

Careers in Research Online Survey (CROS) 2011

Analysis of UK aggregate results



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The CROS/PIRLS 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/principal investigators and research leaders employed in higher education. www.cros.ac.uk

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Foreword

I am pleased to introduce the CROS 2011 report, which presents the key findings emerging from this recent survey of research staff in UK higher education institutions.

It is pleasing to see the progress that has been made in improving the experience of researchers in UK higher education and in implementing The Concordat to Support the Career Development of Researchers. As stated in the conclusion:

'The fundamental observation from this report is that positive progress is being made, and accordingly its main recommendation is to encourage institutions to continue the good work being undertaken towards even greater degrees of implementation of the principles of the Concordat.'

There are, though, no grounds for complacency. Progress is being made but much remains to be done and there will be variations locally across what is a very heterogeneous research sector. We must avoid complacency and ensure that the positive progress continues. This can be assisted by continuing to participate in CROS, sharing findings and sharing good practice with the sector through the CROS and Vitae networks.

CROS provides a valuable way to monitor the progress of institutions and the sector. In particular it:

- helps those concerned with researcher development to plan their interventions
- provides institutions with evidence in relation to the European HR Excellence in Research award and their submissions for the research environment element of the Research Excellence Framework.

I commend both this report and the continued use of CROS and offer my thanks to all those who have been involved in the considerable effort that has gone into running CROS, and especially to the researchers who have taken the time to respond to the survey and hence to benefit themselves and their colleagues.



Dr Andrew Wilson
Loughborough University
Chair, CROS/PIRLS Steering Group

Executive summary

An introduction to CROS 2011

This publication reports findings from the Careers in Research Online Survey (CROS), conducted by higher education institutions (HEIs) in spring 2011. CROS is designed to gather the anonymous views of research staff in UK institutions about their experiences, employment, career development and career aspirations. It provides institutions with the opportunity to compare their institutional results with the UK aggregate or standard benchmarking groups.

Forty-six institutions participated in CROS 2011, which together represent over half of an estimated UK research staff population of around 40,000. The 5,585 completed responses equate to a 25% response rate for the target sample, or 14% of the total UK HE research staff population. The high response rate, consistency with known demographics of research staff and strong statistical confidence afforded by the large sample suggests that responses are representative of the UK research staff population.

Twenty-seven of the 46 participating institutions had participated in both CROS 2009 and CROS 2011, comprising three quarters of all responses. Although the respondents at these institutions will not necessarily have been the same for both surveys, the magnitude of this 'overlap' sample and consistency of these results with the overall survey results in both 2009 and 2011, provided sufficient confidence to support comparison of the 2009 and 2011 UK aggregate results.

Therefore CROS 2011 offers both a unique snapshot of the experiences and attitudes of the UK's research staff in higher education in 2011 and provides a view of how these have changed since 2009. Where questions are directly comparable with those in CROS 2009, CROS 2011 offers a view of progress in implementing the principles of the Concordat to Support the Career Development of Researchers, as seen and reported by research staff.

Key findings and progress with Concordat implementation

Recruitment and selection

There has been good progress in terms of improving the openness and transparency of recruitment and appointment processes. The majority of respondents were interviewed for their current role, through either formal or informal mechanisms, and more received local and institutional induction and were supplied with job descriptions and other employment-related information. Overall there was a slight reduction in the proportion of research staff employed on fixed-term contracts. However, there is evidence of an increase in the use of contracts of two years or less.

Recognition and value

CROS 2011 results reaffirm positive attitudes by most respondents in terms of their work-life balance, community integration and feeling valued by their institution for their research activity. Their perceptions of feeling recognised and valued for their wider contributions beyond research have increased slightly, and fewer believe that they are not treated fairly in comparison with other staff. Participation in appraisal or staff review continues to rise, together with a slight increase in perceived usefulness. There is still a small proportion reporting that they have not been invited to undertake appraisal.

Although there has been some progress since 2009, there remain groups of researchers, such as those who have had multiple, short-term contracts and/or long service through fixed-term contracts, who feel less integrated and report less positive feelings about their employer, job and career. These researchers remain of concern and in need of particular attention.

Support and career development

The strong majority of research staff feel encouraged to engage in personal and career development and able to approach their managers for support. However, the use of personal development records remains much more limited.

The availability and take-up of training and development activities does not appear to have risen since 2009, although different measures have been utilised to assess this. Whether this marks a reversal of the rises seen in recent years will only become clear with further assessment using fully consistent measures. While there still appears to be enthusiasm for broader experience such as work placements or secondments, these have been undertaken only by very small numbers.

Researchers' responsibilities

Most respondents appear to be well-informed about issues related to their current employment and research, but less so about their potential progression. There has been a slight rise in the proportion that has a career plan. Those who do not actively plan their career tend to be less engaged and take less advantage of opportunities on offer.

Many respondents continue to report enthusiasm for training in research and personal development skills or for external placements and believe access to training is fully open. Yet they have not taken advantage of such opportunities. A minority continue to show no interest in training in these areas.

Equality and diversity

The majority of respondents continue to report that they believe that their institution is committed to diversity and equality and that staff are treated fairly by the institution across a range of activities, including promotion, access to training and day-to-day treatment at work. Lower proportions feel that they are not treated fairly in comparison with other staff at the institution, compared with the levels reporting a perceived lack of fairness in relation to lecturing staff in 2009.

Implementation and review

Comparison of CROS 2011 with 2009 aggregate results demonstrates that, across the UK, progress is being made on many of the Concordat principles and also identifies where more progress could be made. Although comparisons of institutional results with the CROS aggregate results is valuable, greater benefit will come from continued institutional participation in CROS enabling longitudinal comparison of institutional data. CROS findings will also be useful to institutions seeking the European HR Excellence in Research award and in providing evidence for their submissions on the research environment element of the Research Excellence Framework.

Conclusion

Institutions are to be congratulated on the progress observed overall on many of the CROS 2009 recommendations, based on the aggregate 2011 results. It is particularly noteworthy that there has been progress with respect to all the Concordat principles. However, the extent of progress varies across the range of the Concordat principles and the situation within individual institutions is likely to be more varied still.

The fundamental observation from this report is that positive progress is being made, and accordingly its main recommendation is to encourage institutions to continue the good work being undertaken towards even greater degrees of implementation of the principles of the Concordat. It also highlights a few detailed areas where more attention may need to be paid, particularly in encouraging more researchers to engage in professional development.

Progress against CROS 2009 recommendations¹

Recruitment and selection

CROS 2009 recommendations	Progress
Institutions should ensure that all recruitment policies are open and transparent, for example all vacancies should be promoted and advertised externally.	✓ Since 2009 there has been a small but significant increase in the proportion of respondents learning about their current post via websites and open information, and a decrease in the proportion that learned by word of mouth.
Ensure that departments and principal investigators are aware of and follow institutional recruitment policies and procedures, including providing job descriptions to all postholders.	✓✓✓ There have been significant increases in the proportion receiving job descriptions (now over 70%) and other supporting information relating to their new post.
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.	✓✓ An increased proportion report that their application interviews were with panels including wider representatives, and a lower proportion report not having an interview at all. There is no evidence for progress on applicants having more opportunities to meet other staff informally during the interview process.
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.	✓✓✓ There have been significant increases in the provision and take-up of inductions, locally to the role and especially at institution level, together with some increase in the provision and usefulness of supporting information when research staff took up their current post. Institutions should explore whether they are tending to use shorter term contracts and, if so, whether they are being used judiciously, e.g. to provide bridging funding.

Recognition and value

CROS 2009 recommendations	Progress
All eligible researchers should undertake regular reviews and appraisal and most research staff report these to be useful.	✓✓ More (55%) now report that they undertake appraisal than do not. There have also been significant increases in the proportion of respondents reporting that their appraisal was useful for most issues. A proportion of apparently eligible researchers (20%) remains that are not being invited to appraisal, which warrants further (local) exploration.
Appraisal processes should also address work practices and problem-solving.	✓✓ There has been an increase in the proportion (now around three quarters) whose appraisal addresses work practices. The questions in CROS 2011 do not specifically include the issue of problem-solving.
Institutions should consider how they can recognise more fully the contribution of researchers, beyond their research activities.	✓ CROS 2011 demonstrates modest increases in the proportion that perceives recognition and value from their institution for some specific contributions, but for other contributions this is unchanged (although for none has the proportion decreased).
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.	✓✓✓ The proportion of research staff overall that perceives integration within their departmental and institutional research communities has increased significantly, and there have also been increases within less engaged groups. Institutions should guard against any reversal in the progress made in the integration of research staff, which might result from any trend to shorter contracts.

¹ Additional recommendations arising from CROS 2011 are in blue.

Key:

- ✓✓✓ Evidence of significant progress from several reinforcing questions
- ✓✓ Evidence of significant progress
- ✓ Direct evidence of some progress or contributory evidence
- ✗ No evidence for progress

Support and career development

CROS 2009 recommendations	Progress
Research staff should be encouraged to engage more actively in career development planning, using the experience of their managers, staff developers and careers advisors.	✓✓✓ There has been a significant increase in the proportion of respondents reporting that they feel encouraged to engage in career development (including within many sub-populations). The majority of researchers either have consulted or would consult their managers for support. Few consult with staff developers and career advisors. Institutions should consider how they can encourage research staff to engage more with 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.	✓ Substantial proportions of respondents continue to claim interest in receiving information and advice, although the proportions are somewhat lower in 2011 for some areas.
Careers services should explore ways to improve their engagement with researchers.	The revised CROS 2011 questions on the level of interaction with careers services were generalised to emphasise researchers' engagement with different sources of support, rather than to measure past extent of interaction specifically with careers services.
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.	✓✓ CROS 2011 records a significant increase in the proportion that has undertaken career management training.
Institutions 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.	✓ Changes in the CROS question set prevent direct comparison, but the proportions reporting they have undertaken and/or would like to participate in transferable skills training remain significant and consistent. Few are investing in ten days of continuing professional development per year. Institutions should consider using the Vitae Researcher Development Statement and Framework to promote the importance of professional development across the range of researcher capabilities.
Institutions should explore how to provide more placement and secondment opportunities to broaden experiences of researchers and widen their career aspirations.	✗ The proportion who report that they have undertaken external placements or secondments remains low and the proportion expressing interest is substantial and growing. Institutions should actively consider how to support opportunities for placements within business and other organisations in line with recent initiatives for postgraduate researchers.

Researchers' responsibilities

CROS 2009 recommendations	Progress
Managers and staff developers should stress that researchers need proactively 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.	✓ A small but significant increase is recorded in the proportion of respondents with a career plan. Although there is no evidence for further increases in the levels of understanding of relevant policies and procedures, these are already at high levels for many issues.
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.	✓ Significant proportions of researchers report that they are willing to consult or have consulted principal investigators (PIs) and career and development specialists in relation to career decision making and progression. The proportion seeking information and advice in relation to employment and applications remains substantial but has decreased for some issues since 2009.
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.	CROS 2011 has new questions which establish a baseline and provide future benchmark measures. Researchers should be encouraged to consider utilising the Vitae Researcher Development Framework professional development planner as a mechanism to record their professional development.

Equality and diversity

CROS 2009 recommendations	Progress
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.	✓ CROS 2011 investigates perceived inequalities in relation to other staff generally, rather than lecturers in CROS 2009, and therefore is not directly comparable. However the proportion perceiving unfair treatment compared with other staff is lower than that reported in relation to lecturers in 2009.
Ensure the institution's commitment to valuing researchers is communicated effectively to researchers and their managers and implemented in practice.	✓✓✓ Respondents report increased perceptions of recognition and value for many of their contributions (and no decreases).
HEIs should review the free text responses provided by respondents in order to explore in more detail issues around discrimination.	✗ A consistent small minority of respondents continues to report perceptions of discrimination against them personally.
	Institutions are encouraged to make use of CROS results as evidence they might provide when demonstrating due regard in relation to their duties under the 2010 Equality Act.

