0.0	Saint Lucian	0.0	Swiss	0.4
Libyan	0.0	Nauruan	0.0	Salvadoran	0.0	Syrian	0.0
Liechtensteiner	0.0	Nepalese	0.0	Samoan	0.0	Taiwanese	0.2
Lithuanian	0.0	New Zealander	0.7	San Marinese	0.0	Tajik	0.0
Luxembourger	0.1	Ni-Vanuatu	0.0	Sao Tomean	0.0	Tanzanian	0.0
Macedonian	0.0	Nicaraguan	0.0	Saudi	0.0	Thai	0.1
Malagasy	0.0	Nigerian	0.1	Scottish	1.8	Togolese	0.0
Malawian	0.0	Nigerien	0.0	Senegalese	0.0	Tongan	0.0
Malaysian	0.5	North Korean	0.0	Serbian	0.1	Trinidadian or Tobagonian	0.0
Maldivan	0.0	Northern Irish	0.4	Seychellois	0.0	Tunisian	0.0
Malian	0.0	Norwegian	0.1	Sierra Leonean	0.0	Turkish	0.1
Maltese	0.0	Omani	0.0	Singaporean	0.2	Tuvaluan	0.0
Marshallese	0.0	Pakistani	0.1	Slovakian	0.0	Ugandan	0.0
Mauritanian	0.0	Palauan	0.0	Slovenian	0.1	Ukrainian	0.2
Mauritian	0.0	Panamanian	0.0	Solomon Islander	0.0	Uruguayan	0.0
Mexican	0.4	Papua New Guinean	0.0	Somali	0.0	Uzbekistani	0.0
Micronesian	0.0	Paraguayan	0.0	South African	0.2	Venezuelan	0.0
Moldovan	0.0	Peruvian	0.0	South Korean	0.1	Vietnamese	0.0
Monacan	0.0	Polish	0.7	Spanish	1.4	Welsh	1.1
Mongolian	0.0	Portuguese	0.5	Sri Lankan	0.1	Yemenite	0.0
Moroccan	0.0	Qatari	0.0	Sudanese	0.0	Zambian	0.0
Mosotho	0.0	Romanian	0.2	Surinamer	0.0	Zimbabwean	0.0
Motswana	0.0	Russian	0.5	Swazi	0.0		
Mozambican	0.0	Rwandan	0.0	Swedish	0.6		

45. Is English your first language? – N=5593

	%
YES	70
NO	30

46. Do you consider yourself to have any form of disability? (Please tick all that apply) – N=5545

	%
None	94.5
Dyslexia	1.6
Blind/visually impaired	0.4
Deaf/hard of hearing	0.7
Wheelchair-user/mobility impairments	0.3
Mental health difficulties	1.1
Autistic spectrum disorder	0.1
Unseen disability	2.0
Multiple disabilities	0.1
Other	

Appendix 3: Analysis of CROS responses

Analysis

The analytical work supporting this report was carried out by Vitae on data collated from the core questions common to all the individual surveys within CROS 2009. The Institute for Learning and Research Technology (ILRT) at the University of Bristol carried out the collation of the data. In order to preserve anonymity of both individual and institutional responses, qualitative responses were not made available in the aggregate data.

The dataset used was that available at the national close-off date of 8 June 2009. Although a small number of individual HEI CROS surveys remained open for some days beyond that date, data from additional responses made within that time were not included in this analysis. The aim has been to provide a single aggregate analysis against which HEIs can compare their own results. The aggregate results tabulated in the questionnaire in Appendix 2, in percentage form are based on the data received at the close-off date and therefore represent the official aggregate results as a benchmark. These are also available as a datafile for comparison purposes by HEIs³⁰.

A number of cross-tabulations were performed on selected questions to explore further the responses of respondents with certain demographic characteristics. Cross-tabulations of this kind were made using responses to questions on age, nationality, first language, mode of employment, nature of contract (fixed-term compared to open-ended), length of service with current HEI, number of contracts with current HEI, career aspiration and possession of a career plan. These cross-tabulations resulted in a vast array of data that could not be analysed in full at this stage. However, where the responses between subsets of respondents appeared to differ significantly, these variations were noted and have been identified in the report.

Treatment of incomplete responses

Online surveys inevitably suffer from some degree of attrition as some respondents fail to complete all questions and submit incomplete surveys. CROS contained 46 voluntary core questions, plus additional questions set by the host institution. This can be considered relatively long and a proportion of incomplete surveys was to be expected. The BOS tool collected response data for all questions answered, including those who subsequently dropped out, so it was possible to analyse the level of attrition.

7,482 respondents in total had taken part in CROS 2009 prior to the close-off date. Of these 1,574 or 21% of respondents failed to complete the survey. Therefore there were 5,908 completed questionnaires: these were used for the analysis of the aggregate results.