Implementation and review

CROS 2009 recommendations	Progress
Institutions are encouraged to compare their own response data with the aggregate responses presented here, taking into account local conditions and cohorts.	✓✓ There is strong anecdotal evidence that institutions value the aggregate reports to compare their own results and identify priorities for action. CROS workshops were well attended. Almost 2000 copies of the CROS 2009 report have been distributed.
Institutions are encouraged to provide feedback to their research staff, both respondents and non-respondents, about their CROS results and subsequent actions.	✓ A Vitae 2011 survey of 'The visibility of researcher development in UK higher education institutions' strategies' found public evidence of CROS participation or feedback in half of the 34 institutions surveyed that had participated in CROS. Examples found included an open forum to encourage research staff comments on future actions, publication of institutional CROS reports and how the CROS results have affected researcher development provision. www.vitae.ac.uk/CMS/files/upload/Vitae-The-visibility-of-researcher-development-in-UK-higher-education-institutions-strategies-2011.pdf Institutions are encouraged to do more to make their CROS results and progress more visible to current and potential researchers and to research leaders.
HEIs should engage in benchmarking groups and other activities to share knowledge and practice, enabling comparison between institutional populations.	CROS 2009 and 2011 provided participating institutions with the ability to compare their results against benchmarked groups consisting of the Russell Group, 1994 Group, pre-1992, post-1992 and Scottish institutions. Informal groups were set up in both 2009 and 2011 to consenting institutions to benchmark against each other.
Institutions should be encouraged to take part in future CROS surveys and those that have run surveys to feed back their experiences to the Steering Group and promote the benefits to colleagues in non-participating institutions.	✓✓✓ 75 institutions have participated in CROS since it was re-launched in 2009. Institutions should recognise that participation in CROS provides useful evidence towards gaining the European HR Excellence in Research award and in preparing their submissions for the research environment element of the Research Excellence Framework.
The aggregate responses should be used to inform national activities to support the implementation of the Concordat's principles.	✓✓✓ CROS aggregate results were published in 2009 and 2011. CROS participation, response rate and specific questions have been included in the Concordat Strategy Group's measures of progress.
The CROS Steering Group should commission further analysis of sub-populations of the aggregate results, e.g. by broad subject areas, employment status.	✓✓✓ CROS 2009 analysis by broad discipline group was published in 2010. www.vitae.ac.uk/CMS/files/upload/CROS%202009%20by%20discipline.pdf
Institutions should identify areas of good practice and share these with the rest of the sector through the CROS and Vitae networks.	✓✓✓ Two CROS workshops ran at the September 2009 Vitae conference, and a special interest session on CROS 2009 by discipline ran at the 2010 conference. The CROS/PIRLS Steering Group, Vitae North West Hub and Yorkshire and North East Hub jointly ran a national CROS practice sharing event in November 2010.

1 Introduction

This report presents findings from the 2011 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 about their experiences, career aspirations and career development opportunities.

The findings are based on the aggregated results from the core questions common to the individual CROS surveys run by 46 institutions in spring 2011. The report provides a current snapshot of the views of research staff respondents and a UK context against which individual institutions can compare and evaluate data collected in their own CROS survey. Where

questions are comparable, it also compares aggregate results in 2011 with those obtained in 2009², thereby highlighting progress of the UK higher education sector.

The results are presented in relation to the principles of the Concordat to Support the Career Development of Researchers. In this way they offer evidence of progress of the sector in respect of the implementation by institutions of the Concordat and prompt further actions.

The complete aggregate CROS 2011 results, with comparison against CROS 2009 where appropriate, are given in Appendix 1.

2 Context

2.1 Context and drivers

The importance of research innovation and highly-skilled researchers as key elements of the future economic prosperity and wellbeing of the UK has repeatedly been articulated in the policy of successive governments, including the Science and Innovation Investment Framework and most recently in the 2011 Higher Education White Paper³.

Optimising the economic and societal impact of research is also the goal of HEFCE's Higher Education Innovation Fund (HEIF)⁴ and other funding councils' 'third stream' funding. Increasingly it is recognised that obtaining greater impact from research requires investment in good leadership and management and development of researchers, as well as effective knowledge exchange with businesses and others dependent on the research base.

Announcing the institutions gaining the HR Excellence in Research award, David Willetts, Minister for Universities and Science said "It is right that as we put research at the heart of our plans for future prosperity, we prioritise the development of excellent researchers able to capitalise on the impact of that research."

The importance of investment and development of human resources is formally recognised within the Research Excellence Framework⁵ assessing the quality of research in UK higher education institutions. Draft panel guidance on the research environment element of the Research Excellence

Framework makes explicit references to evidence and indicators of the implementation of the Concordat to Support the Career Development of Researchers and 'how the unit [of assessment] has been developing the research of early career researchers and support for integrating them into a wider, supportive research culture'.

The introduction of new duties under the Equality Act 2010⁶ reinforces the importance of institutions promoting equality of opportunity for all researchers. As a HEFCE workshop on equality and diversity in research careers⁷ identified, 'making progress on equality and diversity in research careers is increasingly important if the country is to benefit from the endeavours of the pool of talented and committed researchers we have in our higher education (HE) sector'.

2.2 The Concordat to Support the Career Development of Researchers

Much of the drive to improve working conditions and career development opportunities for research staff stems from the Research Careers Initiative⁸ and associated 1996 Concordat on career management for 'contract' researchers. This was replaced in June 2008 by the Concordat to Support the Career Development of Researchers, following the launch of the European Charter and Code⁹. The Concordat¹⁰ is signed by Universities UK and the main research funders, and supported by a range of interested stakeholders.

² Careers in Research Online Survey (CROS) 2009: Analysis of aggregated UK results, Vitae www.vitae.ac.uk/CMS/files/upload/CROS_2009_October.pdf

³ Higher education: students at the heart of the system, BIS, 2011 www.bis.gov.uk/assets/biscore/higher-education/docs/h/11-944-higher-education-students-at-heart-of-system.pdf

⁴ Higher Education Innovation Fund www.hefce.ac.uk/econsoc/buscom/heif/heif.asp

⁵ Research Excellence Framework www.hefce.ac.uk/research/ref/

⁶ Equality Act 2010 implications for higher education institutions, ECU, 2010 www.ecu.ac.uk/publications/equality-act-2010

⁷ Workshop on equality and diversity in research careers, HEFCE, 2010 www.hefce.ac.uk/research/careers/event_notes.pdf

⁸ Research Careers Initiative, www.universitiesuk.ac.uk/Newsroom/Media-Releases/Pages/MediaRelease-355.aspx

⁹ European Charter for Researchers and Code of Conduct for the Recruitment of Researchers www.vitae.ac.uk/policy-practice/2667/European-Charter-and-Code.html#euro

¹⁰ Concordat to Support the Career Development of Researchers www.researchconcordat.ac.uk

The Concordat is having a significant influence and impact across the HE sector. A survey of institutional strategies in spring 2010¹¹ showed that 70% of institutions had implemented changes to their policies and procedures, many had a specific implementation plan and more were in the process of producing a plan. 81% of all institutions reported that their governing body was kept regularly informed about and involved in Concordat implementation.

The Concordat recognised that benchmarking and regular reviews of progress are required in order to assess impact and effectiveness. The alignment of CROS in 2009 with the Concordat principles provides an important mechanism in reviewing progress based on the views and experiences of research staff. Together with a number of other initiatives it provides measures of progress with implementation of the Concordat.

From 2011, CROS is complemented by the Principal Investigators and Research Leaders Survey (PIRLS). Its aim is to capture views of principal investigators about research leadership that will inform actions within the institution, the sector and the research funders. It will capture respondents' views on how they gained the experience and capabilities that have made them research leaders, and on how the research leaders of tomorrow may gain the experience and capabilities that they will need. Both CROS and PIRLS are the responsibility of the CROS/PIRLS Steering Group (see Appendix 2).

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 proactively 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

The Concordat is also the mechanism through which UK institutions can demonstrate alignment with the principles of the European Charter for Researchers and Code of Conduct for their recruitment. A UK-wide process, incorporating both the QAA Code of Practice for Research Degree Programmes and the Concordat to Support the Career Development of Researchers, enables institutions that have published Concordat implementation plans to gain the 'HR Excellence in Research' badge¹². UK institutions lead the way in Europe in gaining the award.

2.3 Vitae

Research Councils UK funds the Vitae programme, launched in 2008 and managed by CRAC. Its vision is for the UK to be world-class in supporting the personal, professional and career development of researchers. It has four overarching aims, which are to:

- build human capital by influencing the development and implementation of effective policy relating to researcher development
- enhance higher education provision to train and develop researchers through generation of key resources/programmes and regional implementation
- empower researchers to make an impact in their careers through UK-wide researcher web resources and support and targeted activities to meet specific needs
- evidence the impact of professional and career development support for researchers.

From April 2011, Vitae assumed responsibilities for the implementation of the Concordat alongside its researcher development activities. During 2011, Vitae will undertake a three-year review of progress in implementation of the principles of the Concordat, and the results of CROS and PIRLS will form an important input to this review.

Vitae has supported the redevelopment and management of CROS since 2008, and more recently the development of PIRLS, with the Concordat Implementation Coordinator. In addition to providing managerial and financial support to the CROS/PIRLS Steering Group, Vitae analyses and publishes the UK aggregated results.

¹¹ Higher education institutions' strategic responses to the Concordat, London, 2010

¹² HE Excellence in Research badge www.vitae.ac.uk/hrexcellencebadge

3 CROS 2011

3.1 Target audience

CROS is targeted at research staff employed in UK higher education institutions as defined 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; it is also intended that lecturers are not included in this definition. Individual institutions were responsible for identifying their target sample and promoting the survey to potential participants.

3.2 Methodology

CROS 2011 comprised a series of parallel surveys conducted by individual institutions, all hosted on the BOS (Bristol Online Surveys) platform, which provides a secure web environment for the design, delivery, administration and analysis of online surveys. Individual institutions' surveys contained a common 'core' CROS 2011 question set, to which they could add

bespoke questions for their own participants. Linkage of the survey responses through the BOS tool enabled collation of the results for core questions on a confidential basis to protect the anonymity of individual respondents and their institutions.

The core question set for the 2009 CROS survey had been developed and structured to reflect the principles of the Concordat to Support the Career Development of Researchers. Based on the experience of the 2009 survey, the question set was amended for the 2010 survey and further minor adjustments made prior to the 2011 survey. The full question set can be seen in Appendix 1.

The responses from CROS offer an extremely rich dataset worthy of deep analysis. The CROS Steering Group agreed that the primary scope of analysis for this report would be the overall aggregate data to provide a UK overview, together with comparisons, where feasible, with the 2009 aggregate results.

Given the varied environments, infrastructure and practice to support researchers within individual universities, responses from a particular institutional cohort may well differ markedly from the aggregate responses reported here. Accordingly, institutions are encouraged to use their own data to assess their particular progress with embedding the Concordat principles, and consider benchmarking through the BOS tool against other groups of institutions, as well as making comparisons with the UK aggregate results reported here.

4 The sample: responses and demographic characteristics

4.1 Participation and response rates

Forty six institutions participated in CROS 2011. These comprised 13 of the 20 Russell Group¹³ institutions, 10 (of the 18) 1994 Group¹⁴ institutions and 23 other institutions. Of the latter, 13 are 'post-92' institutions.

Individual institutions were responsible for identifying their research staff populations and based on these figures the total target population was 22,249 research staff. This represents over half of the total research staff population in the UK as reported by HESA¹⁵.

Institutions launched their surveys from March 2011 onwards. At the point of UK survey closure, 2 June 2011, 7,056 responses had been received, of which there were 5,585 completed, non-duplicate questionnaires. The balance of 1,471 questionnaires was excluded in order to remove a small number of duplicate responses and, especially, incomplete responses. Despite changes to the question set, including reducing the number of questions, there was still a disappointingly high

number of incomplete responses. The Steering Group will explore further how these could be minimised for future surveys.

The 5,585 completed responses represent an overall response rate of around 25%. This response rate was slightly lower for the Russell Group institutions (23%) and highest amongst the participating post-1992 institutions (34%).

A broad comparison of participation in the CROS 2011 with CROS 2009 is made in Table 1. While the number of participating institutions was lower than in 2009 (46 compared to 51), the response rate was higher at 25%. As a proportion of the total UK research staff population, total participation was around 17%, with 14% providing complete responses.

In terms of the institutional groupings, 66% of respondents to CROS 2011 were from Russell Group institutions, 12% from 1994 Group institutions and 22% from other institutions. This appears closely to reflect the UK position based on HESA staff record data which, for example, records that 66% of 'research-only' staff are employed at Russell Group institutions and 14% in 1994 Group institutions.

¹³ The Russell Group www.russellgroup.ac.uk

¹⁴ The 1994 Group www.1994group.ac.uk

¹⁵ HESA (2011). Resources of Higher Education Institutions 2009/10, 'research-only' staff

Table 1 Institutional participation and response rates for CROS 2011, compared with CROS 2009

	CROS 2011	CROS 2009	'Overlap' sample ¹
Completed questionnaires and response rate	5585 25%	5908 21%	4370
Population sampled	22249	28165	
Participating institutions	46	51	27
Russell Group institutions	13 of 20 members (66% of respondents)	16 (71%)	10 (76%)
1994 Group institutions	10 of 18 members (12% of respondents)	12 (15%)	6 (9%)
Other institutions	23 (22% of respondents)	23 (14%)	11 (15%)

¹ The 'overlap' sample is institutions participating in both CROS 2009 and 2011

4.2 Profile and characteristics of the response sample

The demographic characteristics of respondents are shown in Table 2. Comparisons are made, where feasible, with the aggregate results for CROS 2009 and relevant HESA staff records.

Table 2 Demographic characteristics of CROS 2011 respondents, compared with CROS 2009 and HESA data for UK 'research-only' staff (for age and gender) and all UK academic staff (for ethnicity and nationality)

	CROS 2011 %	CROS 2009 %	HESA 09/10 %
Age (yrs)			
30 and under	26	23 (under 30) ²	33
31-45	58	61 (30-44)	51
Over 45	16	16 (45 and over)	16
Gender			
female	53	55	47
male	47	45	53
Ethnicity (UK)			
White (all)	93 ¹		White (all) 93
Asian (all)	2		BME (all) 7
Black (all)	<1		
Chinese	2		
Other	2		
Nationality			
UK	67	65	80
Other EU	19	18	10
Rest of world	15	17	10

¹ Ethnicity percentages for CROS 2011 are for UK nationals only and have been recalculated to exclude those who preferred not to identify their grouping.

² Age categories were changed in 2011 from CROS 2009 to align with HESA categories.

26% of CROS 2011 respondents were 30 years old or younger, 58% were aged 31-45 and 16% were over 45 years old. Although the pattern is broadly similar, the profile of CROS 2011 respondents appears to be somewhat older than that of 'research-only' staff in the HESA staff record data.

53% of respondents to CROS 2011 were female, compared with 55% in CROS 2009. Recent HESA data suggest that the proportion of female research-only staff is 47%, and has been growing in recent years. It is believed that the difference continues to relate to the observation (in many surveys) that females tend to be more prepared to respond to surveys than males.

The proportion of respondents with UK nationality was 67%, with 19% from other EU countries and 15% from the rest of the world. 29% reported that English was not their first language. These figures are close to the proportions observed in CROS 2009, and higher than for all UK academic staff.

The ethnicity of respondents was investigated only for those of UK nationality as the 'standard' UK classification may not be well understood by other nationalities. Of those who stated their ethnic background, 93% of UK national respondents selected a 'White' category. The proportion of UK HE academic staff of ethnic minority background is reported by HESA to be 7% overall, matching the CROS 2011 figure.

Fewer than 5% of respondents considered themselves to have a form of disability, of which almost half reported that this was a 'long-standing illness or health condition'. HESA reports that 2.5% of UK academic staff, and around 2% of research-only staff, are declared disabled. It is quite likely that respondents feel more able to report disability in a survey from a 'neutral' source, such as CROS, than declaring it formally to their employer, which could account for this discrepancy.

The highest level of qualification held by research staff was investigated. 81% of respondents reported that they had a doctorate or equivalent professional qualification, although this was lower for females (77%) than for males (87%) and those of non-UK nationality (88%). Most of the remainder had either a taught postgraduate qualification (7%) or a research masters degree (6%).

As in CROS 2009, the largest proportion of respondents was working in the biological sciences (27%). Table 3 illustrates the subjects studied using JACS subject groups¹⁶, with corresponding figures from HESA staff records, re-coded to the same JACS groups. The pattern in CROS 2011 is similar to that observed in CROS 2009, with a reasonable match between most subject areas between CROS and HESA data, with the exception of medicine and dentistry and biological sciences, and lower proportions in CROS in business/administration and the humanities.

Table 3 Main subject specialism of respondents using selected JACS subject groups compared to HESA data for all academic staff

JACS subject group	CROS 2011 %	CROS 2009 %	HESA 2008/09 %
A: medicine and dentistry	10	12	16
B: subjects allied to medicine	11	8	8
C: biological sciences	28	30	14
F: physical sciences	12	14	9
G: maths and computer sciences	6	6	6
H: engineering	11	8	8
L: social studies	9	8	9
N: business and administration	2	2	8
Q: English-based studies	1	2	5
R/T: foreign languages	1	1	5
V: historical/philosophical studies	2	2	5

4.3 Representativeness of the sample

Statistically, for a random sample of known size from a known total population, the confidence interval (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, 5,585 CROS responses from a target population of 22,249 research staff produce a confidence interval of 1.1% assuming a random sample. In statistical terms, a confidence interval as small as this indicates that the responses are highly representative of the target population sampled.

'Representativeness' of a sample can also be assessed by comparing the demographic profile of the sample with that of the known total target population. The profile of the CROS 2011 sample seems to compare well with known parameters of the overall UK research staff population in terms of age, and reasonably well with gender, disability and ethnicity. While there is some mismatch in terms of certain subject disciplines, this could be due to under-sampling of research staff in medical fields owing to the nature of the participating institutions, or could relate to classification of disciplines in either the HESA or CROS data, or both.

As we have seen, the overall 'shape' of the sample in terms of institution group appears closely to resemble that of the overall research staff population, with a very good match in the proportions of Russell Group (66% of responses), 1994 Group (12%) and other institutions (22%). Taken together with the small confidence interval and the comparable profiles with HESA characteristics, this strongly indicates that the CROS 2011 sample should provide an accurate representation of both the participating institutions and the UK's research staff population in general. On that basis we believe that the aggregate sample can be taken as broadly representative of the UK HE research staff population.

4.4 Comparability with CROS 2009

One of the key potential benefits of CROS is the opportunity to use it as a measure of progress of institutions in relation to embedding the principles of the Concordat to Support the Career Development of Researchers in their human resources strategies and employment practices. This can be achieved by comparing CROS 2009 and 2011 where there are consistent questions and if the respective aggregate samples are both representative of the target population.

In order to consider comparability in a robust fashion, several analyses were carried out. First, institutional participation was compared in CROS 2009 and 2011, which identified that 27 of the 46 institutions participating in CROS 2011 had also participated in the 2009 survey (Table 1). Responses from these 'overlap' institutions comprised over three quarters (78%) of all 2011 responses, while these institutions had provided almost two thirds of responses in CROS 2009. Thus, in numerical terms at least, the high proportion of responses from 'overlap' institutions (Figure 1) increases the potential comparability of responses overall, even though not all respondents within those institutions will have completed both surveys.

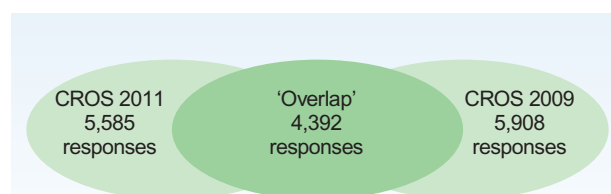


Figure 1 Representation of 'overlap' sample with CROS 2009 and 2011

To further test comparability, the responses to a range of questions were compared between the 'overlap' 2011 subset and the overall 2011 results. The two sets of results were remarkably similar, with almost no significant differences. Additionally, responses from the 'overlap' 2009 subset were compared with the overall 2009 results: again there were almost no significant differences between the two sets of results.

Given the magnitude of the 'overlap' and the observation that responses from 'overlap' institutions were representative of their respective overall survey results in both 2009 and 2011, it was considered that comparison of the UK aggregate results for 2009 and 2011 would be reasonably robust.

¹⁶ JACS (Joint Academic Coding System). www.hesa.ac.uk/index.php?option=com_content&task=view&id=158&Itemid=233

5 Results

This chapter presents the main aggregated results for CROS 2011, principally for those questions where comparison with 2009 results offers an indication of progress against recommendations made in the 2009 CROS report, relative to the principles of the Concordat to Support the Career Development of Researchers. Certain other results are included in a final section. The full aggregate results for CROS 2011 and comparison against CROS 2009, where appropriate, are presented in Appendix 1.

5.1 Recruitment and selection

5.1.1 Employment contractual status

The Concordat recommends that institutions appoint research staff on open-ended contracts unless there is a recorded and justified reason to employ on a fixed-term contract. Overall, 77% of 2011 respondents reported that they were employed on a fixed-term contract and 23% on an open-ended contract. The respective percentages in CROS 2009 were 82% and 18%, representing an overall reduction in the use of fixed-term contracts.

This correlates with the 79% reported in the second annual report to the Research Base Funders Forum¹⁷, based on HESA data from 2008. A more recent survey of research staff in STEM disciplines recorded a figure of 85%¹⁸.

When analysed by institutional group, the proportion with fixed-term contracts decreased between 2009 and 2011 in every group. The highest proportion of respondents with current fixed-term contracts was in Russell Group institutions (82%) and a much lower proportion in post-1992 institutions (43%) (Table 4).

Table 4 Respondents currently employed on a fixed-term contract (N=5263)

Institutional group	CROS 2011 %	CROS 2009 %
Russell Group	82	85
1994 Group	78	80
Pre-1992	72	78
Post-1992	43	59
Total	77	82

Given the much lower proportion of fixed-term contracts amongst post-1992 institution respondents, and the increased number of participating institutions in this group in 2011 compared with 2009, further analysis was applied to these responses. For the 'overlap' institutions that participated in both CROS 2011 and 2009, the overall proportion of fixed-term contracts fell from 82% to 80%. This would suggest that the

overall decrease observed in the UK aggregate responses is partly 'real', but is also in part due to the existence of significantly more post-1992 institutions in the CROS 2011 sample.

Additional analysis shows that a very high proportion of younger respondents were working under fixed-term contracts; over 90% of those aged 30 or less. This was only the case for around half of those aged 45 or over. 85% of respondents on their first contract with the institution had a fixed-term contract. Over 60% of respondents who had had five or more contracts with their current institution were still employed on fixed-term contracts.

For those respondents with fixed-term contracts, the most prevalent length of contract was between two and three years (35%), with 23% reporting being employed on a contract of one year or less. Comparison with CROS 2009 shows a distinct shortening of average contract length, mainly from a reduction in the number of contracts of over two years and increases in shorter contracts (Figure 2). This apparent shortening was evident in all groups of institutions, although the highest proportions of very short contracts were amongst respondents from post-1992 institutions.

In parallel with CROS 2009, there is particular concern in relation to respondents who have had five or more contracts with their current institution, of whom a high proportion (41% in both CROS 2011 and 2009) are on contracts of twelve months or shorter duration. A number of these respondents have been with their institution for many years, comprising a distinct group of researchers who have long service and experience, but are employed on very short contracts.

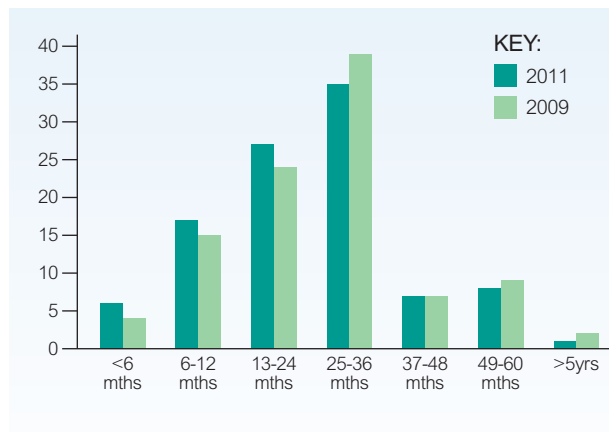


Figure 2 Length of current contract of respondents currently on fixed-term contracts (N=4062)

¹⁷ Second annual report on research staff (2004/05 to 2007/08)

¹⁸ Athena Survey of Science, Engineering and Technology (ASSET) 2010

5.1.2 Appointment processes

The 2009 CROS report recommended 'institutions should ensure that all recruitment policies are open and transparent, for example all vacancies should be promoted and advertised externally' and 'ensure ... aware[ness] of and follow institutional recruitment policies and procedures, including providing job descriptions to all postholders'.

Respondents were asked to identify how they had found out about their current post. Compared with CROS 2009, there was an increase in the proportion that had learned about the vacancy on the institution's website (20% in 2011 compared to 16% to 2009). The proportion hearing by word of mouth dropped slightly from 30% in 2009 to 28% in 2011. Collectively these appear to represent some positive progress in relation to the CROS 2009 recommendation on external advertising of vacancies.

In terms of the information provided to respondents during their application process for their current post, distinct but modest improvement seems to have been made since 2009. The proportions of respondents reporting that they had received a written job description, details of qualifications required, details of research skills needed, and details of transferable/personal skills required all increased in comparison with CROS 2009 (Table 5). However, there is still scope for further progress as 14% reported receiving none of this information (15% in CROS 2009).

The CROS 2009 report recommended in relation to interviews, that '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'.

Table 5 Provision of information during application process for current post (N=5402)

	CROS 2011 %	CROS 2009 %
Written job description or summary	72	68
Details of qualifications required	68	64
Details of specialist research skills required	62	57
Details of transferable/personal/management skills required	39	32
None of these	14	15

Multiple responses allowed

Table 6 Provision of induction and perceived usefulness (N=5481-5509)

	Useful or very %	Not useful %	Total offered %	Offered but not taken %
Local induction to role	54 [43]	14 [20]	72 [65]	4 [3]
Departmental/faculty/unit induction	35 [31]	18 [19]	59 [53]	6 [4]
Institution-wide induction	31 [16]	23 [17]	67 [40]	14 [6]

CROS 2009 results in square parentheses where there is a significant difference from CROS 2011

CROS 2011 revealed increases, compared with CROS 2009, in the proportion reporting that their interview panel had representatives from across the institution (16% in 2011 compared to 12% in 2009) and from within the department (34% compared to 29%), but a small reduction in those reporting an informal opportunity to meet other relevant people (9% compared to 11%). 20% reported that they had a face-to-face interview with only the principal investigator or research leader. Only 6% reported having no interview at all; while a further 20% had no interview because they were named on the grant or were extended/redeployed. Taken together, these indicate a small overall improvement compared with CROS 2009 in terms of desired interviewing procedures.