Figure A3.1 shows the number of respondents for each question, for total participants including non-completions (7,482 starters) and completed questionnaires (5,908). This shows substantial fall-out after question 6 (at the end of Section 1) and after question 12 (at the end of Section 2), after which most respondents continued to complete the survey.

It should also be noted that all of the CROS 2009 questions were voluntary, so respondents could choose not to respond to a particular question. As a result, the number of respondents to each question (N) varies throughout the questionnaire; N is shown for each question in Appendix 2.

Of the 5,908 complete responses, the majority answered most of the questions, so the N figures for each question remain high throughout the questionnaire. Two prominent dips are evident in the graphs, corresponding to lower numbers of responses to question 4 (nature of current employment contract) and question 23 (requirement for information, advice and guidance in career planning).

Comparison of the responses from the total sample (7,482 starters) and the complete sample (5,908) was made to see if any significant differences existed for those questions that had been answered by both. No significant differences were evident.

Equally, since most that dropped out did so early in the questionnaire, there would be little benefit in including the incomplete responses in the overall analysis because they were only available for questions in the first two sections of the questionnaire.

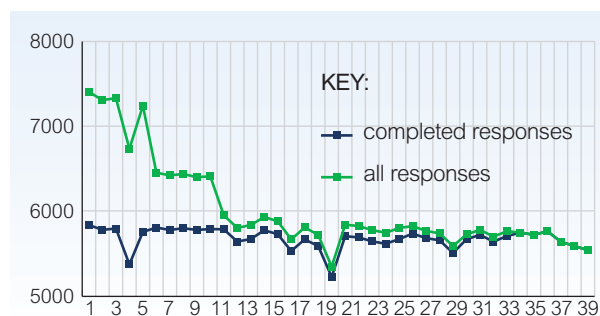


Figure A3.1 Survey completion by question, for those respondents who completed their questionnaire and all respondents

³⁰ It is recommended that HEIs compare their own results with this dataset rather than directly through the BOS facility as the latter will incorporate results received after the close-off date and may differ from the official result set. To access the datafile contact pete.walker@cros.ac.uk.

Statistical confidence

For a random sample of a known size, it is possible to calculate the confidence interval for responses (effectively the 'error bar' for that figure) for specific levels of confidence, provided the total size of the population from which the sample is drawn is known. Typically, statistical analysis is conducted on the basis of a 95% confidence level.

Based on a 95% confidence level, the 5,908 CROS responses from a target population of 28,165 researchers, we can derive that the confidence interval (error bar) is 1.2%. In statistical terms, confidence intervals as small as these indicate that the responses are highly representative of the target population sampled. This would suggest that we should have a very high level of confidence that the responses are representative of the research staff population sampled within the 51 participating HEIs.

Analysis of question 35 responses

Respondents were invited through a free text response to question 35 to identify the length of time they had been a researcher for each of five different categories (see Appendix 2). As qualitative responses were not available directly through BOS for the aggregate sample, analysis of the aggregate responses to question 35 was handled outside of BOS.

The ILRT team at Bristol combined all responses from individual HEIs and exported the results in a CSV file. These were converted into a common format and double-checked. This analysis resulted in the response figures for question 35 tabulated in Appendix 2. The results for 'total length of research career' within body of the report (Figure 8) were derived by summation of individual responses to parts (b) to (e) of question 35.

Those analysing responses to their own institutions' CROS results are recommended to undertake a similar process in order to make comparisons with the aggregate response data.

Implications for future surveys

Although CROS 2009 was trialed with researchers before release, the full-scale use of CROS has raised some issues with the questionnaire that are worthy of consideration before CROS 2010. This process should include structured feedback from participating institutions.

Some institutions have reported feedback from users that they found the questionnaire to be too long and to take longer to complete than the estimated 20 minutes. It will be useful to review the complete questionnaire and associated results to identify which questions have elicited the most useful results and which have not. It will also be beneficial to review the additional questions added by individual HEIs to identify any that may be useful to include in the core questions. This exercise will provide information on how the question set can be improved and hopefully rationalised.

21% of all participants who started the questionnaire did not complete it, with the majority dropping out early in the survey. The ordering of the sections of CROS should be reviewed with the aim of including some of the most critical and engaging issues in early sections to encourage completion.

If incomplete responses are included in future CROS data analysis, consideration will need to be given to the positioning of the section on demographic information, which is critical for cross-tabulation. This section was deliberately placed at the end of the survey so respondents would know the full content of the survey before being asked for 'personal' information.