5.1.3 Information for new postholders

The CROS 2009 report recommended that all new appointees should be 'offered induction to their role and department/institution, and provided with copies of relevant documentation'.

CROS 2009 had found that the majority of respondents, when they started with their current institution, had received information relating to their employment contract (92%), copies of institutional procedures (78%) and information about training/development (77%) and health and safety (78%). Respondents in 2011 reported very similar experiences, although greater proportions had received training or information about equality and diversity (68% in 2011 compared to 55% in 2009) and health and safety (83% in 2011 compared to 78% in 2009). On the other hand, information on institutional research strategies was only offered to around half of respondents, much as in 2009.

In terms of the provision of induction, significant increases were seen in the proportion of respondents reporting that they had received a local induction to their role, a departmental/faculty/unit induction, and especially the offer of an institution-wide induction (Table 6). In addition, the reported usefulness of all three types of induction in CROS 2011 increased compared with 2009. 80% of CROS 2011 respondents receiving a local induction reported it very useful or useful.

This improvement in the provision of induction continues progress seen by comparing pre-2009 CROS results (45% in CROS 2002 and 58% in CROS 2006). The perceived usefulness of the induction has also risen from 53% in CROS 2002 to the current figure of around 80%.

5.2 Recognition and value

5.2.1 Appraisal and review

The Concordat states that managers are required to participate in active performance management and supervision of the researchers they supervise. The CROS 2009 report recommended that 'all eligible researchers should undertake regular reviews and appraisal' and that 'appraisal processes should also address work practices and problem-solving'.

In CROS 2009, 50% of respondents stated that they had participated in an appraisal or staff review in the last two years. This was positive progress over the previous seven years, as only 32% of respondents in CROS 2002 and 39% of respondents in CROS 2006 reported that they had ever taken part in their institution's staff review process.

In CROS 2011, 55% of respondents reported that they had participated in staff appraisal/review within the last two years, or since taking up their current position if more recent. This suggests further progress has been made in terms of the aspiration for all research staff to undertake appraisal or review. However, this still left 45% of respondents reporting that they had not undertaken the process within the last two years.

Cross-tabulation analysis reveals that 75% of respondents with an open-ended contract had participated in an appraisal compared to 45% of those with fixed-term contracts. As in CROS 2009, higher participation (65%) in appraisal was reported by respondents with two or more contracts with their institution, compared with 46% on their first contract. There was also a positive correlation with increased age.

Of those respondents who had participated in an appraisal/review, 62% had found the process useful or very useful overall, similar CROS 2009. When questioned on the

perceived usefulness in relation to specific issues, similar or higher proportions of CROS 2011 respondents reported their appraisal either to have been useful or very useful, compared to CROS 2009 respondents (Table 7). The exception was a slight decrease in usefulness in relation to reviewing personal progress.

Respondents who had not participated in appraisal/review were invited to select a reason why they had not done so. A quarter reported that they were on probation or had only recently been appointed, and a further 5% believed that they were not eligible. 44% of non-participating respondents reported that they had not been invited for an appraisal. This equates to 20% of all respondents, compared with a corresponding figure of 23% in CROS 2009.

5.2.2 Recognition of the full contribution of researchers

The CROS 2009 report recommended that 'institutions should consider how they can recognise more fully the contribution of researchers beyond their research activities'.

For knowledge transfer and commercialisation activities, public engagement, managing resources and supervising/managing staff there was some progress in the proportion of respondents who agreed that their contributions were recognised and valued (Table 8). For other activities, the CROS 2011 results were very similar to CROS 2009: there was no evidence for any reduction in perceived recognition for any activity.

Normalising the percentages to exclude respondents giving a 'not-applicable' response, half or more of respondents agreed that they felt recognised and valued for all activities other than managing resources, although there was higher agreement in relation to more directly research-related activities, than for supervisory and management activities.

Table 7 Perceptions of usefulness of appraisal/review by respondents who had undertaken appraisal/review in the last two years (N=4159-4187)

	Useful or very useful %	Applicable %
Overall	62 [62]	76 [73]
Leading to training and development opportunities	53 [49]	75 [73]
Leading to changes in work practices	36 [32]	73 [69]
Helping to focus on career aspirations and how met by current role	58 [52]	73 [75]
Reviewing personal progress	68 [70]	76 [73]

Results from CROS 2009 in square parentheses where there is a significant difference from CROS 2011

Table 8 Respondents' perceptions of whether their institution recognises and values their contributions in relation to selected activities (N=5359-5489)

	Agree/strongly %	Disagree/strongly %	Don't know %	Not applicable %
Knowledge transfer and commercialisation activities	41 [35]	20 [24]	22 [24]	19
Public engagement with research	46 [41]	20 [24]	18 [21]	16 [14]
Managing resources	41 [34]	27 [32]	19 [21]	13
Supervising/managing staff	38 [28]	26 [31]	12 [16]	26
Teaching and lecturing	35 [33]	24 [26]	9 [11]	32 [30]

CROS 2009 results in square parentheses where there is a significant difference from CROS 2011

Table 9 Perceived levels of integration within research communities (N=5471-5516)

	Agree/strongly %	Disagree/strongly %	Agree/strongly five or more contracts %
You feel integrated into your department's research community	78 [71]	23 [29]	70 [66]
You feel integrated your institution's research community	59 [53]	41 [48]	51 [43]
You feel integrated into your wider disciplinary community	67 [65]	33 [36]	61 [56]
Institutional research culture stimulates your work	67 [74]	34 [26]	55 [64]

CROS 2009 results in square parentheses where there is a significant difference from CROS 2011

5.2.3 Integration of researchers

The CROS 2009 report noted that certain groups of researchers, such as those who have had multiple, short-term contracts at their institution, and/or long service through repeated fixed-term contracts, felt less integrated than others in their departmental or institutional communities. This tended also to be reflected in less positive attitudes towards their employer, job and career. The report recommended that institutions identify any such sub-populations and help them to explore career development strategies.

Overall for CROS 2011 respondents, over three quarters (78%) agreed that they felt integrated in their departmental research community, 67% within their wider disciplinary community and 59% in their institution's research community (Table 9). For all these communities, a greater proportion of respondents agreed that they were integrated, than had been the case in the CROS 2009. On the other hand, there was a reduction from three quarters to two thirds in the proportion of respondents that felt stimulated by the research culture of their institution.

Cross-tabulation analysis revealed that significantly fewer of respondents who have had five or more contracts with their current institution felt integrated with their communities than all respondents, although generally the proportions were higher than in CROS 2009. This suggests that progress has been made overall in terms of improving integration, but the issue of relatively lower integration persists for this particular group of research staff. As will be seen later, this group of respondents continues to report lower levels of engagement with career development and other support, and less positive attitudes in relation to many other issues.

Sub-populations of respondents that reported feeling more integrated included respondents of non-UK nationality, those who reported that they had a career plan and those who had participated in a 'useful' appraisal. A somewhat higher proportion of male respondents than females felt integrated into their institution's and wider disciplinary communities, although there was no difference in their integration within their departmental community. There appeared to be little or no difference by institutional group.

5.3 Support and career development

The CROS 2009 report acknowledged that institutions generally recognised the importance of supporting the career development of researchers, but more needed to be done to encourage research staff to engage. Amongst the recommendations was: 'research staff should be encouraged to engage more actively in career development planning, using the experience of their managers, staff developers and careers advisers'. In addition, it stated that institutions should increase the availability of and promotion of support in this area.

5.3.1 Engagement in career development

Overall, over three quarters of CROS 2011 respondents felt encouraged to engage in development, distinctly higher than had been the case in CROS 2009 (Table 10). Just over half of respondents now claimed to have a clear career plan, slightly higher than in CROS 2009. 70% of CROS 2011 respondents claimed they maintained a record of their professional development. It should be noted that in CROS 2009 there was a much more specific question about whether they had developed a formal personal development plan (PDP), to which only 19% responded positively. It seems likely that the CROS 2011 question has been interpreted much more liberally, i.e. that 70% keep some kind of record of their professional development, rather than a formal PDP, so the responses on this particular question are not believed to be comparable.

Table 10 Percentage expressing levels of agreement with selected activities in relation to personal and career development (N=5466-5503)

To what extent do you...	Agree/strongly %	Disagree/strongly %
feel encouraged to engage in career/ personal development	77 [64]	24 [35]
have a clear career development plan?	53 [50]	47 [50]
maintain a record of your professional development?	70	31

CROS 2009 results in square parentheses where there is a significant difference from CROS 2011

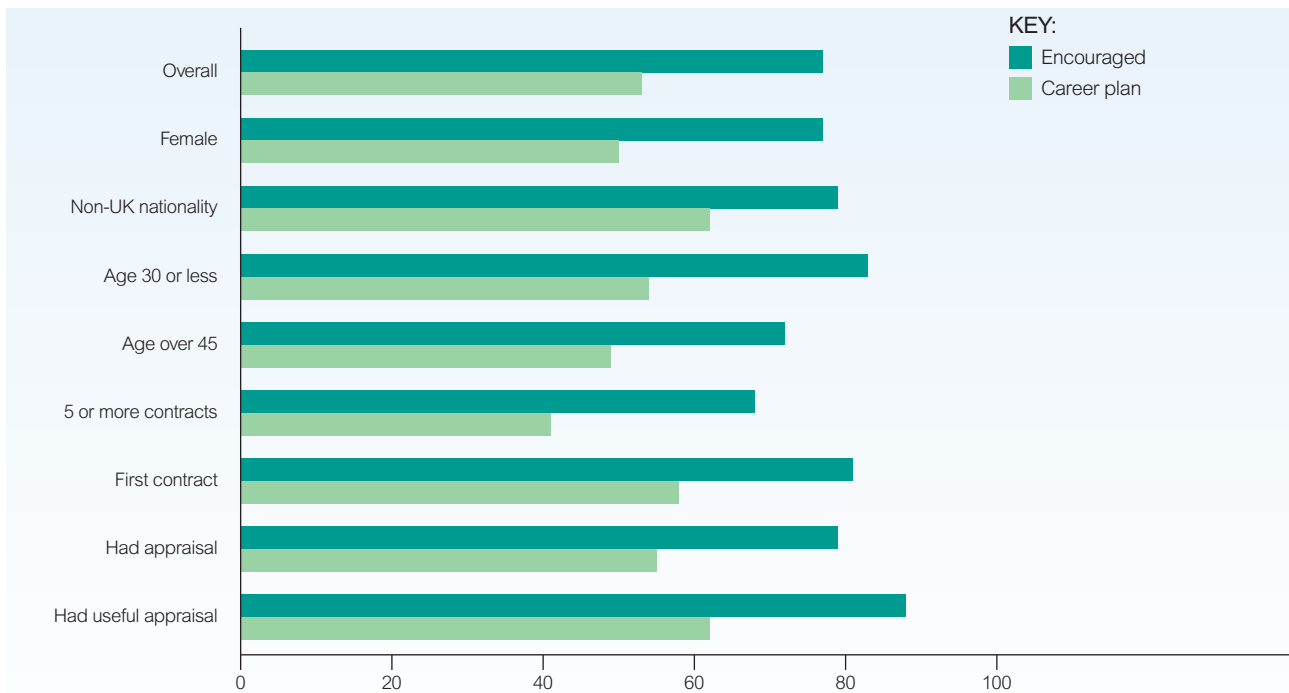


Figure 3 Percentages of selected sub-populations of respondents reporting that they feel encouraged to engage in personal and career development or have a career plan

The proportions within different sub-populations that felt encouraged to engage in development and who had a career development plan are summarised in Figure 3. More male respondents than females claimed to have a career development plan and considerably more respondents of non-UK nationality, especially those from outside the European Union (70%), than of UK respondents (48%).

A significantly higher proportion of CROS 2011 respondents on their first contract with their current institution felt encouraged to engage in development (81%) and had a career plan (58%) than overall. Conversely, a lower proportion of those with five or more contracts felt encouraged to engage in development (68%) and had a career plan (41%). The pattern with age was similar, with the youngest feeling most encouraged, and slightly more of them having a career development plan, and the oldest groups the least engaged.

There was also a positive correlation with those who had undertaken an appraisal. 79% of respondents who had undertaken appraisal felt encouraged to engage in development, and 55% had a career development plan, compared with 73% and 50% respectively of those who had not. The difference for those who reported having had a 'useful' appraisal was higher still, with the proportions being 88% and 62% respectively.

The proportion of respondents who had undertaken training and development in career management was 20%, higher than the 16% reported in CROS 2009, although almost a third of these reported that it had not been very useful. Around half (53%) of respondents stated that they would like to undertake this, while 27% said it was not currently of interest to them.

5.3.2 Wider experiences: placements and secondments

The CROS 2009 report had recommended institutions to: 'explore how to provide more placement and secondment opportunities to broaden experiences of researchers and widen their career aspirations'. There is no evidence in CROS 2011 of an increase in the proportion of respondents who have undertaken a placement in another sector (outside HE) during their current role, which remained at 5%, or the proportion who have undertaken a secondment to another institution (7%). A substantial proportion of respondents to CROS 2011 continued to express a desire to undertake a placement or secondment, 43% and 49% respectively (Table 11). Although few research staff are currently undertaking external placements, secondments or exchanges, 28% of respondents reported that they would find information on secondment and placement opportunities helpful to assist their career decision-making and progression; this remains unchanged from CROS 2009.

Table 11 Respondents having acquired experience outside their immediate area during their current role (N=5305-5342)

	% Have done this	% Would like to do this	% Of no current interest
Undertake a placement in another sector	5 [5]	43 [44]	53 [51]
Undertake a secondment to another institution	7 [7]	49 [52]	44 [42]

CROS 2009 results in square parentheses where there is a significant difference from CROS 2011

Table 12 Knowledge and understanding of institutional policies, processes and procedures in relation to research staff (N=5520-5543)

	Some understanding %	Know it exists %	Never heard of it %	Not applicable %
Terms and conditions of employment	74 [86]	25 [13]	1	<1
Fixed-term contracts	70 [80]	25 [16]	2	3
Appraisal/performance review	62 [69]	32 [22]	5 [7]	1
Equality and diversity	49 [46]	46 [49]	4	1
Probation processes	46 [47]	41 [38]	9 [12]	5 [3]
Institutional research strategy	39 [47]	47 [39]	14	1
Redundancy and redeployment	34 [35]	53 [48]	10 [15]	3
Promotions criteria and processes	28 [37]	53 [46]	14	5 [3]

CROS 2009 results in square parentheses where there is a significant difference from CROS 2011

5.4 Researchers' responsibilities

The 2009 CROS report had several recommendations relating to researcher responsibilities.

'Researchers need proactively to take responsibility for their own development and career planning, including being informed about their employment and progression.'

'Researchers need to be proactive in seeking out sources of information and advice in relation to career progression and employment.'

'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.'

5.4.1 Knowledge around employment and progression

CROS 2011 revealed that very high proportions of respondents had some understanding or at least were aware of processes and policies relating to terms and conditions of employment (99%), fixed-term contracts (95%), appraisal/review (94%) and equality and diversity (95%), although the depth of knowledge of these was far from uniform (Table 12). Still over 80% were aware or had some understanding of policies and procedures in relation to probation processes (87%), promotions criteria and processes (81%), redundancy and redeployment (87%), and institutional research strategies (86%). This confirmed the trend seen in CROS 2009, where respondents had the greatest understanding of issues which were of immediate relevance to their current research role, and somewhat less knowledge of issues which currently affected them less directly.

In comparison with CROS 2009, some progress appears to have been made in that, for some items, lower proportions of respondents had not heard of these policies and processes. Relatively higher proportions now expressed awareness of their existence, however, in many cases lower proportions reported that they had significant understanding of them than in CROS 2009. However, it should be noted that a less granular scale was used in CROS 2011, which may have affected the results and reduced their comparability.

5.4.2 Accessing personal and career development support

The majority of CROS 2011 respondents indicated that they had consulted or would consult their principal investigator/line manager about training and development (72%), in relation to career planning (64%) and many would use informal channels such as their colleagues about training and development or longer-term career planning (61% and 57% respectively) or their partner/family/friends (33% and 49%, respectively) (Table 13).

Lower proportions had consulted or would consult a careers advisor in relation to training and development (23%) or career planning (31%), and slightly fewer in turn a mentor. Staff developers were only cited by 15% or fewer respondents as potential support, and human resources specialists by fewer than one in ten. Online social networks were listed by fewer than 5% of respondents as sources of information or advice on these topics, in contrast with their increasing use by the undergraduate population. The career development responses are comparable with a slightly differently phrased question in CROS 2009 (have consulted or would definitely consult).

Table 13 Third parties that respondents have consulted or would consult about training and development needs (N=4940), or longer-term career planning (N=4917)

	Training and development needs %	Longer-term career planning %	Discussed training needs or career development % [Q19 CROS 2009]
Principal investigator/line manager	72	64 [62]	[76]
Appraiser if not line manager	13	13	
Mentor	21	26 [34]	[34]
Careers advisor	23	31 [23]	[14]
Staff developer	15	11 [12]	[23]
HR specialist	7	7 [8]	
Colleagues	61	57 [60]	
Online social networks	3	3 [5]	
Partner/family/friends	33	49 [64]	

CROS 2009 results in square parentheses where there is a significant difference from CROS 2011

Table 14 Respondents' awareness of selected UK initiatives in relation to career development and support (N=5314-5513)

	Some understanding %	Know it exists only %	Never heard of it %
Concordat for Support for the Career Development of Researchers	22 [32]	35 [26]	43 [42]
Vitae	19 [11]	31 [16]	50 [72]
European HR Excellence in Research recognition	4	24	72

CROS 2009 results in square parentheses where there is a significant difference from CROS 2011

For a slightly different question in CROS 2009, 76% of respondents reported that in the previous 12 months they had discussed training needs and/or opportunities for career development with their principal investigator/line manager, 34% with a mentor and 14% with a careers advisor. Although the questions in CROS 2011 and 2009 are not fully comparable, consistently the data show most respondents to be willing to consult with their principal investigator and colleagues in particular, but far fewer are accessing other sources of information and advice such as careers advisors or other development staff.

An indirect indication of whether respondents were engaged in thinking about career and personal development, or issues in relation to their employment, may be obtained by their knowledge of relevant UK initiatives. 57% of CROS 2011 respondents had heard of the Concordat and 50% the Vitae programme, although fewer than half of those had some or detailed knowledge of their content (Table 14). The extent of awareness of Vitae was clearly higher than in CROS 2009, while the position for the Concordat had not progressed significantly. Awareness of the European HR Excellence in Research badge was less widely held, but this is a relatively recent initiative and currently only a small proportion of UK institutions have received recognition.

A higher proportion of more experienced respondents had heard of the Concordat than of those on their first contract, although there was little difference in relation to Vitae. Slightly more female respondents than males were aware of these initiatives, and they were also more widely known amongst UK respondents than those of other nationalities. There was also a positive correlation between those with a career plan, and/or those who had undertaken appraisal, and those who had heard of Vitae.

5.4.3 Professional development and training

The CROS 2009 report had recommended that 'institutions should further promote the value of transferable skills for future employability in order to increase the level of take-up of development activities'. Questions in CROS 2011 relating to

continuing professional development activities were revised since CROS 2009 in order to provide more detailed information on the extent of participation in different activities. Although this means that comparison of CROS 2011 with CROS 2009 in this area is difficult, in future it will provide better measures of the take-up of different aspects of continuing professional development.

Overall, 79% of CROS 2011 respondents had spent some time on continuing professional development within the previous twelve months. This cannot be directly compared with the figure of 92% in CROS 2009, which had expressly invited respondents to include time spent attending conferences. Respondents to CROS 2011 will most likely have assumed a narrower definition of continuing professional development.

68% of CROS 2011 respondents had participated in training activities or courses within their institution and 42% in courses or activities outside their institution (Table 15). Both these results are slightly lower than the proportions recorded to a similar question in CROS 2009, which may not be directly comparable. In terms of a longer comparison, only 36% of CROS 2006 respondents reported participation in training activities or courses within their institution.

Around one in seven of CROS 2011 respondents (14%) had spent over ten days on continuing professional development activities, as recommended by Sir Gareth Roberts. The proportion participating in coaching or mentoring activities was almost a third (32%), much higher than the 14% reported in CROS 2009.

Training/development in research skills and techniques was undertaken by most respondents (36%), a similar figure to CROS 2009. A similar number of respondents (27%) also had undertaken communication skills training and development compared to CROS 2009. Fewer than one in five of CROS 2011 respondents reported that they had undergone training activity in other areas of personal development or transferable skills, similar to, or slightly above, those reported in CROS 2009.

Table 15 Number of days spent on continuing professional development in previous twelve months (N=5134-5396)

	None %	1-5 days %	6-10 days %	>10 days %
Overall	21	55	13	14
Training activities/courses within institution	32 [28]	59	6	3
Training activities/courses outside the institution	58 [53]	36	4	3
Coaching/mentoring activities	68 [86]	25	2	5

CROS 2009 results in square parentheses where there is a significant difference from CROS 2011

¹⁹ SET for Success www.vitae.ac.uk/policy-practice/1685/Roberts-recommendations.html#set

5.5 Equality and diversity

Although the vast majority of respondents to CROS 2009 believed that their institution was committed to equality and diversity and that it treated research staff fairly, many reported that they felt they were not treated on an equal footing with lecturing staff in terms of promotion or progression or participation in decision-making processes. The CROS 2009 report recommended that institutions should review their policies for 'inequalities between research staff and lecturers, particularly in promotion and progression and in participation in departmental and institutional decision-making processes'.

CROS 2011 investigated respondents' perceptions of whether they were treated fairly in comparison with other types of staff, rather than just in relation to lecturing staff. Nonetheless, a considerably higher proportion of CROS 2011 respondents agreed that they were treated fairly in relation to opportunities for promotion and progression (40% compared with 23% in CROS 2009), and a lower proportion (40% compared with 51% in CROS 2009) disagreed. A similar trend was seen in relation to participation in decision-making and, to some extent at least, for all other items (Table 16). It is also noticeable that the proportion selecting a 'don't know' response also dropped, possibly indicating that more respondents are now confident about their institution's attitude than previously.

58% of CROS 2011 respondents who have had five or more contracts with their current institution disagreed that they were treated fairly in relation to promotion and progression. Nonetheless this represents positive progress from the corresponding CROS 2009 figure of 70%. In relation to participation in decision-making, at 42%, more of this group disagreed that they were treated fairly than agreed. However, this was an improvement on the CROS 2009 figure of 58%.

Within respondent groups, there was a positive correlation between perceptions of fair treatment, levels of perceived integration and levels of engagement in career development activities.

Overall, 91% of CROS 2009 respondents had believed that their institution was committed to equality and diversity, and the vast majority of respondents felt that staff were treated fairly, regardless of ethnic background, gender, religion or belief, sexual orientation, disability or age. For CROS 2011, equality and diversity related questions were updated to enable more granular analysis and reflect the Equality and Diversity Act 2010. As a consequence, comparisons between CROS 2009 and CROS 2011 need to be treated with caution, not least due to the addition of a 'don't know' response option in CROS 2011.

85% of CROS 2011 respondents agreed or strongly agreed that there was institutional commitment to equality and diversity, while 7% disagreed or strongly disagreed and 8% did not know. Initially this appears slightly less positive than in CROS 2009; however, the addition of a 'don't know' option in CROS 2011 corresponds with a reduction of the proportions of both those who expressed modest agreement and modest disagreement. If CROS 2011 results are normalised to exclude 'don't know' respondents, i.e. recording only the proportions of those who have an opinion, the responses become slightly more positive than those recorded in CROS 2009 (Table 17).

In CROS 2009, 86-87% of respondents believed that their institution treated staff fairly, irrespective of gender or age, and over 90% irrespective of other attributes, such as ethnicity, nationality, ability/disability, religion/belief or sexual orientation. The inclusion of the 'don't know' option in CROS 2011 resulted in somewhat lower levels of agreement and slightly lower levels of disagreement about fair treatment for all attributes compared with CROS 2009. If normalised, the levels of agreement either exceeded or were not significantly different from those obtained in CROS 2009 in all cases.

CROS 2011 respondents' perceptions of fair treatment in relation to recruitment, progression and treatment at work regardless of different attributes produced results, after 'normalisation', that were similar or more positive than in CROS 2009.

Going forward, comparisons for future CROS surveys will explicitly include the proportion of respondents expressing no opinion on these issues.

Table 16 Extent of agreement that institution treats respondent fairly in comparison with other types of staff (N=5496-5515)

	Agree/strongly %	Disagree/strongly %	Don't know %
Opportunities for promotion and progression	40 [23]	40 [51]	14 [20]
Opportunities to participate in decision-making processes	51 [30]	32 [47]	13 [18]
Requests for flexible working	74 [65]	6 [10]	12 [17]
Visibility on websites and staff directories	77 [64]	16 [25]	6 [9]
Access to training and development opportunities	87 [76]	8 [11]	4 [11]

CROS 2009 results in square parentheses, although the wording is not identical to the CROS 2011 question

Table 17 Extent of respondents' belief that their institution is committed to equality and diversity (N=5489)

	Agree strongly %	Agree %	Disagree %	Disagree strongly %	Don't know %
CROS 2011	33	52	5	2	8
CROS 2009	[33]	[58]	[8]	[2]	--
CROS 2011 'normalised'	36	57	5	2	0

5.6 Other results

5.6.1 Career aspirations

Question 27 of the 2011 survey invited respondents to indicate the area(s) of work in which they aspired to be in five years' time, which potentially gives an indication of the direction(s) of their longer-term career aspirations.