There is scope to review further and refine the wording of particular questions to decrease the potential for misinterpretation or to provide more specific insight. For example, further differentiation within question 18, which considered 'training needs and/or career development' discussions could be beneficial. Equally some subdivision of the time spent on types of continued professional development in question 19 could be revealing. The CROS Steering Group should gather feedback from individual HEIs on the composition of the questions to inform this process.

Question 35 will need to be completely revised to provide quantitative data on length of research career and experience directly through BOS.

Consideration should also be given to whether or how to illicit the ethnicity of respondents. 19% of respondents used the 'other' category despite using the standard UK Ethnicity categories. Asking HEIs about their free text responses to this question may be illuminating.

Appendix 4: CROS Steering Group and terms of reference

Remit

The Careers in Research Online Survey (CROS) Steering Group (SG) exists to ensure the appropriateness and sustainability of CROS and its associated activities in collecting and reporting the views and experiences of research staff employed in higher education (HE).

Terms of reference

1. Ensure that CROS meets the needs of the HE sector in collecting research staff views of their career development needs and opportunities and in making these views available to the sector
2. Provide sector and key stakeholder input to the ongoing development of CROS, consulting with the sector where appropriate
3. Promote the value of CROS to the sector, encouraging institutional engagement and the sharing of practice
4. Responsible for the control and coordination of CROS, including the timing and frequency of operation
5. Work with the Institute of Learning and Research Technology (ILRT), a department of the University of Bristol and Vitae, to ensure the availability of sufficient resources, administrative support and appropriate protection of the data
6. Be the custodian of the data, including overseeing the specification and production of an annual report of the CROS results by Vitae and responding appropriately to requests for access to the results
7. Work with the Concordat Implementation Coordinator to ensure appropriate links with the implementation of the Concordat principles and other relevant policy developments

Operation

The CROS SG will have an independent Chair from amongst the members.

The CROS SG will meet twice a year. Additional meetings will be arranged as appropriate.

Membership will reflect CROS users and key stakeholders.

Additional tools will be available for internal communication between meetings, eg access to a specific workspace on the Vitae Basecamp.

Vitae will provide travel costs, administrative support and resources for the Steering Group and annual CROS report, and any other costs agreed.

ILRT, University of Bristol will host and administer CROS on the Bristol Online Survey tool (BOS).

Current membership

Jim Baxter	<i>University of Leeds</i>
Rosie Beales	<i>Research Councils UK</i>
John Bothwell	<i>Marine Biological Association and National Research Staff Association (NRSA)</i>
Iain Cameron	<i>Research Councils UK</i>
Christian Carter	<i>University of Bristol and Vitae Research Staff Development Advisory Group (ReSDAG)</i>
Rob Daley	<i>Heriot-Watt University and Vitae Research Staff Development Advisory Group (ReSDAG)</i>
Fiona Denney	<i>King's College, London and Vitae London Hub</i>
Odette Dewhurst	<i>University of Leeds and Vitae Research Staff Development Advisory Group (ReSDAG)</i>
Liz Elvidge	<i>Imperial College, London</i>
Ian Forristal	<i>Queen Mary, University of London</i>
Barbara Gabrys	<i>University of Oxford</i>
Vicky Jones	<i>Higher Education Funding Council for England</i>
Alison McCleery	<i>Edinburgh Napier University</i>
Janet Metcalfe	<i>Vitae</i>
Alison Mitchell	<i>University of Strathclyde</i>
Thomas Papworth	<i>Concordat Implementation Coordinator, Universities UK</i>
Heather Sears	<i>University of Leeds</i>
Pete Walker	<i>ILRT, University of Bristol</i>
Jane Wellens	<i>University of Nottingham</i>
Andy Wilson (chair)	<i>Loughborough University</i>

The Careers in Research Online Survey (CROS) aims to anonymously gather data about working conditions, career aspirations and career development opportunities for research staff employed in higher education (HE). It was relaunched in 2009 with a new question set to reflect the principles of the Concordat to Support the Career Development of Researchers.

The CROS Steering Group exists to ensure the appropriateness and sustainability of CROS and its associated activities, ensuring that CROS meets the needs of the HE sector in collecting research staff views and in making these views available to the sector.

Vitae provides administrative support and resources for the CROS Steering Group. It has analysed the CROS 2009 results and produced this publication on behalf of and under the direction of the CROS Steering Group.

CROS is hosted on the Bristol Online Survey (BOS) tool provided by the Institute of Learning and Research Technology (ILRT), based at the University of Bristol. BOS provides a secure web environment for the design, delivery, administration and analysis of online surveys. www.cros.ac.uk

Vitae builds on previous work by the UK GRAD Programme and UKHERD. Vitae is supported by Research Councils UK (RCUK) and 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 website@vitae.ac.uk

Vitae c/o CRAC, 2nd Floor, Sheraton House, Castle Park, Cambridge, CB3 0AX