Overall, 45% of CROS 2011 respondents aspired to a career in higher education that combined research and teaching, and 44% primarily in research. 26% aspired to a research career outside higher education and 16% a non-research career. 6% reported that they had not thought about it yet (Figure 4). Although not all options were comparable between CROS 2011 and 2009, a broad distribution of aspirations is common to both sets of results.

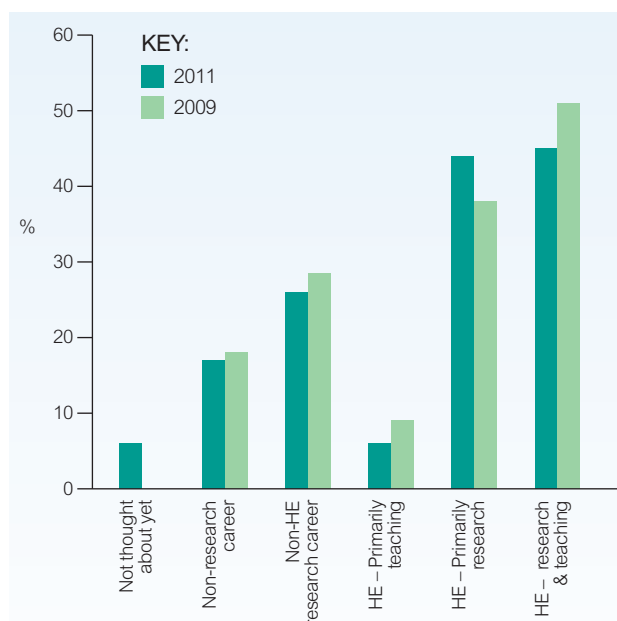


Figure 4 Respondents' career aspirations in five years' time (N=5284)

Multiple responses permitted

CROS 2009 results for some options were not directly comparable, especially in relation to non-research careers

Additional analysis of the multiple responses revealed that:

- around 75% of all respondents are aspiring to a career in higher education
- of respondents who aspired to a primarily research career in higher education, a fifth also aspired to a research and teaching career
- of respondents who aspired to a research and teaching career in higher education:
 - 36% also aspired to a career in non-HE research
 - 27% also aspired to a non-research career
- of respondents who aspired to a career primarily in research in higher education:
 - 50% also aspired to a non-HE research career
 - 32% also aspired to non-research career.

Although only 16% of respondents indicated that they aspired to a non-research career, over 25% of respondents answered the linked question on the types of non-research careers of interest. The overall results therefore also include the interests of some respondents aspiring to research careers: both groups are shown in Table 18. Around 3% of all respondents aspire primarily to a non-HE teaching career and 4% to a non-research career outside higher education.

Table 18 Respondents' interest in selected non-research careers

	Overall (N=1373) %	Those aspiring to non-research careers (N=751) %
Non-research career outside HE	29	27
Teaching outside HE	21	17
Self-employment	39	39
Other	40	49

5.6.2 Research staff in profile

Assuming the CROS 2011 respondents are representative of the current UK population of research staff in HE, that population has the following attributes.

- 74% are older than 30 years; 16% are over 45 years old
- 81% have a doctorate or equivalent professional qualification
- 67% are UK nationals, 19% from other EU states and 14% from the rest of the world
- 77% overall are employed on fixed-term contracts, mostly of two to three years. Of the total, 23% have contracts of one year or shorter duration
- 12% have been with their current institution for ten or more years
- 14% have had five or more contracts with their current institution
- 37% with more than ten years' service are on fixed-term contracts, of whom a quarter are of one year or less
- 49% of UK nationals have conducted their research career in only one UK institution
- 19% of female and 6% of male research staff are employed part-time
- 61% have collaborated internationally (59% of UK nationals)
- 24% have spent time working in research abroad
- 36% have collaborated with industry; only 5% have undertaken a placement or secondment outside higher education
- 45% supervise doctoral or masters students
- 57% undertake demonstrating, teaching or lecturing
- 40% participate in public engagement activities

6 Progress against 2009 recommendations

In this section we summarise the progress made by the sector against the CROS 2009 recommendations, thereby providing an indication of progress towards implementation of the principles of the Concordat, using the following key:

- ✓✓✓ Evidence of significant progress from several reinforcing questions
- ✓✓ Evidence of significant progress
- ✓ Direct evidence of some progress or contributory evidence
- ✗ No evidence for progress

Additional recommendations arising from CROS 2011 are in **blue**.

6.1 Recruitment and selection

There has been progress in terms of improving the openness and transparency of recruitment and appointment processes. The vast majority of respondents were interviewed for their current role, through either formal or informal mechanisms, and more received local and institutional induction and were supplied

with job descriptions and other employment-related information. Overall there was a slight reduction in the proportion of research staff employed on fixed-term contracts. However, there is evidence for an increase in the use of shorter contracts.

CROS 2009 recommendations	Progress
Institutions should ensure that all recruitment policies are open and transparent, for example all vacancies should be promoted and advertised externally.	✓ Since 2009 there has been a small but significant increase in the proportion of respondents learning about their current post via websites and open information, and a decrease in the proportion that learned by word of mouth.
Ensure that departments and principal investigators are aware of and follow institutional recruitment policies and procedures, including providing job descriptions to all postholders.	✓✓✓ There have been significant increases in the proportion receiving job descriptions (now over 70%) and other supporting information relating to their new post.
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.	✓✓ An increased proportion report that their application interviews were with panels including wider representatives, and a lower proportion report not having an interview at all. There is no evidence for progress on applicants having more opportunities to meet other staff informally during the interview process.
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.	<p>✓✓✓ There have been significant increases in the provision and take-up of inductions, locally to the role and especially at institution level, together with some increase in the provision and usefulness of supporting information when research staff took up their current post.</p> <p>Institutions should explore whether they are tending to use shorter term contracts and, if so, whether they are being used judiciously, e.g. to provide bridging funding.</p>

6.2 Recognition and value

The 2011 results reaffirm positive attitudes by most respondents in terms of their work-life balance, community integration and feeling valued by their institution for their research activity. Their perceptions of feeling recognised and valued for their wider contributions beyond research have increased slightly, and fewer believe that they are not treated fairly in comparison with other staff. Participation in appraisal or staff review continues to rise, together with a slight increase in perceived usefulness. There is still a small proportion reporting that they have not been invited to undertake appraisal.

Although there has been some progress since 2009, there remain groups of researchers, such as those who have had multiple, short-term contracts and/or long service through fixed-term contracts, who feel less integrated and report less positive feelings about their employer, job and career. These researchers remain of concern and in need of particular attention.

CROS 2009 recommendations	Progress
All eligible researchers should undertake regular reviews and appraisal and most research staff report these to be useful.	<p>✓✓ More (55%) now report that they undertake appraisal than do not. There have also been significant increases in the proportion of respondents reporting that their appraisal was useful for most issues.</p> <p>A proportion of apparently eligible researchers (20%) remains that are not being invited to appraisal, which warrants further (local) exploration.</p>
Appraisal processes should also address work practices and problem-solving.	<p>✓✓ There has been an increase in the proportion (now around three quarters) whose appraisal addresses work practices. The questions in CROS 2011 do not specifically include the issue of problem-solving.</p>
Institutions should consider how they can recognise more fully the contribution of researchers, beyond their research activities.	<p>✓ CROS 2011 demonstrates modest increases in the proportion that perceives recognition and value from their institution for some specific contributions, but for other contributions this is unchanged (although for none has the proportion decreased).</p>
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.	<p>✓✓✓ The proportion of research staff overall that perceives integration within their departmental and institutional research communities has increased significantly, and there have also been increases within less engaged groups.</p> <p>Institutions should guard against any reversal in the progress made in the integration of research staff, which might result from any trend to shorter contracts.</p>

6.3 Support and career development

The strong majority of research staff feel encouraged to engage in personal and career development and able to approach their managers for support. Around 80% had spent at least one day and one in six over ten days on continuing professional development during the previous year. There has been a considerable increase in participation in coaching and mentoring activities. However, the use of personal development records remains much more limited.

The availability and take-up of training and development activities does not appear to have risen since 2009, although different measures have been utilised to assess this. Whether this marks a reversal of the rises seen in recent years will only become clear with further assessment using fully consistent measures. While there still appears to be enthusiasm for broader experience, such as work placements or secondments, these have been undertaken only by very small numbers.

CROS 2009 recommendations	Progress
Research staff should be encouraged to engage more actively in career development planning, using the experience of their managers, staff developers and careers advisors.	<p>✓✓✓ There has been a significant increase in the proportion of respondents reporting that they feel encouraged to engage in career development (including within many sub-populations). The majority of researchers either have consulted or would consult their managers for support. Few consult with staff developers and career advisors.</p> <p>Institutions should consider how they can encourage research staff to engage more with staff developers and careers advisors.</p>
Institutions should increase and promote the provision of information and advice about careers, career progression and application processes within and outside academia.	<p>✓ Substantial proportions of respondents continue to claim interest in receiving information and advice, although the proportions are somewhat lower in 2011 for some areas.</p>
Careers services should explore ways to improve their engagement with researchers.	<p>The revised CROS 2011 questions on the level of interaction with careers services were generalised to emphasise researchers' engagement with different sources of support, rather than to measure past extent of interaction specifically with careers services.</p>
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.	<p>✓✓ CROS 2011 records a significant increase in the proportion that has undertaken career management training.</p>
Institutions 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.	<p>✓ Changes in the CROS question set prevent direct comparison, but the proportions reporting they have undertaken and/or would like to participate in transferable skills training remain significant and consistent. Few are investing in ten days of continuing professional development per year.</p> <p>Institutions should consider using the Vitae Researcher Development Statement and Framework to promote the importance of professional development across the range of researcher capabilities.</p>
Institutions should explore how to provide more placement and secondment opportunities to broaden experiences of researchers and widen their career aspirations.	<p>✗ The proportion who report that they have undertaken external placements or secondments remains low and the proportion expressing interest is substantial and growing.</p> <p>Institutions should actively consider how to support opportunities for placements within business and other organisations in line with recent initiatives for postgraduate researchers.</p>

6.4 Researchers' responsibilities

Most respondents appear to be well-informed about issues related to their current employment and research, but less so about their potential progression. There has been a slight rise in the proportion that has a career plan. Those who do not actively plan their career tend to be less engaged and take less advantage of opportunities on offer.

Many respondents continue to report enthusiasm for training in research and personal development skills or external placements, and believe access to training is fully open. Yet they have not taken advantage of such opportunities. A minority continue to show no interest in training in these areas.

CROS 2009 recommendations	Progress
Managers and staff developers should stress that researchers need proactively 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.	✓ A small but significant increase is recorded in the proportion of respondents with a career plan. Although there is no evidence for further increases in the levels of understanding of relevant policies and procedures, these are already at high levels for many issues.
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.	✓ Significant proportions of researchers report that they are willing to consult or have consulted principal investigators (PIs) and career and development specialists in relation to career decision making and progression. The proportion seeking information and advice in relation to employment and applications remains substantial but has decreased for some issues since 2009.
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.	CROS 2011 has new questions which establish a baseline and provide future benchmark measures. Researchers should be encouraged to consider utilising the Vitae Researcher Development Framework professional development planner as a mechanism to record their professional development.

6.5 Equality and diversity

The majority of respondents continue to report that they believe that their institution is committed to diversity and equality and that staff are treated fairly by the institution across a range of activities, including promotion, access to training and

day-to-day treatment at work. Lower proportions feel that they are not treated fairly in comparison with other staff at the institution, at least compared with the levels reporting a perceived lack of fairness in relation to lecturing staff in 2009.

CROS 2009 recommendations	Progress
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.	✓ CROS 2011 investigates perceived inequalities in relation to other staff generally, rather than lecturers in CROS 2009, and therefore is not directly comparable. However the proportion perceiving unfair treatment compared with other staff is lower than that reported in relation to lecturers in 2009.
Ensure the institution's commitment to valuing researchers is communicated effectively to researchers and their managers and implemented in practice.	✓✓✓ Respondents report increased perceptions of recognition and value for many of their contributions (and no decreases).
HEIs should review the free text responses provided by respondents in order to explore in more detail issues around discrimination.	✗ A consistent small minority of respondents continues to report perceptions of discrimination against them personally.
	Institutions are encouraged to make use of CROS results as evidence they might provide when demonstrating due regard in relation to their duties under the 2010 Equality Act.

6.6 Implementation and review

Comparison of CROS 2011 with CROS 2009 aggregate results demonstrates that across the UK progress is being made on many of the Concordat principles and identifies where more progress could be made. Although comparisons of institutional results with the CROS aggregate results is valuable, greater

benefit will come from longitudinal comparisons of institutional data. CROS findings will also be useful to institutions seeking the European HR Excellence in Research award and in providing evidence for their submissions on the research environment element of the Research Excellence Framework.

CROS 2009 recommendations	Progress
Institutions are encouraged to compare their own response data with the aggregate responses presented here, taking into account local conditions and cohorts.	✓✓ There is strong anecdotal evidence that institutions value the aggregate reports to compare their own results and identify priorities for action. CROS workshops were well attended. Almost 2000 copies of the CROS 2009 report have been distributed.
Institutions are encouraged to provide feedback to their research staff, both respondents and non-respondents, about their CROS results and subsequent actions.	✓ A Vitae 2011 survey of 'The visibility of researcher development in UK higher education institutions' strategies' found public evidence of CROS participation or feedback in half of the 34 institutions surveyed that had participated in CROS. Examples found included an open forum to encourage research staff comments on future actions, publication of institutional CROS reports and how the CROS results have affected researcher development provision. www.vitae.ac.uk/CMS/files/upload/Vitae-The-visibility-of-researcher-development-in-UK-higher-education-institutions-strategies-2011.pdf Institutions are encouraged to do more to make their CROS results and progress more visible to current and potential researchers and to research leaders.
HEIs should engage in benchmarking groups and other activities to share knowledge and practice, enabling comparison between institutional populations.	CROS 2009 and 2011 provided participating institutions with the ability to compare their results against benchmarked groups consisting of the Russell Group, 1994 Group, pre-1992, post-1992 and Scottish institutions. Informal groups were set up in both 2009 and 2011 to consenting institutions to benchmark against each other.
Institutions should be encouraged to take part in future CROS surveys and those that have run surveys to feed back their experiences to the Steering Group and promote the benefits to colleagues in non-participating institutions.	✓✓✓ 75 institutions have participated in CROS since it was re-launched in 2009. Institutions should recognise that participation in CROS provides useful evidence towards gaining the European HR Excellence in Research award and in preparing their submissions for the research environment element of the Research Excellence Framework.
The aggregate responses should be used to inform national activities to support the implementation of the Concordat's principles.	✓✓✓ CROS aggregate results were published in 2009 and 2011. CROS participation, response rate and specific questions have been included in the Concordat Strategy Group's measures of progress.
The CROS Steering Group should commission further analysis of sub-populations of the aggregate results, e.g. by broad subject areas, employment status.	✓✓✓ CROS 2009 analysis by broad discipline group was published in 2010. www.vitae.ac.uk/CMS/files/upload/CROS%202009%20by%20discipline.pdf
Institutions should identify areas of good practice and share these with the rest of the sector through the CROS and Vitae networks.	✓✓✓ Two CROS workshops ran at the September 2009 Vitae conference, and a special interest session on CROS 2009 by discipline ran at the 2010 conference. The CROS/PIRLS Steering Group, Vitae North West Hub and Yorkshire and North East Hub jointly ran a national CROS practice sharing event in November 2010.

Appendix 1: CROS 2011 UK aggregate results and CROS 2009 comparisons

This appendix contains the full aggregated percentage responses for CROS 2011 by question. Results have been rounded to whole percentages, for which reason totals may not sum to 100%. N represents the number of respondents for each question. CROS 2009 aggregate results are given in square parentheses [x] for comparison where a significant difference exists from the respective 2011 result¹ and the question is directly comparable. All questions were voluntary.

Questions, or parts of questions, that were either new in CROS 2011 or amended from CROS 2009 to such an extent that the results are not directly comparable are indicated by underlined text.

Careers in Research Online Survey CROS 2011

Introduction

Welcome to the Careers in Research Online Survey (CROS) 2011, 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 anonymous 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 CROS has provided to government has been invaluable. It has 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. In 2008, the second Concordat to Support the Career Development of Researchers was launched and Research Councils UK 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 – About your research career

1. Excluding any period of doctoral study, how long have you been a researcher? (%)

	< 1 yr	<u>1-2 yrs</u>	<u>3-5 yrs</u>	<u>6-9 yrs</u>	<u>10+ yrs</u>	Not applicable	N
a) <u>In total</u>	10	19	27	19	24	1	5443
b) At this institution	19 [17]	27 [59: 1-5yrs]	28	14 [16: 6-10yrs]	12 [8: >10yrs]	1 [<1]	5021
c) At other HE or research institutions in the UK	11 [6]	12 [42: 1-5yrs]	13	6 [10: 6-10yrs]	5 [7: >10yrs]	53 [35]	4240
d) At other HE or research institutions <u>outside the UK</u>	10	12	9	3	2	65	4061

2. How many individual contracts of employment as a researcher have you had with your current institution?
N=5438

	%
1	46
2	21
3	13
4	7
5-9	11
10 or more	3

3. Are you currently employed... N=5501

	%
Full-time?	87
Part-time?	13

4. What is the nature of your current contract? N=5263

	%
Fixed-term	77 [82]
Open-ended	23 [18]

If fixed-term, what is the total length of your contract? N=4062

	%
6 months or less	6 [4]
7-12 months	17 [15]
13 – 24 months	27 [24]
25 – 36 months	35 [39]
37 – 48 months	7 [7]
49 – 60 months	8 [9]
More than 5 years	1 [2]

5. What is your main subject specialism (current contract)?
N=5398

	%
Architecture, Building and Planning	1
Biological Sciences	27 [30]
Business and Administrative Studies	2
Creative Arts and Design	1
Eastern, Asiatic, African, American and Australasian Languages, Literature and related subjects	<1
Education	2
Engineering	11
European Languages, Literature and related subjects	1
Historical and Philosophical studies	2
Law	<1
Linguistics, Classics and related subjects	1
Mass Communications and Documentation	<1
Mathematical and Computer Sciences	6
Medicine and Dentistry	10 [7]
Physical Sciences	13
Social studies	10 [8]
Subjects allied to Medicine	11 [14]
Technologies	2
Veterinary Sciences, Agriculture and related subjects	1

Section 2 - Recruitment and Selection

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

6. How did you find out about your current post? (Select all that apply) N=5525

	%
In a newspaper or other printed media	5 [6]
On the institution's website	20 [16]
On jobs.ac.uk or another external website	26 [25]
On a Listserv or email distribution	3 [4]
By word of mouth	28 [30]
I was named on the grant	11 [12]
<u>I am the grant/fellowship holder</u>	8
I was redeployed (e.g. to avoid redundancy)	3 [2]
My previous contract was extended	12 [11]
I don't know/can't remember	1 [1]
Other	6 [10]

7. During the application process, which of the following were you provided with? (Select all that apply) N=5402

	%
A written description summary of what the job entailed (job description)	72 [68]
Details of the qualifications required of the post-holder	68 [64]
Details of the specialist research skills required of the post-holder	62 [57]
Details of the transferable/personal/management skills required of the post-holder	39 [32]
None of the above	14 [15]
I don't know/can't remember	7 [6]
Other	4 [6]

8. How were you interviewed for your current post? (Select all that apply) N=5467

	%	
Remotely by telephone or video interview	8	[7]
By face-to-face interview with <u>only</u> the principal investigator(s) or research leader	20	[38]
By an interview panel made up of representatives from within the department	34	[29]
By an interview panel including representatives from across the institution	16	[12]
By a less formal opportunity to meet relevant people and discuss the role	9	[11]
I did not have an interview <u>because I was named on the grant/redeployed/my contract was extended</u>	20	[20]
I did not have an interview <u>(any other reason)</u>	6	
Other	5	[5]

9. 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) The local induction to your current role	15 [10]	39 [33]	11 [15]	3 [5]	28 [35]	4	5509
b) Departmental/ <u>Faculty/Unit</u> induction programme	7	28 [25]	14	4	41 [47]	6 [4]	5495
c) Institutional-wide induction programmes	5 [2]	26 [14]	17 [13]	6 [4]	33 [60]	14 [6]	5481

10. 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	16 [19]	58 [55]	14	3	9	<1	5505
b) Information about your probationary requirements	9	43 [38]	17 [20]	3 [5]	28	1	5463
c) Copies of institutional policies and procedures (e.g. complaints procedures)	6	40 [38]	24 [27]	4 [6]	24 [22]	2	5454
d) Statement of your rights and responsibilities	6	42 [40]	19	4	28	2	5443
e) Copy of the institution's research strategy	5	27 [23]	16 [18]	5	47	1	5439
f) Training or information about equality and diversity	4 [2]	29 [19]	22 [18]	7	32 [45]	6 [8]	5453
g) Training or information about health and safety	8 [6]	46 [41]	20	6	17 [22]	4	5458

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

Section 3 – Recognition and Value

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

	I have some 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) Terms and conditions of employment (e.g. pay & grading)	74 [86]	25 [13]	1	<1	5543
b) Probation processes	46	41 [38]	9 [12]	5 [3]	5538
c) Appraisal/performance review	62 [69]	32 [22]	5 [7]	1	5533
d) Promotions criteria and processes	28 [37]	53 [46]	14	5 [3]	5526
e) Fixed-term contracts	70 [80]	25 [16]	2	3	5534
f) Redundancy and redeployment	34	53 [48]	10 [15]	3	5520
g) Equality and diversity	49 [46]	46 [49]	4	1	5524
h) Institutional research strategy	39 [47]	47 [39]	14	1	5522
i) Research codes of practice (e.g. research integrity/academic conduct/ethics)	59 [65]	32 [25]	9	1	5521

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

	I have some understanding of this/these	I know these exist but I don't know the detail	I have never heard of this/these	N
a) Concordat to Support the Career Development of Researchers	22 [32]	35 [26]	43	5508
b) Research Assessment Exercise (RAE) /Research Excellence Framework (REF)	54 [68]	35 [21]	11	5513
c) Vitae	19 [11]	31 [16]	50 [72]	5500
d) <u>European 'HR Excellence in Research' recognition</u>	4	24	72	5314

14. To what extent do you agree that your institution treats you (as a member of research staff) fairly in comparison with other types of staff in relation to... (%)

	Agree strongly	Agree	Disagree	Disagree strongly	Don't know	Not applicable	N
a) Terms and conditions of employment (excluding any fixed-term nature of contract)?	19	54	10	6	8	3	5512
b) Opportunities for promotion and progression?	9	31	24	16	14	6	5515
c) Requests for flexible working?	34	40	4	2	12	7	5504
d) Opportunities to participate in decision-making processes (e.g. committees)?	11	40	21	11	13	4	5507
e) Visibility on websites and staff directories?	24	53	11	5	6	1	5496
f) Access to training and development opportunities?	33	54	6	2	4	1	5506
g) Opportunities to attend conferences and external meetings?	33	49	9	4	4	1	5515

15. 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?	11	42	17	7 [9]	22 [19]	1	5512
b) Research culture within the department?	14	47	18	7 [9]	13 [15]	1	5502
c) Grant applications?	12	38 [36]	18	8	12	13	5501
d) Publications?	19	52	12	5	10	3	5508
e) Knowledge transfer and commercialisation activities?	9 [6]	32 [29]	15	5 [8]	20	19	5497
f) External collaborations?	13 [11]	43	17	6 [9]	14	8	5502
g) Public engagement with research?	10 [7]	36 [34]	15 [17]	5 [7]	18 [21]	16 [14]	5492
h) Managing resources?	7 [5]	34 [29]	20 [22]	7 [10]	19 [21]	13	5489
i) Supervising/managing staff?	7 [4]	31 [24]	18 [21]	8 [10]	12 [16]	26	5362
j) Teaching and lecturing?	7	28	17	7 [9]	9 [11]	32 [30]	5490
k) Supervising research students?	9	35 [33]	17	7 [10]	9	23 [21]	5359
l) Supporting others (e.g. informal mentoring)?	8	35 [32]	21 [23]	9 [11]	13	14 [11]	5487
m) World-class research?	13	42	14	6 [8]	19	6	5477

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

	Agree strongly	Agree	Disagree	Disagree strongly	N
a) You are integrated into your department's research community?	27 [22]	51 [49]	18 [22]	5 [7]	5516
b) You are integrated into your institution's research community?	13	46 [41]	35 [39]	6 [9]	5491
c) You are integrated into your wider disciplinary community?	16	51 [48]	29	4 [6]	5471
d) The research culture of the institution stimulates your work?	17 [26]	50 [49]	27 [20]	7	5479

17. 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 4 – Support and Career Development

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

	Agree strongly	Agree	Disagree	Disagree strongly	N
a) You are encouraged to engage in personal and career development?	23 [15]	54 [49]	20 [28]	4 [7]	5503
b) You have reflected on your development needs?	22 [27]	60	17 [12]	2	5496
c) You have a clear career development plan?	14	39 [36]	40 [43]	7	5493
d) <u>You maintain a record of your professional development?</u>	17	53	27	4	5466

19. Over the past two years (or since taking up your current position if that is more recent) have you served a probationary period?
N=5338

If YES, have you actively participated in activities to monitor your progress towards any probationary requirements?

N=2326

	%
Yes	42
No	58

	%
Yes	45
No	55

20. 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=5396

	%
Yes	55 [50]
No	45 [50]

If NO, is this because... N=2423

	%
You are on probation?	11 [8]
You've only recently been appointed?	24 [21]
You haven't been invited to do so?	44 [46]
You haven't arranged this?	8 [7]
You are not eligible?	5 [5]
Other	10 [13]

21. 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?	10	37	21	8	24 [27]	4187
b) In identifying your strengths and achievements?	10	40 [38]	19	7	24 [27]	4171
c) In leading to training or other development opportunities?	8	32 [29]	26	10	24 [27]	4178
d) In leading to changes in work practices?	5 [3]	22 [19]	33	14	26 [31]	4171
e) For you to highlight issues?	10 [8]	41	17	8	24 [28]	4161
f) In helping you focus on your career aspirations and how these are met by your current role?	10	34 [30]	22 [24]	10 [12]	24 [27]	4169
g) In reviewing your personal progress?	12	41 [39]	16	7	24 [27]	4159

22. 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... (%)

	0	1-2	3-5	6-10	> 10	N
a) Overall?	21	26	26	13	14	5396
b) Participating in training activities or courses within your institution?	32	39	20	6	3	5202
c) Participating in training activities or courses outside of your institution?	58	24	12	4	3	5134
d) Participating in coaching/mentoring activities?	68	19	6	2	5	5224

23. 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	36	4	39 [41]	21	5302
b) Ethics and research governance	16 [13]	5	29 [31]	51 [53]	5281
c) Personal effectiveness	16 [13]	5	43 [45]	37	5286
d) Communication skills	22	5	36 [38]	38 [36]	5281
e) Teamworking	13 [11]	4	30 [33]	52	5216
f) Career management	14 [10]	6	53	27 [29]	5297
g) Knowledge transfer and outreach activities	11 [9]	3	49	37 [39]	5256
h) Teaching	18	4	46 [44]	33	5309
i) Leadership and management	13 [11]	3	51 [53]	33	5305

24. In what other areas have you undertaken, or would you like to undertake, training and development?

25. Who have you consulted, or would you consult, about your immediate training and development needs? N=4940

	%
Careers advisor	23
Staff developer	15
Human resources specialist	7
Principal investigator (PI)/line manager	72
Your appraiser (if they are not your PI/line manager)	13
Mentor	21
Colleagues	61
Professional body/learned society	11
Funding organisation	7
Recruitment agency	2
Online social networks	3
Partner/family/friends	33

26. Who have you consulted, or would you consult, about your longer-term career planning? N=4917

	%
Careers advisor	31
Staff developer	11
Human resources specialist	7
Principal investigator (PI)/line manager	64
Your appraiser (if they are not your PI/line manager)	13
Mentor	26
Colleagues	57
Professional body/learned society	11
Funding organisation	7
Recruitment agency	4
Online social networks	3
Partner/family/friends	49

27. In which area(s) of work do you aspire to be in 5 years time? (Select all that apply) N=5284

	%
<u>I haven't thought about it yet</u>	6
Career in higher education – primarily research and teaching	45 [51]
Career in higher education – primarily research	44 [38]
Career in higher education – primarily teaching	5 [9]
Research career outside higher education (e.g. in a private research organisation, charity or in an industrial environment)	26 [34]
<u>Non-research career</u>	16

What types of non-research careers are you interested in? (Select all that apply) N=1373

	%
A non-research career in higher education	29
Teaching outside higher education	21
Self-employment	39
Other	40

28. 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=4548

	%
Job application processes in academia	60 [72]
Job application processes outside academia	34 [39]
Information on careers inside academia	65 [72]
Information on careers outside academia	46 [48]
Information on international job opportunities	37 [43]
Information on secondment and placement opportunities	28 [28]
Information on self-employment and freelance consultancy	27 [22]
Information on business skills and enterprise	20 [18]
Other	3 [3]

Which of the following have you done, or would you like to do as part of your current role? (%)

	I have done this	I would like to do this	I currently have no interest in this	N
29. Acquiring experience outside your immediate area				
a) Collaborate with colleagues outside the UK	61	33	6	5455
b) Collaborate with industry	36	36	28 [30]	5386
c) Undertake a placement in another sector (e.g. business/voluntary/government)	5	43	53 [51]	5342
d) Undertake a secondment to another institution	7	49 [52]	44 [42]	5305
e) Work as part of a cross-disciplinary team	54 [50]	37 [42]	9	5439
30. Developing management experience or expertise				
a) Manage a budget	35	38 [41]	27 [24]	5420
b) Participate in departmental decision making processes and committees	23	46 [51]	30 [28]	5401
c) Participate in institutional decision making processes and committees	10	42 [45]	48 [46]	5374
d) Plan and manage a project	54	4 0	7 [5]	5440
31. Developing a broader experience of research functions				
a) Apply for a fellowship	31 [33]	45	24 [22]	5376
b) Develop specialist research skills and techniques	57	38	5	5397
c) Explain work to people outside your field	55 [59]	30 [28]	15	5390
d) Knowledge transfer	33	45	22	5322
e) Supervise a doctoral or masters student	45 [43]	38 [40]	17	5411
f) Write a grant/funding proposal	49 [51]	41	10	5415
g) Write up research for publication	80	18	2	5449
32. Improving communication skills				
a) <u>Demonstrating, teaching or lecturing</u>	57	27	16	5442
b) Presenting work at a conference (orally/poster)	81 [83]	16	3	5460
c) Participating in public engagement activities	40	37	23	5402
d) Engaging in coaching, mentoring or action learning	32 [14]	41 [51]	27 [35]	5398

33. 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 5 – Equality and Diversity

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

	Agree strongly	Agree	Disagree	Disagree strongly	Don't know	N
a) I believe my institution is committed to equality and diversity.	33	52 [58]	5 [8]	2	8 [-]	5489
b) I am satisfied with my work-life balance	18	52	21	7	2 [-]	5480

35. 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	Don't know	N
a) Recruitment and selection	31 [33]	51 [59]	5	2	12 [-]	5489
b) Career progression / promotion	25 [27]	43 [54]	12 [16]	4	16 [-]	5483
c) Reward	24 [27]	43 [55]	11 [15]	3	19 [-]	5461
d) Day to day treatment at work	31	54 [59]	6	2	8 [-]	5470
e) Access to training and development	32 [34]	53 [60]	3 [5]	1	10 [-]	5464
f) Participation in decision making	24	44 [54]	12 [17]	3	18 [-]	5460

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

	Agree strongly	Agree	Disagree	Disagree strongly	Don't know	N
a) Age	28 [31]	50 [56]	9 [11]	2	10 [-]	5468
b) Ethnicity	33 [36]	52 [58]	3 [5]	1	11 [-]	5473
c) Disability	30 [34]	48 [60]	2 [5]	1	18 [-]	5330
d) Gender	31 [33]	49 [53]	9 [11]	2	10 [-]	5468
e) <u>Gender identity</u>	29	44	2	1	25	5320
f) Nationality	32 [35]	52 [57]	4 [6]	1	11 [-]	5463
g) <u>Pregnancy and maternity</u>	26	43	7	2	21	5328
h) Sexual orientation	30 [36]	46 [61]	1	1	23 [-]	5453
i) Religion/belief	32 [36]	49 [60]	1 [3]	<1	17 [-]	5441

37. Have you ever felt that you have been discriminated against in your post? N=5012

	%
Yes	10
No	90

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

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

Section 6 – About You

39. What is your age? N=5317

	%
<u>25 and under</u>	3 [2: <25]
<u>26 - 30</u>	23 [21: 25-29]
<u>31 - 35</u>	30 [31: 30-34]
<u>36 - 40</u>	16 [19: 35-39]
<u>41 - 45</u>	10 [11: 40-44]
<u>46 - 50</u>	7 [7: 45-49]
<u>51 - 55</u>	5 [4: 50-54]
<u>56 - 60</u>	3 [3: 55-59]
<u>61 or older</u>	1 [2: 60+]

40. What is your gender? N=5407

	%
Female	53 [55]
Male	47 [45]

41. What is the highest qualification that you hold? N=5469

	%
Undergraduate degree	5
Taught postgraduate qualification	7
Research masters	6
Doctorate or equivalent professional qualification	81 [81]
None of the above	1

42. Are you a UK/British national? N=5383

	%
Yes	67 [65]
No	33 [35]

(a) If you are a UK/British national, how would you classify your ethnic group and cultural background? N=3607

	%
White	
White British	61.5
White English	12.8
White Scottish	8.0
White Welsh	2.6
White Irish	1.9
Any other White background	3.5
Mixed	
Mixed White and Black Caribbean	0.1
Mixed White and Black African	<0.1
Mixed White and Asian	0.6
Any other Mixed background	0.3
Asian	
Asian, Asian British, Asian English, Asian Scottish or Asian Welsh Indian	1.2
Asian, Asian British, Asian English, Asian Scottish or Asian Welsh Pakistani	0.4
Asian, Asian British, Asian English, Asian Scottish or Asian Welsh Bangladeshi	0.2
Any other Asian background	0.3
Black	
Black, Black British, Black English, Black Scottish, or Black Welsh Caribbean	0.2
Black, Black British, Black English, Black Scottish, or Black Welsh African	0.2
Any other Black background	0
Chinese, Chinese British, Chinese English, Chinese Scottish, Chinese Welsh	1.9
Rather not say	3.2
Other	1.1

(b) If no, are you a national of another EU member state? N=1776

	%
Yes	58
No	42

43. Is English your first language? N=5416

	%
Yes	71
No	29

44. Do you consider yourself to have any form of disability?
(Select all that apply) N=5372

	%
No	95.1
<u>Specific learning disability</u>	0.9
<u>General learning disability</u>	0.1
<u>Cognitive impairment</u>	<0.1
<u>Long-standing illness or health condition</u>	1.9
<u>Mental health condition</u>	0.9
<u>Physical impairment or mobility issues</u>	0.6
<u>Deaf or serious hearing impairment</u>	0.4
<u>Blind or serious visual impairment</u>	0.1
Multiple disabilities	<0.1
Other	0.7

Appendix 2 CROS/PIRLS Steering Group

The Careers in Research Online Survey and Principal Investigators and Research Leaders Survey (CROS/PIRLS) Steering Group exists to ensure the appropriateness and sustainability of CROS and PIRLS and their associated activities in collecting and reporting the views and experiences of research staff, principal investigators and research leaders 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. Ensure that PIRLS meets the needs of the HE sector in collecting the views and experiences of principal investigators in developing research leaders in HE and in making these views available to the sector.
3. Provide sector and key stakeholder input to the ongoing development of CROS and PIRLS, consulting with the sector where appropriate.
4. Promote the value of CROS and PIRLS to the sector, encouraging institutional engagement and the sharing of practice.
5. Responsible for the control and coordination of CROS and PIRLS, including the timings and frequency of operation.
6. 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 CROS and PIRLS data.
7. Be the custodian of the CROS and PIRLS data, including overseeing the specification and production of any reports of the aggregate CROS and aggregate PIRLS results by Vitae and responding appropriately to requests for access to the results.
8. Work with Vitae to ensure appropriate links with the implementation of the Concordat principles and other relevant policy developments.

Current membership

Glyn Atherton	University of Liverpool
Rosie Beales	Research Councils UK
Lisa Burman	University of Coventry
Frank Chambers	University of Gloucestershire
Hannah Chaplin	HEFCE
Odette Dewhurst	University of Leeds and Vitae Research Staff Development Advisory Group (ReSDAG)
Ian Forristal	Queen Mary, University of London
Mike Gulliver	ILRT, University of Bristol
Rob Hardwick	University of Leicester and UK Research Staff Association (UKRSA)
Lesley Heseltine	Newcastle University
Lucy Lee	University of Sheffield
Alison McCleery	Edinburgh Napier University
Janet Metcalfe	Vitae
Anna Price	Kings College London
Meg Tait	University of Cambridge
Jane Wellens	University of Nottingham
Sara Williams	Cardiff University
Andy Wilson (chair)	Loughborough University

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

Vitae provides administrative support and resources for the CROS/PIRLS Steering Group. It has analysed the CROS 2011 results and produced this publication on behalf of and under the guidance of the CROS/PIRLS 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 is supported by Research Councils UK,(RCUK), managed by CRAC: The Career Development Organisation and delivered in partnership with regional Hub host universities.

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

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

Our aims:

- build human capital by influencing the development and implementation of effective policy relating to researcher development
- enhance higher education provision to train and develop researchers
- empower researchers to make an impact in their careers
- evidence the impact of professional and career development support for researchers.

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